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REPUBLIEK VAN SUID-AFRIKA

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PART 1 OF 2

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GOEWERMENTSKENNISGEWINGS

DEPARTMENT OF AGRICULTURE
DEPARTEMENT VAN LANDBOU

No. R. 1072 **1 August 2003**

AGRICULTURAL PRODUCT STANDARDS ACT, 1990
(ACT No. 119 OF 1990)

REGULATIONS RELATING TO THE QUALITY, GRADING, PACKING AND MARKING OF TOMATOES INTENDED FOR SALE IN THE REPUBLIC OF SOUTH AFRICA

The Minister of Agriculture has, under section 15 of the Agricultural Product Standards Act, 1990 (Act No. 119 of 1990) –

(a) made the regulations in the Schedule;

(b) determined that the said regulations shall come into operation on date of publication; and

(c) read together with section 3(2) of the said Act, repealed the regulations published by Proclamation Nos. R. 1977 of 7 September 1984, R. 2854 of 29 December 1989, Government Notices Nos. R. 1978 of 7 September 1984, and R. 602 of 30 March 1984 with effect from the date of commencement.

SCHEDULE

Definitions

1. In these regulations any word or expression to which a meaning has been assigned in the Act shall have that meaning and, unless the context otherwise indicates, –

"blemishes" means any mark on the outer wall of the tomato which adversely affects the appearance thereof;

"bruises" means any pressure wound which affect the quality of tomatoes detrimentally;

"carrier container"means a container in which more than one consumer package of tomatoes are packed;

"chemical residues" means residues of agricultural remedies which in terms of the Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act, 1947 (Act No. 36 of 1947), are permissible for the treatment of pests and diseases and which do not exceed the prescribed maximum residue limit;

"class" means a class referred to in regulation 3;

"classified tomatoes" means tomatoes which have been classified according to the classes specified in these regulations and of which the container is marked with a class designation or other designation indicating that the tomato is of a particular class or possesses particular quality properties;

"consignment" means --

(a) a quantity of tomatoes of the same class belonging to the same owner which is delivered at any one time under cover of the same consignment note, delivery note or receipt note, or is delivered by the same vehicle, or

(b) if such quantity is subdivided into different size groups or cultivars, each quantity of each of the different size groups or cultivars;

"**decay**" means a state of decomposition, fungus development or insect infestation which partly or completely affect the quality of the tomato detrimentally, is visually noticeable;

"**diameter**" means the greatest transverse measurement of a tomato, measured at right angles to a line running from the stem-end to the apex of the tomato;

"**firm**" means a stage of development at which the flesh of the tomato is firm enough to withstand normal commercial handling;

"**foreign matter**" means any matter which does not naturally form part of tomatoes and is visually noticeable thereon;

"**injury**" means a wound or puncture which exposes the flesh of the tomato, excluding a wound or puncture which has healed completely or has calloused;

"**inspector**" means the Executive Officer or an inspector under his control or an Assignee or an employee of an Assignee;

"**malformed**" means that the shape of a tomato is not typical of the cultivar concerned;

"**size group**" means a size group referred to in item 18 of Table 1;

"**the Act**" means the Agricultural Product Standards Act, 1990 (Act No. 119 of 1990);

"**tomato**" means the unprocessed fruit of the plant *Lycopersicon lycopersicum* (L.) Karsten ex. Farwell intended for human consumption and includes all cultivars, varieties and commercial types;

"**unclassified tomatoes**" means tomatoes which have not been classified according to the classes specified in these regulations and the quality specifications in Table 1, and of which the container is marked with a designation to indicate that no definite class or grade has been applied to the container; and

"**unprocessed**" means that the tomatoes have not been cooked, peeled, dried or processed in any other way, excluding normal sorting, grading, packing or cleaning practices;

"**unspecified defects**" means any defects caused by physiological or non-physiological factors affecting the quality of the tomato detrimentally.

Restrictions on the sale of tomatoes

2. (1) No person shall sell in the Republic of South Africa tomatoes, other than imported tomatoes referred to in subregulation (2), --

(i) unless the tomatoes are unclassified or sold according to the classes in regulation 3;

(ii) unless the tomatoes complies with the different standards for classified or unclassified tomatoes in regulation 4;

(iii) unless the tomatoes are packed in a container and in the manner prescribed in regulations 5, 6 and 7;

(iv) unless the tomatoes are marked with the particulars and in the manner prescribed in regulation 8;

(v) if the tomatoes contains a substance prescribed as a substance which it may not contain;

(vi) if the tomatoes are packed in a container or in a manner so prescribed as a container in which or a manner in which it may not be packed;

(vii) if the tomatoes are marked with particulars or in a manner prescribed as particulars with which or a manner in which it may not be marked.

(2) Imported tomatoes shall be exempted from the provisions of subregulation (1), provided that the tomatoes --

(a) comply with either the Codex, UNECE (United Nations Economic Commission for Europe) or OECD (Organisation for Economic Co-operation and Development) standards; and

(b) are according to bilateral agreement accompanied by certificate issued by a relevant government authority responsible for quality control of fresh fruit and vegetables and in which it is certified that the quality of the tomatoes as verified through inspection conforms to the relevant standard.

(3) The Executive Officer may grant written exemption, entirely or partially, to any person on such conditions as he or she deems necessary, from the provisions of subregulation (1).

QUALITY STANDARDS

Classes for tomatoes

3. (1) Tomatoes shall be sold as either classified tomatoes or unclassified tomatoes.

(2) There are four classes of classified tomatoes namely Class 1, Class 2, Class 3 and Lowest Class.

Standards for classes

4. (1) Classified and unclassified tomatoes shall --

(a) be fit for human consumption; and

(b) contain no chemical residues that exceed the prescribed maximum residue limit.

(2) Subject to the provisions of subregulation (2), tomatoes which are classified as Class 1, Class 2, Class 3 and Lowest Class shall comply with the specifications set out in Table 1 of the Annexure.

(3) The extent to which Class 1, Class 2, Class 3 and Lowest Class tomatoes may deviate from the specifications prescribed in subregulation (1) is determined in accordance to regulations 12, 13 and 14 and as set out in Table 2 of the Annexure.

CONTAINERS, PACKING AND MARKING REQUIREMENTS

Requirements for containers

5. (1) Containers in which tomatoes are packed in shall –

(a) be intact, clean, suitable and strong enough for the packing and normal handling of tomatoes;

(b) not impart a taste or odour to the tomatoes;

(c) be free from any matter other than the tomatoes packed therein and the packing material in which tomatoes are customarily packed;

(d) in the case of containers that are re-used, the container should --

(i) be of such material that the container can be cleaned and disinfected prior to re-use;

(ii) be thoroughly clean before tomatoes are packed therein; and

(iii) be free from all marks and etiquettes removed or be covered by new etiquettes.

(2) A carrier container shall be strong enough not to bulge out or dent in during normal handling and transporting practices.

Stacking of containers on pallets

6. If containers containing tomatoes are palletised --

(a) the pallet shall be clean, undamaged and suitable and not transmit to tomatoes any harmful substance or any substance that may be injurious to human health;

(b) pallets manufactured from wood shall be without bark;

(c) the pallet shall be free from any visible signs of fungal growth;

(d) the pallet shall be free from Arthropoda infestation;

(e) the containers shall be stacked firmly and square with each other and the pallet;

(f) only containers of the same dimensions shall be stacked in the same layer on the pallet; and

(g) the containers shall not be stacked upside-down on the pallet.

Packing requirements

7. Each container tomatoes shall –

(a) be packed with tomatoes to the full capacity thereof; and

(b) in the case of classified tomatoes, contain tomatoes of the same class and size group and as far as practical possible of the same colour.

Marking requirements

8. (1) Containers containing tomatoes destined for sale shall be marked in clear and legible block letters and figures in a manner described in subregulation (5) with the following particulars: Provided that the particulars shall be omitted in the case of a transparent container of 5 kg and less of which the full contents can be seen by the consumer:

(a) The name or trademark and physical or postal address of either the producer or owner or importer or packer of the tomatoes packed in that container.

(b) The producers' code or packhouse code (with the exception of imported tomatoes), which is registered with the Executive Officer by the producer or packhouse as the case may be: Provided that --

(aa) the packhouse code shall only be used if the origin of the tomatoes cannot be traced back to the producer;

(bb) if a producer has more than one farm, each farm shall be registered separately;

(cc) such code shall be preceded by the expression "Producer:", "Packhouse:", "Packer:" or any other suitable term having a similar meaning; and

(dd) the producer has a system in place to enable him/her to track a specific consignment of tomatoes down to field level.

(c) The expression "Product of" followed by the name of the country of origin of the tomatoes.

(d) The class, in the case of Class 1, Class 2, Class 3 and Lowest Class: Provided that additional to the class names the following names may be used:

Class 1 - First, Class 2 - Select, Class 3 - Standard, Lowest Class - Budget.

(e) The size group of the tomatoes in the container, indicated as either minimum diameter and maximum diameter or as "XX-large" or "XXL", "Extra large" or "XL", "Large" or "L", "Medium Plus" or "MP", "Medium" or "M", "Small" or "S" and "Cocktail" or "C": Provided that the size group indication may be omitted in the case of tomatoes in a bunch or cherry tomatoes.

(f) The net mass of the contents: Provided that the net mass may be omitted in the case where standardised containers as prescribed by the Trade Metrology Act, 1973 (Act No. 77 of 1973).

(g) The word "tomatoes", in the case of containers the contents of which are not visible from outside.

(2) If containers containing tomatoes are packed in a carrier container, each carrier container shall be marked with the particulars in subregulation (1), as well as with the number of containers it contains, on at least one end of every carrier container by means of stamping or stenciling or by pasting a printed label thereon.

(3) The particulars prescribed in subregulation (1) shall be indicated on the container by stamping, printing or by affixing a label thereon.

(4) Particulars shall be printed in any of the official languages: Provided that internationally acknowledged symbols may be used.

(5) If at any stage the class or size designation should change the labels shall be replaced unless the new class or size designation is stamped across the old class or size designation, in clear legible block letters of at least 2 mm larger than the previous marks, with a suitable stamp.

(6) Each container containing tomatoes shall be provided with only one or more labels that shall be –

(a) intact, clean and neat;

(b) manufactured from manilla paper or other suitable material; and

(c) affixed firmly to the container and in such a manner that re-stamping is possible without opening or damaging the container.

(7) If classified tomatoes are displayed for sale in loose quantities –

(a) any quantity of a particular class, size group or cultivar shall not be displayed mixed with tomatoes of any other class, size group or cultivar; and

(b) the class, size group and country of origin of the tomatoes shall be indicated in clear, legible block letters on a notice board prominently placed at the quantity of tomatoes.

(8) Containers containing unclassified tomatoes shall be marked in clear and legible block letters and also comply with subregulations 8(1)(a), (b), (c), (f) and (g) and subregulation 8(2), (3), (4) and (6).

Prohibited particulars

9. No wording, illustration or other device of expression which constitutes a misrepresentation or which directly or by implication can create a misleading impression of the contents shall appear on a container containing tomatoes or on a label affixed thereto or which is displayed therewith.

SAMPLING

Obtaining a sample

10. (1) An inspector shall obtain a sample from a consignment by –

(a) in the case of tomatoes packed in containers –

(i) draw two percent of containers and satisfy him or herself that the containers abstracted are representative of the consignment concerned; and

(ii) taking as inspection sample at least 25 tomatoes from each container obtained in subparagraph (i), or the contents from the containers if the containers contains less than 25 tomatoes; and

(b) in the case of tomatoes kept or displayed for sale in loose quantities –

(i) taking separate samples from the various classes and size groups which have been identified; and

(ii) taking as inspection sample at least 25 tomatoes at random from each quantity mentioned in subparagraph (i), or all the tomatoes if the number is less than 25 tomatoes.

(2) Each sample that is taken in accordance to the provisions of subregulation (1), shall be deemed to be representative of the quantity from which the samples have been taken.

Deviating sample

11. If an inspector notices during the course of abstracting a sample or during examination thereof that any of the containers, derived from any or differ from the contents of the containers which represents the rest of the consignment he shall determine the average examination result only on the containers that are required for the examination shall be taken from this divergent part of the consignment of tomatoes.

METHODS OF INSPECTION

Determination of percentage in too green tomatoes

12. The percentage of too green tomatoes shall be determined as follows:

(a) Take from the inspection sample those tomatoes which are most likely to be too green.

(b) Cut not more than four tomatoes open through the diameter thereof.

(c) Determine visually how many of the tomatoes thus cut open, have pips which are undeveloped and not covered with jelly.

(d) Express the number thus determined as a percentage of the total number of tomatoes in that sample, which percentage represents the extent to which too green tomatoes occur in such sample.

Determination of size variations

13. The size variation shall where applicable be determined as follows:

(a) Measure the diameter of each tomato in the inspection sample concerned.

(b) Calculate the average diameter of the tomatoes in that inspection sample.

(c) Determine the number of tomatoes in that inspection sample of which the diameter differs with more than 10 mm from the average thus calculated.

(d) Express the number thus determined as a percentage of the total number of tomatoes in that inspection sample, which percentage represents the extent to which tomatoes with unacceptable size variations occur in the sample.

Determination of percentage of quality factors other than too green tomatoes and size variations

14. Percentage quality factors other than too green tomatoes and size variations shall be determined as follows:

(a) Examine each tomato in the inspection sample concerned visually or if necessary, by handling it or cutting it.

(b) Determine in respect of each of the various quality factors the number of tomatoes in that inspection sample in which deviations occur.

(c) Express the number in respect of each quality factor thus determined as a percentage of the total number of tomatoes in that inspection sample, which percentage represents the extent to which tomatoes with the deviation concerned occur in the sample.

OFFENCES AND PENA LTIES

15. Any person who contravenes or fails to comply with a provision of these regulations shall be guilty of an offense and upon conviction be liable to a fine or imprisonment in consultation with article 11 of the Act.

TABLE 1

STANDARDS FOR TOMATOES

Quality Factors	Standards to be complied with			
	Class 1	Class 2	Class 3	Lowest Class
1	2	3	4	5
1. Decay	Not permissible	Not permissible	Not permissible	*
2. Foreign matter	Not permissible	Not permissible	Not permissible	*
3. Firmness	Fairly firm and not overripe	Reasonably firm and not overripe	May not have a blistered appearance (including cherry tomatoes) and must still be firm enough to be sliced in 5 mm slices (excluding cherry tomatoes)	*
4. Blemishes (excluding cherry tomatoes)	Blemishes not deeper than 1,5 mm and not exceeding a total area of ± 225 mm^2 (circle with a diameter of 15 mm) is permissible	Blemishes not deeper than 1,5 mm and not exceeding a total area of 340 mm^2 (circle with diameter of 20 mm) is permissible	Blemishes not deeper than 3 mm and not exceeding a total area of ± 615 mm^2 is permissible provided that not more than 20% of the tomato is cut away in one or more flat slices to remove damaged parts	*
5. Cat faces (Disfigurement and blemishes at the flowering end of the tomato) (excluding cherry tomatoes)	A few scabby marks not deeper than 1,5 mm or exceeding a total area of 225 mm^2 (circle with a diameter of 15 mm) is permissible	Wrinkled and suberic marks not deeper than 1,5 mm and not exceeding a total area of 340 mm^2 is permissible	Severe wrinkled and suberic parts with a total area of 615 mm^2 is permissible provided that no more than 20% of the tomato may be cut away in one flat slice to remove the malformed part	*
6. Craks (a) Circular cracks (excluding cherry tomatoes)	Circular crack(s) not deeper than 1,5 mm and which individually or collectively form a	Circular crack(s) not deeper than 1,5 mm and which individually or collectively form a half	Circular crack(s) not deeper than 1,5 mm and which individually or collectively form a full	*

	quarter circle is permissible	circle is permissible	circle is permissible	
(b) Stalk-end cracks (excluding cherry tomatoes)	One or more cracks which individually or collectively are not longer than 10 mm and deeper than 1,5 mm is permissible	One individual crack not longer than 20 mm and not deeper than 1,5 mm or two or more cracks which collectively are not longer than 20 mm or deeper than 1,5 mm is permissible	Tomatoes in a poorer condition than Class 2: Provided that no more than 20% of the tomato must be cut away in one of more flat slices to remove the damaged parts and that none of the cracks show any sign of decay	*
7. Bruises	Not permissible	Not permissible	Not permissible	*
8. Too green	Not permissible	Not permissible	Not permissible	*
9. Appearance	Sound and attractive	Sound and attractive	Sound and attractive	*
10. Shape	Well shaped for the relevant cultivar	Reasonably well shaped for the relevant cultivar	Tomatoes with points are permissible	*
11. Injury	Not permissible	Not permissible	Not permissible	*
12. Leaking tomatoes (not regarded as decay)	Not permissible	Not permissible	Not permissible	*
13. Mosaic	Not permissible	Mosaic stain with an area of not more than 12,5% (1/8) of the total surface of the tomatoes is permissible, provided that no blistered appearance is present	Mosaic stain with an area not more than 50% of the total surface of the tomato is permissible	*
14. Sunburn	Not permissible	A light yellow colour without any sign of leatheriness and sunkenness is permissible	A yellow colour, sunkenness and leatheriness is permissible provided that not more than 20% of the tomato must be cut	*

			away in one or two flat slices to remove damaged parts and no sign of decay is present	
15. Dust	Not permissible	Not permissible	Not permissible	*
16. Soil covered	Not permissible	Mud-smeared during handling and light soil splatters is permissible	Soil covered tomato due to contact with soil during growth period is permissible, provided that the tomato has not decayed	*
17. Unspecified defects other than those mentioned in items 1 - 16	Not permissible	Not permissible	Not permissible	*
18. Size according to diameter (excluding cherry tomatoes)				
(a) If not packaged in size groups	At least 50 mm	At least 40 mm	At least 30 mm	*
(b) if packed in size groups : XX-Large pack	More than 95 mm	More than 95 mm	More than 95 mm	*
(c) if packed in size groups: Extra Large	More than 83 mm but not exceeding 94 mm	More than 83 mm but not exceeding 94 mm	More than 83 mm but not exceeding 94 mm	*
(d) if packaged in size groups: Large pack	More than 73 mm but not exceeding 82 mm	More than 73 mm but not exceeding 82 mm	More than 73 mm but not exceeding 82 mm	*
(e) if packaged in size groups: Medium Plus pack	More than 64 mm but not exceeding 72 mm	More than 64 mm but not exceeding 72 mm	More than 64 mm but not exceeding 72 mm	*

(f) if packaged in size groups Medium pack	More than 56 mm but not exceeding 63 mm	More than 56 mm but not exceeding 63 mm	More than 56 mm but not exceeding 63 mm	*
(g) if packed in size groups: Small	More than 30 mm but not exceeding 55 mm	More than 30 mm but not exceeding 55 mm	More than 30 mm but not exceeding 55 mm	*
(h) if packed in size groups Cocktail pack	More than 5 mm but not exceeding 29 mm	More than 5 mm but not exceeding 29 mm	More than 5 mm but not exceeding 29 mm	*
19. Size variation (excluding cherry tomatoes)	Fairly uniform in size: Provided that, in the case of cocktail tomatoes, only 4 mm difference is permissible between the largest and smallest tomato in the same container is allowed	Reasonably uniform in size: Provided that, in the case of cocktail tomatoes, only 4 mm difference is permissible between the largest and the smallest tomato	Different sizes may be packed together: Provided that in the case of cocktail tomatoes, only 4 mm difference is permissible between the largest ad the smallest tomato	*
20. Colour variations	Tomatoes in the same container should be uniform in colour and ripeness	Tomatoes in the same container should be uniform in colour and ripeness	Different colour may be packaged together	*

* Not applicable

TABLE 2

PERMISSIBLE DEVIATIONS IN RESPECT OF QUALITY FACTORS BY NUMBER

Quality Factors	Maximum extent to which deviations may occur in tomatoes that are classified as-			
	Class 1	Class 2	Class 3	Lowest Class
1	2	3	4	5
1. Decay	1%	2%	5%	*
2. Foreign matter	0%	0%	0%	*
3. Firmness, scars, cracks, bruises, too green, appearance, form, injuries, leaking tomatoes, mosaïc, sunburn, dust, soil and other quality factors referred to in item 17 Table 1 individualy	5%	15%	25%	*
4. Deviations referred to in items 1, 2 and 3 collectively: provided that the deviations individually are within the specified requirements	5%	15%	25%	*
5. Size groups (excluding cherry tomatoes)	10%	15%	25%	*
6. Size variations	10%	15%	25%	*
7. Colour variations	20%	25%	*	*

* Not applicable

TABLE 3

SPECIFICATIONS WITH REGARD TO RECOMMENDED CONTAINERS

Type of container	Measurements			Recommended net packed content (kg)
	Outside length (mm)	Outside width (mm)	Maximum inside depth (mm)	
1	2			3
Prepack Punnet				0,5
Packet				1
Bulkpack	300	200	76	2
Tray	400	300	76	3,5
Box	400	200	125	5
B6 Carton	400	250	133,5	6
Traditional box	460	230	127	7
Box 6"	460	230	152	8
Jumbo (composite Wood/Carton) B9	400	300	180	9
Jumble	460	230	180	10
Crate	*	*	*	20

No. R. 1072 **1 Augustus 2003**

WET OP LANDBOUPRODUKSTANDAARDE, 1990
(WET No. 119 VAN 1990)

REGULASIES MET BETREKKING TOT DIE GEHALTE, GRADERING, VERPAKKING EN MERK VAN TAMATIES BESTEM VIR VERKOOP IN DIE REPUBLIEK VAN SUID-AFRIKA

Die Minister van Landbou het, kragtens artikel 15 van die Wet op Landbouprodukstandaarde, 1990 (Wet No. 119 van 1990) –

(a) die regulasies in die Bylae uitgevaardig;

(b) bepaal dat die genoemde regulasies op datum van publikasie in werking tree; en

(c) saamgelees met artikel 3(2) van genoemde Wet, die regulasies gepubliseer by Proklamasies Nos. R. 1977 van 7 September 1984, R. 2854 van 29 Desember 1989, Goewermentskennisgewings Nos. R. 1978 van 7 September 1984 en R. 602 van 30 Maart 1984 met ingang van genoemde datum van inwerkingtreding, herroep.

BYLAE

Woordomskrywing

1. In hierdie regulasies het enige woord of uitdrukking waaraan 'n betekenis in die Wet geheg is, daardie betekenis en, tensy uit die samehang anders blyk, beteken –

"bederf" 'n toestand van verrotting, swamontwikkeling of insekbesmetting wat deels of in die geheel die gehalte van die tamatie nadelig beïnvloed en wat visueel waarneembaar is;

"besending" --

(a) 'n hoeveelheid tamaties van dieselfde klas wat aan dieselfde eienaar behoort, wat op 'n bepaalde tydstip afgelewer word onder dekking van dieselfde vragbrief, aflewerings-brief of ontvangsbewys, of gelewer word deur dieselfde voertuig, of

(b) indien so 'n hoeveelheid ingedeel is in verskillende groottegroepe of kultivars, elke hoeveelheid van elk van die verskillende groottegroepe of kultivars;

"besering" 'n wond of prik wat die vlees van die tamatie blootstel, uitgesluit 'n wond of prik wat volkome genees of vereelt is;

"chemise residu's" residu's van landboumiddels wat ingevolge die Wet op Misstowwe, Veevoedsel, Landboumiddels en Veemiddels, 1947 (Wet No. 36 van 1947), toelaatbaar is vir die behandeling van peste en siektes en wat nie die voorgeskrewe maksimum residuperk oorskry nie;

"deursnee" die grootste dwarsafmeting van 'n tamatie, gemeet reghoekig met 'n lyn wat van die stingelent tot die bloment van die tamatie strek;

"die Wet" die Wet op Landbouprodukstandaarde, 1990 (Wet No. 119 van 1990);

"drahouer" 'n houer waarin meer as een verbruikersverpakking tamaties verpak is;

"ferm" 'n stadium van ontwikkeling waarby die weefsel van die tamatie ferm genoeg is om weerstand teen normale kommersiële hantering te bied;

"**geklassifiseerde tamaties**" tamaties wat volgens die klasse in hierdie regulasies gespesifiseer geklassifiseer is en waarvan die houer met 'n klasaanduiding of ander aanduiding dat die tamaties van 'n bepaalde klas is of bepaalde gehalte-eienskappe besit, gemerk is;

"**groottegroep**" 'n groottegroep in item 18 van Tabel 1 bedoel;

"**inspekteur**" die Uitvoerende Beampte of 'n beampte onder sy beheer, of 'n Gemagtigde of 'n werknemer van 'n Gemagtigde;

"**klas**" 'n klas in regulasie 3 bedoel;

"**kneusings**" enige drukwonde wat die gehalte van tamaties nadelig beïnvloed;

"**letsel**" enige merk op die buitewand van die tamatie wat die voorkoms daarvan nadelig beïnvloed;

"**misvormd**" dat die fatsoen van die tamatie nie kenmerkend van die betrokke kultivar is nie;

"**ongeklassifiseerde tamaties**" tamaties wat nie volgens die klasse in hierdie regulasie gespesifiseer en die gehaltespesifikasies in Tabel 1 geklassifiseer is nie, en waarvan die houer gemerk is met 'n aanduiding dat geen besliste klas of graad op die houer van toepassing is nie;

"**ongespesifiseerde gebreke**" enige gebrek wat veroorsaak is deur fisiologiese of nie-fisiologiese faktore wat die gehalte van die tamatie nadelig beïnvloed;

"**onverwerk**" dat die tamaties nie gekook, geskil, gedroog of op enige wyse verwerk is nie, uitgesonderd normale sorterings-, graderings-, verpakkings- en skoonmaakpraktyke;

"**tamatie**" die onverwerkte vrug van die plant *Lycopersicon lycopersicum* (L.) Karsten ex. Farwel bestem vir menslike verbruik en sluit alle kultivars, variëteite en kommersiële tipes in; en

"**vreemde stowwe**" enige stof wat nie natuurlikerwys deel van tamaties uitmaak nie en visueel daarop waarneembaar is.

Beperkings op die verkoop van tamaties

2. (1) Niemand mag in die Republiek van Suid-Afrika tamaties anders as ingevoerde tamaties in subregulasie (2) bedoel, verkoop nie --

(i) tensy die tamaties ongeklassifiseer of volgens die klasse in regulasie 3 geklassifiseer is;

(ii) tensy die tamaties aan die onderskeie standaarde vir geklassifiseerde of ongeklassifiseerde tamaties in regulasie 4, voldoen;

(iii) tensy die tamaties verpak is in 'n houer en op die wyse in regulasies 5, 6 en 7 voorgeskryf;

(iv) tensy die tamaties gemerk is met die besonderhede en op die wyse in regulasie 8 voorgeskryf;

(v) indien die tamaties 'n stof bevat wat aldus voorgeskryf is as 'n stof wat dit nie mag bevat nie;

(vi) indien die tamaties in 'n houer of op 'n wyse verpak is wat aldus voorgeskryf is as 'n houer waarin of 'n wyse waarop dit nie verpak mag word nie; en

(vii) indien die tamaties met besonderhede of op 'n wyse gemerk is wat aldus voorgeskryf is as besonderhede waarmee of 'n wyse waarop dit nie gemerk mag word nie.

(2) Ingevoerde tamaties is van die bepalings in subregulasie (1) vrygestel, mits die tamaties --

(a) voldoen aan die Codex, UNECE ("United Nations Economic Commission for Europe") of OECD ("Organisation for Economic Co-operation and Development") standaarde; en

(b) volgens bilaterale ooreenkoms vergesel word van 'n sertifikaat uitgereik deur die relevante regeringsinstansie verantwoordelik vir gehaltebeheer van vars vrugte en groente en waarin gesertifiseer word dat die gehalte van die tamaties soos geverifieer deur middel van die inspeksie aan die betrokke standaarde voldoen.

(3) Die Uitvoerende Beampte kan iemand skriftelik, in die geheel of gedeeltelik, op die voorwaardes wat hy of sy nodig ag, van die bepalings van subregulasie (1) vrystel.

GEHALTESTANDAARDE

Klasse vir tamaties

3. (1) Tamaties moet as geklassifiseerde tamaties óf as ongeklassifiseerde tamaties verkoop word.

(2) Daar is vier klasse geklassifiseerde tamaties naamlik Klas 1, Klas 2, Klas 3 en Laagste Klas.

Standaarde vir klasse

4. (1) Geklassifiseerde en ongeklassifiseerde tamaties moet --

(a) geskik vir menslike verbruik wees; en

(b) nie chemiese residu's wat die voorgeskrewe maksimum residuvlak oorskry, bevat nie.

(2) Behoudens die bepalings van subregulasie (2), moet tamaties wat as Klas 1, Klas 2, Klas 3 en Laagste Klas geklassifiseer is, voldoen aan die spesifikasies in Tabel 1 van die Aanhangsel uiteengesit.

(3) Die mate waarin Klas 1, Klas 2, Klas 3 en Laagste Klas tamaties mag afwyk van die spesifikasies in subregulasie (1) voorgeskryf, word ooreenkomstig regulasies 12, 13 en 14 bepaal en in Tabel 2 van die Aanhangsel uiteengesit.

HOUERS, VERPAKKINGS- EN MERKVEREISTES

Vereistes vir houers

5. (1) Houers waarin tamaties verpak word, moet –

(a) heel, skoon, geskik en sterk genoeg vir die verpakking en normale hantering van tamaties wees;

(b) nie 'n smaak of reuk aan die tamaties oordra nie;

(c) vry wees van enige stof anders as die tamaties wat daarin verpak is en die verpakkingsmateriaal waarin tamaties gebruiklikerwys verpak word;

(d) in die geval van houers wat hergebruik word, moet houers --

(i) van sodanige materiaal wees dat die houer skoongemaak en ontsmet kan word voordat dit hergebruik word;

(ii) deeglik skoongemaak wees voordat tamaties daarin verpak word; en

(iii) alle ou merke en etikette vooraf verwyder of deur nuwe etikette bedek wees.

(2) 'n Drahouer moet sterk genoeg wees dat dit nie tydens normale hantering en vervoerpraktyke sal uitdy of induik nie.

Stapeling van houers op palette

6. Indien houers wat tamaties bevat gepalettiseer word, moet --

(a) die palet skoon, onbeskadig en geskik wees en nie enige skadelike stof of stof wat nadelig vir menslike gesondheid is aan die tamaties oordra nie;

(b) palette wat uit hout vervaardig is, sonder bas wees;

(c) die palet vry van enige sigbare tekens van swamgroei wees;

(d) die palet vry van Arthropodabesmetting wees;

(e) die houers stewig en haaks met mekaar en met die palet gestapel word;

(f) slegs houers van dieselfde afmetings in dieselfde laag op die palet gestapel word;

(g) die houers nie onderstebo op 'n palet gestapel word nie.

Verpakkingsvereistes

7. Elke houer tamaties moet –

(a) tot die volle inhoudsvermoë daarvan met tamaties gevul word; en

(b) in die geval van geklassifiseerde tamaties, tamaties van dieselfde klas en groottegroep en so ver prakties moontlik van dieselfde kleur bevat.

Merkvereistes

8. (1) Houers wat geklassifiseerde tamaties bestem vir verkoop bevat, moet in duidelike en leesbare blokletters en syfers op 'n wyse in subregulasie (5) voorgeskryf, met die volgende besonderhede gemerk wees: Met dien verstande dat die besonderhede weggelaat mag word in die geval van 'n deursigtige houer van 5 kg en kleiner en waarvan die volle inhoud deur die verbruiker gesien kan word.

(a) Die naam of handelsmerk en fisiese of posadres van die produsent of eienaar of invoerder of verpakker van die tamaties wat in daardie houer gepak is.

(b) Die produsent se kode of die pakhuiskode (met die uitsondering van ingevoerde tamaties) wat deur die produsent of pakhuis, na gelang van die geval, by die Uitvoerende Beampte geregistreer is: Met dien verstande dat --

(aa) die pakhuiskode slegs gebruik mag word indien die oorsprong van die tamaties nie tot by die produsent teruggespoor kan word nie;

(bb) indien 'n produsent meer as een plaas besit of bedryf moet sodanige plase afsonderlik geregistreer word;

(cc) sodanige kode voorafgegaan moet word deur die uitdrukking "Produsent:", "Pakhuis:", "Verpakker:", of enige ander geskikte term met 'n ooreenstemmende betekenis; en

(dd) die produsent 'n stelsel in plek het om 'n spesifieke hoeveelheid tamaties of besending tot op landeryvlak terug te spoor.

(c) Die uitdrukking "Produk van" gevolg deur die naam van die land van oorsprong van die tamaties.

(d) Die klas, in die geval van Klas 1, Klas 2, Klas 3 en Laagste Klas: Met dien verstande dat addisioneel tot die klasbenaming die volgende benamings gebruik mag word:

Klas 1 - First, Klas 2 - Select, Klas 3 - Standard, Laagste Klas - Budget

(e) Die groottegroep van die tamaties in die houer, aangedui as minimum deursnee en maksimum deursnee of as "XX-groot" of "XXL", "Ekstra Groot" of "XL", "Groot" of "L", "Medium plus" of "MP", "Medium" of "M", "Klein" of "S", "Cocktails" of "C": Met dien verstande dat groottegroepaanduiding in die geval van tamaties aan 'n tros of kersietamaties weggelaat mag word.

(f) Die netto massa van die inhoud: Met dien verstande dat die netto massa weggelaat mag word in die geval waar gestandardiseerde houers deur die Wet op Handelsmetrologie, 1973 (Wet No. 77 van 1973) voorgeskryf word.

(g) Die woord "tamaties", in die geval van houers waarvan die inhoud nie van buite sigbaar is nie.

(2) Indien houers wat tamaties bevat in 'n drahouer verpak word, moet elke drahouer met die besonderhede in subregulasie (1) uiteengesit, asook met die aantal houers wat dit bevat, op ten minste een koppenent van elke drahouer gemerk word deur dit te stempel of te druk of deur 'n gedrukte etiket daarop te plak.

(3) Die besonderhede in subregulasie (1) voorgeskryf moet op die houer gemerk word deur dit te stempel, te druk of deur 'n gedrukte etiket daarop te plak.

(4) Besonderhede moet in enige van die amptelike tale gedruk wees: Met dien verstande dat international erkende simbole gebruik mag word.

(5) Indien die klas- of groottebenaming in enige stadium sou verander, moet die etikette vervang word tensy die nuwe klas- of groottebenaming in duidelike leesbare blokletters van minstens 2 mm groter as die vorige merke dwarsoor die ou klas- of groottebenaming met 'n geskikte stempel gestempel word.

(6) Elke houer wat tamaties bevat moet van slegs een etiket voorsien wees wat –

(a) heel, skoon en netjies is;

(b) van manillapapier of ander geskikte material vervaardig is; en

(c) stewig aan die houer geheg is op so 'n wyse dat oorstempeling moontlik is sonder om die houer oop te maak of te beskadig.

(7) Indien geklassifiseerde tamaties vir verkoop in los hoeveelhede uitgestal word –

(a) mag 'n hoeveelheid van 'n bepaalde klas, groottegroep of kultivar nie gemeng met tamaties van 'n ander klas, groottegroep of kultivar uitgestal word nie; en

(b) moet die klas, groottegroep en land van oorsprong van die tamaties in duidelike, leesbare letter op 'n kennisgewingbord wat prominent by die hoeveelheid tamaties geplaas is, aangedui word.

(8) Houers met ongeklassifiseerde tamaties moet in duidelike en leesbare blokletters gemerk word en voldoen met subregulasies 8(1)(a), (b), (c), (f) en (g) en subregulasie 8(2), (3), (4) en (6).

Verbode besonderhede

9. Geen bewoording, illustrasie of ander metode van begripsuitdrukking wat 'n wanvoorstelling behels of wat regstreeks of by implikasie, 'n misleidende indruk kan skep van die inhoud, mag op 'n houer wat tamaties bevat of op 'n etiket daaraan geheg of daarby uitgestal, verskyn nie.

MONSTERNEMING

Verkryging van 'n monster

10. (1) 'n Inspekteur moet 'n monster van die besending verkry, deur –

(a) in die geval van tamaties wat in houers verpak is –

(i) twee persent van die houers te neem en hom- of haarself tevrede stel dat die houers verteenwoordigend van die betrokke besending is; en

(ii) ten minste 25 tamaties, of die inhoud van die houer, indien die houer minder as 25 tamaties bevat, uit elke houer in subparagraaf (i) bedoel as inspeksiemonster te neem; en

(b) in die geval van tamaties wat in los hoeveelhede vir verkoop gehou of uitgestal is –

(i) afsonderlike monsters van die verskillende klasse en groottegroepe wat geïdentifiseer is te neem; en

(ii) ten minste 25 tamaties of al die tamaties indien die hoeveelheid uit minder as 25 tamaties bestaan, uit elke hoeveelheid in subparagraaf (i) bedoel as inspeksiemonster te neem.

(2) Elke monster wat ooreenkomstig die bepalings van subregulasie (1) geneem is, word geag verteenwoordigend te wees van die hoeveelheid waaruit daardie monster geneem is.

Afwykende monster

11. Indien 'n inspekteur tydens die onttrekking van 'n monster of tydens die ondersoek merk dat enige van die houers wat uit enige gedeelte van die besending afkomstig is, tamaties bevat wat ooglopend swakker is of verskil van die inhoud van houers wat die res van die besending verteenwoordig, moet hy die gemiddelde ondersoekresultate slegs op die houers afkomstig van die afwykende gedeelte van die besending bepaal, en verdere houers benodig vir ondersoek moet uit hierdie afwykende deel van die besending tamaties geneem word.

ONDERSOEKMETODES

Bepaling van persentasie te groen tamaties

12. Die persentasie te groen tamaties moet soos volg bepaal word:

(a) Neem uit die betrokke inspeksiemonster daardie tamaties wat die mees waarskynlike te groen is.

(b) Sny hoogstens vier tamaties deur die deursnee daarvan oop.

(c) Bepaal visueel hoeveel van die tamaties aldus oopgesny, pitte het wat onontwikkeld is en nie met jellie bedek is nie.

(d) Druk die getal aldus bepaal, uit as 'n persentasie van die totale getal tamaties in daardie monster, welke persentasie die mate verteenwoordig waartoe te groen tamaties in sodanige monster voorkom.

Bepaling van groottevariasie

13. Die groottevariasie moet, waar van toepassing, soos volg bepaal word:

(a) Meet die deursnee van elke tamatie in die betrokke inspeksiemonster.

(b) Bereken die gemiddelde deursnee van die tamaties in daardie inspeksiemonster.

(c) Bepaal die getal tamaties in daardie inspeksiemonster waarvan die deursnee met meer as 10 mm verskil van die gemiddeld aldus bereken.

(d) Druk die getal aldus bepaal, uit as 'n persentasie van die totale getal tamaties in daardie inspeksiemonster, welke persentasie die mate verteenwoordig waartoe tamaties met 'n onaanvaarbare groottevariasie in die monster voorkom.

Bepaling van persentasie van gehaltefaktore anders as te groen tamaties en groottevariasie

14. Die persentasie van gehaltefaktore anders as te groen tamaties en groottevariasie moet soos volg bepaal word:

(a) Ondersoek elke tamatie in die betrokke inspeksiemonster visueel of indien nodig, deur dit te hanteer of te sny.

(b) Bepaal ten opsigte van elkeen van die onderskeie gehaltefaktore die getal tamaties in daardie inspeksiemonster waarin afwykings voorkom.

(c) Druk die getal ten opsigte van elke gehaltefaktor aldus bepaal, uit as 'n persentasie van die totale getal tamaties in daardie inspeksiemonster, welke persentasie die mate verteenwoordig waartoe tamaties met die betrokke afwyking in die monster voorkom.

OORTREDING EN STRAWWE

15. Iemand wat die bepalings van hierdie regulasies oortree of versuim om daaraan te voldoen, is aan 'n misdryf skuldig en by skuldigbevinding strafbaar met 'n boete of met gevangenisstraf volgens artikel 11 van die Wet.

TABEL 1

STANDAARDE VIR TAMATIES

Gehaltefaktore	Standaarde waaraan voldoen moet word			
	Klas 1	Klas 2	Klas 3	Laagste Klas
1	2	3	4	5
1. Bederf	Nie toelaatbaar nie	Nie toelaatbaar nie	Nie toelaatbaar nie	*
2. Vreemde stowwe	Nie toelaatbaar nie	Nie toelaatbaar nie	Nie toelaatbaar nie	*
3. Fermheid	Taamlik ferm en nie oorryp nie	Redelik ferm en nie oorryp nie	Geen blaasagtigheid vertoon nie (insluitend kersie tamaties) en moet nog ferm genoeg wees om in skywe van 5 mm gesny te word (uitsluitend kersie tamaties)	*
4. Letsels (Uitsluitend kersie tamaties)	Letsels nie dieper nie as 1,5 mm en met 'n totale oppervlakte van ongeveer 225 mm^2 (sirkel van 15 mm deursnit) is toelaatbaar	Letsels nie dieper nie as 1,5 mm en met 'n totale oppervlakte van ongeveer 340 mm^2 ('n sirkel van 20 mm deursnit) is toelaatbaar	Letsels nie dieper nie as 3 mm en met 'n totale oppervlakte van ongeveer 615 mm^2 voorkom mits nie meer as 20% van die tamatie weggesny word met een of meer plat snitte om die beskadigde dele te verwyder	*
5. Katbakkies (misvorming en letsels by die bloment van die tamatie) (Uitsluitend kersie tamaties)	Enkel skurwe merke, nie dieper as 1,5 mm en met 'n totale oppervlakte van ongeveer 225 mm^2 voorkom (sirkel van 15mm deursnit) is toelaatbaar	Geplooide en verkurkte merke nie dieper as 1,5 mm en met 'n totale oppervlakte van ongeveer 340 mm^2 is toelaatbaar	Ernstige geplooide en verkurkte gedeeltes met 'n oppervlak van 615 mm^2 is toelaatbaar mits nie meer as 20% van die tamatie met een plat snit weggesny moet word om die misvormde dele te verwyder	*
6. Barste (a) Kringbarste (Uitsluitend kersie tamaties)	'n Kringbars of kringbarste nie dieper as 1,5 mm nie en wat individueel	'n Kringbars of kringbarste nie dieper as 1,5 mm nie en wat individueel	'n Kringbars of kringbarste nie dieper as 1,5 mm nie en wat individueel	*

	of gesamentlik 'n	of gesamentlik 'n	of gesamentlik 'n	
	kwart sirkel vorm is toelaatbaar	halwe sirkel vorm is toelaatbaar	volle sirkel vorm is toelaatbaar	
(b) Stingelentbarste (Uitsluitend kersie tamaties)	Een of meer barste wat individueel of gesamentlik nie langer as 10 mm en dieper as 1,5 mm is nie, is toelaatbaar	Een individuele bars nie langer as 20 mm en nie dieper as 1,5 mm of twee of meer barste wat gesamentlik nie langer as 20 mm en nie dieper as 1,5 mm is nie, is toelaatbaar	Tamaties swakker as die vir Klas 2, mits nie meer as 20% van die tamatie weggesny word met een of meer plat snitte om die beskadigde dele te verwyder en geen van die barste, tekens van bederf toon nie	*
7. Kneusings	Nie toelaatbaar nie	Nie toelaatbaar nie	Nie toelaatbaar nie	*
8. Te groen	Nie toelaatbaar nie	Nie toelaatbaar nie	Nie toelaatbaar nie	*
9. Voorkoms	Gesond en aantreklik	Gesond en aantreklik	Gesond en aantreklik	*
10. Vorm	Goed gevorm vir betrokke kultivar	Redelik goed gevorm vir betrokke kultivar	Tamaties met punte is toelaatbaar	*
11. Beserings	Nie toelaatbaar nie	Nie toelaatbaar nie	Nie toelaatbaar nie	*
12. Lekkende tamaties (nie as bederf gereken nie)	Nie toelaatbaar nie	Nie toelaatbaar nie	Nie toelaatbaar nie	*
13. Mosaïek	Nie toelaabaar nie	Mosaïekbesmetting met oppervlak van nie meer as 12,5% (1/8ste) van die totale oppervlak van die tamaties nie is toelaatbaar. Met dien verstande dat geen blaasagtigheid voorkom nie	Mosaïekbesmetting met oppervlak nie meer as 50% van die totale oppervlak van die tamatie nie, is toelaatbaar	*

14. Sonbrand	Nie toelaatbaar nie	'n Ligte geel skynsel sonder enige tekens van leeragtigheid en ingesonkenheid is toelaatbaar	'n Geel skynsel, ingesonkenheid en leeragtigheid is toelaatbaar mits nie meer as 20% van die tamatie weggesny word met een of meer plat snitte, om die beskadigde dele te verwyder en geen tekens van bederf voorkom nie	*
15. Stof	Nie toelaatbaar nie	Nie toelaatbaar nie	Nie toelaatbaar nie	*
16. Grondbesmeer	Nie toelaatbaar nie	Nat grondbesmeer tydens hantering en ligte grondspatsel is toelaatbaar	Grondbesmeerde tamaties wat tydens die groeiperiode met die grond in aanraking was, is toelaatbaar mits die tamaties nie bederf is nie	*
17. Ongespesifiseerde gebreke, gebreke nie in items 1-16 hierbo genoem	Nie toelaatbaar nie	Nie toelaatbaar nie	Nie toelaatbaar nie	*
18. Grootte volgens deursnee (Uitsluitend kersie tamaties) –				
(a) indien nie in groottegroepe verpak nie	Minstens 50 mm	Minstens 40 mm	Minstens 30 mm	*
(b) indien in groottegroep XX-Groot verpak	Meer as 95 mm	Meer as 95 mm	Meer as 95 mm	*
(c) indien in groottegroep Ekstra Groot	Meer as 83 mm maar hoogstens 94 mm	Meer as 83 mm maar hoogstens 94 mm	Meer as 83 mm maar hoogstens 94 mm	*
(d) indien in groottegroep Groot verpak	Meer as 73 mm maar hoogstens 82 mm	Meer as 73 mm maar hoogstens 82 mm	Meer as 73 mm maar hoogstens 82 mm	*

(e) indien in groottegroep Medium Plus verpak	Meer as 64 mm maar hoogstens 72 mm	Meer as 64 mm maar hoogstens 72 mm	Meer as 64 mm maar hoogstens 72 mm	*
(f) indien in groottegroep Medium verpak	Meer as 56 mm maar hoogstens 63 mm	Meer as 56 mm maar hoogstens 63 mm	Meer as 56 mm maar hoogstens 63 mm	*
(g) indien in groottegroep Klein verpak	Meer as 30 mm maar hoogstens 55 mm	Meer as 30 mm maar hoogstens 55 mm	Meer as 30 mm maar hoogstens 55 mm	*
(h) indien in groottegroep Cocktails verpak	Meer as 5 mm maar hoogstens 29 mm	Meer as 5 mm maar hoogstens 29 mm	Meer as 5 mm maar hoogstens 29 mm	*
19. Groottevariasie (Uitsluitend kersie tamaties)	Taamlik eenvormig in grootte: Met dien verstande dat in die geval van "cocktail"-tamaties slegs 4 mm verskil tussen die grootste en kleinste tamatie in dieselfde houer toelaatbaar is.	Redelik eenvormig in grootte: Met dien verstande dat in die geval van "cocktail"-tamaties slegs 4 mm verskil tussen die grooste en kleinste tamatie toelaatbaar is.	Verskillende groottes kan saam gepak word: Met dien verstande dat in die geval van "cocktail"-tamaties slegs 4 mm verskil tussen die grootste en kleinste tamatie toelaatbaar is.	*
20. Kleurvariasies	Tamaties in dieselfde houer moet eenvormig in rypheid en kleur wees	Tamaties in dieselfde houer moet eenvormig in rypheid en kleur wees	Min of meer dieselfde kleur in die houer	*

* Nie van toepassing nie

TABEL 2

TOELAATBARE AFWYKINGS TEN OPSIGTE VAN GEHALTEFAKTORE VOLGENS GETAL

Gehaltefaktore	Maksimum mate waartoe afwykings mag voorkom in tamaties wat geklassifiseer is as			
	Klas 1	Klas 2	Klas 3	Laagste klas
1	2	3	4	5
1. Bederf	1%	2%	5%	*
2. Vreemde stowwe	0%	0%	0%	*
3. Fermheid, letsels, katbakkies, barste, kneusings, te groen, voorkoms, vorm, beserings, lekkende tamaties, mosaïek, sonbrand, stof, grondbesmeer en ander gehaltefaktore in item 17 van Tabel 1 bedoel individueel	5%	15%	25%	*
4. Afwykings in items 1, 2 en 3 gesamentlik: Met dien verstande dat die afwykings individueel binne die gespesifiseerde perke is	5%	15%	25%	*
5. Groottegroepe (Uitsluitend kersie tamaties)	10%	15%	25%	*
6. Groottevariasies	10%	15%	25%	*
7. Kleurvariasies	20%	25%	*	*

* Nie van toepassing nie

TABEL 3

SPESIFIKASIES MET BETREKKING TOT AANBEVOLE HOUERS

Tipe houer	Afmetings			Aanbevole netto verpakkings-inhoud (kg)
	Buite lengtemaat (mm)	Buite breedte (mm)	Maksimum binne diepte (mm)	
1	2			3
Prepack Punnet				0,5
Sakkie				1
Bulkpak	300	200	76	2
Enkellaag	400	300	76	3,5
Metrieke Kissie	400	200	125	5
B6-Karton	400	250	133,5	6
Tradisionele kissie	460	230	127	7
Kissie 6"	460	230	152	8
Jumbo (saamgestel Hout/Karton) B9	400	300	180	9
Dompel Jumble	460	230	180	10
Krat	*	*	*	20

DEPARTMENT OF HEALTH
DEPARTEMENT VAN GESONDHEID

No. R. 1096 **1 August 2003**

MEDICINES AND RELATED SUBSTANCES ACT, 1965 (ACT NO. 101 OF 1965)

REGULATIONS RELATING TO FEES PAYABLE TO THE REGISTRAR: AMENDMENT

The Minister of Health, in consultation with the Medicines Control Council, intends, in terms of Section 35 of the Medicines and Related Substances Act, 1965 (Act No. 101 of 1965), to make the regulations in the Schedule.

Interested persons are invited to submit any comments or representations on the proposed regulations to the Director-General: Health, Private Bag X 828, Pretoria, 0001, within three months from the date of publication of this notice.

SCHEDULE

Definition

1. In this Schedule "the Regulations" means the Regulations Relating to Fees Payable to the Registrar, published under Government Notice No. R 539 of 25 April 2003 and "the Act" means the Medicines and Related Substances Act, 1965 (Act No. 101 of 1965).

Amendment of regulation 2 of the Regulations

2. Regulation 2 of the regulations is hereby amended-

(a) in subregulation (1), by the addition in paragraph (a), of the following subparagraphs:

"(viii) screening fee on receipt of an application: R1 050;
(ix) evaluation of additional submitted clinical data: R1 900;
(x) an application in terms of Section 15C of the Act: R12 500.
(xii) any medicine, the registration of which has been approved by the Council in terms of section 15(3) of the Act:

(aa) evaluation of request for rescheduling of medicines or substances: R1 900;

(bb) evaluation of request to amend package insert in respect of which clinical data relating to efficacy must be evaluated: R2 100.

(xiii) of any medicine in accordance with an expedited registration procedure in terms of section 15(2)(b) of the Act: R 5 000"

(b) in subsection (1), by the insertion after paragraph (a) of the following paragraph, and the existing paragraph (b) becoming paragraph (c):

"(b) in respect of registration of any medicine, the registration of which has been approved by the Council in terms of section 15(3) of the Act (in the case of medicines in minute-dose form; the fee encompasses different dilutions and different volumes, when submitted simultaneously for the same indication or intended use) and in respect of which an application fee has been paid: R600 for each registration."

(c) in subregulation (2), by the addition in paragraph (a), of the following subparagraphs:

"(iii) screening fee on receipt of the application: R1 050;

(iv) evaluation of additional submitted clinical data: R1 900

(v) any medicine, the registration of which has been approved by the Council in terms of section 15(3):

(aa) evaluation of request for rescheduling of products: R1 900;

(bb) evaluation of request to amend package insert in respect of which clinical data relating to efficacy must be evaluated: R2 100."

(d) by the insertion after subsection (2) of the following subsections, the current subsections (3) and (4) becoming subsections (8) and (9) respectively:

"(3) In respect of the submission of an application for the authorization of the use of an unregistered medicine:

(a) clinical trials (Companies): R6 300;

(b) clinical trials (Institutions): R3 100;

(c) any other clinical trial: R1 075;

(d) any other application except for the purpose of performing a clinical trial: R200.

(4) In respect of clinical trials amendments:

(a) fees in respect of an application for technical amendments: R1 050 per amendment;

(b) fees in respect of an application for administrative amendment: R320 per amendment.

(5) In respect of licences:

(a) an application for a license in terms of section 22C(1)(b) of the Act:

(i) Manufacturer: R3 500;

(ii) Distributor: R2 400;

(iii) Wholesaler: R2 400;

(b) an application for the renewal of a license in terms of section 22D of the Act, the licensing of which has been approved by the Council in terms of section 22C(1)(b) of the Act:

(i) Manufacturers: R3 500;

(ii) Distributors: R2 400;

(iii) Wholesalers: R2 400;

(c) annually, in respect of the retention of a licence issued in terms of section 22C(1)(b) of the Act: R600, and this fee is payable on or before the last working day of June that year, failing which registration may be cancelled;

(d) a licence fee in respect of any manufacturer, distributor or wholesaler, the license of which has been approved by the Council in terms of Section 22C(1)(b) of the Act: R600.

(6) In respect of performance of inspections to assess the quality of medicines:

(a) local manufacturing sites: R160 per hour;

(b) international manufacturing sites: R400 per hour.

(7) In respect of the issuing of a permit or a certificate:

(a) a certificate: R525;

(b) an import permit: R500;

(c) an export permit: R300;

(d) any other permit: R525; and

(e) permits issued by the Director-General in terms of Section 22A of the Act: R100."

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MINISTER OF HEALTH

SOUTH AFRICAN REVENUE SERVICE
SUID-AFRIKAANSE INKOMSTEDIENS

No. R. 1069 **1 August 2003**

CUSTOMS AND EXCISE ACT, 1964.-
AMENDMENT OF SCHEDULE NO. 1 (NO. 1/1/1207)

Under section 48 of the Customs and Excise Act, 1964, Part 1 of Schedule No. 1 to the said Act is hereby amended, **with retrospective effect to 1 January 2003,** to the extent set out in the Schedule hereto.

M MPAHLWA
DEPUTY MINISTER OF FINANCE

SCHEDULE

Heading	Subheading	CD	Article Description	Statistical Unit	Rate of duty		
					General	EU	SADC
04.02, 04.03, 04.04, 04.05 and 04.06			By the substitution for headings 04.02, 04.03, 04.04, 04.05 and 04.06 of the following:				
"04.02			**Milk and cream, concentrated or containing added sugar or other sweetening matter:**				
	0402.10	4	- In powder, granules or other solid forms, of a fat content, by mass, not exceeding 1,5 per cent	kg	450 c/kg	450 c/kg	90 c/kg
	0402.2		- In powder, granules or other solid forms, of a fat content, by mass, not exceeding 1,5 per cent:				
	0402.21	0	- - Not containing added sugar or other sweetening matter	kg	450 c/kg	450 c/kg	90 c/kg
	0402.29	1	- Other	kg	450 c/kg	450 c/kg	90 c/kg
	0402.9		- Other:				
	0402.91	2	- - Not containing added sugar or other sweetening matter	kg	450 c/kg	450 c/kg	90 c/kg
	0402.99	3	- - Other	kg	450 c/kg	450 c/kg	90 c/kg

Heading	Subheading	CD	Article Description	Statistical Unit	Rate of duty		
					General	EU	SADC
04.03			**Buttermilk, curdled milk and cream, yogurt, kephir and other fermented or acidified milk and cream, whether or not concentrated or containing added sugar or other sweetening matter or flavoured or containing added fruit, nuts or cocoa:**				
	0403.10	3	-Yogurt	kg	free	free	free
	0403.90	9	- Other	kg	450 c/kg	450 c/kg	90 c/kg
04.04			**Whey, whether or not concentrated or containing added sugar or other sweetening matter, products consisting of natural milk constituents, whether or not containing added sugar or other sweetening matter, not elsewhere specified or included:**				
	0404.10	7	- Whey and modified whey, whether or not concentrated or containing added sugar or other sweetening matter	kg	450 c/kg	450 c/kg	90 c/kg
	0404.90	3	- - Other	kg	450 c/kg	450 c/kg	90 c/kg
04.05			**Butter and other fats and oils derived from milk, dairy spreads:**				
	0405.10	0	- Butter	kg	450 c/kg	450 c/kg	100 c/kg
	0405.20	5	- Dairy spreads	kg	450 c/kg	450 c/kg	100 c/kg
	0405.90	7	- - Other	kg	450 c/kg	450 c/kg	100 c/kg
04.06			**Cheese and curd:**				
	0406.10	4	- Fresh (unripened or cured)cheese including whey cheese, and curd	kg	450 c/kg	450 c/kg	100 c/kg
	0406.20	9	- Grated or powdered cheese, of all kinds	kg	450 c/kg	450 c/kg	100 c/kg
	0406.30	3	- Processed cheese, not grated or powdered	kg	450 c/kg	450 c/kg	100 c/kg
	0406.40	8	- Blue veined cheese	kg	450 c/kg	450 c/kg	100 c/kg
	0406.90	0	- Other	kg	450 c/kg	450 c/kg	100 c/kg

No. R. 1069 **1 Augustus 2003**

DOEANE EN AKSYNSWET, 1964.-
WYSIGING VAN BYLAE NO. 1 (NO. 1/1/1207)

Kragtens artikel 48 van die Doeane- en Aksynswet, 1964, word Deel 1 van Bylae No. 1 by genoemde Wet hiermee gewysig,**met terugwerkende krag tot 1 Januarie 2003,** in die mate in die Bylae hierby aangetoon.

M MPAHLWA
ADJUNKMINISTER VAN FINANSIES

BYLAE

Pos	Subpos	TS	Artikel Beskrywing	Statistiese Eenheid	Skaal van Reg		
					Algemeen	EU	SAOG
04.02, 04.03, 04.04, 04.05 en 04.06			Deur poste 04.02, 04.03, 04.04, 04.05 en 04.06 deur die volgende te vervang:				
"04.02			**Melk en room, gekonsentreerd of wat bygevoegde suiker en ander versoetingsmiddels:**				
	0402.10	4	- In poeier, korrels of ander soliede vorms, met 'n vet inhoud, volgens massa, van hoogstens 1,5 persent	kg	450 c/kg	450 c/kg	90 c/kg
	0402.2		- In poeier, korrels of ander soliede vorms, met 'n vet inhoud, volgens massa, van hoogstens 1,5 persent:				
	0402.21	0	- - Wat nie bygevoegde suiker of ander versoetingsmiddels bevat nie	kg	450 c/kg	450 c/kg	90 c/kg
	0402.29	1	- - Ander	kg	450 c/kg	450 c/kg	90 c/kg
	0402.9		- Ander:				
	0402.91	2	- - Wat nie bygevoegde suiker of ander versoetingsmiddels bevat nie	kg	450 c/kg	450 c/kg	90 c/kg
	0402.99	3	- - Ander	kg	450 c/kg	450 c/kg	90 c/kg

Pos	Subpos	TS	Artikel Beskrywing	Statistiese Eenheid	Skaal van Reg		
					Algemeen	EU	SAOG
04.03			**Karringmelk, dikmelk en- room, jogurt, kefir en ander gegiste of aangesuurde melk of room, hetsy gekonsentreerd of wat bygevoegde suiker of ander versoetingsmiddels bevat of gegeurde of wat bygevoegde vrugte, neute of kakao bevat al dan nie:**				
	0403.10	3	- Jogurt	kg	vry	vry	vry
	0403.90	9	- Ander	kg	450 c/kg	450 c/kg	90 c/kg
04.04			**Wei, hetsy gekonsentreerd of wat bygevoegde suiker of ander versoetingsmiddels bevat al dan nie, produkte wat uit natuurlike melk bestanddele bestaan, hetsy dit bygevoegde suiker of ander versoetingsmiddels bevat al dan nie, nie elders vermeld of ingesluit nie:**				
	0404.10	7	- Wei en gemodifiseerde wei, hetsy gekonsentreerd of wat bygevoegde suiker of ander versoetingsmiddels bevat al dan nie:	kg	450 c/kg	450 c/kg	90 c/kg
	0404.90	3	- Ander	kg	450 c/kg	450 c/kg	90 c/kg
04.05			**Botter en ander vette en olies van melk verkry, suiwelsmere:**				
	0405.10	0	- Botter	kg	450 c/kg	450 c/kg	100 c/kg
	0405.20	5	- Suiwelsmere	kg	450 c/kg	450 c/kg	100 c/kg
	0405.90	7	- Ander	kg	450 c/kg	450 c/kg	100 c/kg
04.06			**Kaas en wrongel:**				
	0406.10	4	- Vars (onryp of onbeleë) kaas, met inbegrip van weikaas, en wrongel	kg	450 c/kg	450 c/kg	100 c/kg
	0406.20	9	- Gerasperde of verpoeierde kaas, van alle soorte	kg	450 c/kg	450 c/kg	100 c/kg
	0406.30	3	- Geprosesseerde kaas, nie gerasper of verpoier nie	kg	450 c/kg	450 c/kg	100 c/kg
	0406.40	8	- Blougeaarde kaas	kg	450 c/kg	450 c/kg	100 c/kg
	0406.90	0	- Ander kaas	kg	450 c/kg	450 c/kg	100 c/kg

No. R. 1070 **1 August 2003**

CUSTOMS AND EXCISE ACT, 1964.-
AMENDMENT OF SCHEDULE NO. 1 (NO. 1/1/1208)

Under section 48 of the Customs and Excise Act, 1964, Part 1 of Schedule No. 1 to the said Act is hereby amended, **with retrospective effect to 1 January 2003,** to the extent set out in the Schedule hereto.

M MPAHLWA
DEPUTY MINISTER OF FINANCE

SCHEDULE

Head= ing	Subheading	C D	Article Description	Statistical Unit	Rate of Duty		
					General	EU	SADC
11.02			By the substitution for subheadings 1102.30 and 1102.90 of the following:				
	"1102.30	1	- Rice flour	kg	20%	20%	free"
	1102.90		- Other:				
	.15	7	- - Oats flour	kg	2,75c/kg	free	free
	.30	0	- - Sorghum flour	kg	3%	free	free
	.90	4	- - Other	kg	0,65c/kg	free	free"
11.03			By the substitution for subheading 1103.19.10 of the following:				
	".10	0	- - - Of oats	kg	2,75c/kg	free	free"
			By the substitution for subheading 1103.20.20 of the following:				
	".20	5	- - Of oats, in immediate packings of a content exceeding 10 kg	kg	2,75c/kg	free	free"
11.04			By the substitution for subheading 1104.29.90 of the following:				
	".90	7	- - - Other	kg	20%	free	free"
11.05			By the substitution for heading 11.05 of the following:				
"11.05			**Flour, meal, powder, flakes, granules and pellets of potatoes:**				
	1105.10	3	- Flour, meal and powder	kg	20%	20%	free
	1105.20		- Flakes, granules and pellets:				
	.10	5	- - Pellets made from pieces of potatoes	kg	20%	20%	free
	.90	3	- - Other	kg	20%	20%	free"

Head=ing	Subheading	CD	Article Description	Statistical Unit	Rate of Duty		
					General	EU	SADC
11.06			By the substitution for subheading 1106.30 of the following:				
	1106.30	6	- Of the products of Chapter 8	kg	20%	20%	free"
11.07			By the substitution for subheading 1107.10.25 of the following:				
	".25	6	- - Of oats	kg	2,75c/kg	free	free"
			By the substitution for subheading 1107.10.90 of the following:				
	".90	6	- - Other	kg	0,85c/kg	free	free"
			By the substitution for subheadings 1107.20.25 and 1107.20.90 of the following:				
	".25	0	- - Of oats	kg	2,75c/kg	free	free
	.90	0	- - Other	kg	0,85c/kg	0,85c/kg	free"
11.08			By the substitution for subheading 1108.11.90 of the following:				
	".90	6	- - - Other	kg	10%	6,7%	free"
			By the substitution for subheading 1108.13.90 of the following:				
	".90	9	- - - Other	kg	10%	6,7%	free"
			By the substitution for subheading 1108.14.90 of the following:				
	".90	5	- - - Other	kg	10%	6,7%	free"
			By the substitution for subheading 1108.19.90 of the following:				
	".90	7	- - - Other	kg	10%	6,7%	free"
			By the substitution for subheading 1108.20 of the following:				
	"1108.20	9	- Inulin	kg	20%	20%	free"
12.06, 12.07 and 12.08			By the substitution for headings 12.06, 12.07 and 12.08 of the following:				
"12.06	1206.00	4	**Sunflower seeds, whether or not broken**	kg	9,4%	free	free
12.07			**Other oil seeds and oleaginous fruits, whether or not broken:**				
	1207.10	2	- Palm nuts and kernels	kg	7,4%	4,958%	free
	1207.20	7	- Cotton seeds	kg	9,4%	6,298%	free

Head=ing	Subheading	CD	Article Description	Statistical Unit	Rate of Duty		
					General	EU	SADC
	1207.30	1	- Castor oil seeds	kg	7,4%	4,958%	free
	1207.40	6	- Sesamum seeds	kg	7,4%	4,958%	free
	1207.50	0	- Mustard seeds	kg	free	free	free
	1207.60	5	- Safflower seeds	kg	9,4%	6,298%	free
	1207.9		- Other:				
	1207.91	5	- - Poppy seeds	kg	9,4%	6,298%	free
	1207.99	6	- - Other	kg	9,4%	6,298%	free"
12.08			**Flours and meals of oil seeds or oleaginous fruits (excluding those of mustard):**				
	1208.10	6	- Of soya beans	kg	20%	free	free
	1208.90	2	- Other	kg	20%	free	free"
12.11 and 12.12			By the substitution for headings 12.11 and 12.12 of the following:				
"12.11			**Plants and parts of plants (including seeds and fruits) of a kind used primarily in perfumery, in pharmacy or for insecticidal, fungicidal or similar purposes, fresh or dried, whether or not cut, crushed or powdered:**				
	1211.10	3	- Liquorice roots	kg	15%	10,05%	free
	1211.20	8	- Ginseng roots	kg	15%	10,05%	free
	1211.30	2	- Coca leaf	kg	15%	10,05%	free
	1211.40	7	- Poppy straw	kg	15%	10,05%	free
	1211.90		- Other:				
	.10	7	- - Pyrethrum	kg	free	free	free
	.20	4	- - Basil, borage, hyssop, mint, rosemary, rue and sage, neither ground nor crushed	kg	0,45c/kg	free	free
	.30	1	- - Basil, borage, hyssop, mint, rosemary, rue and sage, ground or crushed	kg	4c/kg	free	free
	.80	8	- - Other of a kind used primarily in pharmacy	kg	15%	10,05%	free
	.90	5	- - Other	kg	20%	20%	free

Head=ing	Subheading	CD	Article Description	Statistical Unit	Rate of Duty		
					General	EU	SADC
12.12			By the substitution for subheadings 1212.10 and 1212.20.of the following:				
	"1212.10	7	- Locust beans including locust bean seeds	kg	20%	20%	free
	1212.20		- Seaweeds and other algae:				
	.10	9	- - Frozen	kg	5%	free	free
	.90	7	- - Other	kg	free	free	free"
			By the substitution for subheading 1212.99.90 of the following:				
	".90	6	- - - Other	kg	20%	20%	free"
13.02			By the substitution for subheadings 1302.11 and 1302.12 of the following:				
	"1302.11	2	- - Opium	kg	15%	10,05%	free
	1302.12	9	- - Of liquorice	kg	15%	10,05%	free"
			By the substitution for subheadings 1302.19.10 and 1302.19.90 of the following:				
	".10	0	- - - Other, suitable for pharmaceutical purposes	kg	15%	10,05%	free
	.90	9	- - - Other	kg	25%	25%	free"
			By the substitution for subheading 1302.32.20 of the following:				
	".20	2	- - - Modified	kg	10%	6,7%	free"
			By the substitution for subheading 1302.39.20 of the following:				
	".20	7	- - - Modified	kg	10%	6,7%	free"
14.04			By the substitution for subheading 1404.20.90 of the following:				
	".90	5	- - Other	kg	15%	free	free"

Head= ing	Subheading	C D	Article Description	Statistical Unit	Rate of Duty		
					General	EU	SADC
15.05			By the substitution for subheading 1505.00.90 of the following:				
	".90	1	- Other	kg	10%	6,7%	free"
15.07			By the substitution for subheading 1507.90 of the following:				
	"1507.90	4	- Other	kg	10%	6,7%	free"
15.09			By the substitution for subheading 1509.90 of the following:				
	"1509.90	1	- Other	kg	10%	free	free"
15.10 and 15.11			By the substitution for headings 15.10 and 15.11 of the following:				
"15.10	1510.00	0	**Other oils and their fractions, obtained solely from olives, whether or not refined, but not chemically modified, including blends of these oils or fractions with oils or fractions of heading 15.19**	kg	10%	free	free
15.11			**Palm oil and its fractions, whether or not refined, but not chemically modified:**				
	1511.10	9	- Crude oil	kg	10%	free	free
	1511.90	5	- Other	kg	10%	6,7%	free"
15.12			By the substitution for subheading 1512.19 of the following:				
	"1512.19	9	- - Other	kg	10%	10%	free"
			By the substitution for subheading 1512.29 of the following:				
	"1512.29	4	- - Other	kg	10%	6,7%	free"
15.15			By the substitution for subheadings 1515.29.20 abd 1515.29.90 of the following:				
	".20	6	- - - In containers holding 205 li or less	kg	10%	10%	free
	.90	0	- - - Other	kg	10%	6,7%	free"

Head=ing	Subheading	CD	Article Description	Statistical Unit	Rate of Duty		
					General	EU	SADC
			By the substitution for subheadings 1515.40 and 1515.50 of the following:				
	"1515.40	7	- Tung oil and its fractions	kg	10%	free	free
	1515.50	1	- Sesame oil and its fractions	kg	10%	free	free"
			By the substitution for subheading 1515.90.10 of the following:				
	".10	7	- - Jojoba oil and its fractions	kg	10%	free	free"
15.16			By the substitution for subheading 1516.10 of the following:				
	"1516.10	7	- Animal fats and oils and their fractions	kg	10%	free	free"
			By the substitution for subheading 1516.20.90 of the following:				
	".90	7	- - Other	kg	10%	6,7%	free"
15.17			By the substitution for subheading 1517.90 of the following:				
	"1517.90	7	- Other	kg	10%	free	free"
15.18			By the substitution for heading 15.18 of the following:				
"15.18	1518.00	9	**Animal or vegetable fats and oils and their fractions, boiled, oxidized, dehydrated, sulphurised, blown, polymerized by heat in vacuum or in inert gas or otherwise chemically modified (excluding those of heading 15.16); inedible mixtures or preparations of animal or vegetable fats or oils or of fractions of different fats or oils of this Chapter, not elsewhere specified or included**	kg	10%	6,7%	free"
15.21			By the substitution for subheadings 1521.10.90 and 1521.90 of the following:				
	".90	7	- - Other	kg	10%	6,7%	free
	1521.90	8	- Other	kg	10%	6,7%	free"
16.01			By the substitution for subheading 1601.00.90 of the following:				
	".90	9	- Other	kg	40% or 240c/kg	40% or 240c/kg	8%"

Head=ing	Subheading	CD	Article Description	Statistical Unit	Rate of Duty		
					General	EU	SADC
16.02			By the substitution for subheading 1602.20.90 of the following:				
	".90	1	- - Other	kg	37% or 240c/kg	37% or 240c/kg	10%"
			By the substitution for subheadings 1602.32, 1602.39 and 1602.4 of the following:				
	"1602.32		- - Of fowls of the species GALLUS DOMESTICUS:				
	.10	0	- - - Pastes	kg	20%	20%	free
	.90	9	- - - Other	kg	220c/kg	220c/kg	44c/kg
	1602.39		- - Other:				
	.10	5	- - - Pastes	kg	20%	20%	free
	.90	3	- - - Other	kg	27%	27%	5%
	1602.4		- Of swine:				
	1602.41	1	- - Hams and cuts thereof	kg	15% or 130c/kg	15% or 130c/kg	8%
	1602.42	8	- - Shoulders and cuts thereof	kg	15% or 130c/kg	15% or 130c/kg	8%
	1602.49		- - Other, including mixtures:				
	.30	4	- - - Cooked rib, frozen, not marinated, in immediate of a content of 10 kg or more	kg	free	free	free
	.90	8	- - - Other	kg	15% or 130c/kg	15% or 130c/kg	8%"
			By the substitution for subheading 1602.50.90 of the following:				
	".90	5	- - Other	kg	40% or 240c/kg	40% or 240c/kg	8%"
			By the substitution for subheading 1602.90.10 of the following:				
	".10	5	- - Pastes	kg	20%	20%	free"
			By the substitution for subheading 1602.90.90 of the following:				
	".90	3	- - Other	kg	40% or 240c/kg	40% or 240c/kg	8%"

Head=ing	Subheading	CD	Article Description	Statistical Unit	Rate of Duty		
					General	EU	SADC
16.03			By the substitution for heading 16.03 of the following:				
"16.03	1603.00		**Extracts and juices of meat, fish or crustaceans, mollusks or other aquatic invertebrates:**				
	.10	8	- Extracts of meat	kg	25%	25%	free
	.20	5	- Juices of meat; extracts of fish	kg	25%	25%	free
	.90	6	- Other	kg	25%	25%	free"
16.04			By the substitution for subheading 1604.12.10 of the following:				
	".10	9	- - - Frozen	kg	25% or 200c/kg	25% or 200c/kg	free"
			By the substitution for subheading 1604.13.80 of the following:				
	".80	6	- - - Other, frozen	kg	25% or 200c/kg	25% or 200c/kg	free"
			By the substitution for subheading 1604.14.10 of the following:				
	".10	1	- - - Frozen	kg	25% or 200c/kg	25% or 200c/kg	free"
			By the substitution for subheading 1604.15.10 of the following:				
	".10	8	- - - Frozen	kg	25% or 200c/kg	25% or 200c/kg	free"
			By the substitution for subheading 1604.16 of the following:				
	"1604.16	7	- - Anchovies	kg	25%	25%	free"
			By the substitution for subheading 1604.19.10 of the following:				
	".10	3	- - - Frozen	kg	25% or 200c/kg	25% or 200c/kg	free"
			By the substitution for subheading 1604.20.30 of the following:				
	".30	5	- - - Other anchovies	kg	25%	25%	free"

Head=ing	Subheading	CD	Article Description	Statistical Unit	Rate of Duty		
					General	EU	SADC
			By the substitution for subheading 1604.20.80 of the following:				
	".80	1	- - Other, frozen	kg	25% or 200c/kg	25% or 200c/kg	free"
			By the substitution for subheading 1604.30 of the following:				
	"1604.30		- Caviar and caviar substitutes:				
	.10	5	- - Caviar	kg	30%	30%	6%
	.20	2	- - Caviar substitutes	kg	27%	27%	5%"
16.05			By the substitution for subheading 1605.30.90 of the following:				
	".90	7	- - Other	kg	30%	30%	6%"
17.04			By the substitution for heading 17.04 of the following:				
"17.04			**Sugar confectionery (including white chocolate), not containing cocoa:**				
	1704.10	0	- Chewing gum, whether or not sugar-coated	kg	25%	25%	6%
	1704.90	7	- Other	kg	25%	25%	6%"
18.06			By the substitution for heading 18.06 of the following:				
"18.06			**Chocolate and other food preparations containing cocoa:**				
	1806.10	8	- Cocoa powder, containing added sugar or other sweetening matter	kg	17%	17%	free
	1806.20		- Other preparations in blocks, slabs or bars of a mass exceeding 2 kg or in liquid, paste, powder, granular or other bulk form in containers or immediate packings, of a content exceeding 2 kg:				
	.10	1	- - Chocolate and sugar confectionery containing cocoa	kg	21%	21%	6%
	.90	5	- - Other	kg	17%	17%	free

Head=ing	Subheading	CD	Article Description	Statistical Unit	Rate of Duty		
					General	EU	SADC
	1806.3		- Other, in blocks, slabs or bars:				
	1806.31	5	- - Filled	kg	20%	20%	free
	1806.32	1	- - Not filled	kg	20%	20%	free
	1806.90	6	- Other	kg	17%	free	free"
19.01 and 19.02			By the substitution for headings 19.01 and 19.02 of the following:				
"19.01			**Malt extract; food preparations of flour, groats, meal starch or malt extract, not containing cocoa or containing less than 40 per cent by mass of cocoa calculated on a totally defatted basis, not elsewhere specified or included; food preparations of goods of headings 04.01 to 04.04, not containing cocoa or containing less than 5 per cent by mass of cocoa calculated on a totally defatted basis not elsewhere specified or included:**				
	1901.10	3	- Preparations for infant use, put up for retail sale	kg	20%	20%	free
	1901.20	8	- Mixes and doughs for the preparation of baker's wares of heading 19.05	kg	20%	20%	free
	1901.90		- Other:				
	.10	7	- - Cornflour	kg	10% or 55c/kg less 90%	6,7% or 55c/kg less 90%	free
	.90	5	- - Other	kg	20%	20%	free

Head=ing	Subheading	CD	Article Description	Statistical Unit	Rate of Duty		
					General	EU	SADC
19.02			**Pasta, whether or not cooked or stuffed (with meat or other substances) or otherwise prepared, such as spaghetti, macaroni, noodles, lasagna, gnocchi, ravioli, cannelloni; couscous, whether or not prepared:**				
	1902.1		- Uncooked pasta, not stuffed or otherwise prepared:				
	1902.11	3	- - Containing eggs	kg	30%	30%	6%
	1902.19	4	- - Other	kg	30%	30%	6%
	1902.20		- Stuffed pasta, whether or not cooked otherwise prepared:				
	.10	9	- - Stuffed with meat	kg	3c/kg	free	free
	.20	6	- - Stuffed with fish, crustaceans or molluscs	kg	5,5c/kg	free	free
	.90	7	- - Other	kg	20%	20%	free
	1902.30	6	- Other pasta	kg	20%	20%	free
	1902.40		- Couscous:				
	.10	8	- - Not prepared	kg	30%	30%	6%
	.90	6	- - Other	kg	20%	20%	free"
19.04 and 19.05			By the substitution for headings 19.04 and 19.05 of the following:				
"19.04			**Prepared foods obtained by the swelling or roasting of cereals or cereal products (for example, corn flakes); cereals (excluding maize (corn)) in grain form or in the form of flakes or other worked grains (except flour, groats and meal), pre-cooked or otherwise prepared, not elsewhere specified or included:**				
	1904.10	4	- Prepared foods obtained by the swelling or roasting of cereal products	kg	25%	25%	free
	1904.20		- Prepared foods obtained from unroasted cereal flakes and roasted cereal flakes or swelled cereals:				
	.10	6	- - "Muesli" type preparations based on unroasted cereal flakes	kg	5%	free	free
	.90	4	- - Other	kg	25%	25%	free

Head=ing	Subheading	CD	Article Description	Statistical Unit	Rate of Duty		
					General	EU	SADC
	1904.30	3	- Bulgar wheat	kg	20%	20%	free
	1904.90		- Other:				
	.10	8	- - Prepared rice	kg	5c/kg	free	free
	.90	6	- - Other	kg	20%	20%	free"
19.05			**Bread, pastry, cakes, biscuits and other bakers wares, whether or not containing cocoa; communion wafers, empty cachets of a kind suitable for pharmaceutical use, sealing wafers, rice paper and similar products:**				
	1905.10	8	- Crispbread	kg	25%	25%	free
	1905.20	2	- Gingerbread and the like	kg	25%	25%	free
	1905.3		- Sweet biscuits; waffles and wafers:				
	1905.31	3	- - Sweet biscuits	kg	25%	25%	free
	1905.32	6	- - Waffles and wafers	kg	25%	25%	free
	1905.40	1	- Rusks, toasted bread and similar toasted products	kg	25%	25%	free
	1905.90		- Other:				
	.10	1	- - Gluten bread	kg	3,6c/kg with a maximum of 25%	2,41c/kg wth a maximum of 25%	free
	.20	9	- - Communion wafers, empty cachets of a kind suitable for pharmaceutical use, sealing wafers, rice paper and similar products	kg	20%	13,4%	free
	.30	6	- - Bread crumbs	kg	20%	13,4%	free
	.90	1	- - Other	kg	25%	16,75%	free"
20.01			By the substitution for heading 20.01 of the following:				
"20.01			**Vegetables, fruit, nuts and other edible parts of plants prepared or preserved by vinegar or acetic acid:**				
	2001.10	5	- Cucumbers and gherkins	kg	20%	13,4%	free
	2001.90		- Other:				
	.10	9	- - Olives	kg	25%	25%	free

Head=ing	Subheading	CD	Article Description	Statistical Unit	Date of Duty		
					General	EU	SADC
	.20	5	- - Onions	kg	20%	free	free
	.90	7	- - Other	kg	20%	20%	free"
20.02			By the substitution for subheadings 2002.10.10 and 2002.10.80 of the following:				
	".10	6	- - Frozen (excluding prepared meals)	kg	20%	20%	free
	.80	7	- - Other, in airtight metal containers	kg	30%	30%	free"
20.04			By the substitution for heading 20.04 of the following:				
"20.04			**Other vegetables prepared or preserved otherwise than by vinegar or acetic acid, frozen (excluding products of heading 20.06):**				
	2004.10	6	- Potatoes	kg	20%	20%	free
	2004.90		- Other vegetables and mixtures of vegetables:				
	.10	1	- - Cabbages, cucumbers and gherkins	kg	4,15c/kg	free	free
	.20	7	- - Peas (PISUM SATIVUM), beans (VIGNA SPP., PHASEOLUS SPP.) and lentils	kg	4,15c/kg	free	free
	.30	4	- - Olives	kg	25%	25%	free
	.90	8	- - Other	kg	20%	20%	free"
20.05			By the substitution for subheadings 2005.90.20 and 2005.90.30 of the following:				
	".20	0	- - Lentils, cucumbers and gherkins	kg	4,15c/kg	free	free
	.30	8	- - Sauerkraut	kg	4,.15c/kg	free	free"
20.06, 20.07 and 20.08			By the substitution for headings 20.06, 20.07 and 20.08 of the following:				
"20.06	2006.00		**Vegetables, fruit, nuts, fruit-peel and other parts of plants, preserved by sugar (drained, glace or crystallized):**				
	.10	6	- Candied peel	kg	free	free	free

Head=ing	Subheading	CD	Article Description	Statistical Unit	Rate of Duty		
					General	EU	SADC
	.20	3	- Crystallised fruits	kg	30% or 7,25c/kg	free	free
	.30	0	- Cherries, drained or glacé	kg	20% or 215c/kg less 80%	20% or 215c/kg less 80%	free
	.90	4	- Other	kg	30% or 7,25c/kg	30% or 7,25c/kg	6%"
20.07			**Jams, fruit jellies, marmalades, fruit or nut puree and fruit or nut pastes, obtained by cooking, whether or not containing added sugar or other sweetening matter:**				
	2007.10	7	- Homogenised preparations	kg	30% or 4,5c/kg	20,1% or 4,5c/kg	6%
	2007.9		- Other:				
	2007.91	9	- - Citrus fruit	kg	30% or 4,5c/kg	20,1% or 4,5c/kg	6%
	2007.99	0	- - Other	kg	30% or 4,5c/kg	20,1% or 4,5c/kg	6%
20.08			**Fruit, nuts and other edible parts of plants, otherwise prepared or preserved, whether or not containing added sugar or other sweetening matter or spirit, not elsewhere specified or included:**				
	2008.01		- Nuts, ground-nuts and other seeds, whether or not mixed together:				
	2008.11	7	- - Ground-nuts	kg	0,99c/kg	free	free
	2008.19	8	- - Other including mixtures	kg	free	free	free
	2008.20	5	- Pineapples	kg	55%	36,85%	11%
	2008.30	2	- Citrus fruit	kg	5%	3,35%	free
	2008.40	4	- Pears	kg	5%	3,35%	free
	2008.50	9	- Apricots	kg	5%	3,35%	free
	2008.60	3	- Cherries	kg	5%	3,35%	free
	2008.70	8	- Peaches, including nectarines	kg	5%	3,35%	free
	2008.80	2	- Strawberries	kg	5%	3,35%	free

Head=ing	Subheading	CD	Article Description	Statistical Unit	Rate of Duty		
					General	EU	SADC
	2008.9		- Other, including mixtures other than those of subheading 2008.19:				
	2008.91	3	- - Palm hearts	kg	20%	20%	free
	2008.92	8	- - Mixtures	kg	5%	3,35%	free
	2008.99		- - Other:				
	.40	3	- - - Tamarinds	kg	free	free	free
	.50	0	- - - Ginger preserved in syrup, in immediate packings of a content of 45 kg or more	kg	free	free	free
	.90	3	- - - Other	kg	5%	3,35%	free"
20.09			By the substitution for subheadings 2009.1, 2009.2, 2009.3, 2009.4 and 2009.50 of the following:				
	"2009.1		- Orange juice:				
	2009.11	0	- - Frozen	kg	25%	16,75%	free
	2009.12	7	- - Not frozen, of a Brix value not exceeding 20	kg	25%	16,75%	free
	2009.19	1	- - Other	kg	25%	16,75%	free
	2009.2		- Grapefruit juice:				
	2009.21	5	- - Of a Brix value not exceeding 20	kg	25%	16,75%	free
	2009.29	6	- - Other	kg	25%	16,75%	free
	2009.3		- Juice of any other single citrus fruit:				
	2009.31	1	- - Of a Brix value not exceeding 20	kg	25%	16,75%	free
	2009.39	0	- - Other	kg	25%	16,75%	free
	2009.4		- Pineapple juice:				
	2009.41	4	- - Of a Brix value not exceeding 20	kg	25%	16,75%	free
	2009.49	5	- - Other	kg	25%	16,75%	free
	2009.50	2	- Tomato juice	kg	25%	16,75%	free"

Head=ing	Subheading	CD	Article Description	Statistical Unit	Rate of Duty		
					General	EU	SADC
			By the substitution for subheadings 2009.80 and 2009.90 of the following:				
	"2009.80		- Juice of any other single fruit or vegetable:				
	.10	3	- - Fruit juices	kg	20%	20%	free
	.20	0	- - Vegetable juices	kg	25%	16,75%	free
	2009.90		- Mixtures of juices:				
	.10	8	- - Fruit juices	kg	20%	13,4%	free
	.20	5	- - Vegetable juices	kg	25%	16,75%	free"
21.01, 21.02, 21.03, 21.04 21.05 and 21.06			By the substitution for headings 21.01, 21.02, 21.03, 21.04, 21.05 and 21.06 of the following:				
"21.01			**Extracts, essences and concentrates, of coffee, tea or maté and preparations with a basis of these products or with a basis of coffee, tea or maté; roasted chicory and other roasted coffee substitutes, and extracts, essences and concentrates thereof:**				
	2101.1		- Extracts essences and concentrates, of coffee, and preparations with a basis of these extracts, essences or concentrates or with a basis of coffee:				
	2101.11		- - Extracts, essences and concentrates:				
	.10	0	- - - Mixtures of ground roasted coffee with vegetable fats	kg	20%	20%	free
	.90	9	- - - Other	kg	25%	25%	free
	2101.12		- - Preparations with a basis of extracts, essences or concentrates or with a basis of coffee:				
	.10	7	- - - Mixtures of ground roasted coffee with vegetable fats	kg	20%	13,4%	free
	.90	5	- - - Other	kg	25%	25%	free

Head=ing	Subheading	CD	Article Description	Statistical Unit	Rate of Duty		
					General	EU	SADC
	2101.20	1	- Extracts, essences and concentrates, of tea or mate, and preparations with a basis of these extracts, essences or concentrates with a basis of tea or maté	kg	free	free	free
	2101.30		- Roasted chicory and other roasted coffee substitutes, and extracts, essences and concentrates thereof:				
	.10	3	- - Roasted chicory and other roasted coffee substitutes	kg	9,2c/kg	free	free
	.90	1	- - Other	kg	25%	25%	free
21.02			**Yeasts (active or inactive); other single-cell micro-organisms, dead (but not including vaccines of heading 30.02); prepared baking powders:**				
	2102.10	0	- Active yeasts	kg	15%	10,05%	free
	2102.20	5	- Inactive yeasts; other single-cell micro-organisms, dead	kg	15%	10,05%	free
	2102.30	5	- Prepared baking powders	kg	30%	30%	6%
21.03			**Sauces and preparations therefore; mixed condiments and mixed seasonings; mustard flour and meal and prepared mustard:**				
	2103.10	4	- Soya sauce	kg	5%	free	free
	2103.20	9	- Tomato ketchup and other tomato sauces	kg	5%	free	free
	2103.30		- Mustard flour and meal and prepared mustard:				
	.10	0	- - Mustard flour and meal	kg	8c/kg	free	free
	.20	8	- - Prepared mustard	kg	5%	free	free
	2103.90		- Other:				
	.10	8	- - Sauces and preparations therefore, of flour, meal or malt extract	kg	20%	20%	free
	.90	6	- - Other	kg	5%	free	free

Head=ing	Subheading	CD	Article Description	Statistical Unit	Rate of Duty		
					General	EU	SADC
21.04			**Soups and broths and preparations therefore; homogenised composite food preparations:**				
	2104.10		- Soups and broths and preparations therefore:				
	.10	5	- - Preparations for soups and broths	kg	20%	20%	free
	.20	2	- - Other, in powder, solid or other concentrated form	kg	25%	25%	free
	.90	3	- - Other	kg	3c/kg	free	free
	2104.20	2	- Homogenised composite food preparations	kg	free	free	free
21.05	2105.00		**Ice cream and other edible ice, whether or not containing cocoa:**				
	.10	4	- Ice cream not containing cocoa or added sugar	kg	10%	10%	free
	.20	1	- Ice cream containing cocoa or added sugar	kg	25%	25%	free
	.90	2	- Other	kg	20%	20%	free
21.06			**Food preparations not elsewhere specified or included:**				
	2106.10		- Protein concentrates and textured protein substances:				
	.10	2	- - Soya protein concentrates, in powder form, with a protein content, on the basis of the dry substance, exceeding 65 per cent	kg	10%	6,7%	free
	.90	0	- - Other	kg	20%	20%	free
	2106.90		- Other:				
	.17	6	- - Disaccharide free infants' food, in powder form	kg	free	free	free
	.25	7	- - Syrups (excluding syrups with a basis of fruit juice)	kg	free	free	free
	.35	4	- - Sweetening substances (excluding sweetening substances with a basis of saccharine)	kg	5%	free	free

Head=ing	Subheading	CD	Article Description	Statistical Unit	Rate of Duty		
					General	EU	SADC
	.50	8	- - Mixtures of chemicals and foodstuffs of a kind used in the preparation of human foodstuffs	kg	10%	6,7%	free
	.67	2	- - Compound alcoholic preparations of a kind used for the manufacture of beverages (excluding those based on odoriferous substances)	kg	154c/li	154c/li	31c/li
	.90	7	- - Other	kg	20%	20%	free"
22.02 and 22.03			By the substitution for headings 22.02 and 22.03 of the following:				
"22.02			**Waters, including mineral waters and aerated waters, containing added sugar or other sweetening matter or flavoured, and other non-alcoholic beverages (excluding fruit or vegetable juices of heading 20.09):**				
	2202.10		- Waters, including mineral waters and aerated waters, containing added sugar or other sweetening matter or flavoured:				
	.10	5	- - In sealed containers holding 2,5 li or less (excluding those in collapsible plastic tubes)	li	4,36c/li	free	free
	.90	8	- - Other	li	3,3c/li	free	free
	2202.90		- Other:				
	.20	3	- - In sealed containers holding 2,5 li or less (excluding those in collapsible plastic tubes and those with a basis of milk)	li	25% plus 1,04c/li	free	free
	.90	4	- - Other	li	25%	free	free
22.03	2203.00	1	**Beer made from malt**	li	5%	free	free"
22.07 and 22.08			By the substitution for headings 22.07 and 22.08 of the following:				
"22.07			**Undenatured ethyl alcohol of an alcoholic strength by volume of 80 per cent vol. or higher; ethyl alcohol and other spirits, denatured, of any strength:**				
	2207.10	0	- Undenatured ethyl alcohol of an alcoholic strength by volume of 80 per cent vol. or higher	li	317c/li of absolute alcohol	317c/li of absolute alcohol	63c/li of absolute alcohol
	2207.20	5	- Ethyl alcohol and other spirits, denatured, of any strength	li	317c/li of absolute alcohol	317c/li of absolute alcohol	63c/li of absolute alcohol

Head=ing	Subheading	CD	Article Description	Statistical Unit	Rate of Duty		
					General	EU	SADC
22.08			**Undenatured ethyl alcohol of an alcoholic strength by volume of less than 80 per cent vol.; spirits, liqueurs and other spirituous beverages:**				
	2208.20		- Spirits obtained by distilling grape wine or grape marc:				
	.10	6	- - In containers holding 2 li or less	li	154c/li	154c/li	31c/li
	.90	4	- - Other	li	136c/li	136c/li	27c/li
	2208.30		- Whiskies:				
	.10	0	- - In containers holding 2 li or less	li	154c/li	154c/li	31c/li
	.90	9	- - Other	li	136c/li	136c/li	27c/li
	2208.40		- Rum and tafia:				
	.10	5	- - In containers holding 2 li or less	li	154c/li	154c/li	31c/li
	.90	3	- - Other	li	136c/li	136c/li	27c/li
	2208.50		- Gin and Geneva:				
	.10	9	- - In containers holding 2 li or less	li	154c/li	154c/li	31c/li
	.90	8	- - Other	li	136c/li	136c/li	27c/li
	2208.60		- Vodka:				
	.10	4	- - In containers holding 2 li or less	li	154c/li	154c/li	31c/li
	.90	2	- - Other	li	136c/li	136c/li	27c/li
	2208.70		- Liqueurs and cordials:				
	.20	6	- - In containers holding 2 li or less	li	154c/li	154c/li	31c/li
	.90	7	- - Other	li	136c/li	136c/li	27c/li
	2208.90		- Other:				
	.20	5	- - In containers holding 2 li or less	li	154c/li	154c/li	31c/li
	.90	6	- - Other	li	136c/li	136c/li	27c/li"

Head=ing	Subheading	CD	Article Description	Statistical Unit	Rate of Duty		
					General	EU	SADC
23.04, 23.05, 23.06 and 23.07			By the substitution for headings 23.04, 23.05, 23.06 and 23.07 of the following:				
"23.04	2304.00	7	**Oil-cake and other solid residues, whether or not ground or in the form of pellets, resulting from the extraction of soya-bean oil**	kg	6,6%	free	free
23.05	2305.00	0	**Oil-cake and other solid residues, whether or not ground or in the form of pellets, resulting from the extraction of groundnut-oil**	kg	6,6%	free	free
23.06			**Oil-cake and other solid residues, whether or not ground or in the form of pellets, resulting from the extraction of vegetable fats or oils (excluding those of heading 23.04 or 23.05):**				
	2306.10	9	- Of cotton seeds	kg	6,6%	free	free
	2306.20	3	- Of linseed	kg	6,6%	free	free
	2306.30	8	- Of sunflower seeds	kg	6,6%	free	free
	2306.4		- Of rape or colza seeds:				
	2306.41	9	- - Of low erucic acid rape or colza seeds	kg	6,6%	free	free
	2306.49	7	- - Other	kg	6,6%	free	free
	2306.50	7	- Of coconut or copra	kg	6,6%	free	free
	2306.60	1	- Of palm nuts or kernels	kg	6,6%	free	free
	2306.70	6	- Of maize (corn) germ	kg	6,6%	2,21%	free
	2306.90	5	- Other	kg	6,6%	free	free
23.07	2307.00	8	**Wine lees; argol**	kg	20%	20%	free"
23.09			By the substitution for subheading 2309.10 of the following:				
	"2309.10	0	- Dog or cat food, put up for retail sale	kg	20%	20%	free"
			By the substitution for subheading 2309.90 of the following:				
	".90	1	- - Other	kg	20%	20%	free"

Head=ing	Subheading	CD	Article Description	Statistical Unit	Rate of Duty		
					General	EU	SADC
24.01			By the substitution for subheading 2401.30 of the following:				
	"2401.30	1	- Tobacco refuse	kg	77c/kg	77c/kg	15c/kg"
24.02 and 24.03			By the substitution for headings 24.02 and 24.03 of the following:				
"24.02			**Cigars, cheroots, cigarillos and cigarettes, of tobacco or of tobacco substitutes:**				
	2402.10	6	- Cigars, cheroots and cigarillos, containing tobacco	kg	110c/kg net	110c/kg net	free
	2402.20	0	- Cigarettes containing tobacco	kg	45%	45%	9%
	2402.90	2	- Other	kg	45%	45%	9%
24.03			**Other manufactured tobacco and manufactured tobacco substitutes; "homogenized" or "reconstituted" tobacco; tobacco extracts and essences:**				
	2403.10		- Smoking tobacco, whether or not containing tobacco substitutes in any proportion:				
	.10	7	- - Pipe tobacco, in immediate packings of a content of less than 5 kg	kg	45%	45%	9%
	.20	4	- - Other pipe tobacco	kg	45%	45%	9%
	.30	1	- - Cigarette tobacco	kg	40%	40%	8%
	2403.9		- Other:				
	2403.91	2	- - "Homogenised" or "reconstituted" tobacco	kg	15%	free	free
	2403.99		- - Other:				
	.10	0	- - - Snuff	kg	40%	40%	8%
	.20	8	- - - Tobacco extracts and essences	kg	free	free	free
	.90	9	- - - Other	kg	45%	45%	9%"

No. R. 1070 **1 Augustus 2003**

DOEANE EN AKSYNSWET, 1964.-
WYSIGING VAN BYLAE NO. 1 (NO. 1/1/1208)

Kragtens artikel 48 van die Doeane- en Aksynswet, 1964, word Deel 1 van Bylae No. 1 by genoemde Wet hiermee gewysig, **met terugwerkende krag tot 1 Januarie 2003,** in die mate in die Bylae hierby aangetoon.

M MPAHLWA
ADJUNKMINISTER VAN FINANSIES

BYLAE

Pos	Subpos	TS	Artikel Beskrywing	Statis=tiese Eenheid	Skaal van Reg		
					Algemeen	EU	SAOG
11.02			Deur subposte 1102.30 en 1102.90 deur die volgende te vervang:				
	"1102.30	1	- Rysmeelblom	kg	20%	20%	vry"
	1102.90		- Ander:				
	.15	7	- - Hawermeelblom	kg	2,75c/kg	vry	vry
	.30	0	- - Sorghummeelblom	kg	3%	vry	vry
	.90	4	- - Ander	kg	0,65c/kg	vry	vry"
11.03			Deur subpos 1103.19.10 deur die volgende te vervang:				
	".10	0	- - - Van hawer	kg	2,75c/kg	vry	vry"
			Deur subpos 1103.20.20 deur die volgende te vervang:				
	".20	5	- - Van hawer, in onmiddellike ver=pakkings met 'n inhoud van meer as 10 kg	kg	2,75c/kg	vry	vry"
11.04			Deur subpos 1104.29.90 deur die volgende te vervang:				
	".90	7	- - - Ander	kg	20%	vry	vry"
11.05			Deur pos 11.05 deur die volgende te vervang:				
"11.05			**Meelblom, meel, poeier, vlokke, korrels en pille van aartappels:**				
	1105.10	3	- Meelblom, meel en poeier	kg	20%	20%	vry
	1105.20		- Vlokke, korrels en pille:				
	.10	5	- - Pille van stukkies aartappels gemaak	kg	20%	20%	vry
	.90	3	- - Ander	kg	20%	20%	vry"

Pos	Subpos	TS	Artikel Beskrywing	Statis=tiese Eenheid	Skaal van Reg		
					Algemeen	EU	SAOG
11.06			Deur subpos 1106.30 deur die volgende te vervang:				
	1106.30	6	- Van die produkte van Hoofstuk 8	kg	20%	20%	vry"
11.07			Deur subpos 1107.10.25 deur die volgende te vervang:				
	".25	6	- - Van hawer	kg	2,75c/kg	vry	vry"
			Deur subpos 1107.10.90 deur die volgende te vervang:				
	".90	6	- - Ander	kg	0,85c/kg	vry	vry"
			Deur subposte 1107.20.25 en 1107.20.90 deur die volgende te vervang:				
	".25	0	- - Van hawer	kg	2,75c/kg	vry	vry
	.90	0	- - Ander	kg	0,85c/kg	0,85c/kg	vry"
11.08			Deur subpos 1108.11.90 deur die volgende te vervang:				
	".90	6	- - - Ander	kg	10%	6,7%	vry"
			Deur subpos 1108.13.90 deur die volgende te vervang:				
	".90	9	- - - Ander	kg	10%	6,7%	vry"
			Deur subpos 1108.14.90 deur die volgende te vervang:				
	".90	5	- - - Ander	kg	10%	6,7%	vry"
			Deur subpos 1108.19.90 deur die volgende te vervang:				
	".90	7	- - - Ander	kg	10%	6,7%	vry"
			Deur subpos 1108.20 deur die volgende te vervang:				
	"1108.20	9	- Inulien	kg	20%	20%	vry"
12.06, 12.07 en 12.08			Deur poste12.06, 12.07 en 12.08 deur die volgende te vervang:				
"12.06	1206.00	4	**Sonneblomsaad, hetsy gebreek al dan nie**	kg	9,4%	vry	vry
12.07			**Ander oliesade en olieagtige vrugte, hetsy gebreek al dan nie:**				
	1207.10	2	- Palmneute en -pitte	kg	7,4%	4,958%	vry
	1207.20	7	- Katoensaad	kg	9,4%	6,298%	vry

Pos	Subpos	TS	Artikel Beskrywing	Statis=tiese Eenheid	Skaal van Reg		
					Algemeen	EU	SAOG
	1207.30	1	- Kasteroliesaad	kg	7,4%	4,958%	vry
	1207.40	6	- Sesamsaad	kg	7,4%	4,958%	vry
	1207.50	0	- Mosterdsaad	kg	vry	vry	vry
	1207.60	5	- Saffloersaad	kg	9,4%	6,298%	vry
	1207.9		- Ander:				
	1207.91	5	- - Papawersaad	kg	9,4%	6,298%	vry
	1207.99	6	- - Ander	kg	9,4%	6,298%	vry"
12.08			**Meelblom en meel van oliesade of olieagtige vrugte (uitgesonderd dié van mosterd):**				
	1208.10	6	- Van sojabone	kg	20%	vry	vry
	1208.90	2	- Ander	kg	20%	vry	vry"
12.11 en 12.12			Deur poste 12.11 en 12.12 deur die volgende te vervang:				
"12.11			**Plante en dele van plante (met inbegrip van saad en vrugte), van 'n soort wat hoofsaaklik gebruik word in parfumerie, in farmasie, of vir insektedodende, swamdodende of dergelike doeleindes, vars of gedroog, hetsy gesny, gebreek, gemaal of in poeiervorm:**				
	1211.10	3	- Soethoutwortels	kg	15%	10,05%	vry
	1211.20	8	- Ginsengwortels	kg	15%	10,05%	vry
	1211.30	2	- Kokablaar	kg	15%	10,05%	vry
	1211.40	7	- Papawerstrooi	kg	15%	10,05%	vry
	1211.90		- Ander:				
	.10	7	- - Piretrum	kg	vry	vry	vry
	.20	4	- - Basielkruid, hisop, kruisement, roosmaryn, wynruit en salie, nie gemaal of gebreek nie	kg	0,45c/kg	vry	vry
	.30	1	- - Basielkruid, hisop, kruisement, roos=maryn, wynruit en salie, gemaal of gebreek	kg	4c/kg	vry	vry
	.80	8	- - Ander van 'n soort hoofsaaklik in farmasie gebruik	kg	15%	10,05%	vry
	.90	5	- - Ander	kg	20%	20%	vry

Pos	Subpos	TS	Artikel Beskrywing	Statis=tiese Eenheid	Skaal van Reg		
					Algemeen	EU	SAOG
12.12			Deur subposte 1212.10 en 1212.20.deur die volgende te vervang:				
	"1212.10	7	- Johannesbrood, met inbegrip van Johannesbroodsaad	kg	20%	20%	vry
	1212.20		- Seegras en ander alge:				
	.10	9	- - Bevrore	kg	5%	vry	vry
	.90	7	- - Ander	kg	vry	vry	vry"
			Deur subpos 1212.99.90 deur die volgende te vervang:				
	".90	6	- - - Ander	kg	20%	20%	vry"
13.02			Deur subposte 1302.11 en 1302.12 deur die volgende te vervang:				
	"1302.11	2	- - Opium	kg	15%	10,05%	vry
	1302.12	9	- - Van soethout	kg	15%	10,05%	vry"
			Deur subposte 1302.19.10 en 1302.19.90 deur die volgende te vervang:				
	".10	0	- - - Ander, vir farmaseutiese doeleindes geskik	kg	15%	10,05%	vry
	.90	9	- - - Ander	kg	25%	25%	vry"
			Deur subpos 1302.32.20 deur die volgende te vervang:				
	".20	2	- - - Gemodifiseer	kg	10%	6,7%	vry"
			Deur subpos 1302.39.20 deur die volgende te vervang:				
	".20	7	- - - Gemodifiseer	kg	10%	6,7%	vry"
14.04			Deur subpos 1404.20.90 deur die volgende te vervang:				
	".90	5	- - Ander	kg	15%	vry	vry"

Pos	Subpos	T S	Artikel Beskrywing	Statis= tiese Eenheid	Skaal van Reg		
					Algemeen	EU	SAOG
15.05			Deur subpos 1505.00.90 deur die volgende te vervang:				
	".90	1	- Ander	kg	10%	6,7%	vry"
15.07			Deur subpos 1507.90 deur die volgende te vervang:				
	"1507.90	4	- Ander	kg	10%	6,7%	vry"
15.09			Deur subpos 1509.90 deur die volgende te vervang:				
	"1509.90	1	- Ander	kg	10%	vry	vry"
15.10 en 15.11			Deur poste 15.10 en 15.11 deur die volgende te vervang:				
"15.10	1510.00	0	**Ander olies en fraksies daarvan, geheel van olywe verkry, hetsy geraffineer al dan nie, maar nie chemies gemodifiseer nie, met inbegrip van mengsels van hierdie olies of fraksies met olies of fraksies van pos 15.19**	kg	10%	vry	vry
15.11			**Palmolie en fraksies daarvan, hetsy geraffineer al dan nie, maar nie chemies gemodifiseer nie:**				
	1511.10	9	- Ru-olie	kg	10%	vry	vry
	1511.90	5	- Ander	kg	10%	6,7%	vry"
15.12			Deur subpos 1512.19 deur die volgende te vervang:				
	"1512.19	9	- - Ander	kg	10%	10%	vry"
			Deur subpos 1512.29 deur die volgende te vervang:				
	"1512.29	4	- - Ander	kg	10%	6,7%	vry"
15.15			Deur subposte 1515.29.20 en 1515.29.90 deur die volgende te vervang:				
	".20	6	- - - In houers wat hoogstens 205 li bevat	kg	10%	10%	vry
	.90	0	- - - Other	kg	10%	6,7%	vry"

Pos	Subpos	TS	Artikel Beskrywing	Statis=tiese Eenheid	Skaal van Reg		
					Algemeen	EU	SAOG
			Deur subposte 1515.40 en 1515.50 deur die volgende te vervang:				
	"1515.40	7	- Tungolie en fraksies daarvan	kg	10%	vry	vry
	1515.50	1	- Sesamolie en fraksies daarvan	kg	10%	vry	vry"
			Deur subpos 1515.90.10 deur die volgende te vervang:				
	".10	7	- - Jojoba-olie en fraksies daarvan	kg	10%	vry	vry"
15.16			Deur subpos 1516.10 deur die volgende te vervang:				
	"1516.10	7	- Dierlike vette en olies en fraksies daarvan	kg	10%	vry	vry"
			Deur subpos 1516.20.90 deur die volgende te vervang:				
	".90	7	- - Ander	kg	10%	6,7%	vry"
15.17			Deur subpos 1517.90 deur die volgende te vervang:				
	"1517.90	7	- Ander	kg	10%	vry	vry"
15.18			Deur pos 15.18 deur die volgende te vervang				
"15.18	1518.00	9	**Dierlike of plantaardige vette en olies en fraksies daarvan, gekook, geoksideer, gedehidrateer, gesulfureer, geblaas, gepolimeriseer met hitte in vakuum of in onaktiewe gas of andersins chemies gemodifiseer (uitgesonderd die van pos 15.16); oneetbare mengsels of preparate van dierlike of plantaardige vette of olies of van fraksies van verskillende vette of olies van hierdie Hoofstuk, nie elders vermeld of ingesluit nie**	kg	10%	6,7%	vry"
15.21			Deur subposte 1521.10.90 en 1521.90 deur die volgende te vervang:				
	".90	7	- - Ander	kg	10%	6,7%	vry
	1521.90	8	- Ander	kg	10%	6,7%	vry"
16.01			Deur subpos 1601.00.90 deur die volgende te vervang:				
	".90	9	- Ander	kg	40% of 240c/kg	40% of 240c/kg	8%"

Pos	Subpos	TS	Artikel Beskrywing	Statis=tiese Eenheid	Skaal van Reg		
					Algemeen	EU	SAOG
16.02			Deur subpos 1602.20.90 deur die volgende te vervang:				
	".90	1	-- Ander	kg	37% of 240c/kg	37% of 240c/kg	10%"
			Deur subposte 1602.32, 1602.39 en 1602.4 deur die volgende te vervang:				
	"1602.32		-- Van hoender van die GALLUS DOMESTICUS-soort:				
	.10	0	--- Pastas	kg	20%	20%	vry
	.90	9	--- Ander	kg	220c/kg	220c/kg	44c/kg
	1602.39		-- Ander:				
	.10	5	--- Pastas	kg	20%	20%	vry
	.90	3	--- Ander	kg	27%	27%	5%
	1602.4		- Van varke:				
	1602.41	1	-- Hamme en snitte daarvan	kg	15% of 130c/kg	15% of 130c/kg	8%
	1602.42	8	-- Blaaie en snitte daarvan	kg	15% of 130c/kg	15% of 130c/kg	8%
	1602.49		-- Ander, met inbegrip van mengsels:				
	.30	4	--- Gekookte rib, bevrore, nie gemarineer nie, in onmiddellike verpakkings met 'n inhoud van minstens 10 kg	kg	vry	vry	vry
	.90	8	--- Ander	kg	15% of 130c/kg	15% of 130c/kg	8%"
			Deur subpos 1602.50.90 deur die volgende te vervang:				
	".90	5	-- Ander	kg	40% of 240c/kg	40% of 240c/kg	8%"
			Deur subpos 1602.90.10 deur die volgende te vervang:				
	".10	5	-- Pastas	kg	20%	20%	vry"
			Deur subpos 1602.90.90 deur die volgende te vervang:				
	".90	3	-- Ander	kg	40% of 240c/kg	40% of 240c/kg	8%"

Pos	Subpos	TS	Artikel Beskrywing	Statistiese Eenheid	Skaal van Reg		
					Algemeen	EU	SAOG
16.03			Deur pos 16.03 deur die volgende te vervang:				
"16.03	1603.00		**Ekstrakte en sappe van vleis, vis of skaaldiere, weekdiere of ander ongewerwelde waterdiere:**				
	.10	8	- Ekstrakte van vleis	kg	25%	25%	vry
	.20	5	- Sappe van vleis; ekstrakte van vis	kg	25%	25%	vry
	.90	6	- Ander	kg	25%	25%	vry"
16.04			Deur subpos 1604.12.10 deur die volgende te vervang:				
	".10	9	- - - Bevrore	kg	25% of 200c/kg	25% of 200c/kg	vry"
			Deur subpos 1604.13.80 deur die volgende te vervang:				
	".80	6	- - - Ander, bevrore	kg	25% of 200c/kg	25% of 200c/kg	vry"
			Deur subpos 1604.14.10 deur die volgende te vervang:				
	".10	1	- - - Bevrore	kg	25% of 200c/kg	25% of 200c/kg	vry"
			Deur subpos 1604.15.10 deur die volgende te vervang:				
	".10	8	- - - Bevrore	kg	25% of 200c/kg	25% of 200c/kg	vry"
			Deur subpos 1604.16 deur die volgende te vervang:				
	"1604.16	7	Ansjovisse	kg	25%	25%	vry"
			Deur subpos 1604.19.10 deur die volgende te vervang:				
	".10	3	- - - Bevrore	kg	25% of 200c/kg	25% of 200c/kg	vry"
			Deur subpos 1604.20.30 deur die volgende te vervang:				
	".30	5	- - - Ander ansjovisse	kg	25%	25%	vry"

Pos	Subpos	TS	Artikel Beskrywing	Statis=tiese Eenheid	Skaal van Reg		
					Algemeen	EU	SAOG
			Deur subpos 1604.20.80 deur die volgende te vervang:				
	".80	1	- - Ander, bevrore	kg	25% of 200c/kg	25% of 200c/kg	vry"
			Deur subpos 1604.30 deur die volgende te vervang:				
	"1604.30		- Kaviaar en kaviaarsurrogate:				
	.10	5	- - Kaviaar	kg	30%	30%	6%
	.20	2	- - Kaviaarsurrogate	kg	27%	27%	5%"
16.05			Deur subpos 1605.30.90 deur die volgende te vervang:				
	".90	7	- - Ander	kg	30%	30%	6%"
17.04			Deur pos 17.04 deur die volgende te vervang:				
"17.04			**Suikergoed (met inbegrip van wit sjokolade), wat nie kakao bevat nie:**				
	1704.10	0	- Kougom, hetsy suikerbedek al dan nie	kg	25%	25%	6%
	1704.90	7	- Ander	kg	25%	25%	6%"
18.06			Deur pos 18.06 deur die volgende te vervang:				
"18.06			**Sjokolade en ander voedselbereidinge wat kakao bevat:**				
	1806.10	8	- Kakaopoeier, wat bygevoegde suiker of ander versoetingsmiddels bevat	kg	17%	17%	vry
	1806.20		- Ander preparate in blokke, plakke of stawe met 'n massa van meer as 2 kg of in vloeibare, pasta, poeier, korrel of ander massavorms in houers of onmiddellike verpakkings met 'n inhoud van meer as 2 kg:				
	.10	1	- - Sjokolade of suikergoed wat kakao bevat	kg	21%	21%	6%
	.90	5	- - Ander	kg	17%	17%	vry

Pos	Subpos	TS	Artikel Beskrywing	Statis= tiese Eenheid	Skaal van Reg		
					Algemeen	EU	SAOG
	1806.3		- Ander, in blokke, plakke of stawe:				
	1806.31	5	- - Gevul	kg	20%	20%	vry
	1806.32	1	- - Nie gevul nie	kg	20%	20%	vry
	1806.90	6	- Ander	kg	17%	vry	vry"
19.01 en 19.02			Deur poste 19.01 en 19.02 deur die volgende te vervang:				
"19.01			**Moutekstrak; voedselbereidinge van meelblom, gort, meel, stysel of mout= ekstrak, wat nie kakao bevat nie of wat kakao bereken op 'n geheel ontvette basis met 'n verhouding volgens massa van minder as 40 persent bevat, nie elders vermeld of ingesluit nie; voedselberei= dinge van goedere van poste 04.01 tot 04.04, wat nie kakao bevat nie of wat kakao met 'n verhouding bereken volgens massa op 'n geheel ontvette basis, van minder as 5 persent bevat nie elders vermeld of ingesluit nie:**				
	1901.10	3	- Bereidinge vir gebruik deur babas, in kleinhandelverpakkings bemark	kg	20%	20%	vry
	1901.20	8	- Mengsels en deeg, vir die bereiding van gebak van pos 19.05	kg	20%	20%	vry
	1901.90		- Ander:				
	.10	7	- - Mielieblom	kg	10% of 55c/kg min 90%	6,7% of 55c/kg min 90%	vry
	.90	5	- - Ander	kg	20%	20%	vry

Pos	Subpos	TS	Artikel Beskrywing	Statis=tiese Eenheid	Skaal van Reg		
					Algemeen	EU	SAOG
19.02			**Pasta, hetsy gekook of gestop (met vleis of ander stowwe) al dan nie of andersins berei, soos spaghetti, macaroni, noedels, lasagna, ghnocchi, ravioli, cannelloni; koeskoes, hetsy berei al dan nie:**				
	1902.1		- Ongekookte pasta, nie gestop of andersins berei nie:				
	1902.11	3	-- Wat eiers bevat	kg	30%	30%	6%
	1902.19	4	-- Ander	kg	30%	30%	6%
	1902.20		- Gestopte pasta, hetsy gekook of andersins berei al dan nie:				
	.10	9	-- Met vleis gestop	kg	3c/kg	vry	vry
	.20	6	-- Met vis, skaaldiere of weekdiere gestop	kg	5,5c/kg	vry	vry
	.90	7	-- Ander	kg	20%	20%	vry
	1902.30	6	- Ander pasta	kg	20%	20%	vry
	1902.40		- Koeskoes:				
	.10	8	-- Nie berei nie	kg	30%	30%	6%
	.90	6	-- Ander	kg	20%	20%	vry"
19.04 en 19.05			Deur poste 19.04 en 19.05 deur die volgende te vervang:				
"19.04			**Bereide voedsel verkry deur graansoorte of graanprodukte te laat uitdy of te rooster (byvoorbeeld, graanvlokke); graansoorte (uitgesonderd mielies) in korrel vorm of in die vorm van vlokke of ander bewerkte graansoorte (behalwe meelblom, gort en meel), vooraf gekook of andersins bewerk, nie elders vermeld of ingesluit nie:**				
	1904.10	4	- Bereide voedsel verkry deur graansoorte of graanprodukte te laat uitdy of te rooster	kg	25%	25%	vry
	1904.20		- Bereide voedsel verkry van ongeroosterde graanvlokke of van mengsels van ongeroosterde graanvlokke en geroosterde of uitgedyde graansoorte:				
	.10	6	-- Muesli-tipe bereidinge op on=geroosterde graanvlokke gebaseer	kg	5%	vry	vry
	.90	4	-- Ander	kg	25%	25%	vry

Pos	Subpos	TS	Artikel Beskrywing	Statis=tiese Eenheid	Skaal van Reg		
					Algemeen	EU	SAOG
	1904.30	3	- Bulgaarse koring	kg	20%	20%	vry
	1904.90		- Ander:				
	.10	8	- - Bereide rys	kg	5c/kg	vry	vry
	.90	6	- - Ander	kg	20%	20%	vry"
19.05			**Brood, soetgebak, koek, beskuitjies en ander gebak, hetsy dit kakao bevat al dan nie; nagmaalhosties, leë kasjette van 'n soort geskik vir farmaseutiese gebruik, ouelseëls, ryspapier en dergelike produkte:**				
	1905.10	8	- Brosbrood	kg	25%	25%	vry
	1905.20	2	- Gemmerbrood en soortgelyke produkte	kg	25%	25%	vry
	1905.3		- Soetbeskuitjies; wafels en hosties:				
	1905.31	3	- - Soetbeskuitjies	kg	25%	25%	vry
	1905.32	6	- - Wafels en hosties	kg	25%	25%	vry
	1905.40	1	- Beskuit, geroosterde brood en dergelike geroosterde produkte	kg	25%	25%	vry
	1905.90		- Ander:				
	.10	1	- - Glutenbrood	kg	3,6c/kg met 'n maksi mum van 25%	2,41c/kg met 'n maksimum van 25%	vry
	.20	9	- - Nagmaalhosties, leë kasjette van 'n soort geskik vir farmaseutiese gebruik, ouelseëls, ryspapier en dergelike produkte	kg	20%	13,4%	vry
	.30	6	- - Broodkrummels	kg	20%	13,4%	vry
	.90	1	- - Ander	kg	25%	16,75%	vry"
20.01			Deur pos 20.01 deur die volgende te vervang:				
"20.01			**Groente, vrugte, neuter en ander eetbare dele van plante, berei of gepreserveer met asyn of asynsuur:**				
	2001.10	5	- Komkommers en agurkies	kg	20%	13,4%	vry
	2001.90		- Other:				
	.10	9	- - Olywe	kg	25%	25%	vry

Pos	Subpos	TS	Artikel Beskrywing	Statis=tiese Eenheid	Skaal van Reg		
					Algemeen	EU	SAOG
	.20	5	- - Uie	kg	20%	vry	vry
	.90	7	- - Ander	kg	20%	20%	vry"
20.02			Deur subposte 2002.10.10 en 2002.10.80 deur die volgende te vervang:				
	".10	6	- - Bevrore (uitgesonderd voorbereide etes)	kg	20%	20%	vry
	.80	7	- - Ander, in lugdigte metaalhouers	kg	30%	30%	vry"
20.04			Deur pos 20.04 deur die volgende te vervang:				
"20.04			**Ander groente wat andersins as met asyn of asynsuur berei of gepreserveer is, bevrore (uitgesonderd produkte van pos 20.06):**				
	2004.10	6	- Aartappels	kg	20%	20%	vry
	2004.90		- Ander groente en mengsels van groente:				
	.10	1	- - Kool, komkommers en agurkies	kg	4,15c/kg	vry	vry
	.20	7	- - Erte (PISUM SATIVUM), bone (VIGNA SPP., PHASEOLUS SPP.) en lensies	kg	4,15c/kg	vry	vry"
	.30	4	- - Olywe	kg	25%	25%	vry
	.90	8	- - Ander	kg	20%	20%	vry"
20.05			Deur subposte 2005.90.20 en 2005.90.30 deur die volgende te vervang:				
	".20	0	- - Lensies, komkommers en agurkies	kg	4,15c/kg	vry	vry
	.30	8	- - Suurkool	kg	4,.15c/kg	vry	vry"
20.06, 20.07 en 20.08			Deur poste 20.06, 20.07 en 20.08 deur die volgende te vervang:				
"20.06	2006.00		**Vrugte, nieute, vrugteskil en ander dele van plante, met suiker gepreserveer (ontstroop, geglaseer of gekristalliseer):**				
	.10	6	- Suikerskil	kg	vry	vry	vry

Pos	Subpos	TS	Artikel Beskrywing	Statistiese Eenheid	Skaal van Reg		
					Algemeen	EU	SAOG
	.20	3	Gekristalliseerde vrugte	kg	30% or 7,25c/kg	vry	vry
	.30	0	Kersies, ontstroop of geglaseer	kg	20% of 215c/kg min 80%	20% of 215c/kg min 80%	vry
	.90	4	Ander	kg	30% of 7,25c/kg	30% of 7,25c/kg	6%"
20.07			**Konfyte, vrugtejellies, marmelades, vrugte- of neutpuree en vrugte- of neutpastas, naamlik gekookte bereidinge, hetsy dit bygevoegde suiker of versoetingsmiddels bevat al dan nie:**				
	2007.10	7	- Gehomogeniseerde preparate	kg	30% of 4,5c/kg	20,1% of 4,5c/kg	6%
	2007.9		- Ander:				
	2007.91	9	- - Sitrusvrugte	kg	30% of 4,5c/kg	20,1% of 4,5c/kg	6%
	2007.99	0	- - Ander	kg	30% of 4,5c/kg	20,1% of 4,5c/kg	6%
20.08			**Vrugte, neute en ander eetbare dele van plante, andersins berei of gepreserveer, hetsy dit bygevoegde suiker of ander versoetingsmiddels of spiritus bevat al dan nie, nie elders vermeld of ingesluit nie:**				
	2008.01		- Neute, grondboontjies en ander sade, hetsy tesame vermeng al dan nie:				
	2008.11	7	- - Grondboontjies	kg	0,99c/kg	vry	vry
	2008.19	8	- - Ander, met inbegrip van mengsels	kg	vry	vry	vry
	2008.20	5	- Pynappels	kg	55%	36,85%	11%
	2008.30	2	- Sitrusvrugte	kg	5%	3,35%	vry
	2008.40	4	- Pere	kg	5%	3,35%	vry
	2008.50	9	- Appelkose	kg	5%	3,35%	vry
	2008.60	3	- Kersies	kg	5%	3,35%	vry
	2008.70	8	- Perskes, met inbegrip van nektariens	kg	5%	3,35%	vry
	2008.80	2	- Aarbeie	kg	5%	3,35%	vry

Pos	Subpos	TS	Artikel Beskrywing	Statistiese Eenheid	Skaal van Reg		
					Algemeen	EU	SAOG
	2008.9		- Ander, met inbegrip van mengsels uitgesonderd die van subpos 2008.19:				
	2008.91	3	-- Palmmurg	kg	20%	20%	vry
	2008.92	8	-- Mengsels	kg	5%	3,35%	vry
	2008.99		-- Ander:				
	.40	3	--- Tamaryne	kg	vry	vry	vry
	.50	0	--- Gemmer, in stroop gepreserveer, in onmiddellike verpakkings met 'n inhoud van minstens 45 kg	kg	vry	vry	vry
	.90	3	--- Ander	kg	5%	3,35%	vry"
20.09			Deur subposte 2009.1, 2009.2, 2009.3, 2009.4 en 2009.50 deur die volgende te vervang:				
	"2009.1		- Lemoensap:				
	2009.11	0	-- Bevrore	kg	25%	16,75%	vry
	2009.12	7	-- Nie gevries, met 'n Brixwaarde van minstens 20	kg	25%	16,75%	vry
	2009.19	1	-- Ander	kg	25%	16,75%	vry
	2009.2		- Pomelosap:				
	2009.21	5	-- Met 'n Brixwaarde van minstens 20	kg	25%	16,75%	vry
	2009.29	6	-- Ander	kg	25%	16,75%	vry
	2009.3		- Sap van enige ander enkele sitrusvrug:				
	2009.31	1	-- Met 'n Brixwaarde van minstens 20	kg	25%	16,75%	vry
	2009.39	0	-- Ander	kg	25%	16,75%	vry
	2009.4		- Pynappelsap:				
	2009.41	4	-- Met 'n Brixwaarde van minstens 20	kg	25%	16,75%	vry
	2009.49	5	-- Ander	kg	25%	16,75%	vry
	2009.50	2	- Tamatiesap	kg	25%	16,75%	vry"

Pos	Subpos	TS	Artikel Beskrywing	Statistiese Eenheid	Skaal van Reg		
					Algemeen	EU	SAOG
			Deur subposte 2009.80 en 2009.90 deur die volgende te vervang:				
	"2009.80		- Sap van enige ander enkele vrug of groente:				
	.10	3	- - Vrugtesappe	kg	20%	20%	vry
	.20	0	- - Groentesappe	kg	25%	16,75%	vry
	2009.90		- Mengsels van sappe:				
	.10	8	- - Vrugtesappe	kg	20%	13,4%	vry
	.20	5	- - Groentesappe	kg	25%	16,75%	vry"
21.01, 21.02, 21.03, 21.04 21.05 en 21.06			Deur subposte 21.01, 21.02, 21.03, 21.04, 21.05 en 21.06 deur die volgende te vervang:				
"21.01			**Ekstrakte, essense en konsentrate, van koffie, tee of maté en bereidinge met 'n basis van dié produkte of met 'n basis van koffie, tee of maté; gebrande sigorei en ander koffiesurrogate, en ekstrakte, essense en konsentrate daarvan:**				
	2101.1		- Ekstrakte, essense en konsentrate van koffie, en bereidinge met 'n basis van die ekstrakte, essense of konsentrate of met 'n basis van koffie:				
	2101.11		- - Ekstrakte, essense en konsentrate:				
	.10	0	- - - Mengsels van gemaalde gebrande koffie met plantaardige vette	kg	20%	20%	vry
	.90	9	- - - Ander	kg	25%	25%	vry
	2101.12		- - Bereidinge met 'n basis van ekstrakte, essense of konsentrate of met 'n basis van koffie:				
	.10	7	- - - Mengsels van gemaalde gebrande koffie met plantaardige vette	kg	20%	13,4%	vry
	.90	5	- - - Ander	kg	25%	25%	vry

Pos	Subpos	TS	Artikel Beskrywing	Statis= tiese Eenheid	Skaal van Reg		
					Algemeen	EU	SAOG
	2101.20	1	- Ekstrakte, essense en konsentrate, van tee of maté, en bereidinge met 'n basis van dié ekstrakte, essense of konsentrate of met 'n basis van tee of maté	kg	vry	vry	vry
	2101.30		- Gebrande sigorei en ander gebrande koffiesurrogate, en ekstrakte, essense en konsentrate daarvan:				
	.10	3	- - Gebrande sigorei en ander gebrande koffiesurrogate	kg	9,2c/kg	vry	vry
	.90	1	- - Ander	kg	25%	25%	vry
21.02			**Gis (aktief of onaktief); ander eensellige mikro-organismes, dood (uitgesonderd entstowwe van pos 30.02); bereide bakpoeiers:**				
	2102.10	0	- Aktiewe gis	kg	15%	10,05%	vry
	2102.20	5	- Onaktiewe gis; ander eensellige mikro-organismes, dood	kg	15%	10,05%	vry
	2102.30	5	- Bereide bakpoeiers	kg	30%	30%	6%
21.03			**Souse en preparate daarvoor; gemengde kruiery en gemengde smaakmiddels; mosterdmeeblom en –meel en aange= maakte mosterd:**				
	2103.10	4	- Sojasous	kg	5%	vry	vry
	2103.20	9	- Tamatieketjap en ander tamatiesouse	kg	5%	vry	vry
	2103.30		- Mosterdmeelblom en –meel en aangemaakte mosterd:				
	.10	0	- - Mosterdmeelblom en -meel	kg	8c/kg	vry	vry
	.20	8	- - Bereide mosterd	kg	5%	vry	vry
	2103.90		- Ander:				
	.10	8	- - Souse en preparate daarvoor, van meelblom, meel of moutekstrak	kg	20%	20%	vry
	.90	6	- - Ander	kg	5%	vry	vry

Pos	Subpos	TS	Artikel Beskrywing	Statistiese Eenheid	Skaal van Reg		
					Algemeen	EU	SAOG
21.04			**Sop en kragsop en preparate daarvan; gehomogeniseerde saamgestelde voedselbereidinge:**				
	2104.10		- Sop en kragsop en preparate daarvan:				
	.10	5	- - Preparate vir sop en kragsop	kg	20%	20%	vry
	.20	2	- - Ander, in poeier-, soliede of ander gekonsentreerde vorm	kg	25%	25%	vry
	.90	3	- - Ander	kg	3c/kg	vry	vry
	2104.20	2	- Gehomogeniseerde saamgestelde voedselbereidinge	kg	vry	vry	vry
21.05	2105.00		**Roomys en ander eetbare ys, hetsy dit kakao bevat al dan nie:**				
	.10	4	- Roomys, wat nie kakao of bygevoegde suiker bevat nie	kg	10%	10%	vry
	.20	1	- Roomys, wat kakao of bygevoegde suiker bevat	kg	25%	25%	vry
	.90	2	- Ander	kg	20%	20%	vry
21.06			**Voedselbereidinge nie elders vermeld of ingesluit nie:**				
	2106.10		- Proteïenkonsentrate en getekstuurde proteïenstowwe:				
	.10	2	- - Sojaproteïenkonsentrate, in poeiervorm, met 'n proteïen inhoud, op die basis van die droë stof, van meer as 65 persent	kg	10%	6,7%	vry
	.90	0	- - Ander	kg	20%	20%	vry
	2106.90		- Ander:				
	.17	6	- - Disakkariedvrye babvoedsel, in poeiervorm	kg	vry	vry	vry
	.25	7	- - Stroop (uitgesonderd stroop met 'n basis van vrugtesap)	kg	vry	vry	vry
	.35	4	- - Versoetingsmiddels (uitgesonderd versoetingsmiddels met 'n basis van sakkarien)	kg	5%	vry	vry

Pos	Subpos	TS	Artikel Beskrywing	Statistiese Eenheid	Skaal van Reg		
					Algemeen	EU	SAOG
	.50	8	-- Mengsels van chemikalieë en voedsel van 'n soort gebruik by die bereidinge van mensevoedsel	kg	10%	6,7%	vry
	.67	2	-- Saamgestelde alkoholiese preparate van 'n soort gebruik by die vervaardiging van dranke (uitgesonderd dié op welriekende stowwe gebaseer)	kg	154c/li	154c/li	31c/li
	.90	7	-- Ander	kg	20%	20%	vry"
22.02 en 22.03			Deur subposte 22.02 en 22.03 deur die volgende te vervang:				
"22.02			**Water, met inbegrip van mineraalwater en spuitwater, wat bygevoegde suiker of ander versoetingsmiddels bevat of gegeur, en ander nie-alkoholiese dranke (uitgesonderd vrugte- of groentesappe van pos 20.09):**				
	2202.10		- Water, met inbegrip van mineraalwater en spuitwater, wat suiker of ander versoetingsmiddels bevat of gegeur:				
	.10	5	-- In verseëlde houers wat hoogstens 2,5 li bevat (uitgesonderd dié in opvoubare plastiekbuisies)	li	4,36c/li	vry	vry
	.90	8	-- Ander	li	3,3c/li	vry	vry
	2202.90		- Ander:				
	.20	3	-- In verseëlde houers wat hoogstens 2,5 li bevat (uitgesonderd dié in opvoubare plastiekbuisies en dié met 'n basis van melk)	li	25% plus 1,04c/li	vry	vry
	.90	4	-- Ander	li	5%	vry	vry"
22.03	2203.00	1	**Bier van mout gemaak**	li	5%	vry	vry"
22.07 en 22.08			Deur poste 22.07 en 22.08 deur die volgende te vervang:				
"22.07			**Ongedenatureerde etielalkohol met 'n alkoholiese sterkte van minstens 80 persent v/v; etielalkohol en ander spiritus, gedenatureer, van enige sterkte:**				
	2207.10	0	- Ongedenatureerde etielalkohol met 'n alkoholiese sterkte van minstens 80 persent v/v	li	317c/li absolute alkohol	317c/li absolute alkohol	63c/li absolute alkohol
	2207.20	5	- Etielalkohol en ander spiritus, gedenatureer, van enige sterkte	li	317c/li absolute alkohol	317c/li absolute alkohol	63c/li absolute alkohol

Pos	Subpos	TS	Artikel Beskrywing	Statistiese Eenheid	Skaal van Reg		
					Algemeen	EU	SAOG
22.08			**Ongedenatureerde etielalkohol met 'n alkoholsterkte van minder as 80 persent v/v; spiritus, likeure en ander spiritusdranke:**				
	2208.20		- Spiritus verkry deur die distillering van druiwewyn of druiwemoer:				
	.10	6	- - In houers wat hoogstens 2 li bevat	li	154c/li	154c/li	31c/li
	.90	4	- - Ander	li	136c/li	136c/li	27c/li
	2208.30		- Whisky:				
	.10	0	- - In houers wat hoogstens 2 li bevat	li	154c/li	154c/li	31c/li
	.90	9	- - Ander	li	136c/li	136c/li	27c/li
	2208.40		- Rum en tafia:				
	.10	5	- - In houers wat hoogstens 2 li bevat	li	154c/li	154c/li	31c/li
	.90	3	- - Ander	li	136c/li	136c/li	27c/li
	2208.50		- Jenewer en Geneva:				
	.10	9	- - In houers wat hoogstens 2 li bevat	li	154c/li	154c/li	31c/li
	.90	8	- - Ander	li	136c/li	136c/li	27c/li
	2208.60		- Vodka:				
	.10	4	- - In houers wat hoogstens 2 li bevat	li	154c/li	154c/li	31c/li
	.90	2	- - Ander	li	136c/li	136c/li	27c/li
	2208.70		- Likeure en soetdranke:				
	.20	6	- - In houers wat hoogstens 2 li bevat	li	154c/li	154c/li	31c/li
	.90	7	- - Ander	li	136c/li	136c/li	27c/li
	2208.90		- Ander:				
	.20	5	- - In houers wat hoogstens 2 li bevat	li	154c/li	154c/li	31c/li
	.90	6	- - Ander	li	136c/li	136c/li	27c/li"

Pos	Subpos	TS	Artikel Beskrywing	Statis=tiese Eenheid	Skaal van Reg		
					Algemeen	EU	SAOG
23.04, 23.05, 23.06 en 23.07			Deur poste 23.04, 23.05, 23.06 en 23.07 deur die volgende te vervang:				
"23.04	2304.00	7	**Oliekoek en ander vaste oorblyfsels, hetsy gemaal of in die vorm van pille al dan nie, afkomstig van die winning van sojaboonolie**	kg	6,6%	vry	vry
23.05	2305.00	0	**Oliekoek en ander vaste oorblyfsels, hetsy gemaal of in die vorm van pille al dan nie, afkomstig van die winning van sojaboonolie**	kg	6,6%	vry	vry
23.06			**Oliekoek en ander vaste oorblyfsels, hetsy gemaal of in die vorm van pille al dan nie, afkomstig van die winning van plantaardige vette of olies (uitgesonderd dié van pos 23.04 of 23.05):**				
	2306.10	9	- Van katoensaad	kg	6,6%	vry	vry
	2306.20	3	- Van lynsaad	kg	6,6%	vry	vry
	2306.30	8	- Van sonneblomsaad	kg	6,6%	vry	vry
	2306.4		- Van raap- of koolsaad:				
	2306.41	9	- - Van lae erukasuur raap- of koolsaad	kg	6,6%	vry	vry
	2306.49	7	- - Ander	kg	6,6%	vry	vry
	2306.50	7	- Van klapper of kopra	kg	6,6%	vry	vry
	2306.60	1	- Van palmneute of -pitte	kg	6,6%	vry	vry
	2306.70	6	- Van mielie (koring) kiem	kg	6,6%	2,21%	vry
	2306.90	5	- Ander	kg	6,6%	vry	vry
23.07	2307.00	8	**Wynmoer; ru-wynsteen**	kg	20%	20%	vry"
23.09			Deur subpos 2309.10 deur die volgende te vervang:				
	"2309.10	0	- Hond- of katvoedsel, vir kleinhandel=verkoop bemark	kg	20%	20%	vry"
			Deur subpos 2309.90 deur die volgende te vervang:				
	".90	1	- - Ander	kg	20%	20%	vry"

Pos	Subpos	TS	Artikel Beskrywing	Statis= tiese Eenheid	Skaal van Reg		
					Algemeen	EU	SAOG
24.01			Deur subpos 2401.30 deur die volgende te vervang:				
	"2401.30	1	- Tabak, nie afgestroop nie	kg	77c/kg	77c/kg	15c/kg"
24.02 and 24.03			Deur poste 24.02 en 24.03 deur die volgende te vervang:				
"24.02			**Sigare, seroete, sigaartjies en sigarette, van tabaksurrogate:**				
	2402.10	6	- Sigare, seroete en sigaartjies, wat tabak bevat	kg	110c/kg net	110c/kg net	vry
	2402.20	0	- Sigarette wat tabak bevat	kg	45%	45%	9%
	2402.90	2	- Ander	kg	45%	45%	9%
24.03			**Ander vervaardigde tabak en vervaar= digde tabaksurrogate; "gehomoge= niseerde" of "hersaamgestelde" tabak; tabakekstrakte en -essense:**				
	2403.10		- Rooktabak, hetsy dit tabaksurrogate in enige verhouding bevat al dan nie:				
	.10	7	-- Pyptabak in onmiddellike verpakkings met 'n inhoud van minder as 5 kg	kg	45%	45%	9%
	.20	4	-- Ander pyptabak	kg	45%	45%	9%
	.30	1	-- Sigarettabak	kg	40%	40%	8%
	2403.9		- Ander:				
	2403.91	2	-- "Gehomogeniseerde" of "hersaam= gestelde" tabak	kg	15%	vry	vry
	2403.99		-- Ander:				
	.10	0	--- Snuif	kg	40%	40%	8%
	.20	8	--- Tabakekstrakte en -essense	kg	vry	vry	vry
	.90	9	--- Ander	kg	45%	45%	9%"

DEPARTMENT OF TRADE AND INDUSTRY
DEPARTEMENT VAN HANDEL EN NYWERHEID

No. R. 1075 **1 August 2003**

STANDARDS ACT, 1993

WITHDRAWAL AND REPLACEMENT OF THE COMPULSORY SPECIFICATION FOR MOTOR VEHICLES OF CATEGORY M1

I, Alexander Erwin, Minister of Trade and Industry, hereby under Section 22(1)(a)(I) of the Standards Act, 1993 (Act No. 29 of 1993), and on the recommendation of the Council of the South African Bureau of Standards, withdraw the compulsory specification for motor vehicles of category M1, and replace it with the compulsory specification as set out in the Schedule, with effect from the date 2 months after the date of publication of this notice.

A ERWIN
Minister of Trade and Industry

SCHEDULE

COMPULSORY SPECIFICATION FOR MOTOR VEHICLES OF CATEGORY M_1

1 Scope

1.1 This specification covers the requirements for motor vehicle models of category M_1, not previously registered or licensed in South Africa, and motor vehicle models assembled from new bodies and used parts from earlier designs of motor vehicle models, designed or adapted for operation on a public road.

1.2 The requirements of this specification shall, in so far as the parts already incorporated are concerned, apply in respect of an incomplete motor vehicle model supplied for further manufacture by one manufacturer to another, and the entire specification shall apply to the vehicle after completion thereof by the last -mentioned manufacturer. In addition, the requirements shall apply to designs of bodies sold for the purposes of incorporating new or used parts of motor vehicle models previously homologated (or previously produced) by other manufacturers.

1.3 This specification does not apply to

a) experimental or prototype vehicles constructed or imported for the purpose of testing, assessment or development, or

b) a motor vehicle model that was manufactured before 1965, that was not previously registered or licensed in South Africa, and that is so certified by a motor club approved by the relevant Minister.

1.4 The relevant requirements of this specification that take effect on any specified date, shall not apply to vehicles manufactured or imported before that date.

1.5 Except for the requirements of 3.7, which shall not be omitted or replaced, certain special category M_1 motor vehicles designed or adapted for use as

a) mobile living accommodation (motor caravans),

b) ambulances and patient-transfer vehicles,

c) prisoner-conveyance vehicles,

d) hearses,

e) security and antiriot vehicles, and

f) recreation vehicles derived from vehicles other than category M_1 vehicles,

may, alternatively, comply with the specific requirements of the relevant compulsory specification for another category of motor vehicle.

1.6 Vehicles that are sold with a category M_2 seating configuration and with a category M_1 seating configuration as an alternative, need not comply with the steering frontal impact requirements of 3.5.2.

1.7 Homologation shall comprise the confirmation by the Regulatory Authority, that the manufacturer has provided the Regulatory Authority with the following specific evidence in respect of the commodity covered by this specification:

a) a summary of evidence showing that all relevant tests have been conducted with successful results under appropriate controls in respect of the model or type of commodity;

b) sufficient data to enable a relevant model or type and its components to be identified and related to (a) above;

c) relevant samples for the conducting of whatever tests and inspections are considered appropriate by the Regulatory Authority, to verify any, or all, of the evidence provided;

d) details of the quality management system applied by the manufacturer;

e) when relevant, documentation to advise subsequent manufacturers of incomplete commodities of their responsibilities; and

f) agreement by the manufacturing source to permit conformity of production audits to be carried out by the Regulatory Authority or by the Regulatory Authorities appointed agent at the relevant manufacturing, assembling and test facilities.

The Regulatory Authority may issue such confirmation, on application, in respect of new models or types, provided that such confirmation may not be used for the purpose of advertising or to imply that all units of the commodity necessarily or consequently comply with all the requirements of this specification.

1.8 Where a South African national standard, including an international standard or an ECE regulation adopted by South Africa as a national standard, is incorporated by reference into this specification, only the technical requirements/specification for the commodity and the tests to verify the compliance, apply.

2 Definitions

For the purposes of this specification, the following definitions apply:

2.1
airbag assembly
device that is installed to supplement safety belts and restraint systems in power -driven vehicles which, in the event of a severe impact affecting the vehicle, automatically deploys a flexible structur e intended to limit, by compression of the gas contained within it, the gravity of the contact of one or more parts of the body of an occupant of the vehicle with the interior of the passenger compartment

2.2
builder
person who builds a category M_1 motor vehicle, and "build" has a corresponding meaning

2.3
category M_1 motor vehicle, hereinafter referred to as a vehicle
motor vehicle that is used for the carriage of passengers, that has at least four wheels, and that has seating accommodation for not more than eight passengers in addition to the driver of the vehicle

2.4
category M_2 motor vehicle, hereinafter referred to as a vehicle
motor vehicle that is used for the carriage of passengers, that has at least four wheels, and that has seating accommodation for more than eight passengers in addition to the driver of the vehicle, and that has a maximum mass not exceeding 5 t

2.5
child restraint
arrangement of components which may comprise a combination of straps or flexible components with a securing buckle, adjusting devices, attachments, and, in some cases, a supplementary chair or an impact shield or both, capable of being anchored to a power-driven vehicle. It is so designed as to diminish the risk of injury to the wearer, in the event of a collision or o f an abrupt deceleration of the vehicle, by limiting the mobility of the wearer's body

2.6

importer
person who imports a category M_1 motor vehicle, and "import" has a corresponding meaning

2.7
inspectorate authority
an organization appointed by the Minister of the National Department of Transport as an inspectorate of manufacturers, importers and builders

2.8
manufacturer
person who manufactures, produces, assembles, alters, modifies or converts a category M_1 motor vehicle, and "manufacture" has a corresponding meaning

2.9
model
manufacturer's description for a series of vehicle designs that do not differ in respect of body shell, cab structure, profile, or the number of axles, by which they are introduced to South Africa, by a specific source

The Regulatory Authority reserves the right to decide which variations or combinations of variations constitute a new model, and might also take cognisance of the classification system applied in the country of origin of the design

The following variations do not necessarily constitute a new model:

a) a variant of the model in relation to trim or optional features for which compliance has been fully demonstrated;

b) different engine and transmission combinations, including petrol and diesel engines, and manual and automatic transmissions;

c) minor variations in profile, such as front air dams or rear spoilers;

d) air management systems;

e) a different number of doors;

f) sleeper cabs on trucks;

g) wheelbase variations;

h) a cargo body or equipment fitted to a truck and that has no effect on compliance; and

i) the number of driven axles.

If a vehicle is manufactured in a number of configurations, such as a sedan, a hatchback, or a station wagon, and a single or double cab, each of these may be regarded as a variant to the base model.

2.10
passenger airbag
airbag assembly intended to protect the occupants of seats other than the driver's in the event of a collision

2.11
proof of compliance
document that contains a summary of evidence acceptable to the inspectorate authority, that a motor vehicle model complies in all aspects with this specification

2.12
public road
road, street or thoroughfare, including the verges, or any other place, whether a thoroughfare or not, to which the public or sections of the public have the right of access and that they commonly use

2.13

rearward facing
facing in the direction opposite to the normal direction of travel of the vehicle

2.14
regulatory authority
an organization appointed by the Minister of the Department of Trade and Industry to implement this compulsory specification on behalf of the South African Government

3 General requirements

3.1 Requirements for lights and lighting equipment

3.1.1 Lights

Main and dipped-beam headlights, direction-indicator lights, stoplights, and front and rear position lights fitted to a vehicle shall comply with the relevant requirements given in SABS 1376-1:1983, *Lights for motor vehicles – Part 1: Incandescent lamps,* as published by Government Notice no. 563 of 29 July 1983, SABS 1376-2:1985, *Lights for motor vehicles – Part 2: Headlights,* as published by Government Notice no. 1263 of 14 June 1985, and SABS 1376-3:1985, *Lights for motor vehicles – Part 3: Secondary lights,* as published by Government Notice no. 2328 of 18 October 1985:

Provided that all other lights required or allowed to be fitted in terms of 3.1.2 are hereby excluded for the purposes of this subsection of this specification.

3.1.2 Lighting

Lighting shall be fitted to a vehicle and shall comply with the relevan t requirements given in SABS 1046:1990, *Motor vehicle safety specification for lights and light- signalling devices installed on motor vehicles and trailers,* as published by Government Notice no. 1735 of 27 July 1990:

Provided that

a) the requirements for the installation of retro-reflectors as given in 4.14, 4.16 and 4.17 of the said SABS 1046 may be met by the use and fitting of retro- reflectors that are defined in the relevant regulations of the National Road Traffic Act, 1996 (Act 93 of 1996), and, in addition, the require ments may also be met by the use and fitting of retro-reflectors that are integral portions of any other light lens assembly, and

b) the specific requirements of the said SABS 1046 for

   1) dipped beam adjustment devices as set out in 4.2.6 and appendix 1, and

   2) rear fog lights as set out in 4.11,

   shall be treated as **OPTIONAL** for the purposes of this compulsory specification:

Provided that, if any motor vehicle is fitted with such devices or lamps, they shall comply with the applicable requirements.

3.2 Requirements for rear-view mirrors and vision

3.2.1 Rear-view mirrors

Rear-view mirrors shall be fitted to a vehicle and shall comply with the relevant requirements given in SABS 1436:1989, *Motor vehicle safety specification for the rear-view mirrors of motor vehicles of categories M and N,* as published by Government Notice no. 2008 of 22 September 1989.

3.2.2 Windscreens, windows and partitions
3.2.2.1 Windscreens

3.2.2.1.1 A windscreen shall be fitted to a vehicle and shall be of safety glass that complies with the relevant requirements given in SABS 1191:1978, *High penetration-resistant laminated safety glass for vehicles,* as published by Government Notice no. 463 of 9 July 1982.

3.2.2.1.2 For the purposes of this specification, the marking requirements shall be as follows:

a) the windscreen shall bear the glass manufacturer's registered trademark; and

b) the glass fitted shall comply with an approved national standard, recognized by the Regulatory Authority, that will provide a method of identifying the glass type.

3.2.2.2 Windows and partitions

3.2.2.2.1 Glass partitions and glass windows fitted to a vehicle shall be of safety glass that complies with the relevant requirements given in the said SABS 1191 or in SABS 1193:1978, *Toughened safety glass for vehicles,* as published by Government Notice no. 463 of 9 July 1982.

3.2.2.2.2 For the purposes of this specification, the marking requirements shall be as follows:

a) the glass shall bear the glass manufacturer's registered trademark; and

b) the glass fitted shall comply with an approved national standard, recognized by the Regulatory Authority, that will provide a method of identifying the glass type.

3.2.3 Windscreen wipers

A vehicle shall be fitted with at least one windscreen wiper that is capable of operation by means other than manual, and the windscreen wiper blade, when in operation, shall wipe the outside of the windscreen directly in front of the driver, evenly and efficiently.

3.3 Requirements for brakes and braking equipment

3.3.1 Braking equipment shall be fitted to a vehicle and shall comply with the requirements given in SABS 1207:1985, *Motor vehicle safety standard specification for braking,* as published by Government Notice no. 6 of 3 January 1986, or the requirements in SABS ECE R13 *Uniform provisions concerning the approval of vehicles of categories M, N and O with regard to braking* to the level of ECE R13.08.

3.3.2 For vehicles fitted with anti- lock braking systems, the braking equipment shall, in terms of braking performance, at least comply with the braking performance requirements for M1 vehicles without anti- lock braking systems fitted.

3.3.3 For the purposes of this specification, the following requirements of SABS ECE R13 are excluded:

a) the banning of asbestos in brake linings; and

b) anti-lock specific brake test procedure and its requirements (paragraph 5 of annex 13 of SABS ECE R13).

3.3.4 For the purposes of this specification, annex 4, paragraph 2.3.6 of SABS ECE R13 is amended to read as follows:

To check compliance with the requirements specified in paragraph 5.2.1.2.4 of SABS ECE R13, a Type- O test shall be carried out with the engine disconnected at an initial test speed of 30 km/h. The mean fully developed deceleration on application of the control of the parking brake system and the deceleration immediately before the vehicle stops shall be not less than 1,5 m/s^2. The test shall be carried out with a laden vehicle. The force exerted on the braking control device shall not exceed the specified values.

3.4 Requirements for interior fittings, controls, steering mechanism and audible warning devices

3.4.1 Interior fittings

No fittings shall be installed inside the passenger compartment of a vehicle unless they comply with the relevant requirements given in SABS 1047:1984, *Motor vehicle safety standard specification for interior fittings (passenger cars),* as published by Government Notice no. 149 of 1 February 1985.

3.4.2 Controls

3.4.2.1 General

All controls that are fitted to a vehicle, and that are required for the operation of the vehicle, shall be so located that the driver can reach and operate them when he is seated in the normal driving position, with the seat belt fastened.

3.4.2.2 Right-hand drive

A vehicle shall be of a right-hand drive configuration, except as allowed in terms of 3.4.2.3.

3.4.2.3 Central steering

A vehicle may have a central steering configuration.

3.4.3 Audible warning devices

A vehicle shall be fitted with one or more audible warning devices such that, when they are operated, a continuous sound is emitted at a level of at least 93 dB, determined in accordance with SABS 0169:1984, *Determining the performance of audible warning devices (hooters) after installation in a motor vehicle,* as published by Government Notice no. 966 of 11 May 1984.

3.5 Requirements for the steering mechanism system

3.5.1 Energy absorption capacity of the steering control

The energy absorption capacity of the steering control shall comply with the relevant requirements given in SABS 1440:1987, *Motor vehicle safety specification for the steering mechanism of motor vehicles (Category M_1 only): Behaviour on impact,* as published by Government Notice no. 2227 of 9 October 1987.

3.5.2 Frontal impact characteristics

The frontal impact characteristics of the vehicle and its steering mechanism shall comply with the relevant requirements given in the said SABS 1440.

3.6 Requirements for door latches, hinges, entrances and exits

3.6.1 Door latches and hinges

Side doors fitted as a means of entrance or exit in a vehicle shall have door latches and hinges that comply with the relevant requirements given in SABS 1443:1987 *Motor vehicle safety specification for door latches and hinges,* as published by Government Notice no.2227 of 9 October 1987:

Provided that section 3 in annex 1 of the said SABS 1443 is excluded for the purposes of this compulsory specification.

3.6.2 Entrances and exits

The means of entrance to and exit from a vehicle that is designed and constructed with a fixed hood and that has a tare exceeding 570 kg, shall be as follows:

a) at least one ready means of entrance and exit on the left and right sides of the vehicle, each such means being equipped with a permanent device that is capa ble of being operated from both the inside and the outside of the vehicle for the purpose of opening and closing; or

b) a means as specified in (a) above, provided on one side of the vehicle and, on the other side or at the back, an accessible means of escape, of size at least 450 mm x 450 mm, that is readily removable from both the inside and the outside of the vehicle or is equipped with a permanent device for opening and closing as specified in (a) above:

Provided that, in the case of a vehicle design ed and constructed as an ambulance or for the conveyance of prisoners, such means need be provided in the driver's compartment only.

3.7 Requirements for seats, seat anchorages, restraining device anchorages, restraining devices (safety belts) and supplementary restraining devices (airbags)

3.7.1 Seats and seat anchorages

A vehicle shall be fitted with seats and seat anchorages that comply with the relevant requirements given in SABS 1429:1987, *Motor vehicle safety specification for strength of seats and of their anchorages,* as published by Government Notice no. 1878 of 4 September 1987.

3.7.2 Restraining device anchorages

Excluding seating positions that have seats of the folding tip-up (jockey), rearward-facing or sideways- facing type, and seating positions in the rear rows of seats on simple single box type construction vehicles that contain at least three rows of seats,

a) all seating positions on a vehicle that requires to have restraining devices fitted, shall have restraining device anchorages that comply with the relevant requirements given in SABS 1430:1987, *Motor vehicle safety specification for anchorages for restraining devices in motor vehicles,* as published by Government Notice no. 1878 of 4 September 1987, and

b) all other seating positions on a vehicle shall have at least two lower restraining device anchorages installed, which shall comply with the relevant requirements given in (a) above:

Provided that for rear outboard seating positions (except where no upper anchorages can be installed, for example, in a convertible type vehicle or in a vehicle with a removable roof), two lower restraining device anchorages and one upper restraining device anchorage shall be fitted.

3.7.3. Restraining devices (safety belts)

3.7.3.1 The restrain ing devices (safety belts) that are fitted to a vehicle shall comply with the relevant requirements given in SABS 1080:1983, *Restraining devices (safety belts) for occupants of adult build in motor vehicles (Revised requirements),* as published by Government Notice no. 264 of 17 February 1984.

3.7.3.2 The type and location of the restraining devices (safety belts) required to be fitted to a vehicle and the method of installation thereof shall comply with the relevant requirements given in SABS 0168:1983, *The installation of restraining devices (safety belts) in motor vehicles,* as published by Government Notice no. 265 of 17 February 1984, except that the same exclusions for seating positions shall apply as in 3.7.2.

3.7.4 Child restraints

In the case of any vehicle manufactured with child restraints installed, such child restraints shall comply with the compulsory specification for *Child- restraining devices for use in motor vehicles* as published by Government Notice no .642 of 2 May 1997.

3.7.5 Supplementary restraining devices (airbags)

3.7.5.1 If a motor vehicle is fitted with an airbag assembly, it shall carry information to the effect that it is equipped with such an assembly.

3.7.5.2 In the case of a motor vehicle fitted with an airbag assembly intended to protect the driver, the information shall consist of the inscription "AIRBAG" located in the interior of the circumference of the steering wheel; this inscription shall be durably affixed and easily visible.

3.7.5.3 In the case of a motor vehicle fitted with a passenger airbag intended to protect the front seat occupants other than the driver, this information shall consist of a warning label. An example of a possible design of a pictogram is shown in figure 1.

3.7.5.4 A motor vehicle fitted with one or more passenger airbags shall carry information about the extreme hazard associated with the use of rearward-facing child restraints on seats equipped with airbag assemblies.

3.7.5.5 Every passenger seating position which is fitted with an airbag shall be provided with a warning label against the use of a rearward-facing child restraint in that seating position. The warning label, in the form of a pictogram which may include explanatory text, shall be durably affixed and located such that it is easily visible in front of a person about to install a rearward- facing child restraint on the seat in question. An example of a possible design of a pictogram is shown in figure 1. A permanent reference should be visible at all times, in case the warning is not visible when the door is closed. This requirement does not apply to those seats equipped with a device which automatically deactivates the airbag assembly when a rearward -facing child restraint is installed.

Colours

The pictogram should be red.

The seat, child restraint and contour line of the airbag should be black.

The word "AIRBAG" and the airbag should be white.

Figure 1 — Airbag warning label

3.8 Requirements for anti-theft devices

Anti-theft devices shall be fitted and shall comply with the relevant requirements of SABS 1248:1986, *Devices to prevent the unauthorized use of motor vehicles (anti-theft devices),* as published by Government Notice no. 936 of 16 May 1986.

3.9 Requirements for head restraints

Head restraints, if forming an integral part of the seat back or if installed on any forward-facing seat of a vehicle, shall comply with the relevant requirements given in SABS 1269:1986, *Motor vehicle safety specification for head restraints (passenger cars),* as published by Government Notice no. 936 of 16 May 1986.

3.10 Requirements for warning triangles

In the case of any vehicle supplied with warning triangles as part of the vehicle equipment, such warning triangles shall comply with the requirements given in SABS 1329-1 :1987, *Retro-reflective and fluorescent warning signs for road vehicles – Part 1: Triangles,* as published by Government Notice no.2227 of 9 October 1987.

4 Requirements for the control of environmental interference

4.1 Suppression of radio and television interference

A vehicle, its components and its accessories shall comply with the current applicable regulations relating to interference with communications, promulgated under the Telecommunications Act, 1996 (Act 103 of 1996).

4.2 Suppression of atmospheric pollution

4.2.1 The exhaust emission from the engine of a vehicle shall be such as to comply with the current applicable regulations promulgated under the Atmospheric Pollution Prevention Act, 1965 (Act 45 of 1965).

4.2.2 The gaseous and particulate emissions from the vehicle shall comply with the requirements of SABS ECE R83 *Uniform provisions concerning the approval of vehicles with regard to the emission of pollutants according to engine fuel requirements* to the level of ECE R83.02, except for the type V test (durability of pollution control devices).

4.3 Suppression of noise emission

4.3.1 Vehicles in motion

With the exception of noise emission originating from audible warning devices, any noise emitted by a vehicle, determined in accordance with SABS 0205:1986, *The measurement of noise emitted by motor vehicles in motion,* as published by Government Notice no. 936 of 16 May 1986, shall not exceed 82 dB(A). To allow for any lack of precision in the measuring equipment, the highest sound l evel reading obtained shall be reduced by 1 dB(A).

4.3.2 Vehicles when stationary

With the exception of noise emission originating from audible warning devices, any noise emitted by a vehicle, determined in accordance with SABS 0181:1981, *The measurement of noise emitted by road vehicles when stationary,* as published by Government Notice no. 463 of 9 July 1982, and SABS 0281:1994, *Engine speed (S values), reference sound levels and permissible sound levels of stationary road vehicles,* as published by Government Notice no. 1313 of 25 August 1995, shall be recorded for homologation purposes.

5 Requirements concerning metrological data

5.1 Vehicle dimensions

The dimensions of a vehicle shall comply with the applicable requirements of the relevant regulations of the National Road Traffic Act, 1996 (Act 93 of 1996).

5.2 Information plates

5.2.1 Data plates

5.2.1.1 A vehicle shall have a metal data plate or plates affixed by rivets, or by welding, or by any other method that will achieve permanency of attachment during the life of the vehicle, in a conspicuous and readily accessible position on a part not subject to replacement.

5.2.1.2 As an alternative to the above, a data plate may be a self -adhesive tamperproof metal or plastics label that is not transferable from one vehicle to another, is clearly legible, and undergoes permanent and obvious damage on removal. The self-adhesive tamperproof label shall be resistant to engine oils, to engine coolants, to normal engine temperatures and to humidity. In addition, it shall have permanency characteristics similar to those of the plate(s) described in 5.2.1.1.

5.2.1.3 The data plate(s) shall be legibly and indelibly printed or stamped with the following details of the model type or of the vehicle, as applicable:

a) the gross vehicle mass, in kilograms, for the model type, denoted and prefixed by the letters GVM/BVM;

b) the gross combination mass, in kilograms, for the model type, denoted and prefixed by the letters GCM/BKM; and

c) the gross axle mass-load of each axle, or the gross axle unit mass -load of each axle unit, in kilograms, for the model type, denoted and prefixed by the letters GA/BA or GAU/BAE, as applicable.

5.2.2 Optional data plate

The abbreviations given in 5.2.1.3(a), 5.2.1.3(b) and 5.2.1.3(c) are not required if the information is supplied in the following order:

a) gross vehicle mass;

b) gross combination mass; and

c) gross axle masses in the order front to rear.

5.2.3 Information on vehicle engine

The requirements for the vehicle engine number shall comply with the relevant regulations of the National Road Traffic Act, 1996 (Act 93 of 1996).

5.2.4 Vehicle identification number (VIN)

The vehicle identification number shall comply with the relevant requirements given in SABS ISO 3779:1983, *Road vehicles – Vehicle identification number (VIN) – Content and structure,* and SABS ISO 4030:1983, *Road vehicles – Vehicle identification number (VIN) – Location and attachment,* as published by Government Notice no. 3160 of 20 November 1992. However, the requirements for marking the VIN, as given in clause 5 of the said SABS ISO 4030, shall, for the purpose of this specification, be taken to read as follows:

5 VIN attachment

5.1 The VIN shall be marked direct on any integral part of the vehicle; it may be either on the frame, or, for integral frame body units, on a part of the body not easily removed or replaced.

5.2 The VIN shall also be marked on the data plate.

5.3 Deleted.

5.4 The height of the roman letters an d the arabic numerals of the VIN shall be as follows:

- at least 7 mm if marked in accordance with 5.1 (frame, body, etc.) on motor vehicles and trailers; and
- at least 3 mm if marked in accordance with 5.2 (data plate).

5.2.5 Visible identification

An identification code made up of all or part of the VIN shall be applied to the motor vehicle, such that it is readily visible to a person standing outside the vehicle, without the use of aids.

In cases where only part of the VIN is used, the code shall be sufficient to provide unique identification of any unit of a model, provided the model is known.

5.3 Measuring units

All gauges, indicators or instruments that are fitted to a motor vehicle and are calibrated in physical units shall be calibrated in units as prescribed by the current applicable regulations promulgated under the Measuring Units and

National Measuring Standards Act, 1973 (Act 76 of 1973).

6 Requirements for vehicle equipment, components and systems

6.1 Speedometers

A vehicle that is capable of exceeding a speed of 25 km/h on a level road shall be equipped with speedometer equipment that complies with the relevant requirements given in SABS 1441:1987, *Motor vehicle safety specification for speedometer equipment on motor vehicles,* as published by Government Notice no. 1878 of 4 September 1987.

6.2 Engine, exhaust system and transmission

6.2.1 Engine

The engine of a vehicle shall be so fitted with a cover that any part of the engine that co nstitutes a source of danger is out of normal reach of a person.

6.2.2 Exhaust system

The exhaust system of a vehicle shall comply with the relevant regulations of the National Road Traffic Act.

6.2.3 Transmission

A vehicle the tare of which exceeds 570 kg shall be equipped with a transmission that enables it to be controlled and driven in both a forward and a reverse direction.

6.3 Fuel system

6.3.1 Fuel filler cap

The orifice for filling a fuel tank on a vehicle shall be fitted with an effective cap that prevents incidental ingress of water or other foreign matter.

6.3.2 Fuel filler inlet

A vehicle equipped with a positive-ignition engine shall be fitted with a fuel inlet orifice so designed that it prevents the tank from being filled from a petrol pump delivery nozzle which has an external diameter of 23.6 mm or greater.

For the purposes of this subsection, category M1 vehicles which also offered in M2 configuration shall be considered to be of category M2.

6.4 Tyres

The tyres fitted to the wheels of a motor vehicle shall comply with the relevant requirements of the compulsory specification for *Pneumatic tyres for passenger cars and their trailers* as published by Government Notice no. 1125 of 16 November 2001.

6.5 Vehicle bodies

Vehicle bodies referred to in 1.2 shall be provided with sufficient instructions on the selection and assembly of components, such that the completed vehicle complies (or is capable of complying) with the requirements of this specification, when the instructions are followed.

7 Compliance requirements

Proof of compliance shall be provided by the manufacturer, importer or builder (MIB) to the inspectorate authority in respect of each motor vehicle model covered by the scope of this specification.

Such proof of compliance shall consist of the relevant documentation to enable the inspectorate authority to satisfy itself that compliance has been achieved before any such vehicle is registered in the Republic of South Africa.

8 Equivalent requirements

The requirements of any of the national standards in the appropriate parts of sections 3 to 7 given in table 1, shall be deemed to have been met if compliance with the equivalent standards given or to their later levels is achieved.

COMPULSORY SPECIFICATION FOR MOTOR VEHICLES OF CATEGORY M_1

SCHEDULE 1 — Operative dates

1	2	3	4	5
Sub-section	**Item**	**Operative date**	**Exclusions**	**Exclusions expiry date**
3.1.1	Lights to SABS 1376	15 July 1987	Vehicle models homologated before 15 July 1987	1 January 2001
3.1.2	Lights to SABS 1046	1 July 1991	Fitment of category 5 indicators as per 4.5 of SABS 1046	1 January 2001
3.2.1	Rear-view mirrors to SABS 1436	1 July 1991	Vehicle models homologated before 1 July 1991	1 January 2001
3.3.1	Braking to SABS 1207	15 July 1987	Vehicle models homologated before 15 July 1987 shall comply with SABS 1051	1 January 2001
3.3.1	Braking to the requirements in SABS ECE R13 equivalent to ECE R13.08	1 January 2001	Vehicle models homologated before 1 January 2001	To be agreed
3.4.1	Interior fittings to SABS 1047	15 July 1987	Vehicle models homologated before 15 July 1987	1 January 2001
3.5.1	Energy absorption of steering control to SABS 1440	1 July 1991	Vehicle models homologated before 1 July 1991	1 January 2001
3.5.2	Frontal impact characteristics to SABS 1440	1 July 1991	Vehicle models homologated before 1 July 1991	1 January 2001
3.6	Door latches and hinges to SABS 1443	1 July 1991	Vehicle models homologated before 1 July 1991	1 January 2001
3.7.1	Seats and seat anchorages to SABS 1429	1 July 1991	Vehicle models homologated before 1 July 1991	1 January 2001
3.7.2	Restraining device anchorages to SABS 1430	1 July 1991	Vehicle models homologated before 1 July 1991	1 January 2001
3.7.4	Child restraints (if fitted) to the relevant compulsory specification	1 July 1991	Vehicle models homologated before 1 July 1991	1 January 2001
3.7.5	Supplementary restraining devices (airbags)	1 January 2001	Vehicle models homologated before 1 January 2001	To be agreed
3.8	Anti-theft devices to SABS 1248	1 July 1987	Vehicle models homologated before 1 July 1987	1 January 2001
3.9	Head restraints (if fitted) to SABS 1269	15 July 1987	Vehicle models homologated before 1 July 1987	1 January 2001
3.10	Warning triangles (if supplied) to SABS 1329-1	1 July 1991	Vehicle models homologated before 1 July 1991	1 January 2001
4.2.2	Vehicle emissions to SABS ECE R83 to the level of ECE R83.02	18 months after final gazetting	Vehicle models homologated before the operative date	To be agreed
5.2.5	Visible identification	1 August 2001	Nil	
6.1	Speedometers to SABS 1441	1 July 1991	Vehicle models homologated before 1 July 1991	1 January 2001
6.3	Fuel filler restrictor	2 months after final gazetting	Nil	

COMPULSORY SPECIFICATION FOR MOTOR VEHICLES OF CATEGORY M_1

Vehicles incorporating new body designs and used components from earlier designs of Original Equipment Manufacturers motor vehicles and new bodies (replicas and kit cars)

SCHEDULE 2 — Operative dates

1	2	3	4	5
Sub-section	**Item**	**Operative date**	**Exclusions**	**Exclusions expiry date**
3.1.2	Installation of lights to SABS 1046	1 January 1997	Vehicles homologated before 1 January 1997, for 4.2.4.1, 4.2.4.2 and 4.5.4 only, of SABS 1046 in cases where the headlight and indicator positions form part of a design intended to replicate the position of an earlier model of motor vehicle	1 January 2006
3.3.1	Braking to SABS 1207 or SABS ECE R13	1 January 1997	Vehicles incorporating major components of rear engine vehicles, which were homologated before 1 January 1980, except where the original engine or transmission is altered to an extent that the control of the vehicle would be adversely affected	1 January 2001
3.4.1	Interior fittings to SABS 1047	1 January 1997	Vehicles homologated before 1 January 1997, at the discretion of the SABS	1 January 2001
3.5.2	Frontal impact characteristics to SABS 1440	1 January 1997	Vehicles homologatedbefore 1 January 1997 NB – No exclusions for the energy absorption of the steering control (see 3.5.1)	1 January 2006

COMPULSORY SPECIFICATION FOR MOTOR VEHICLES OF CATEGORY M_1

TABLE 1 — Equivalent standards that shall be deemed to comply with SABS standards

1	2	3	4	5	6	7	8	9
				Equivalent standards				
Sub-section	Item	SABS No.	Dated	EEC	Incl.	ECE	Others	Remarks
3.1.1	Lights	1376-1 1376-2 1376-3	1983 1985 1985	76/758 76/757 76/759 76/760 76/761 76/762 77/538 77/539 77/540		R1 R2.02 R3.02 R4 R5.01 R6.01 R7.01 R8.04 R19.01 R20.02 R23 R31.01 R37.02 R38		Applicable only for headlamps, direction indicators, stoplights, front and rear position lights
3.1.2	Installation of lights	1046	1990	76/756	89/278	R48		
3.2.1	Rear-view mirrors	1436	1989	71/127	88/321	R46.01		
3.2.2.1	Windscreens	1191	1978	92/22		R43		
3.2.2.2	Windows and partitions	1191 or 1193	1978 1978	92/22 92/22		R43 R43		
3.3	Braking	1207 or ECE R13	1985 1996	71/320	79/489	R13.04 R13.08 R13H		
3.4.1	Interior fittings	1047	1984	74/60	78/632	R21.01		
3.4.3	Audible warning devices	0169	1984	70/388		R28.01		
3.5	Steering mechanism	1440	1987	74/297		R12.02		
3.6.1	Door latches and hinges	1443	1987	70/387		R11.02		
3.7.1	Seats and seat anchorages	1429	1987	74/408	81/577	R17.02		
3.7.2	Restraining device anchorages	1430	1987	76/115	82/318	R14.02		
3.7.3.1	Restraining devices (safety belts)	1080	1983	77/541	82/319	R16.03		
3.7.3.2	Installation of restraining devices	0168	1983	77/541	82/319	R16.03		
3.7.4	Child restraints	1340	1996			R44.01		If fitted
3.8	Anti-theft devices	1248	1986	74/61		R18.01		
3.9	Head restraints	1269	1986	78/932		R25.02		If fitted
3.10	Warning triangles	1329-1	1987			R27.03		If supplied
4.1	Radio and television interference	Act	1996	72/245		R10.01		
4.2	Atmospheric pollution	Act	1965	70/220 and 72/306		R15, R24		
4.2.2	Vehicle emissions	ECE R83	1993	70/220	93/59	R83.02		
4.3.1	Noise when in motion	0205	1986	70/157	81/334	R51		
4.3.2	Noise when stationary	0181 0281	1981 1994	70/157	84/424	R51		
5.2.1	Data plates			76/114	78/507			
5.2.4	VIN	ISO 3779 ISO 4030	1983 1983				ISO 3779 ISO 4030	
6.1	Speedometers	1441	1987	75/443				
6.4	Tyres	Act	1996	92/23		R30		

No. R. 1076 **1 August 2003**

STANDARDS ACT, 1993

PROPOSED REPLACEMENT OF THE COMPULSORY SPECIFICATION FOR THE MANUFACTURE, PRODUCTION, PROCESSING AND TREATMENT OF CANNED FISH, CANNED MARINE MOLLUSCS AND CANNED CRUSTACEANS

It is hereby made known under section 22(3) of the Standards Act, 1993 (Act No. 29 of 1993) that the Minister of Trade and Industry intends to withdraw the compulsory specification for the Manufacture, production, processing and treatment of canned crustaceans, as amended, published by Government Notice No 357 of 10 March 1972 and the manufacture, production, processing and treatment of canned fish, canned fish products and canned marine molluscs, as amended, published by Government Notice No R357 of 10 March 1972 and to replace it with the specification contained in the Schedule.

Any person who wishes to object to the intention of the Minister to thus replace the compulsory specification concerned, shall lodge his objection in writing with the President, South African Bureau of Standards, Private Bag X191, Pretoria, 0001, on or before the date two (2) months after publication of this notice.

A ERWIN
Minister of Trade and Industry

SCHEDULE

PROPOSED COMPULSORY SPECIFICATION FOR THE MANUFACTURE, PRODUCTION, PROCESSING, AND TREATMENT OF CANNED FISH, CANNED MARINE MOLLUSCS AND CANNED CRUSTACEANS

1 Scope

This specification covers the manufacture, production, processing, and treatment of canned fish, canned fish products, canned marine molluscs, canned marine mollusc products, canned crustaceans and canned crustacean products.

2 Definitions

For purposes of this specification the following definitions shall apply:

2.1
acceptable
acceptable to the authority administering this specification

2.2
address
an address in the Republic of South Africa, that includes the street or road number, if a number has been allotted, the name of the street or road and the name of the town, village or suburb, or that, in the case of a farm or a smallholding, includes the name of the farm or small holding and of the magisterial district where it is situated. In the case of imported foodstuffs, "address" means the address of the manufacturer or supplier or importer

2.3
adequate
sufficient to accomplish the intended purpose of this specification:

a) In regard to quality: Of quality such as to ensure performance of the projected activity or function.

b) In regard to quantity or size: Of such magnitude as will comfortably accommodate the maximum number of persons or operations or size of unit envisaged as being involved.

2.4
appropriate
acceptable to, or required by the authority administering this specification

2.5
batch-code
numbers(s), letter(s) or marking(s) or any combination of these in addition to the code representing a particular time on the date of canning, which may indicate a line of production or a particular catch or harvest or delivery of the raw material

2.6
bleeders
small orifices on a retort through which steam and other gases are emitted from throughout the entire thermal process

2.7
canned crustacean
article of food for human consumption obtained by packing clean, sound crustaceans or the edible meat of crustaceans with or without the addition of seasoning and flavouring materials, water, edible oil, and other wholesome ingredients allowed by this specification, in hermetically sealed containers and obtained and maintaining it in sound edible condition by a process of preservation

2.8
canned crustacean product
article of food for human consumption prepared from clean, sound crustaceans or the edible meat of crustaceans with or without the addition of seasoning, and flavouring materials, water, fat, edible oil, farinaceous material, vegetables (including mushrooms), fruit and other wholesome ingredients allowed by this specification, packed in hermetically sealed containers and obtained and maintained in sound edible condition by a process of preservation

2.9
canned fish
article of food for human consumption obtained by packing clean, sound, edible fish or cuts of such fish or the flesh of such fish or parts of such fish with or without the addition of seasoning and flavouring materials, water, edible oil, and other wholesome ingredients allowed by this specification, in hermetically sealed containers and obtained and maintaining it in sound edible condition by a process of preservation

2.10
canned fish product
article of food for human consumption prepared from clean, sound, edible fish or parts of such fish with or without the addition of seasoning, and flavouring materials, water, fat, edible oil, farinaceous material, vegetables, including mushrooms, fruit and other wholesome ingredients allowed by this specification, packed in hermetically sealed containers and obtained and maintained in sound edible condition by a process of preservation

2.11
canned marine mollusc
article of food for human consumption obtained by packing clean, sound, edible mollusc or meat of mollusc with or without the addition of seasoning and flavouring materials, water, fat, edible oil, and other wholesome ingredients allowed by this specification, in hermetically sealed containers and obtained and maintaining it in good edible condition by a process of preservation

2.12
canned marine mollusc product
article of food for human consumption prepared from clean, sound, edible mollusc or meat of molluscs with or without the addition of seasoning, and flavouring materials, water, fat, edible oil, farinaceous material, vegetables, including mushrooms, fruit and other wholesome ingredients allowed by this specification, packed in hermetically sealed containers and obtained and maintained in sound edible condition by a process of preservation

2.13
cleaning
removal of soil, food and fat residues, dirt, grease or other objectionable matter from surfaces

2.14
clean area worker
worker who operates in an area that is required to be maintained in a hygienic condition

2.15
code
number(s), letters or markings or any combination of these, indelibly affixed to containers representing the factory identity, batch code and sub-code where applicable

2.16
coming-up time
time, including venting time, that elapses between the introduction of the heating medium into a closed retort and the time when the temperature throughout the retort reaches the required sterilization temperature

2.17
commercially sterilized product
product:

a) that is processed in such a way as to reduce the number or activity or both of viable micro-organisms or their spores to such an extent that no growth is detectable by the methods given in 12.1 or 12.2

b) in which no spoilage or toxicity of microbial origin is detectable under normal, non-refrigerated conditions of storage, distribution and handling using the method in 12.1

2.18
container
rigid or semi-rigid container including collapsible tubes and retort pouches made of tinplate or, glass or other acceptable material or mixture or layers of different materials that excludes the permeation of gas and that is capable of being hermetically sealed

2.19
contamination
occurrence of any undesirable matter in the product

2.20
count
number of units of fish, molluscs or crustaceans or cuts of fish or units prepared from fish, molluscs or crustaceans present in the container

2.21
crustacean
any invertebrate animal breathing by gills and having jointed limbs and a hard segmented exoskeleton or outer shell

2.22
dirty area worker
worker who operates in an area that cannot be maintained in a completely hygienic condition as required for the product processing areas

2.23
disinfection
application of hygienically satisfactory chemical or physical agents and processes to reduce or eliminate micro-organisms

2.24
distinct
capable of being readily perceived by vision, odour, touch, mouth feel, taste or flavour through an objective impression, not blurred, obscured or indefinite

2.25
d.n.m
net mass of the contents declared on the container

2.26
drained mass
washed mass
mass of the contents, without the packing medium, of a container in that equilibrium has been reached, determined in accordance with 11.5

2.27
extraneous matter
any material readily recognized without magnification in the product which has not been derived from the fish or molluscs or crustacean used, or from the ingredients added or is present at a level determined by any method, including magnification that indicates non-compliance with good manufacturing practices and sanitation practices

2.28
fish
any vertebrate cold-blooded marine or fresh water animal having gills throughout life, and limbs, if any, modified into fins

2.29
flesh pack
pack consisting of the musculature tissues of raw material covered by this specification

2.30
headspace and net headspace
headspace means the volume in a container not occupied by the food and net headspace is the mean vertical distance between the upper level of the product in an upright rigid container and the inside surface of the lid

2.31
hermetically sealed containers
containers that are designed and intended to protect the contents against the entry of micro-organisms and air during and after heat processing and prevent leakage of the contents

2.32
honeycombing
formation of alveolaires
a condition characterized by decomposition of the flesh resulting in formation of voids in the meat, occurring sometimes on the surface of the cut of the meat, but more often in between the layers of fish flesh

2.33
initial temperature
temperature at the coldest spot of the contents in the coldest container to be processed at the onset of the sterilization/pasteurisation process

2.34
name of the product
product name
name and true description of the contents of the can as is required on the main panel of the container or the main panel of the label on the container

2.35
non-fish proteinaceous materials
any nitrogen protein obtained from sources other than from fish, molluscs and crustaceans

2.36
MIG thermometer
Mercury-in-Glass thermometer

2.37
off-odour
persistent and distinct objectionable odour abnormal for the type of product

2.38
off-flavour
persistent and distinct objectionable flavour abnormal for the type of product

2.39
packed/canned in the round
packed (canned) "whole" i.e. head on, untrimmed, and guts in (or guts may be removed in the case of finfish)

2.40
packing medium
any medium in which solid foods are packed in a container

2.41
per cent (%)
percentage
per cent (percentage) as a mass fraction, by mass, unless otherwise indicated or as is consistent with the text

2.42
persistent
existing without significant change; not fleeting

2.43
plain pack
fish packed either in its own exuded oil or liquid without any additional ingredient other than salt, or in brine

2.44
potable water
water that complies with the requirements of SANS 241 (SABS 241), *Drinking water*

2.45
preserve
maintain in sound edible condition by the prevention of deterioration, decomposition, or putrefaction

2.46
process
course of operations during production of the product

2.47
product
either fish, marine molluscs or crustaceans or products of these or any combination of these, canned or in the course of transporting, handling, preparation, packing, processing for canning as indicated by the context

2.48
production lot
containers of the same product and container size produced on the same day under the same conditions by the same factory and identified by the same code

2.49
retort
vessel that may be pressurized and is designed for thermal processing of product packed in hermetically sealed containers

2.50
retort process
the entire process that starts with the loading of the retort, where relevant, the closing of doors, introduction of the heating medium and continuous heating through the coming-up time, sterilization time, and ends at the end of the cooling process when the retort door is opened

2.51
semi-preserved product
product requiring refrigeration for continued preservation

2.52
shallow container
container with the height shorter than the diameter of the container

2.53
slack filling
excessive lateral free space, whether between individual units or cuts of fish or between units or cuts of fish and the walls of the container, or between both

2.54
sterilization schedule
time and temperature process scientifically determined for a given product and container type and size established at a specific initial temperature to achieve at least the intended condition of either a commercially sterilized product or a semi-preserved product

2.55
sterilization temperature
minimum temperature to be maintained throughout the sterilization time as specified in the sterilization schedule

2.56
sterilization time
time between the moment the sterilization temperature is achieved and the moment the heating medium is turned off. If the sterilization temperature is achieved prior to the completion of the venting cycle, sterilization time means the time between the completion of the venting cycle and the moment the steam is turned off

2.57
sub-code
number(s), letter(s), or marking(s) or any combination of these, in addition to the batch code, representing a particular time on the date of canning which may indicate a line of production or a particular catch or harvest or delivery of the raw material

2.58
suitable
suitably
complying with the requirements of the intended purpose

2.59
suitably prepared
prepared for the intended purpose

2.60
thermal process
heat treatment to achieve the intended condition of either a commercially sterilized product or a semi-preserved product that is quantified in terms of time and temperature

2.61
time-and-temperature process
continuous heat treatment, expressed in terms of time and temperature, applied in the processing of heat-preserved products after the container has been sealed

2.62
uniformity in unit size
situation where the mass of a unit in any one container is within 20 % of the average mass of all units in the container

NOTE 1 In most instances one smaller filler piece may be added to the contents to adjust the net mass.

NOTE 2 Where unit size is within tolerances described in a product description on a label, this requirement is irrelevant.

2.63
venting
process of flushing air out of steam or steam-air retorts during coming-up time before the start of the timing of the sterilization schedule

2.64
vents
relatively large, controlled ports in retorts used for purging or eliminating air from the retorts

3 Requirements for the factory and for employees

3.1 General

Management shall implement documented methods and procedures that can testify that an acceptable product safety management system has been incorporated.

Where a part of the preparation of a product for canning is done at a factory other than the canning factory, the other factory concerned and its employees shall comply with the requirements of 3.1 to 3.6 inclusive.

All the statutory requirements of the Occupational Health and Safety Act, 1993 (Act 85 of 1993) and the Health Act, 1977 (Act 63 of 1977) (as amended from time to time) shall be complied with.

3.2 Factory construction, layout and conditions

3.2.1 Location, size, hygienic design, conditions and maintenance

3.2.1.1 The factory shall be situated in an environment deemed by the authority administering this standard to be suitable for the canning of the product.

The location of the factory and the designed construction of the factory shall be such that it can be kept acceptably free from objectionable odours, smoke, dust and other contamination in order to comply with the relevant requirements for hygiene and sanitation of the Health Act, 1977.

3.2.1.2 The factory buildings and structures shall be of suitable size, construction design, and location to facilitate

a) maintenance and operation for their intended purpose,

b) large enough to prevent crowding of equipment and employees,

c) sufficient space for orderly arrangement of equipment and storage of raw materials and utensils used in any of the operations,

d) an orderly uninterrupted flow of production without any cross flows that could have an adverse effect on the quality of the product,

e) adequate cleaning and the maintenance of hygiene,

f) processing of raw materials without undue delay,

g) product quality and safety, and

h) adequate food safety management procedures.

The factory shall have the necessary fittings, equipment, utensils, the technical supervision and skilled labour to carry out the production process as required and in accordance with its design.

3.2.1.3 The factory grounds shall be graded to ensure proper drainage, eliminate stagnant water and shall not be subject to flooding. There shall be no inadequately drained areas that may contribute to contamination of the product through seepage of food-borne filth and by providing breeding places for insects or micro-organisms. The factory and grounds shall be of sound construction and well maintained in a clean and hygienic state and shall be effectively fenced to keep out large animals. Outside surfaces shall be constructed as to prevent the entry of rain or waste water.

3.2.1.4 There shall be no accumulation of unused equipment, litter, waste, refuse, and uncut weeds or grass within the immediate vicinity of the product processing plant buildings or structures that may constitute an attraction, breeding place or harbourage for rodents, insects or other pests.

3.2.1.5 A system of control without risking contamination of the product shall be maintained to keep the factory free from birds, rodents, insects and other vermin.

3.2.1.6 A schedule and routine inspection system of the condition and maintenance of the factory construction and facilities shall be implemented and maintained. Procedures for corrective actions in the event of non-compliance shall be instituted. Findings of such inspections and correction of non-conformance or the time limit to correct such non-conformance shall be documented and kept.

3.2.2 Roofs and ceilings

3.2.2.1 The roofs, valleys and gutters shall be weatherproof and well maintained to prevent contamination of the product, ingredients and empty containers, and to keep the walls, floor and other structures from becoming damp. Roofs, valleys and gutters shall be kept clear of debris including insects, dead birds and rodents and their droppings.

3.2.2.2 The roofs and ceilings shall be at least 300 mm above any overhead equipment and in no case, less than 3 m from the floor.

3.2.2.3 Roofs where no ceilings are fitted, and ceilings in other cases, shall be faced with a smooth water-impermeable material that is light in colour and capable of being easily cleaned without damage, and so designed, constructed, installed and finished as to be dust-proof and minimize condensation, mould development, flaking paint and the lodgement and accumulation of dirt.

3.2.2.4 Effective measures shall be taken to avoid contamination and to prevent loose or detachable material and drips from falling on the product from overhead structures in processing and storage rooms. The structures should be insulated where appropriate.

3.2.2.5 Areas where the sauce is prepared, cooked product is handled or ingredients are stored, shall have overhead ceilings. A ceiling is not required where a canopy covers the entire open product.

3.2.2.6 In areas where the open product is handled, all overhead structures and fittings shall be installed in such a manner as to avoid direct or indirect contamination of the product by condensation, drip or other falling matter and shall not hamper cleaning operations.

3.2.3 Walls and doors

3.2.3.1 Outer walls shall be weatherproof and impermeable to water.

3.2.3.2 Interior wall surfaces shall be faced with a smooth, without crevices, (an unplastered brick surface is unacceptable), hard, water-impermeable, light-coloured material to a height of not less than 2 m above the floor. In addition, the walls in the preparation, processing and packing areas shall be faced with a suitable corrosion-resistant, light-coloured, washable, water-impermeable, impact-resistant, non-toxic material to a height of at least 2 m above the floor, except that when soiling of the walls might occur above this height this facing shall be continued to a higher level appropriate to the operation.

3.2.3.3 All ledges occurring in wall construction shall be sloped at an angle of at least 45°. The walls shall be free from unnecessary projections and ledges. Openings for conveyors, services, vents, etc. shall be smooth and shall be sealed.

3.2.3.4 Fixtures, signboards, switch boxes, etc. shall be avoided on internal wall surfaces in the processing areas and where necessarily present, shall be adequately sealed to prevent harbourage of pests and accumulation of dirt.

3.2.3.5 Windowsills shall be sloped to the inside at an angle of at least 45° and shall be at least 1 m above floor level.

3.2.3.6 Windows and other openings shall be so constructed as to avoid accumulation of dirt. Windows shall be tight fitting into their frames. Joints on panelled walls and junctions of the panels and floor surface shall be adequately sealed. Where appropriate, walls shall be protected from damage by moving equipment and fork trucks. Galvanized guardrails or the equivalent shall be used for this purpose.

3.2.3.7 Wall-to-wall and wall-to-floor junctions in production areas shall be closed and coved. The minimum radius of the coving shall be 25 mm and 40 mm respectively. Junctions between walls and ceilings shall be closed and coved. Wall surfaces shall be easy to clean and disinfect.

3.2.3.8 Doors, through which products are moved between processing areas shall be of adequate width. Doors and door frames shall be made from corrosion resistant material that has high impact resistance. Doors and door-frames shall have a smooth, seamless, water-impermeable, light-coloured, readily cleanable surface. Doors that open directly from the outside into the preparation, processing and packaging areas shall be tight fitting and be of a self-closing type.

3.2.3.9 Direct entrance(s) from the outside that is (are) used by the employees shall be provided with an entrance hall furnished with wash hand basins, boot cleaning apparatus and/or proper foot baths into the factory building.

3.2.4 Floors and drainage in processing and food handling areas

3.2.4.1 Floors shall be constructed of concrete or other suitable material that is impermeable to water, non-toxic, resistant to wear and corrosion, easy to clean and maintain and laid to an even surface that is smooth but not slippery, free from cracks, crevices and open joints.

3.2.4.2 Floor surfaces shall be resistant to attack by product spillages, cleaning agents and cleaning solutions used at normal strengths. In the case of floor tiles, the grouting between the tiles shall be of a non-absorbent and of a durable material that is resistant to erosion and corrosion.

3.2.4.3 Floors and drainage channels shall be evenly sloped to have a fall of at least 1 in 60 and be drained to internal drainage channels connected to accessible gullies, sumps and external sewers.

3.2.4.4 Outlets shall have a suitable drain trap to prevent vermin entering the factory from the sewer system. Floors and drainage channels shall be in good condition and repair, and gully traps shall have strainers in place. Internal drainage channels shall be of the open type with, where necessary, removable covers.

3.2.4.5 Installations obstructing flow and cleaning shall not be present in drainage channels. The capacity of drainage channels shall be sufficient to cope with the maximum flow of liquid during peak demand without overflowing and causing flooding.

3.2.4.6 Where necessary, stands or duckboards made from material that is washable and water-impermeable shall be provided for workers.

3.2.5 Lift cages and staircases

3.2.5.1 Lift cages shall have a corrosion resistant inside surface that is smooth, easy to clean, and water-impermeable, and the floor shall be properly drained.

3.2.5.2 Staircases in rooms where food is processed or handled shall have solid risers, and shall be provided with closed balustrades of a height that will prevent contamination of products underneath the stairs.

3.2.5.3 Stairs, lift cages and auxiliary structures such as platforms, ladders, chutes, catwalks shall be so situated and constructed so as to not cause contamination of the products.

3.2.5.4 Walkways, catwalks, bridges and mezzanine floors over the open product, product contact surfaces, empty containers, conveyors for empty containers or the open product or hand-wash facilities shall be completely sealed underneath and shall have side walls.

3.2.5.5 Chutes shall be constructed where appropriate with inspection and cleaning hatches.

3.2.6 Cables and pipes

3.2.6.1 Cables and pipes shall be

a) fixed above ceilings, or

b) chased into walls, or

c) carried under floors, or

d) fixed away from walls or ceilings and above the floor, and spaced in such a manner that the ceilings, walls, floor, cables and pipes can be easily cleaned and maintained in a hygienic condition.

3.2.6.2 Overhead cable and pipework and girders and other structures shall be kept to a minimum to aid cleaning and if present shall be free from dust, rust, mould, flaking paint, cobwebs and other extraneous material.

3.2.6.3 Cladding around steam pipes shall be suitable for use in a food factory and shall not be ragged and shall be covered with a suitable metal sheet.

3.2.6.4 Pipes in which the product is conveyed, shall have no dead ends or sharp corners.

3.2.7 Illumination

3.2.7.1 General illumination shall be such as to permit efficient operation during manufacture of the product.

3.2.7.2 An illumination of at least 220 lux is required for general operations in the manufacture, production, processing or treatment of the product, while at least 540 lux is required at points where close examination of the product or containers is carried out.

3.2.7.3 Artificial illumination, if used, shall be such that the colours of products are not significantly altered.

3.2.7.4 Luminaires suspended over production areas, container storage areas and ingredient storage areas, shall be of the safety type or otherwise protected to prevent contamination of the product in case of breakage. Suspended fixtures shall be so constructed and so situated to facilitate easy cleaning and maintenance.

3.2.8 Ventilation

3.2.8.1 The ventilation shall keep the air fresh, prevent the build-up of excessive heat, remove excess steam, and shall prevent the formation of condensate and growth of mould. Natural ventilation shall be augmented, if necessary, by mechanical means.

3.2.8.2 Airflow shall be from the more hygienic to the less hygienic areas of the factory.

3.2.8.3 Windows that open for ventilation purposes or ventilation openings shall be insect screened and made out of corrosion-resistant material and kept in good repair. The screens shall be easily removable for cleaning and shall be regularly cleaned.

3.2.8.4 Fork truck or other vehicles emitting exhaust gasses shall not be operated in the preparation and processing areas. The air shall be free from noxious fumes, smoke, vapour, dust, chemicals and contaminating aerosols.

3.2.8.5 Mechanical air intake points for ventilation shall be fitted with dust filters and shall be located so as to avoid the intake of air contaminated by micro-organisms and other contaminants.

3.2.9 Hand-washing facilities

3.2.9.1 The following shall be provided at the entrances to the preparation and processing areas of the factory used by the employees, and at other strategic and convenient places wherever the process demands it:

a) an adequate number of wash-hand basins, with an abundant supply of hot and cold running potable water from taps operated by means other than hands or elbows, or warm potable water in the temperature range of 40 °C to 50 °C under adequate pressure;

b) abundant unscented liquid soap or suitable hand cleaning preparation, nail brushes and single-use disposable towels;

c) receptacles for used disposable towels at each hand-washing facility. These receptacles shall be regularly emptied; and

d) notices conspicuously posted requiring employees or where applicable, visitors, to wash their hands with soap or detergent;

   1) after using the toilet,

   2) when entering the preparation, processing or product handling areas,

   3) when their hands become dirty or whenever necessary before handling the product.

3.2.9.2 Hand-washing facilities at the entrance to the processing and food handling areas shall be under protection against environmental contamination inside the building and shall be preferably located in a lobby or entrance hall. They shall be placed in such a position that employees are forced to pass them upon entering (e.g. guided by a rail).

3.2.9.3 The hand-washing facilities at the entrances to the processing areas and inside the processing area shall be located in such a position that employee practices can be supervised.

3.2.9.4 Access to hand-washing facilities shall, at all times, be unobstructed by equipment and operating activities. Wash-hand basins shall be of a suitable corrosion-resistant impermeable material, shall have a smooth finish, be easy to clean and shall drain directly into the waste water system.

3.2.9.5 Hand-washing facilities shall not be used for other purposes than the washing of hands.

Disinfectant hand dips, where provided, shall be of such design that they can be adequately cleaned. Hand dips shall not be allowed to become a source of contamination. Disinfectant solutions shall be monitored and replaced regularly.

3.2.10 Footbaths and boot-wash basins

3.2.10.1 Unless their absence in particular circumstances is acceptable, or unless alternative acceptable cleaning and disinfecting facilities are provided, footbaths or boot-wash basins that contain a suitable active disinfectant solution shall be provided at each entrance to the preparation, processing and packaging areas that is used by employees and be so located that employees cannot obtain access to those areas without disinfecting their footwear.

3.2.10.2 There shall be adequate provision for the drainage and cleaning of footbaths. Boot-wash basins shall be positioned before the hand-washing facility upon entering the processing area and shall be located inside the factory, protected against environmental contamination.

3.2.10.3 Boot-wash basins shall be provided with suitable brushes consisting of non-absorbent material of hygienic design, water sprays under suitable pressure and boot scrubbing powder and a disinfectant dip.

3.2.11 Production areas

Product handling areas shall not be used during production for any other purposes than that for which they have been designed. The production areas shall be designed, constructed, and staffed, and the equipment shall be arranged in a manner to permit

a) control of access,

b) proper supervision,

c) adequate working space to allow free movement of workers for the satisfactory performance of all operations,

d) functions such as quality and process control on the ingredients, packing, materials, handling and processing from the arrival of raw materials, to the finished product,

e) easy and adequate cleaning and proper maintenance of hygiene and hygienic operations and facilitate free movement and cleaning of movable equipment,

f) physical separation of the preparation and processing areas from any storage and designated cleaning areas. Workshops and comfort areas shall be completely separated from preparation, processing and storage areas,

g) rapid and efficient handling and processing without mechanical or other damage of the product,

h) an orderly and undelayed flow of production,

i) prevention of cross flows of operations that may have an adverse effect or reduction in the quality of the product or separation of those operations that may cause cross contamination, and

j) minimizing the risk of the product being contaminated.

3.2.12 Storage facilities for edible raw materials

3.2.12.1 Holding tanks for fish, molluscs and crustaceans shall be constructed of material that is durable, water-impermeable, resistant to flaking or poverising and capable of withstanding repeated cleaning and disinfection.

Water or ice water used for storage of the raw product shall not be re-circulated for the purpose of repeated use without adequate treatment to maintain its purity. Provision shall be made for drainage of the tanks without contaminating the product.

3.2.12.2 Edible materials shall be stored in a clean, tidy, dust free, insect, vermin and bird proof areas, away from the wall and floor surfaces and protected against any source of contamination and separated from the processing areas. Materials not used in contact with the product shall not be stored in the same rooms where edible or packing materials are stored.

3.2.12.3 Edible raw materials requiring storage under cool, chilled or frozen conditions shall be stored under such conditions.

3.2.12.4 Edible material supplied by the manufacturer in containers or in packages shall be stored in closed containers or packages. Opened containers or packages with partly used ingredients shall be re-sealed or transferred to closed containers for further storage and shall be properly identified.

3.2.12.5 Edible dry ingredients and other ingredients in containers or packages such as tomato paste shall be stored under dry conditions.

3.2.13 Storage facilities for items not used in contact with the product

Materials capable of contaminating the product and spare parts for machinery shall be stored separately from the processing area.

3.2.14 Storage facilities for packing and packaging materials

Containers, closures, cartons, and labels for the packing and packaging of the product shall be stored in clean, dustproof, vermin-proof, dry store-rooms reserved for the purpose. Precautions shall be exercised that containers and closures are not exposed to dust and other environmental elements or excessive steam or moisture during storage. Packing and packaging materials shall be stored at a height of at least 250 mm above floor level and away from the walls.

3.2.15 Storage facilities for poisonous and harmful materials

3.2.15.1 Storage facilities for pesticides and other poisonous materials

Poisonous or other harmful materials, pesticides and equipment for their application, shall be stored in an enclosed room in which no foodstuff or food-handling equipment or packing material or containers are stored and shall be kept locked. These poisonous or harmful substances shall at all times be segregated from edible materials. All these materials shall be prominently and distinctly labelled with the warning about their toxicity and use, and shall be registered for the purpose of use. Their containers shall be kept closed during storage.

3.2.15.2 Storage facilities for cleaning and disinfecting materials

Cleaning and disinfecting materials and equipment for their application, shall be stored in a lockable room where no foodstuff or food-handling equipment or packaging materials or containers or lids are stored and shall at no time come into contact with containers, raw materials or the product. All materials shall be prominently and distinctly labelled.

3.2.15.3 Fuel storage area

Any storage area or tank, for the storing of fuels such as coal or hydrocarbons shall be located, designed, protected, controlled and maintained in such a manner so as to not present a risk of the product being polluted during the storage and manipulation of these fuels.

3.2.15.4 Storage of lubricants

Lubricants shall be stored away from the production areas in such a manner that they shall not be a cause of contamination to the product.

3.2.16 Storage facilities for utensils and spare parts

Utensils and equipment parts that, when in use, come in contact with the product, shall, when not in use, be kept in a disinfectant solution or be stored in an hygienic manner in an area that is dry, free from dust and any other source of contamination by vermin. Suitable stands and/or shelves shall be provided for the storage of loose equipment and utensils. Spare parts for equipment and tools that can contaminate the product shall be not stored with operational utensils and equipment parts used in contact with the product.

3.2.17 Storage facilities for finished products

Finished products awaiting dispatch shall be stacked away from the floors and walls in ventilated, dust-free, dry and clean rooms. The storage area for finished products shall be physically separated from areas where steam is generated. The storage area shall be such that the finished products are protected against environmental elements or any other condition that may adversely affect the product.

3.2.18 Labelling

The construction and layout of the labelling area shall be such that orderly, neat and tidy conditions can be maintained and the possibility of confusion between different production lots will be precluded. Illumination shall be in accordance with the requirements in 3.2.7.

3.2.19 Smoke units

Where used, smoke units shall be maintained in an hygienic condition and they shall not be fired from the inside of the processing area of the factory. In the case of prefabricated smoke kilns where the smoke generating equipment forms part of the kiln, the smoke generator may not emit any smoke into the processing area and the area adjacent to such a generator is to be partitioned off from the processing area so as to prevent contamination of the area with sawdust. Open sawdust shall be not transported through the processing areas. Sawdust shall be contained in bins with lids on. Doors of smoke rooms and kilns shall be tight fitting. The inner surfaces of smoke units shall be finished with a smooth lining such as stainless metal to facilitate the cleaning of the walls with steam and water. Trolleys or trays used in smoke units shall be of hygienic design and shall be regularly cleaned.

3.2.20 By-products

Processing plants for the manufacture of by-products such as fish meal, fish oil, stick-water concentrates, and similar products from fish, fish residues, and fish waste shall be effectively separated from the cannery in such a way that there is no risk of contamination of the product. There shall be no direct access from such a by-product plant to the preparation and processing areas of the cannery. Utensil and equipment used in by-product plants may not be used in areas where food for human consumption is handled.

3.2.21 Refuse

A separate refuse room or other equally adequate refuse facility shall be provided on the premises. The design and construction shall be such to prevent harbourage of pests and contamination of the product, the equipment or buildings used for the production of the product.

3.2.22 Effluent sewage and waste disposal

Establishments shall have an efficient effluent sewage and waste disposal system that shall, at all times, be maintained in good order and repair. All effluent lines (including sewer systems) shall be large enough to carry peak loads and shall be so constructed as to avoid contamination of potable water supplies or the environment and not constitute a source of contamination to the product, product contact surfaces or ingredients and shall not create an unsanitary condition or nuisance. Drainage and sewer pipes shall not be installed directly over the preparation, processing or packaging areas, or the product or product contact surfaces or empty container storage areas or in any manner that accidental leakages could contaminate the product. Sewer pipes shall have an inside diameter of at least 100 mm and shall be properly vented to the outside atmosphere.

Effluent sewage and waste water lines shall be identified as such and the disposal shall be made into a public sewerage system or in the absence thereof, into an adequate private sewerage system as per requirements of local authorities but in such a manner that health risks are eliminated.

Offal and rubbish shall be so conveyed, disposed, or stored as to minimize the development of bad odours and to prevent the harbouring and breeding of vermin and prevent contamination of the product or product contact surfaces, ground surfaces or water supplies. Manholes shall not be present in preparation and processing areas.

Combustible waste, if incinerated shall be burned in an incinerator of an approved design located at an adequate distance from the factory to avoid contamination of air. Effluent shall not be treated on the premises or close to the factory premises if there is any risk of air contamination. Hazardous substances shall be disposed of in an environmentally acceptable manner.

3.2.23 Comfort facilities

3.2.23.1 An adequate number of suitable dining rooms, change rooms, shower baths, wash-hand basins with taps, toilets (separate for each sex) and, where appropriate, urinals, shall be provided. The design, layout, construction and location of the comfort features shall be such as not to create a health hazard. Each shower shall have fresh (potable) hot and cold water supply and soap shall be supplied. Comfort facilities shall be separated and not open directly into a preparation, processing, packaging or storage area but be connected with these areas by means of a vestibule or lobby. The location of the change rooms shall be such to enable workers to dress with the required protective clothes before entering the preparation and processing areas. Change rooms may not open directly into the factory. They should be connected to processing areas in such a manner that protective clothing can be exchanged before leaving the factory of before visiting the toilets.

3.2.23.2 Toilets shall be conveniently located and be provided at a suitable distance from the production areas, shall not open direct onto production areas and shall be completely separated from change rooms. If toilets do not open into a vestibule or a lobby, they shall be fitted with close-fitting self-closing doors. Doors of toilets rooms shall not open direct into areas where the product could be exposed to airborne contamination. The comfort facilities shall be kept neat and clean and maintained in a sanitary condition and in good repair and free from bad odours. The layout and equipment shall be such as to permit proper cleaning, maintenance and enable proper vermin control. The comfort features shall be designed to ensure hygienic removal of waste matter. A proper footbath is to be erected at the entrance lobby to the factory. An adequate supply of toilet paper shall be provided at the toilets.

3.2.23.3 Proper facilities such as clothes-baskets or well ventilated lockers shall be provided for the storage of the daily change of clothes at or near change room facilities. Where lock-up facilities are required for personal effects of workers, such facilities are to be provided in a separate room (e.g. rest rooms or dining rooms). Personal effects of workers shall not be allowed to accumulate in the lockers or baskets. The lockers or baskets shall be not used for the storage of food or personal items attracting vermin. The lockers or baskets shall be maintained in a clean and good condition and repaired or shall be replaced when necessary.

3.2.23.4 The comfort facilities shall be adequately ventilated and illuminated. Toilets shall be ventilated to external air and in such a way as not to contaminate the air in the processing areas. Change rooms and dressing rooms shall not be used as living quarters or for the preparation of food or as dining rooms. Staff dining rooms shall be separate from the change rooms or dressing rooms. Separate comfort facilities shall be provided for "clean area" and "dirty area" workers.

3.2.24 Living quarters

Living quarters shall not be located on the same premises that accommodate the areas where the product is prepared, processed, packaged or stored.

3.2.25 Facilities for washing and laundering of protective clothing

Plastic brushes on corrosion-resistant chains, disinfecting soap or powder such as hypochlorite, and spray nozzles shall be provided near the hand-washing facilities for the cleaning of waterproof protective clothing and gloves. The washing or laundering of other types of protective clothing shall be performed by the factory or a firm contracted by the factory. Workers shall not be allowed to remove work clothing from the premises in order to launder this clothing. Laundering facilities at the factory shall not be connected to processing or storage areas.

3.2.26 Facilities for cleaning and disinfecting portable equipment

The washing and disinfecting of portable or movable equipment such as trolleys, bins and other utensils shall be conducted in allocated areas furnished with proper floor drainage and the necessary water points. Such facilities shall either be located in a separate room or in a designated area that may be partitioned off from the preparation, processing and packaging areas where there is any possibility of contaminating the product or product contact surfaces. Suitable drying stands or shelves shall be provided to keep equipment and utensils off the floor. An ample supply of cold potable water, and hot water if required, or saturated steam, at adequate pressure, that complies with the requirements for potable water shall be provided. High pressure or high frequency oscillating water or detergent equipment shall be available where possible. The drainage shall be in a direction away from the food handling areas.

3.2.27 Freezers, chill rooms and freezer storage rooms

These facilities shall comply with the current compulsory specification for frozen fish and frozen fish products as published in Government Notice R1229 (Government Gazette No. 23903) of 11 October 2002.

3.2.28 Thawing areas

Thawing devices shall have sufficient capacity to avoid delay, shall be designed and constructed for ease of cleaning and disinfecting and shall allow adequate evacuation of water. The thawing of frozen fish shall be performed in a separate, well-drained and cool area where the air temperature can be maintained below 20 °C. The design of thawing shelves shall ensure adequate drainage. Dripping onto fish from shelves above shall be prevented. If the thawed product cannot be processed immediately, the product shall be kept under refrigerated conditions.

3.2.29 Ice-making plant and ice storage and transportation

Suitable and adequate facilities shall be provided for the production, storage and transportation of ice.

All surfaces of ice-making equipment that come into contact with ice shall be of suitable non-absorbent corrosion resistant material that shall not peel or flake. The ice-making plant shall be of such a design and construction to protect the ice against contamination and undue exposure to heat and to facilitate cleaning and the drainage of melted water. Ice shall be effectively protected against contamination and heat when transferred or transported.

3.2.30 Specific requirements for fishing vessels

3.2.30.1 Compliance with compulsory specification

Fishing vessels for freezing and chilling of fish shall comply with the requirements prescribed in the current compulsory specification for frozen fish and frozen fish products.

3.2.30.2 Good Manufacturing Practice (GMP) checks and documentation

The approach required is similar to that for fishing vessels for freezing and chilling prescribed in the said compulsory specification.

3.2.30.3 Construction and maintenance of production facilities and equipment

3.2.30.3.1 Water and ice used to chill the product shall comply with the requirements of SANS 241 (SABS 241), *Drinking water*. Seawater shall be clean and no seawater may be taken in near the shoreline unless it is cleaned beforehand. Establishments providing ice shall be inspected for conformance with the same requirements for fish processing areas in clause 3.

3.2.30.3.2 Sea water shall be taken in at the deepest possible point on the vessel. The water may not be used for engine cooling and the sea water supply lines may not have any cross-connections with engine cooling lines or waste water lines.

3.2.30.3.3 Water refrigeration lines shall be equipped with coarse screen filters and there may be no possibility that the refrigerated water may be cross-contaminated in the heat exchanging equipment.

3.2.30.3.4 The inside surfaces of the holds, tanks or containers shall be smooth, impermeable, corrosion and flake resistant and easy to clean and disinfect. They shall not transmit to fish products, substances harmful to human health.

3.2.30.3.5 Refrigeration tanks or holds shall be designed and equipped to

a) render satisfactory insulation,

b) enable adequate sea water filling and drainage,

c) enable effective circulation of sea water in tanks while incorporating coarse screen filters to allow a constant and unobstructed flow of refrigerated water,

d) enable the fish-water mix to reach a temperature of 3 °C or lower within 6 h after loading and 0 °C within 16 h of loading,

e) enable the temperature at the warmest spot in the tank to be recorded, and

f) prevent drainage water on deck from running into the tank.

3.2.30.3.6 If the catch comes into contact with the deck, the deck surfaces shall be smooth, easy to clean and disinfect and permit free and complete drainage of water. Deck surfaces constructed of wood, shall be made of hardwoods. The reception area for the fish on deck shall be arranged into pounds and pens of adequate size that are easy to clean.

3.2.30.3.7 The catch shall be kept out of the sun and protected from drying out by sprays of clean sea water.

3.2.30.3.8 Deck surfaces that come into contact with the fish shall be clean and shall not be liable to be contaminated by fuel or other petrochemical substances.

3.2.30.3.9 Where any fish is handled by crew, at least one wash hand facility shall be erected in the fish handling area. Taps shall not be operated by hands or elbows and liquid wash hand soap shall be provided.

3.2.30.3.10 Where gutting or heading and gutting are to be performed, the requirements are the same as for freezer vessels as detailed in the said compulsory specification for frozen fish and frozen fish products.

3.2.30.3.11 Chutes, pipes, conveyors and movable parts shall be water-impermeable, easy to clean and disinfect and shall be designed in such a way so as to not be a source of dirt and contamination.

3.2.30.3.12 Toilet facilities or the crew quarters may not open directly into the processing area/fish handling area unless doors are fitted with self-closing devices (where applicable).

3.2.30.4 Operation and sanitation

3.2.30.4.1 An adequate number of flushing toilets shall be provided.

3.2.30.4.2 Crews quarters, cloakrooms, dining rooms and galley shall be suitably isolated from the processing/fish handling area where applicable. Facilities shall be kept clean and tidy and the floors and other surfaces are to be cleaned regularly.

3.2.30.4.3 Bathing or showering facilities are to be provided if vessels stay out for more than 3 days (especially where any fish is to be hand handled).

3.2.30.4.4 Protective clothing shall be stored as follows:

a) clean overalls and coats shall be stored in clean cupboards or wardrobes; and

b) a suitable ventilated facility shall be provided for cleaned plastic protective clothing (oilskins).

3.2.30.4.5 The requirements for staff handling or processing fish on board are the same as those described for freezer vessels, as detailed in the said compulsory specification for frozen fish and frozen fish products (as amended from time to time). For other types of operations, the following is required:

a) clean protective clothing or oilskins are to be worn;

b) smoking, spitting, eating or drinking shall be prohibited on deck or in storage areas of the vessel;

c) staff shall wash their hands after visits to the toilet; and

d) staff shall maintain a high standard of cleanliness for themselves and their clothes.

3.2.30.4.6 The requirements for the keeping of medical and health records are the same as those for freezer vessels and ice vessels as detailed in the said compulsory specification for frozen fish and frozen fish products.

3.2.30.4.7 The following requirements for sanitation of processing and storage areas apply:

a) work surfaces shall be cleaned and disinfected as per prescribed cleaning schedules;

b) where applicable, the processing/fish handling and storage areas shall be monitored for the requirements that were set out in 6.3.8.5 to 6.3.8.12 for freezer vessels as detailed in the said compulsory specification for frozen fish and frozen fish products;

c) after each discharge of fish, the fish hold, tanks and circulation system shall be completely emptied and thoroughly cleaned with clean seawater or fresh water and disinfected where required. All cleaning chemicals and disinfectants shall be rinsed off before the vessel sails; and

d) if tanks are filled with water after cleaning and rinsing, only clean water complying with SANS 241 (SABS 241), *Drinking water*, may be used.

3.3 Equipment

3.3.1 Layout, installation, design, construction and usage

3.3.1.1 Layout

Processing areas shall be so designed, equipped and staffed as to allow free movement of employees to facilitate cleaning and maintenance of hygiene and product quality. Equipment such as tables shall be installed or placed away from the walls. Aisles and working spaces between equipment and between equipment and walls shall be unobstructed and of a sufficient width to permit employees to perform their duties without contamination of the product or food contact surfaces with clothing or personal contact. The position of stationary equipment shall not impede drainage of water towards the drainage canals.

3.3.1.2 Installation

Equipment shall be so constructed and installed so as to prevent hygienic hazards and to minimise the build-up of contamination with organic material and dirt, and to facilitate their cleaning and disinfection.

All permanently mounted or readily movable equipment shall be installed away from the walls or ceiling and be either installed high enough above the floor at distances sufficient to provide access for cleaning and inspection, or completely sealed to the floor.

Equipment shall preferably not be sunk into the floor but, if this is unavoidable, the equipment shall be installed in an acceptable manner. Sunken areas shall be well drained.

3.3.1.3 Design

Equipment, implements and utensils shall be designed and of a workmanship that is suitable for their intended use and facilitate rapid and efficient handling of the product. The design of equipment and where applicable, utensils, shall be such to prevent hygienic hazards and shall preclude contamination of the product with lubricants, fuel, metal fragments, soiling, contaminated water or any other contaminants. All equipment used in the production of the product shall be in a well-maintained and sound condition, durable and easy to maintain, inspect or monitor, movable or easy to dismantle or able to be disassembled or to be opened for cleaning. They shall be of hygienic design with no open joints or pits or crevices or dirt traps. All parts that come into contact with the product shall be easily accessible for cleaning and disinfecting. Where necessary, as in the case of equipment that cannot be cleaned *in situ*, it shall be possible for easy dismantling to expose the food contact surfaces for effective cleaning and disinfection. Surfaces with which the product comes into contact shall not be painted and shall be constructed to reduce projections, sharp

corners or other features that could cause damage to the product. Bearings in equipment or revolving of equipment within reach of the product contact surfaces shall be of a sealed type and shall not cause any soiling of the product through seepages.

3.3.1.4 Construction

All plant equipment, implements and utensils or surfaces that come into contact with the product shall be smooth and of a suitable corrosion-resistant, non-absorbent material that does not transmit toxic substances, odour, taste, staining or cause colour changes and soiling of the product and shall be inert to the product, detergents and disinfectants under normal operating conditions. The equipment, implements and utensils may have an acceptable plastics-coated surface capable of withstanding repeated cleaning and disinfection or shall preferably be made of stainless steel suitable for use with food. Dissimilar metal material shall not be used where electrolytic corrosion can occur. Wooden equipment or utensils are unacceptable.

Copper, lead and their alloys (other than solder), and other metals or materials detrimental to health, shall not be used in the construction of equipment that comes into contact with the raw materials or with the unprotected product at any stage of its processing. The use of solder in equipment shall be minimized.

3.3.1.5 Usage

Equipment and utensils shall not be removed from the processing areas except for repairs.

Equipment and utensils used for inedible materials or waste shall be identified as such and shall not be used for edible products. Equipment and utensils used in areas outside the food for human consumption areas such as the toilets and ablution facilities shall not be used in food for human consumption handling areas. Such equipment and utensils shall be identified as such.

3.3.2 Equipment for the packing medium

Pipes, valves, joints, pumps, homogenizers, cyclones or any equipment coming into contact with the packing medium shall be of an hygienic design with no dead-ends, sharp bends or uneven joints. Pipelines shall be easily dismantled for cleaning. Branches occurring in pipelines shall be fitted with suitable stopcocks in such position to avoid dead ends and the development of stagnant packing medium. Any bend occurring in the pipeline, shall allow for dismantling at both sides of it. Mixing equipment, stirrers mesh screens and storage tanks shall be of stainless steel. Storage tanks shall be provided with suitable covers.

Water used in the mixing tanks shall only be supplied by means of a permanently fixed water pipe. Water hoses shall not be used to supply water as an ingredient in the product.

3.3.3 Tables

Wooden tables shall be not used in preparation, processing and packaging areas. Tables shall be of a design and construction that will not allow the development of unhygienic conditions and microbial build-up. Frames shall be made of suitable smooth, corrosion-resistant metal or steel with no openings in the construction. The tops of preparation and packaging tables shall be of a suitable water-impermeable, smooth, seamless, corrosion-resistant metal (preferably stainless steel or other material with similar surface characteristics). The tops shall either be removable for cleaning, or so secured to their frames as to allow cleaning and disinfection. Tables shall, as far as possible, allow rapid and effective draining and shall be easy to clean and be free from cracks, crevices or openings in the framework. Where metal tops are folded at the edges, the fold shall be effectively soldered, welded or sealed with an acceptable mastic sealant in such a way as to prevent organic matter and dirt from entering the folded section. All joints shall be watertight.

3.3.4 Cutting boards

If cutting boards are used they shall be easily removable cutting boards or blocks of hygienic construction, made of acceptable light-coloured solid and smooth material (other than wood or other absorbent or porous material) and suitable for use with food. The shape and size shall be such as to facilitate cleaning and disinfecting.

3.3.5 Utensils and implements

Knives, shovels, brooms and other utensils or implements shall not have handles of wood or other absorbent or porous material. Utensils used for the topping-up of cans shall be made of stainless metal or of rigid plastics and of hygienic design.

3.3.6 Heat processing equipment

Retorts shall have an adequate supply of heating medium such as steam and where applicable, water or air. The capacity of heat processing equipment shall be sufficient to avoid any delays in processing. Steam shall be made from potable water and shall be free from condensate and air.

Steam, water and compressed air used in the operation of retorts shall not contain any substances that may be hazardous to health or that may contaminate the product. All heat-processing equipment, temperature control devices and other process measuring devices shall be maintained in good order. All temperature measuring bulbs or probes shall be installed in such a way and in such a location so as to accurately measure the actual temperature within the retort. A constant flow of the heating medium shall pass the sensitive part of the probe or bulb of the temperature indicating or recording device. A bleeder of a diameter of at least 3 mm is to be provided at or near such probes or bulbs.

Retorts shall comply with the requirements laid down for the efficient operation of the particular retort type.

In the case of steam retorts the following is required:

All heat-processing equipment shall be maintained in good order and shall be fitted with temperature control mechanisms and thermometers that shall be calibrated regularly (at least annually) and the calibration certificates shall be available to the authority administering this specification. Steam retorts shall be equipped with the following fittings:

a) a controller, either manually or automatically operated, to maintain the processing temperature accurately;

b) at least one indicating mercury-in-glass thermometer;

c) a recording thermometer and time-temperature charts;

d) a pressure gauge;

e) a vent or vents with taps have to be placed at appropriate distances from each other on horizontal retorts or in the top of the retort in case of vertical retorts. The sizes of vents, venting lines connecting individual vent openings and vent manifolds shall be acceptable to ensure efficient venting and there may be no obstructions in the venting system;

f) a bleeder in each thermometer pocket;

g) at least one bleeder in the top of vertical retorts and on horizontal retorts bleeders are to be placed within 300 mm from each side and not more than 2,5 m from one another. Each of these bleeders shall have a diameter of at least 6 mm;

NOTE The bleeders referred to in (f) and (g) should remain open during the heat-processing period.

h) where an automatic controller is used, a steam by-pass around the controller to make a rapid rise to the processing temperature possible;

i) an effective pressure safety valve;

j) at least one indicating mercury-in-glass (MIG) thermometer, easily readable to 0,5 °C. The divisions shall not exceed 10 °C for each 20 mm of graduated scale. The temperature range shall adequately encompass scheduled retort temperatures to be used. Bulbs of MIG thermometers shall be installed within the retort shell or in external wells attached to the retort body. Thermometers with separable wells or sleeves for the bulb shall not be used. Thermometers shall not be installed in the lid or door of a retort. Thermometers with a divided mercury column shall be replaced immediately for repair;

k) a recording thermometer device (thermograph) producing a time vs temperature chart (thermogram) to provide a permanent record of thermal processing, installed in such a way that their proper operation is not affected by steam or vibration.

The time and temperature charts shall have a temperature scale of not less than 1,0 mm/°C and a time scale of not less than 20 mm/h over a range of 5 °C of the processing temperature. The recording accuracy shall be equal to or better than 0,5 °C at the sterilizing temperature. The temperature recorded shall never be higher than and not more than 0,5 °C lower than the MIG thermometer value at sterilizing temperature. Means of preventing unauthorized changes or adjustment shall be provided.

The heat processes of not more than one retort shall be recorded on a particular time-temperature chart. Where multi-point plotting chart-type devices are used, temperature recordings shall be printed at intervals not exceeding 30 s. Records of the retort process shall be kept and shall be available for control reference for at least the expected shelf life of the products;

l) a pressure gauge, with the diameter of the dial at least 100 mm, connected to the retort by means of a gauge siphon or gooseneck;

m) water retorts:

whether still, agitating, or rotating retorts, the bulbs, or probes of indicating temperature devices and controllers shall be located in such a position that they are beneath the surface of the water and so that steam does not strike them directly or that there is no opportunity for steam impingement on the control bulb or probe. The indicating temperature device bulb or probe shall extend directly into the water without a separate well or sleeve.

There shall be a means of determining the water level in the retort during operation;

n) process timing devices:

a large, easily read fixed wall clock in at least one minute divisions or an accurate timing device shall be used for recording the retort process and to monitor the time and temperature controlling device. The wall clock shall, in the case of a power failure, be independent of the main electricity supply. The wall clock shall be located in such a position that it can be readily observed by the retort operator while controlling the retort process. A wristwatch or pocket watch shall be not used for retort timing. A clock not indicating seconds shall be not used unless the specified operating process including the venting and sterilization schedules have an added one minute or greater safety factor over the schedule process.

The wall clock and the timing controlling devices used to measure the retort process shall ensure that the specified venting time and the sterilization schedule time has been achieved;

o) any supplies of compressed air and/or water shall allow for adequate shutting-off to prevent any leakage into the retort in order to prevent adverse effects on the retort process;

p) retort identification:

each retort shall be conspicuously identified with a number; and

q) retort basket identification:

retort baskets containing unprocessed products shall be so identified as to obviate confusion between such retort baskets and those containing processed products.

3.3.7 Measuring instrumentation, devices and equipment

The calibration of measuring instrumentation devices and equipment shall ultimately be traceable to national standards. Pressure and temperature gauges shall be calibrated at least annually by an accredited body or institution and the calibration certificates shall be available to the authority administering this specification.

A system of in-house monitoring and verification of accuracy against known accurate standards of the measuring instruments shall be employed on a routine basis or at any time their accuracy is questioned between calibrations. In case of temperature measuring devices the routine verification of accuracy shall only be done against a calibrated and certified MIG thermometer.

3.3.8 Containers, bins and trays

All containers that contain foodstuffs, other than those containing the finished product and sealed cans in retort baskets, shall at all times be kept on shelves or dunnage stands of corrosion-resistant water-impermeable material at a minimum height of 250 mm above the floor level. Containers shall be of hygienic design and light-coloured or have a bright metal finish.

Containers used for offal products and waste shall be leakproof and constructed of suitable impermeable material that is easy to clean and shall be identifiable. The same type of containers used for the product shall not be used for collecting offal and waste. Containers and bins for offal and waste shall be appropriately identified. Waste bins shall be fitted with lids.

3.3.9 Conveyors, elevators, runways and flumes

Conveyors, elevators, runways and flumes for transferring the product shall be so designed as to allow effective cleaning and, when necessary, disinfection and to prevent damage to the product such as by sharp corners, projections, long drops, crushing or contamination of the product. Electrical motors and transmissions driving the conveyors shall be not installed above the open product or in such a position that the product is exposed to soiling. Conveyor systems and runways to transport empty containers shall be designed and constructed to prevent contamination and damaging of the containers.

3.3.10 Compressed air and gases

Compressed air and gases used in direct or indirect contact with food or with food contact surfaces shall not contain substances that could be hazardous to health or that could contaminate the food. Compressed air lines used to blow out empty containers/cans shall be fitted with effective oil traps or filters just before the point where cans are blown out. The compressed air supply at the point of cleaning on a conveyor line for empty containers shall be fitted with a mechanism to activate the outlet of compressed air into the container when passing that point.

The point where empty containers are blown out with compressed air shall not be located in or over an area where the open product can be contaminated.

3.3.11 Seamers or sealing equipment

Seamers or sealing equipment shall be clearly and indelibly numbered where a processing plant is equipped with more than one seamer or sealing equipment.

Seamers or sealing equipment shall be identified indelibly by means of a coding device.

Seamers or sealing equipment shall be equipped with an effective, automatically operated device for counting the number of containers processed.

3.4 Water

3.4.1 General

The water used shall comply with the requirements for potable water as defined.

Subject to the provisions of 3.4.2, every cannery shall have an adequate supply of clean potable water under adequate pressure and capable of coping with peak demand. The water supply shall be free from suspended matter and substances that are deleterious to the product or injurious to health.

In addition, all water coming in contact with the product, product contact surfaces or being in the processing areas at the factory shall have been so treated, by flocculation, filtration, chlorination or other acceptable process, as to ensure compliance with the requirements in 3.4.2 to 3.4.4.

3.4.2 Treatment of water for container cooling in the retorts

Water used for container cooling after the retort process shall comply with the microbiological requirements of potable water as defined. Water that is used for container cooling but is not circulated for re-use shall be continuously chlorinated to contain a minimum of 2 mg/L of available chlorine content measured at the retort inlet. Clean potable water that is not recirculated may be treated by other acceptable means than chlorination that will ensure compliance with requirements for clean water and in addition a total count of viable micro-organisms less than a 100 mL.

Where water for container cooling is circulated for re-use it shall, before recirculation, be treated to remove solids and, chlorinated after the circulated water has been cooled, to ensure, after a contact period of at least 20 min, a minimum available chlorine content of 2 mg/L at the retort inlet. In all cases the free residual chlorine concentration shall be determined by the N,N-diethyl-1,4-phenylenediamine test or other test of equivalent sensitivity.

After being used for container cooling, the water shall not be drained onto the floor surface and then be circulated for re-use. All pipelines, reservoirs, tanks, cooling towers, treatment facilities and equipment employed in the handling of re-circulated water for container cooling shall be kept clean and so constructed and installed to facilitate cleaning and inspection. The pipelines, tanks and reservoirs shall be a closed system. Recirculated cooling water shall be protected against contamination.

3.4.3 Ice

Ice shall be manufactured, handled and stored in a manner that protects it from contamination. The purity of ice shall be such that the water derived from it (by melting the ice under aseptic conditions at a temperature not exceeding 10 °C) immediately after the ice has been manufactured, complies with the microbiological requirements for potable water.

3.4.4 Steam

Steam used in direct contact with the open product or food contact surfaces such as, but not limited to hot exhaust boxes, or indirect contact with the product such as in retorts, shall be made from potable water and shall not contain substances that may be hazardous to health or that risks contamination of the product. Boilers shall be properly operated and maintained.

3.4.5 Non-potable water other than sea water

Non-potable water shall be carried in completely separate lines from potable water with no cross-connection with, or back-siphonage into, the system carrying potable water, to prevent contamination. Non-potable water lines shall be identified as such and the water shall be considered unsafe and shall not be used for drinking or for use in food or in food handling areas or for hand washing purposes.

3.5 Hygienic operating requirements

3.5.1 General

The factory shall implement procedures that will ensure good operation and sanitation practices as described in SANS 10049 (SABS 049), *Food hygiene management*.

3.5.2 Cleaning and disinfecting

3.5.2.1 Cleaning and disinfecting system

A permanent cleaning and disinfection system shall be established to ensure that the processing areas, equipment and material, including vessels used for transportation, are cleaned and disinfected appropriately and regularly.

3.5.2.2 Cleaning and disinfecting materials

Only cleaning agents, sanitizers and disinfectants that have been officially approved for use in food establishments shall be used.

An adequate supply of cleaning materials, steam, hot and cold water, complying with 3.4, hose-piping, brushes and other requisites for proper cleaning shall be available. Brooms and brushes shall be made of impermeable material and shall have nylon bristles and shall be maintained in a clean and good condition. Bristles shall be conspicuously coloured to enable easy detection in case of detached bristles. Brooms and brushes used on floors shall not be used on product contact surfaces. Wire wool or metal scouring wool shall not be used for cleaning surfaces that come in contact with the product. Cleaning equipment and utensils shall be identified to the areas of use and equipment used to clean toilets, ablution facilities or other uncleaned areas shall not be used in processing areas.

3.5.2.3 Cleaning of facilities

3.5.2.3.1 Buildings, premises, plant, equipment, utensils and all other physical facilities of the factory shall be kept clean and in good repair and shall be maintained in an orderly, clean and hygienic condition. The plant shall be cleaned and/or disinfected and rinsed during production stoppages and as frequently as necessary whenever circumstances demand. Where necessary, provision shall be made for cleaning-in-place (CIP) of pipes and tanks used for the product, sauces or other packaging medium. Couplings and other fittings of pipelines used for transporting packing medium shall be cleaned and kept in a disinfectant solution or stored dry under hygienic conditions when they are dismantled.

3.5.2.3.2 The entire plant, equipment and utensils shall be thoroughly cleaned with a detergent or other cleaning agent and disinfected at each change of operations and at least once during a twenty four hour cycle or at the end of operations. Where equipment and utensils are used in a continuous production line basis, the product-contact surfaces of such equipment or utensils shall be cleaned and disinfected at a predetermined schedule. Immediately before the commencement of operations, equipment shall be thoroughly rinsed with potable water to remove any residues from the sanitation process and dust. Cleaning of the facility shall commence immediately after processes have stopped and machinery and products have been protected and safe guarded against contamination. Dirt, waste and organic materials such as blood and scales shall not be allowed to react in such a manner that cleaning is impeded.

3.5.2.3.3 Ceilings shall be regularly cleaned. Accumulation of dust above the ceiling shall be not allowed. During periods of operation, the floors and the drainage channels in the preparation, processing and packaging areas shall be kept clean and if necessary by regular sweeping and flushing with water. The product shall be protected from being splashed with water. Refuse shall not be permitted to accumulate in drainage channels. Thorough cleaning of floors and drainage channels shall take place as often as is necessary and at the end of each day's operations in order to maintain hygienic conditions.

3.5.2.3.4 Foot-baths shall be drained and cleaned regularly and the disinfectant kept in active condition.

3.5.2.3.5 The inside surfaces of walls of preparation, processing and packaging areas shall be thoroughly washed immediately after each day's operations and as often as necessary during the production periods. The rooms shall be kept as free from dust as possible.

3.5.3 Control of vermin

All buildings in which raw materials, ingredients and the product are stored, or in which the product is handled, prepared, processed or packaged, shall be kept free from insects, rodents, birds and other vermin. The factory and its premises shall be regularly inspected by trained personnel for the evidence of infestation by insects or rodents and for the presence of birds and wild or domestic animals. All rooms where raw materials and ingredients are stored shall, in addition, be rodent proof. Potential breeding sites shall be eliminated.

An effective and continuous programme for pest control shall be established, implemented and maintained.

A site drawing and register of all bait stations shall be kept up to date and open baits shall not be present in processing areas or ingredient, product and empty container and lid stores.

NOTE SANS 10133 (SABS 0133), *The application of pesticides in food handling, food processing and catering establishments*, may be referred to.

3.5.4 Exclusion of animals

Animals, including birds, shall be not allowed in any part of the factory. Security dogs shall be not allowed in, or come in contact with production or product handling areas or product contact surfaces.

3.6 Requirements for employees engaged in the handling, preparation, processing, packaging and storage of the product

3.6.1 Operating requirement

The production planning shall be such that workers will not be subjected to such exhausting long working hours that could result in a lack of their concentration with the risk of adversely affecting the product quality and safety.

3.6.2 Health

3.6.2.1 Before being engaged, employees shall pass an appropriate medical examination to ensure that they are free from communicable diseases, and shall thereafter pass an annual medical examination.

3.6.2.2 No person who is a carrier of, or is suffering from, any communicable disease, especially a carrier of *Salmonella*, *Shigella* and A-type haemolytic *Streptococcae*; or parasites such as any vegetative or cystic amoeba, tape-worm or any type of helminthiasis, or shows symptoms of, or is suffering from, gastro-enteritis or an enterobacterial infection or a disorder or condition causing discharge of fluid from any part of the skin or body, shall be allowed to come into contact with the product, containers or product contact surfaces. Any such person or worker in the factory in a capacity in that there is a possibility of the product or ingredients becoming contaminated or the disease being transmitted to other individuals, shall immediately report to the factory management.

3.6.2.3 The management shall ensure that no employee who is known or suspected to be affected with a disease capable of being transmitted through food shall be permitted to work in any part of the factory in a capacity in which there is a possibility of the employee's contaminating the product with pathogenic organisms.

3.6.2.4 In the case of any absence of more than one day due to illness, the employee shall, before resuming duty, report the nature of the illness that necessitated the absence to the factory hygiene officer who shall, should he deem it necessary, take the appropriate steps to obtain a medical opinion on the employee's fitness for work.

3.6.2.5 An appropriate medical record of each employee shall be kept. Medical records and any medical certificate submitted by a factory employee shall be available for inspection by the authority administering this specification.

3.6.2.6 The management shall ensure that no employee who is suffering from any cut, injury, infected wounds, infected skin irritations, shall be allowed to come into contact with the product, ingredients, containers, or product contact surfaces, unless the cut or injury has been so treated or dressed that the discharge of body fluid has been prevented, and the wound and its dressing have been so covered as to ensure that infection or contamination of the product is no longer possible. Such dressing and its covering shall be conspicuous in colour.

3.6.2.7 Employees performing close-up inspections shall undergo an eyesight test at least annually.

3.6.2.8 All the requirements of Regulation 2538 of the Health Act, 1977, shall be complied with.

3.6.3 Protective clothing

3.6.3.1 All employees engaged in the handling, preparation and processing of the product up to and including the cooling of cans after retorting, but excluding employees operating within freezer storage rooms, shall wear clean, light-coloured, protective clothing covering personal clothes down to the knee. They shall in addition wear washable or disposable headgear that completely covers their hair including beards and if necessary, hair nets. Employees handling the exposed product or other wet materials shall wear light-coloured waterproof aprons.

3.6.3.2 Gloves if used, shall be made from impermeable material and shall either be washable or be of the disposable type. The wearing of gloves shall not exempt workers from washing their hands.

Woollen caps may be worn in freezer rooms only. Overalls shall completely cover the personal clothing of the employees. At the end of each working day soiled overalls and headgear shall be handed in for laundering.

3.6.3.3 Employees shall not remove protective clothing from the factory premises.

3.6.3.4 Sleeves shall not extend below the elbows, except when covered by plastics sleevelets or when worn in freezer storage rooms.

3.6.3.5 Protective clothing, other than waterproof aprons, sleevelets and gloves, shall not be stored in work areas; when not in use it shall be kept in change-rooms and shall not be removed from the premises except for laundering under hygienic conditions. The homes of employees shall not be regarded as acceptable for laundry purposes.

3.6.3.6 Waterproof protective clothing shall be made of plastic, rubber or other acceptable material. All protective clothing shall be of hygienic design, shall not have external pockets above the waistline, shall be in good repair and shall not constitute a source of contamination to the product.

3.6.3.7 Employees shall not visit the toilets and cloakrooms with their waterproof aprons, gloves and plastic sleevelets on. Hooks and pegs for hanging waterproof aprons and gloves shall be provided at the exit before the hand-wash facilities. Pegs for gloves shall not be located above other protective clothing in such a way that contamination by means of dripping water can occur. Hooks for aprons shall be adequately spaced apart to prevent contact between aprons and a consequent build-up of contaminants.

3.6.3.8 Waterproof aprons, sleevelets and gloves shall be cleaned and disinfected immediately at the end of each shift and at the end of each days' operations, at each time of undress and as frequently as necessary, and shall be hung on hooks or pegs at exits from work areas during intervals between work and during visits to the lavatory. Waterproof protective clothing such as aprons shall not be washed on the floors. Waterproof aprons, sleevelets and gloves, as well as equipment used in the preparation, processing and packaging of the product, shall be not removed from the work areas except for repairs and for cleaning under hygienic conditions.

3.6.4 Personal hygiene and personal effects

3.6.4.1 Workers shall, at all times be clean of person and maintain a high degree of personal cleanliness and conform to hygienic practices while on duty. Workers shall be trained and educated in personal cleanliness and hygienic practices. Adequate control shall be exercised to ensure that employees are in compliance with the hygienic requirements such as supervision at the hand-washing facilities before commencing work at the beginning of a work shift and after breaks.

3.6.4.2 Before commencing work, and after each absence from the factory preparation, processing or packaging area, after blowing their noses, after handling unwashed vegetables, at regular intervals during production, or at any time necessary such as after handling contaminated material, and after using the toilet, employees shall wash their hands with warm running water complying with 3.4.1, and an acceptable unscented liquid soap or detergent, after which they shall rinse their hands in clean, running, potable water complying with 3.4.1. They may then immerse their hands in an acceptable disinfectant, after that they shall rinse their hands in clean running potable water, complying with 3.4.1, if so required by the usage directions of the hand dip. Fingernails, shall be kept short and clean and free from varnish or lacquer. Jewellery shall not be worn by employees who handle raw materials or the unprotected product.

3.6.4.3 The necessary precautions and control shall be exercised to prevent contamination through the workers of the product with micro-organisms and foreign substances including but not limited to, perspiration, hair, cosmetics, chemicals and medicants or any behaviour that could result in the contamination of the product. Workers handling the unprotected product shall keep their hands away from their noses, eyes, ears, hair, mouths or licking their fingers when handling the unprotected product. Workers shall not cough, sneeze or blow their noses over the unprotected product.

3.6.4.4 Containers used in the preparation, processing or packaging of the product shall be not used for any other purpose.

3.6.4.5 The use of chewing gum and tobacco in any form shall be not allowed within the areas where the product and its ingredients and packaging materials are handled or stored. Spitting shall be not allowed anywhere within the factory premises.

3.6.4.6 Neither workers' personal effects nor their food shall be present in the preparation, production, processing, packaging areas or where the product, its ingredients or packaging materials are handled or stored. Employees' personal effects including their personal clothes shall be kept in lockers or hangers provided for this purpose in cloakrooms. No food or drink, other than that forming part of the product produced, shall be prepared and no food or drink shall be consumed in these areas.

3.6.5 Notice boards and supervision

Notices prohibiting eating, spitting and the use of chewing gum and tobacco in any form shall be posted in each production area and in each area for the storage of ingredients. Notices requesting employees to wash their hands on entering the production areas shall be posted at each entrance used by employees to gain access to those areas. Notices shall be posted at the toilets directing employees to wash their hands after using the toilet. (See 3.2.9.1(d).)

Adequate supervision shall at all times be practised to ensure compliance with this section.

Responsibility for ensuring observance of all personal practices, operations and requirements of this section by all people and employees shall be given specifically to competent staff members.

3.6.6 Visitors

A strict control of visitors entering the factory shall be exercised.

Any person who visits or enters the preparation, processing or packaging areas during the hours of operation shall, when in those areas, observe and adhere to all relevant hygiene requirements and shall wear clean protective clothing that shall be provided by the factory.

4 Ingredient requirements

4.1 General

All ingredients used shall fall within the scope of, and shall comply with the requirements of the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act 54 of 1972) (as amended from time to time) and any regulation promulgated there-under. The limits set for the use of ingredients by the regulations in the said Food, Cosmetics and Disinfectant Act shall be adhered to. All ingredients used in the preparation of the product shall be clean, sound, of good quality, shall show no signs of decomposition or shall not be contaminated or excessively infested with parasites or be infested with insects, and shall be in every way fit for human consumption. In addition the product shall not contain any substance in amounts that may present a hazard to human health.

4.2 Condition of ingredients

All fish, marine molluscs, crustaceans and other ingredients for canning, whether fresh, chilled, frozen, canned or otherwise preserved shall be in compliance with 4.1. All fish, marine molluscs and crustaceans shall be alive on harvesting. The raw materials shall only be transported under protection.

An incoming inspection on the quality of the raw materials and ingredients shall be conducted on receipt and records shall be kept of the findings and time of reception.

Ingredients are to be inspected on arrival at the factory to ensure that they are correct as ordered, properly packaged and identified through labelling, of the correct quality or grade and uncontaminated. Ingredients are to be stored hygienically and in such a manner so as to protect quality and integrity. Where ingredients are made up for use in processing areas, they shall be protected and identified. Only ingredients made up for the daily use shall be stored in processing areas and then in such a manner that they cannot be contaminated. They shall be kept hygienically at a safe distance from the floor.

4.3 Specific requirements for certain ingredients

4.3.1 Packing oils and vegetable fats

Edible vegetable oils that shall not affect the product adversely and refined fish oil may be used in the canning of fish. The oils shall be bland, clear refined, deodorized, edible and free from rancidity, off-odour, and off-flavour. They shall be clear at a temperature of 15,5 °C and bland and, where applicable, shall comply with the requirements of the British Pharmacopoeia or the British Pharmaceutical Codex, or be in conformity with the recommended international standards adopted by the Codex Alimentarius Commission. Olive oils shall be in conformity with the Recommended International Standard for Olive Oil, Virgin and Refined and for Refined Olive Residue Oil (Ref. CAC/RS 33-1970). The use of mineral oils is not permitted.

Edible vegetable fats for use in the preparation of the product shall be bland and free from off-odours, off-flavours and rancidity.

4.3.2 Preservatives

Preservatives shall, when allowed, be specially prepared for use in foodstuffs.

4.3.3 Salt

Salt added to the product or used in the preparation of brine for canning shall be edible and free from bitterness due to calcium, magnesium, sulphur or other causes.

4.3.4 Starchy (farinaceous) materials

Subject to the provisions of the said Foodstuffs, Cosmetic and Disinfectants Act, fillers used shall be cereal, rusk, biscuit meal, potato flour, or other edible starchy (farinaceous) material, including edible gums and modified starches. Starchy materials used as thickeners in the preparation of sauce shall be cereal or other wholesome edible starchy flour and shall be free from insect infestation, pesticides or other contaminants.

4.3.5 Thickeners

Thickeners specially prepared for use in food and of sound quality may be used in the preparation of the packing medium.

4.3.6 Vegetables and fruits

Vegetables may be used as such or as preparations. Vegetables or fruits, whether frozen, canned, dehydrated or dried, shall be suitably prepared from fresh vegetables or fruits that are free from insect infestation or signs of insect infestation and contamination and that comply with the requirements for pesticidal residues under the said Foodstuffs, Cosmetics and Disinfectants Act. Canned vegetables shall comply with the relevant requirements for standard grade prescribed by the regulations under the Agriculture Product Standards Act, 1990 (Act 119 of 1990) (as amended from time to time).

The cleaning and washing of fresh vegetables or fruits shall be done in a room separated from areas where fish molluscs or crustaceans are handled or prepared to avoid risks of cross contamination of the product.

4.3.7 Tomato paste

Tomato paste shall be made only from sound, clean, fully ripe, red tomatoes that have been well washed and trimmed where necessary. Tomato paste shall have the maximum tomato content and shall be well-bodied, smooth and fine in texture and free from skin, seeds and core. It shall have a colour and flavour characteristic of fresh, sound and ripe tomatoes.

Scorched paste or paste showing evidence of the use of immature tomatoes, or paste containing artificial colouring matter shall not be used. Tomato paste intended for thickening by homogenizer before using in fish canning, shall be diluted to an appropriate total soluble solids content and homogenized to render a good sauce in the end product with a consistency corresponding to a blob diameter when tested in accordance with 11.11, not greater than 59,5 mm.

4.3.8 Soya and other proteinaceous materials from non-fish products

Subject to the requirements of the regulations under the said Foodstuffs, Cosmetics and Disinfectants Act and with the approval of the authority administering this specification, soya and other non-fish, proteinaceous materials may be used subject to the following:

a) Soya and any other non-fish proteinaceous materials shall not be used to replace the required fish, molluscs and crustacean content.

b) If required to do so by the authorities administering this specification, the manufacturer of the canned fish, canned molluscs or canned crustacean products shall disclose to the authority the composition of the non-fish proteinaceous preparation that has been used and the concentration at which it is present in the product.

c) Where soya and/or other non-fish proteinaceous material is present in products that contain the fish or molluscs or crustacean content called for by this specification, the presence of non-fish proteinaceous material shall be declared in the ingredients panel of the label. (See 10.2.1(c).)

4.3.9 Canned and preserved fish for paste manufacture

Canned fish that fails to comply with the requirements of this specification shall not be used in the manufacture of fish paste except under the authority administering this specification.

Preserved fish used in the manufacture of fish paste shall be clean, sound, and free from contamination.

4.3.10 Sweetening ingredients

Only the type and quantity of sweetening ingredients permitted under regulations promulgated under the Foodstuffs, Cosmetics and Disinfectants Act may be used.

5 Requirements for fish, marine molluscs and crustaceans used as raw materials for the product

5.1 General

Good hygiene and good manufacturing practices are to be incorporated during the harvesting, transport, handling, cleaning, preparation and processing of the product. Operations such as gutting, heading, skinning, boning or portioning shall be done in a clean and hygienic area and under such conditions as will ensure freedom from any contamination, deterioration, spoilage or the development of infections or toxigenic micro-organisms. Where gutting is performed, it shall be done in such a manner that split viscera do not adversely affect the quality, appearance and flavour of the product. Guts and fish offal shall be hygienically and effectively removed from cleaned fish products by mechanical means, water fluming or other acceptable means. Fish shall be thoroughly washed in clean running water before and after cleaning and preparation.

5.2 Fish

5.2.1 All fish shall be acceptably descaled unless

a) it is sardines packed in flat shallow cans, or
b) the product is described as "scales on".

Tough scales, able to hurt the palate, on Jack Mackerel (Maasbanker) shall be removed.

5.2.2 The heads, tails, and fins of all fish shall be removed unless the fish is packed as whole units or the manner of presentation is appropriately described on the label.

5.2.3 The viscera (except for roes) kidney and extremity of the anal canal, shall be removed.

5.2.4 Large bones and backbones that can hurt the palate must be removed unless

a) it is the backbone of larger species presented as cross-cut sections or cutlets, or

b) fish bones are softened during heat processing or in low acid preservation to such an extent that there is no health risk to the consumer.

5.2.5 Fish products and its form and presentation shall be correctly described on the label.

5.3 Marine Molluscs

5.3.1 General

Molluscs are to be obtained from sources that are officially approved by the authorities monitoring biotoxins. Molluscs shall not contain any chemical, or microbiological contaminants or marine biotoxins at levels that could be detrimental to the health of the consumer. Molluscs shall be alive until immediately before processing and may be kept alive in appropriate clean water tanks or in aerated containers under cool conditions until they can be processed.

5.3.2 Shucking

Shucking shall be performed under conditions of good hygiene and the product thoroughly washed under clean running water. Shucking shall be complete and the product shall be free from sand, dirt, silt, debris and other foreign material.

5.3.3 Cleaning of abalone

In the case of abalone, all guts, mouths, adhering mucous and epithelium between fringes and the "foot" of the abalone shall be removed.

5.4 Crustaceans

5.4.1 General

Raw material used for canning shall be of a quality suitable for human consumption and shall be collected from clean waters not polluted by industrial or sewage discharges or other sources of pollution. Crustaceans shall not contain chemical, microbiological or biological contamination that may be hazardous to health. Transport of crustaceans to the factory shall be under conditions that will protect the product from the elements and from environmental contamination. Crustaceans shall be kept alive until immediately prior to processing or canning.

5.4.2 Preparation of crustaceans

Unless crustaceans are canned in the round, all viscera including the anal canal shall be removed. In flesh packs, the flesh shall be neatly trimmed and free from pieces of shell or swimmeret.

5.5 Minced, diced or sliced fish products

Proper procedures are to be instituted to prevent contamination of product with metal and other foreign material from mincers, slicers, dicers or other cutting machinery. Raw material used for the product must be fresh and of a quality suitable for human consumption.

6 Requirements for the product

6.1 General requirements

6.1.1 Packing appearance and colour

The product in a container shall comprise fish or molluscs or crustaceans or a mixture of these, of an appearance and colour characteristic of the genus or genera processed and packed in the manner indicated. The product shall have a normal texture characteristic of the species, the type of product and the process used.

6.1.2 Absence of foreign matter posing a threat to health

The product shall be free from any foreign material that poses a threat to human health, e.g.

a) contaminants such as but not limited to pesticide residue, fuel, mineral oil and lubricants or hazardous chemicals, or

b) dangerous material such as, but not limited to glass, metal, stones, sharp and hard bones.

6.1.3 Absence of toxic fish, biotoxins and histamine

No fish that are naturally toxic or affected by biotoxins from the aquatic environment or have high histamine levels may be used for canning. The product shall not contain more than 10 mg/100 g histamine based on the average of samples tested, provided that no sample shall contain more than 20 mg histamine per 100 g product. The limits for other biotoxic substances are as per United States Foods and Drugs Administration regulations.

6.1.4 Objectionable extraneous matter

The product shall be free from any objectionable extraneous material such as, but not limited to insects, sand, dirt, soiling, hair, metal soiling or other foreign matter that indicates non-compliance with good manufacturing and sanitation practises. The product shall be free from sulphide stains and presence of "struvite crystals".

6.1.5 Container integrity

The final product shall be free from container integrity defects that may compromise the hermetic seal. Additional requirements are stipulated in section 9.

6.1.6 Net headspace and fill of containers

The containers shall be filled to practical capacity without being overfilled. The drained mass requirements are subject to the cans being filled to practical capacity. When examined in accordance with 11.4.2 and 11.4.3, the net headspace in cylindrical containers shall be not more than 13 mm, on condition that the product shall occupy at least 90 % of the total volume capacity of the container.

Sufficient headspace shall be allowed for expansion of the contents during the heat process and to ensure that the ends of the container or closure of jars are not convex when cooled after the retort process. Shallow containers with large flexible lids (see definition 2.54) need little or no measurable headspace on condition that the lid or lids do not remain convex.

6.1.7 Negative air pressure inside containers

The negative air pressure inside the container shall be adequate to prevent the bulging or flipping of containers at ambient temperature or lower atmospheric pressure in regions of higher altitude.

6.1.8 Sensory requirements

The product shall have an odour and flavour that is characteristic of fresh raw material and of the packing medium and processing undergone. Examine the product as stipulated in 11.9.

6.1.9 Requirements for the packing medium

The product may be packed in its own juice, potable water, brine, vegetable broth, a sauce, a gravy, fish oil, vegetable oil, or with vegetable oil added, in agar, or other suitable medium. The product may be packed dry. The packing medium shall be reasonably free from exuded proteins and fish matter indicating decomposed fish or presence of viscera or of excessive fish blood in the raw material. Parchment paper or similar lining material may be used to prevent surface discolouration or adhesion of the product to the container. Vegetables may be used in the preparation of the sauce or gravy. When tested in accordance with 13.2 the sauce or gravy without the solid ingredients shall contain not more than 6 % starch. Where the product is claimed to be in a broth, or a thick or rich sauce or gravy, the character of the packing medium shall, after equilibrium has been reached, be in accordance with the claim made. A product packed in a natural broth shall not be labelled in a sauce or gravy.

Where oil is declared as the sole packing medium, the presence of other liquid shall be not in excess of 30 % when determined in accordance with 11.6. When the packing medium contains more than 30 % exuded liquid it shall be labelled "X (name of product) with oil added".

6.1.10 Vegetables, fruits and cereals

Root vegetables shall be in the form of clean-cut dices, slices or pieces, except that, if of acceptable size, these vegetables may be packed whole. Dices shall be approximate cubes. Pieces shall appear regular in size and shape and shall be practically free from scrap pieces. The texture shall be soft but not broken up or disintegrated or abnormally tough, dry or woody. Onions, fresh or pickled, shall be sliced, diced, shredded or chopped, or, if of acceptable size, they may be used whole. Dehydrated onion may be used. Grains of rice shall separate easily. Beans and peas shall be mostly intact and not split or broken, and shall be free from loose shells. Cereals such as spaghetti and noodles shall be not disintegrated or abnormally broken up, and the texture shall be not abnormally mushy or soggy.

6.1.11 Parasites

The product shall be free from visible parasites.

6.1.12 Salt content (as sodium chloride)

Unless described as packed in salt, or salted, or heavily salted the product, when examined in accordance with 13.3, the product shall contain not more than 3 % by mass of common salt.

6.2 Canned fish

6.2.1 General

Only fish of one species shall be packed under the same batch code and sub code where applicable. Units of fish in any one container shall be reasonably uniform in size, appearance and form. Where it is necessary to adjust the fill of the container, a small cutlet or smaller unit of fish may be present. The manner of packing or the cut packed shall be in accordance with the product description on the label. In packs other than plain packs, the fish shall be pre-cooked and exuded

liquids drained before the addition of the packing medium. Canned fish shall be practically free from units of mushy and brittle texture indicating poor quality raw material or fish softened by excessive parasitical infestation.

6.2.2 Fillets

Where fish is packed as fillets, the fillets shall be reasonably uniform in size. An additional small piece may be included for mass adjustment.

6.2.3 Compliance with product description and sensory requirements

The presentation of the product and its appearance shall comply with the description of the product on the label. The appearance, colour, texture, odour and flavour shall be indicative and characteristic of fresh raw material used. The flesh colour shall be reasonably free from discolouration indicating excessive lipid oxidation or other chemical or biochemical reaction. Unless the product description indicates that fish units are de-skinned or that trawl marked raw materials were used, fish units shall be reasonably free from skin damage and excessive blemishes in the flesh. No canned fish product shall have a muddy appearance indicative of poor raw materials being used. Flesh texture shall not be excessively soft, mushy, tough or rubbery.

6.2.4 Freedom from defects indicating poor manufacturing

Canned fish shall be free from defects such as, but not limited to viscera, head parts or tails unless the presentation matches the description of the product. Canned fish shall be free from unsightly deposits of exuded fish protein curd, loose scales, scutes, fibre, sand, grit, intestines or spilled feed, loose parasites and other extraneous matter. Any residual scales shall be soft.

6.3 Canned marine molluscs (including cephalopods)

6.3.1 Preparation

When packed with shells, any growth on the external surfaces of the shells and meats shall be removed. Byssus shall be removed. In the case of abalone cleaning of the flesh shall include removal of the mouth and guts. The adhering mucous and epithelium between fringes and foot shall be brushed off. Abalone may be treated with preparations of salt and lime solutions to remove mucous. No bleaching agents shall be used.

6.3.2 Packing medium

The packing medium shall be free from excessive exuded materials indicating poor cleaning and manufacturing techniques or use of poor quality raw materials.

6.3.3 Compliance with product description and sensory requirements

The product shall comply with the size description where declared or shall be otherwise uniform in colour, appearance and size. Where male and female units of some molluscs differ in colour (e.g. black mussels) they may be packed as such but colours must be characteristic of the freshly cooked product. The texture shall be characteristic of the species and firm, succulent, but not difficult to chew and swallow. Meats shall not be disintegrated, mealy, chalky, mushy or doughy.

6.3.4 Freedom from defects indicating poor manufacturing

The product shall be free from sand, grit, byssus, obvious parasites or other extraneous contaminants that may not be of marine mollusc origin, but indicate poor cleaning and manufacturing practises. In case of marine mollusc meats, no sharp pieces of shell or other foreign matter that pose a threat to human health, may be present.

6.4 Canned crustaceans

6.4.1 Preparation

The product shall be prepared as in 5.4.2.

6.4.2 Packing medium

The colour of the packing medium shall be characteristic of good quality raw material and free from excessive protein curd or discolouration indicative of chemical breakdown or staining.

6.4.3 Compliance with the product description and sensory requirements

The product shall be free from uncharacteristic discolouration such as blue and black stains. In flesh packs the pigment of the flesh shall be bright and natural white to off-white. The flesh shall be firm, yet tender and shall not be disintegrated, soft, mushy or soggy.

6.4.4 Freedom from defects indicating poor manufacturing

Crustacean meat packs shall be free from inedible parts, shells or pieces of shell and swimmerets. The product shall be free from foreign matter not derived from shrimp and no foreign matter that may pose a health risk may be present.

7 Product-specific requirements

7.1 Canned fish (see also 5.2 and 6.2)

7.1.1 Canned pilchards, sardinella, herring, mullet, sauries and similar types of canned fish and canned sardines

7.1.1.1 Preparation

7.1.1.1.1 Pilchards

Fins need not be removed.

7.1.1.1.2 Sardines

When sardines are packed vertically in the can, the scales shall be removed unless the product is described as scales on and the scales are soft.

7.1.1.1.3 Products packed in sauce

The fish product shall be covered or partially covered with sauce upon opening of the can and the product shall comply with the description of the product. The presence of natural fish oils in the sauce is acceptable but there shall not be excessive separation of water from the sauce. Fish units shall be of uniform size and there shall not be excessive disintegration of flesh and bellies indicative of poor quality raw material or of bad manufacturing practice. In case of skin-on portions, fish skins shall be reasonably intact and not show signs of microbiological, biochemical or physical deterioration.

7.1.1.2 Drained mass

7.1.1.2.1 The average drained mass of pilchards, mullet, herring, sardinella and similar types of fish packed in sauce and of sardines packed in vertical cans shall be not less than 70 % of the declared mass. No individual drained mass shall be less than 65 % of the d.n.m. of products under 7.1.1.

7.1.1.2.2 When pilchards are presented in a brine or water packing medium in round vertically packed cans, the minimum drained mass shall be not less than 65 % of the d.n.m.

7.1.1.2.3 When packed as fillets of pilchards, sardinella, sardines or similar types of fish in flat cans and in a thick sauce, the drained mass shall be not less than 60 % of the d.n.m.

7.1.1.2.4 Mullet and herring fillets packed in flat cans and in a thick sauce shall have a drained mass of not less than 60 %.

7.1.1.2.5 The total drained mass of fish products packed as semi-preserves, where the packing medium composition preserves the product, shall be not less than 60 %.

7.1.1.3 Absence of scales and viscera

Unless fish is labelled scales on, not more than 10 % of the units examined as per 11.14 shall be covered with scales. Unless the fish is presented as packed in the round when determined in accordance with 11.13 the product shall contain not more than 3 % of viscera and loose green feed.

7.1.2 Canned sardines in oil or sauce, with oil added and including cured sild sardines, cured brisling, cured pilchards and similar types of fish in canned sardine style and packed horizontally in flat cans

7.1.2.1 Preparation

Head and gills shall be completely removed. The fish may be eviscerated and if eviscerated, shall be practically free from visceral parts other than roe, milt or kidney (as per 7.1.1.3). If fish is ungutted, the product shall be practically free from loose feed. If the product is presented ungutted or scales on, the manner of presentation shall be disclosed in the product description (unless it is fish packed in units of more than 5 in a small Dingley container of net mass less than 120 g. In this case it is not required to disclose this information).

7.1.2.2 Packing and packing medium

Units shall be neatly finger layed so that there are not excessive void spaces between fish units and fish units and the container. Over filling causing bulging of can lids or mechanical damage to the fish, shall be avoided. Where the product is packed in an oil packing medium such as vegetable oil, the packing medium shall be reasonably free from excessive cooked out protein curds and turbidity indicating poor raw material quality or poor cleaning of fish. Where products are depicted as sardines in a particular oil, the exuded liquid in the oil shall not exceed 30 % of the packing medium.

7.1.2.3 Drained mass

When sardines are packed in an oil or a thin watery medium, the drained mass shall not be less than 75 % of the d.n.m. when determined in accordance with 11.3. When sardines are packed in a thick sauce, the average drained mass of the containers shall be not less than 70 % of the d.n.m with no individual drained mass less than 65 %.

7.1.3 Canned maasbanker (jack mackerel or horse mackerel), mackerel, canned snoek and similar types

7.1.3.1 Preparation

Fins need not be removed but in the case of Maasbanker, the tough scutes and sharp dangerous spines at the dorsal and anal fins shall be removed.

7.1.3.2 Drained mass

When determined in accordance with 11.5 the drained mass shall be as follows:

- when fish units are cut in cutlets or middle cuts, the drained mass shall be not less than 70 %,
- in the case of fish fillets packed in shallow flat cans, the drained mass shall be not less than 60 % of the d.n.m.

7.1.4 Canned tuna, albacore and bonito

7.1.4.1 Preparation and presentation

The product shall be produced from pre-cooked tuna flesh from the species listed under 10.3.2.10.

Tuna shall be presented as tuna meat preparation forms (unless it is described differently on the label) as per the following:

a) Solid:

Fish is cut into transverse segments that are placed in the can with their transverse cut ends parallel to the ends of the can. The proportion of free flakes or chunks shall not exceed 18 % of the drained mass of the container when determined in accordance with 11.5.

The structure of the solid tuna meat shall be well defined and shall turn out of the can in a basically single portion.

b) Chunks:

A mixture of pieces of fish most of that have dimensions of not less than 12 mm in each direction and in that the original muscle structure is retained. The presence of pieces of flesh of that the dimensions are less than 12 mm shall not exceed 30 % of the drained mass when determined in accordance with 11.5.

c) Flakes:

A mixture of particles and pieces of flesh that have dimensions less than 12 mm in each direction but in which the muscular structure of the flesh is retained. The proportion of pieces of flesh of which the dimensions are less than 12 mm shall exceed 30 % of the drained mass of the container as determined in accordance with 11.5.

d) Grated or shredded:

A mixture of particles of fish that have been reduced to a reasonable uniform size in that particles are discrete and do not comprise a paste.

e) Tuna with vegetables and/or fruit and/or cereals:

The tuna component shall be in the form of flakes or shredded and the colour shall be light as required in 7.1.4.2.

f) Other presentations:

Any other presentation shall be permitted provided that it is sufficiently distinctive from the forms of presentation or preparation laid down in 7.1.4.1, meets all other requirements of this specification and is adequately described on the label to avoid confusing or misleading the consumer.

7.1.4.2 Colour of white or light meat tuna

For the purpose of labelling, canned tuna shall fall within one of the following colour designations:

a) White tuna or white meat tuna:

Canned tuna of the species ***Thunnus alalunga*** (albacore) that has a diffuse luminous reflectance of not less than 33,7 % of that of magnesium oxide when that reflectance is measured by the method in SANS 5137 (SABS SM 137), *Daylight 45°, 0° luminous directional reflectance of surface coatings and pigments.* This is approximately equivalent to 6.3 Munsell units when examined in accordance with 11.12; and

b) Light tuna or light meat tuna:

Canned tuna that has a diffuse luminous reflectance of not less than 22,6 % of that of magnesium oxide when that reflectance is measured by the said method. This is approximately equivalent to 5,3 Munsell units when examined in accordance with 11.12.

The colour in each pack shall conform to its description and shall be reasonably uniform. There shall be no dark meat and the product shall be practically free from discoloured muscle due to bruising, blood, parasitical infestation or lipid oxidation. The flesh of different species of tuna shall not be packed together. Discolouration due to lipid oxidation, sugar caramelisation or persistent flushed pink, orange or green colours in the flesh shall not exceed 5 % of the drained contents. Metal soiling or staining shall be absent.

7.1.4.3 Dark meat tuna or dark tuna

Canned tuna that does not meet the colour requirements of light meat tuna or that is packed by using dark meats, may be described as dark meat tuna or dark tuna.

NOTE Colour of tuna is usually determined subjectively by trained and experienced inspectors. The test methods in 7.1.4.2 need only be employed in cases of dispute.

7.1.4.4 Opening appearance and packing medium

The cans shall be well filled with fish and the flesh pack shall be reasonably free from voids. In case of solid packs the structure of the solid tuna meat shall be well defined and shall turn out of the can in a basically single portion. The product shall be free from excessive exuded protein curd indicating poor quality raw material or bad manufacturing procedures. The packing medium shall comply with requirements of 6.1.10.

7.1.4.5 Drained mass

When determined in accordance with 11.5 the drained mass shall be as follows:

- the average drained mass of containers examined shall be not less than 70 % of the d.n.m. with no individual drained mass less than 65 % of the d.n.m.;
- where canned tuna is packed in a thick sauce the drained mass shall be not less than 60 % of the d.n.m.;
- where tuna is packed in a thick sauce with garnish, the drained mass shall be not less than 55 % of the d.n.m.; and
- where tuna is packed with vegetables and/or fruit and/or edible garnish and/or cereals, the total drained mass shall be not less than 55 % of the d.n.m. and the drained mass of the tuna content shall be not less than 25 % of the d.n.m.

7.1.4.6 Absence of certain particular defects

The product shall comply with the description on the label. The product shall be free from bones, fins, viscera, large blood vessels longer than 10 mm and shall be practically free from blood clots greater than 6 mm in diameter.

7.1.5 Canned kippers, bloaters and similar types

7.1.5.1 Presentation

Kippers, bloaters, and similar types of cured fish may, except when packed as fillets, be packed with heads, tails and fins.

7.1.5.2 Drained mass

When determined in accordance with 11.5 the drained mass shall be as follows:

a) be not less than 70 % of the d.n.m; and

b) be not less than 60 % of the d.n.m. when packed in flat shallow containers.

7.1.6 Canned salmon

7.1.6.1 Preparation and presentation

Canned salmon shall be prepared from fresh or frozen raw material of salmon species listed in 10.3.2.12. The heads including the gills, viscera including the roe, tails, fins, loose scales, milt and blood shall be removed. Damaged or discoloured flesh, bruises or wounds shall be cut away.

Canned salmon shall consist of sections of fish that are cut transversely and in equal lengths and that are filled vertically into the can. The sections shall be packed in the container so that the cut surfaces are approximately parallel with the ends of the container and the skins parallel to the walls of the container.

Any other presentation may be permitted provided that it

a) is sufficiently distinctive from the form of presentation laid down above,

b) meets all other requirements of the specification, and

c) is adequately described on the label to avoid confusing or misleading the consumer.

7.1.6.2 Drained mass

When determined in accordance with 11.5 the drained mass shall be as follows:

a) be not less than 70 % when fish units are cut into cutlets or middle cuts; and

b) be not less than 60 % of the d.n.m. in case of fish fillets packed in shallow flat cans.

7.1.7 Canned hake, cod, kabeljou and similar types

7.1.7.1 Preparation and presentation

The product may be smoked and shall be prepared from fresh or frozen raw material from which the heads, viscera including the roe, tails, fins, loose scales, milt and blood shall be removed. All visible parasites and unsightly bruises and wounds shall be removed. The product shall consist of sections of whole fish that are cut transversely and in equal lengths and that are filled vertically into the can. Fillet or fillet portions may be packed. Any presentation that is adequately described on

the label so as to avoid confusing or misleading the consumer may be permitted. The product shall be free from hard bones that may hurt the palate and that may be an indication of insufficient heat processing. Backbones present on cross cuts shall only be present as an integral part of the cut section of the fish and shall not appear separated from the muscular structure.

7.1.7.2 Drained mass

The drained mass, when determined in accordance with 11.5, shall be not less than 70 % of the d.n.m. in the case of transversely cut sections of the whole fish packed vertically; and 60 % of the d.n.m in the case of fillets and fillet portions packed in shallow flat cans.

7.1.8 Curried fish and pickled fish

7.1.8.1 Preparation and presentation

The product preparation and presentation shall be as discussed in 7.1.7.1. Fish portions may be dipped in flour, batter or other suitable coating and may be pre-cooked, pre-fried or pre-baked. The product is packed with curry sauce containing at least a mass fraction of 5 % onions in the case of pickled fish.

7.1.8.2 Drained mass

7.1.8.2.1 Curried fish

The washed mass of all solid components in curried fish product shall be not less than 50 % of the d.n.m. In case of a battered (or breaded) product, the fish and batter content shall be not less than 45 % of the d.n.m.

7.1.8.2.2 Pickled fish

The washed mass of all solid components shall be not less than 50 % of the d.n.m. and the mass of the fish core content shall be not less than 35 % of the d.n.m. on condition that at least 5 % of the d.n.m. consists of onions. A fish core content of 40 % is required where less than 5 % onions are used.

7.1.8.3 Absence of particular defects

Where fish units are covered in batter, the batter shall not separate excessively from fish units or crumble to form an excessive amount of sediment in the can. Where onions are present, they shall not be abnormally dark or discoloured. The surfaces of fish ends shall not be abnormally dark discoloured. There shall be no dark discoloured oil in the packing medium.

7.1.9 Canned salted or salt cured/dried anchovies or sardines

7.1.9.1 Preparation, preservation and presentation

The fish shall be salted or salt cured before canning. The product may be preserved by salt and chilled storage (below 5 °C) or by pasteurization or heat processing to render it shelf stable. When presented as fillets, the backbones shall be removed. The product may be presented as whole fish, headed and gutted fish, flat or rolled fillets or any presentation fitting the description on the label. Garnish may be used and the product may be packed dry with salt, salted in own juices, in a salt pickle or in oil. Units in flat shallow containers shall be packed to avoid void spaces between units and units and the container.

7.1.9.2 Drained mass

When the drained mass is determined in accordance with 11.5, the fish and garnish content shall be at least 70 % of the d.n.m.

7.1.9.3 Absence of particular defects

Fillets shall not have dangerous protruding bones that can hurt the palate or throat. Fish units shall be firm and not mushy, slimy, mealy or disintegrating. There shall be no indication of mould or halophilic discolouration of units. Units shall be reasonably uniform in size unless described otherwise.

7.1.10 Canned fish for bulk catering and re-manufacturing purposes

7.1.10.1 Preparation and presentation

Except for texture, uniformity of unit size, and the permissible presence of cross-filled units and turbidity in brine or in other packing medium, fish for bulk catering and re-manufacturing purposes shall comply with the requirements of this specification. Units may be packed with the tails intact; the heads and guts (viscera) however shall be removed. It may be a solid pack or contain packing medium. It shall be labelled to disclose its true nature, with the name of the fish used being declared.

In the case of catering packs in a packing medium such as tomato, the packing medium shall be dispersed through the pack to cover almost all the fish units.

7.1.10.2 Drained mass

The drained mass, when determined in accordance with 11.5, shall be not less than 70 % of the d.n.m.

7.1.11 Canned minced fish

7.1.11.1 Preparation and presentation

The product shall not consist out of a mixture of fish species unless this is conspicuously declared in the name of the product.

Except for requirements rendered inapplicable by the nature of the pack, canned minced fish shall comply with the requirements of this specification.

Except that damaged fish units may be permitted, the raw fish used shall comply with this specification.

The product shall be prepared from the body parts of fish without the heads and viscera. The bone to flesh ratio shall practically be the same that occurs in middle cut pieces of fish. Excessive tail-end pieces and scales shall be not used. Pieces of the head, gills, gut, intestines or its contents or other unsuitable or any unsound fish parts shall not be used.

It shall be labelled to disclose its true nature, and the name of the fish used shall be declared in the name of the product and in the list of ingredients.

7.1.11.2 Absence of certain particular defects

When determined in accordance with 11.16, the product shall not contain more than 5 % starch.

The product shall have a uniform minced texture where the flesh has been reduced to a uniform size in that particles are discrete and do not comprise of a paste or an emulsified texture. The product shall not contain large pieces of fish. It shall not contain a large amount of denatured protein or honeycombing. The texture shall not be soggy or watery. It shall not have a gritty texture due to the presence of an abnormally high amount of bone pieces or a high amount of scales or any other added ingredients that cause grittiness in the product. The texture shall not be extremely closed and excessively compact or doughy.

The product shall not contain an excessive amount of exuded aqueous material. It shall be practically free from other exuded matter such as starch and protein.

Upon removal out of the container, the product shall retain essentially the shape of the container without falling apart and shall practically be free from excessive surface cavities that affect its appearance.

The product shall have an acceptable uniform colour. The colour of the product shall not be abnormally dark due to excessive amounts of skin pigment and tail-ends. It shall be practically free from discolouration on the surface due to oxidation.

The product shall be free from discolouration such as metal soiling or scorching. The product shall be free from fish eyeballs. Green feed, gut or pieces of gut shall be absent.

The odour and flavour of the product shall be characteristic of the fresh product and bitter or scorched flavours and odours shall be absent.

7.1.12 Marinated fish products with or without vegetables

7.1.12.1 Preparation and presentation

The product shall be prepared from fillets or cut pieces of specific fish types packed in brine or a suitable sour sauce with or without sweeteners, spices or herbs or other suitable ingredients.

7.1.12.2 Drained mass

When determined in accordance with 11.5, the drained mass of the fish content shall be not less than 50 % of the d.n.m.

7.1.13 Canned kedgeree and canned smoorfish

Preparation and presentation

The product shall be prepared from species of fish flesh suitable for the purpose. The product shall not contain a mixture of fish species unless this fact is conspicuously declared in the name of the product. The trimmed and cleaned fish shall be pre-cooked before flaking and only light-coloured flesh shall be used. Where possible bones shall be removed and no hard bones may remain in the final product. No dark discoloured fish or vegetables shall be present.

When determined in accordance with 13.1, the protein nitrogen content derived from the fish flesh of kedgeree shall be not less than 1,3 % by mass. Kedgeree may contain cereal, other starchy material, egg, other ingredients and garnish.

When determined in accordance with 13.1, the protein nitrogen content derived from the fish flesh of smoorfish shall be not less than a mass fraction of 1,5 %. The remainder of the contents shall be vegetables or cereals or both, or other ingredients.

7.1.14 Canned fish cakes and canned fish balls

7.1.14.1 Preparation and presentation

Fish cakes and fish balls shall be prepared from flaked, shredded, or minced fish flesh with or without the addition of seasoning ingredients, edible starchy material, egg and other ingredients. Bones shall be removed where practicable. No bones that are hazardous to the consumer shall be present. The head, gills, gut, intestines or its contents or other unsuitable or any unsound fish parts shall not be used.

The product described as fish balls shall be formed into characteristic rounded shaped units and the product described as fish cakes shall be formed in flat rounded disc-like shaped units.

The units shall not be ragged or disintegrated and shall retain their shape when normally handled.

The units shall not be soggy or mushy and shall be free from grittiness.

7.1.14.2 Fish protein nitrogen content

When determined in accordance with 13.1, the protein nitrogen content derived from the fish flesh in the fish cakes or fish balls without the packing medium shall be not less than 1,0 % by mass.

7.1.14.3 Drained mass

7.1.14.3.1 Packed in brine or sauce

The drained mass of the product when determined in accordance with 11.5, shall be not less than 60 % of the d.n.m.

7.1.14.3.2 Packed with vegetables, fruit or cereals

The drained mass of the fish content of the cakes or balls shall be at least 25 % of the d.n.m. and the total drained mass of all solid components at least 55 % of the d.n.m. when determined in accordance with 11.5.

7.1.15 Canned fish roe and caviar

7.1.15.1 Preparation and presentation

7.1.15.1.1 Fish roe

The product shall be prepared from roes in which membranes and connective tissue may be present but from which blood and adhering particles of entrails have been removed. It shall be packed in brine. The container shall be well-filled.

7.1.15.1.2 Caviar

Caviar shall be prepared from cured roe free from membrane and connective tissue. It may be packed in brine. The product shall not be mushy or tough. Artificial preparations resembling the product shall not be labelled as caviar.

7.1.15.2 Drained mass

Except when packed as a dry product the drained mass when determined in accordance with 11.5 shall be at least 70 % of the d.n.m. The drained mass of fish roe in the membrane shall be at least 60 % of the d.n.m. When packed as a dry product the containers shall be practically full.

7.1.16 Fish paste, fish pâté and fish spread

7.1.16.1 Preparation, preservation and presentation

For purposes of this specification fish paste, pâté and spread shall be deemed to include paste containing the edible flesh of crustaceans or molluscs either as major or minor ingredient.

The product shall be prepared from clean, sound fish, fresh or preserved, that has been comminuted to form a smooth, spreadable paste or in the case of a spread may contain coarse pieces. It may contain tomato, prepared vegetable material, starchy material, salt, spices, milk powder, fat, or oil of vegetable or fish origin, seasoning and flavouring substances, and other acceptable ingredients. Head or head parts of the fish, the gills, intestines or intestines contents, cartilage or other unsuitable or any unsound parts shall not be used.

Unless the salt concentration is adequate to preserve it, the product shall be processed by heat to ensure preservation.

The texture of the product shall be well bodied but readily spreadable without being watery or excessively soggy. It shall have a smooth textured appearance without being emulsified.

The product shall be free from separated fat starch, denatured protein or aqueous material. Discolouration other than slight surface discolouration due to oxidation, shall not be present.

There shall not be indications of inadequate mixing of ingredients. The texture shall be homogeneous throughout the contents of the container without separation of the components or tendency to separate the components. The contents of the container shall be reasonably free from air bubbles. Large void cavities shall be not present.

When examined in accordance with 11.10, it shall be free from sandiness, grittiness or palpable pieces of bone or shell particles.

The product shall be free from clots of materials such as clots of cereals or other inadequately mixed portions of ingredients or other abnormalities such as specks and stained areas.

7.1.16.2 Fish protein nitrogen content

When determined in accordance with 13.1, the protein nitrogen content derived from the fish flesh shall be not less than a mass fraction of 2 %. When determined in accordance with 13.2, the starch content of the product shall not be more than a mass fraction of 6 %.

Where the product is described as a spread with vegetables and/or fruit, the protein nitrogen content of the fish flesh, as determined in accordance with 13.1 shall be not less than a mass fraction of 0,7 %.

7.1.17 Fish sausages

7.1.17.1 Preparation and presentation

The product shall be prepared from clean and sound minced or finely chopped fish flesh, either fresh, frozen, cured or canned. It may contain starchy material, salt, spices, fat or oil of vegetable or fish origin, seasoning and flavouring substances and other permissible ingredients. The sausages may be smoked.

The product shall be formed either in artificial casing (that, if not edible, shall be completely stripped before the product is packed into containers), or in natural casings of animal origin.

7.1.17.2 Composition

When determined in accordance with 13.1, after draining and removal of the packing medium, the protein nitrogen percentage derived from fish flesh shall be not less than a mass fraction of 2 %. When determined in accordance with 13.2 the sausages without the packing medium shall not contain a mass fraction of more than 6 %.

7.1.17.3 Drained mass

When determined in accordance with 11.5, the drained mass of the product shall be not less than 75 % of the d.n.m.

7.1.17.4 Absence of particular defects

The sausages shall have an evenly fine to slightly coarse, smooth and a firmly stuffed texture. The sausages shall not be soggy. They shall be free from grittiness, cavities and air pockets.

The sausage units shall be acceptably uniform in size, shape and colour and shall be free from discolouration and ragged or irregularly cut ends. The units shall be not distorted or twisted. Off-cut pieces, bursts, and cut-marked units shall be not present. Pieces of fish bone shall not be present. Sausages shall completely be separated from one another. The sausages shall be free from impression marks such as caused by the expansion rings on the side walls of the container. Sausage units that are cross-filled in relation with other units in the container shall not be present. Cross-cut units shall be cleanly cut at square angles to their longitudinal axes. Spices present shall not adversely affect the appearance of the product.

7.1.18 Canned fish, including marinated products, with vegetables and/or fruit and/or cereals

7.1.18.1 Preparation and presentation

The product shall be prepared from fish or cuts of fish packed with vegetables and/or fruits, and/or cereals and/or edible garnish, together with seasoning materials, spices or other appropriate ingredients.

7.1.18.2 Drained mass

When determined in accordance with 11.5, the total drained mass of the container contents shall be not less than 55 % of the d.n.m. When fish appears first in the name of the product, the drained mass of fish shall be not less than 25 % of the d.n.m. When fish does not appear first in the name of the product, the fish content shall constitute not less than 10 % of the d.n.m. unless the fact that it constitutes less than 10 % is declared on the main panel of the label.

7.2 Canned marine molluscs and cephalopods

7.2.1 Canned abalone

7.2.1.1 Preparation and presentation

The abalone units shall be smoothly trimmed and guts and mouth pieces shall be removed. The fringes need not be removed. Flesh showing unsightly fork marks or other damage shall not be used for the packing of wholes or halves unless being trimmed and used as filler pieces.

Abalone shall be packed as wholes or as halves. Wholes and halves shall be not packed in the same container unless only one half is used as a filler piece to make up the correct mass. A small piece may be added to adjust the fill of the container. Such a filler piece shall be not less than 70 g in mass. Not more than one filler piece may be added.

Other forms of presentation may be permitted provided that they

a) meet all regulatory requirements, and

b) are adequately described on the label in accordance with the labelling requirements.

The container shall be well filled but not overfilled with the fish and packing medium. Distortion of the circular curve of the cans by forcing large abalone units into the cans with the consequent risk of affecting the integrity of the hermetical sealing of lids onto the cans shall be prohibited.

7.2.1.2 Drained mass

The drained mass, when determined in accordance with 11.5, shall be not less than 50 % of the d.n.m. Where the abalone content of any product is less than 50 % the product description shall be clear to indicate that it is a special type of product of which abalone is an ingredient, and the drained mass of the abalone shall be prominently declared on the label.

7.2.1.3 Absence of particular defects

Abalone units shall be free from discolouration due to oxidation or objectionable discoloured surfaces or stained marks or spots. The abalone units shall not have an abnormal dark colour. The product shall not contain abalone units with excessive dark colours due to high metal content such as iron, copper, lead or mercury.

The abalone units in any one container shall be reasonably uniform in colour.

The abalone units shall be practically free from abnormal surface cracks. Whole abalone units shall not be damaged or have unsightly cut marks or fork marks. When more than two abalone units are packed in any one container they shall be reasonably uniform in size. The product shall be free from viscera, mouth parts and black or dark pigmented parts.

When the packing medium is brine or water the packing shall be clear and free from any curd and turbidity such as milkiness and sediment.

Canned abalone shall have a firm, springy, chewy but succulent texture.

The texture shall be not abnormally soft or brittle. The internal texture of the whole abalone body shall be not mushy or disintegrated (soft heart) or mealy, or chalky, or crumbled or doughy. The texture shall be not dried or shrunken.

7.2.2 Canned mussels, oysters, clams, cockles, scallops, whelks and marine molluscs other than abalone

7.2.2.1 Presentation and presentation

Canned molluscs other than abalone may be packed from molluscs that were pre-cooked or raw, smoked or unsmoked, whole unshelled or shucked units. The molluscs units shall be culled, washed where appropriate and if necessary trimmed and packed in containers with, or in, a suitable oil, brine, own juice, a suitable sauce or another suitable grade packing medium.

Canned marine molluscs products may consist of marine molluscs packed with vegetables, fruits, cereals or other appropriate ingredients.

Other forms of presentation may be permitted provided that they

a) meet all regulatory requirements, and

b) are adequately described on the label and in accordance with the labelling requirements.

Shelled molluscs units presented in a shallow type container shall be neatly packed in rows close together with all units in the same upside down positions. There shall be no void spaces between the molluscs units or between the molluscs units and the walls of the container.

Cans shall not be over filled to the extent that they cause mechanical damage of the molluscs units or result in bulging lids.

Molluscs units packed without the shell shall be reasonably uniform in colour and in size. When smoked, the molluscs units in any one container shall have a uniform smoked colour.

Molluscs units shall not contain excessive amounts of green feed to the extent that it causes the discolouration of the packing oil.

Where the product is packed in an oil packing medium such as a vegetable oil, the packing medium shall be reasonably free from sediment and turbidity. Where the product is presented as a type of molluscs in "X" oil where "X" indicates the type of oil, the exuded liquid in the oil determined in accordance with 11.6 shall not exceed 30 %.

7.2.2.2 Drained mass

When determined in accordance with 11.5, the drained mass when packed in vertical containers shall be at least 60 % of the d.n.m.. When packed in flat cans the drained mass shall be at least 70 % of the d.n.m. Baby clams packed in vertical cans shall have a drained mass at least 50 % of the d.n.m.

7.2.3 Canned cephalopods (octopus, squids and cuttlefish)

7.2.3.1 Preparation and presentation

Cephalopods may be presented as whole, legs only, or cut pieces of the legs, heads or pieces of heads or a mixture of cut pieces from the cephalopods. Cephalopods may be packed with vegetables, fruit or cereals.

Cephalopods may be packed in an oil packing medium, brine or in water or in its own juice such as the ink.

7.2.3.2 Drained mass

The drained mass, when determined in accordance with 11.5, shall be not less than 60 % of the d.n.m.

7.2.4 Canned molluscs and vegetables and/or fruit and/or cereals and/or edible garnish

7.2.4.1 Preparation and presentation

The product may consist of molluscs with vegetables and/or fruits and/or cereals and/or with edible garnish together with seasoning materials, spices or other appropriate ingredients.

7.2.4.2 Drained mass

The total drained mass, when determined in accordance with 11.5, shall be not less than 55 % of the d.n.m. When molluscs appear first in the name of the product, the drained mass of the molluscs shall be not less than 25 % of the d.n.m., unless the fact that the drained mass of the molluscs is less than 25 % appears on the label. When molluscs do not appear first in the name of the product, the mass content of the molluscs shall constitute not less than 10 % of the d.n.m, unless the fact that it constitutes less than 10 % is declared on the main panel of the label.

7.3 Canned crustaceans

7.3.1 Lobster and rock lobster

7.3.1.1 Preparation and presentation

7.3.1.1.1 Lobster and rock lobster tails

In the packing of lobster and rock lobster tails, a small additional portion of tail flesh may be introduced to adjust the fill of the container. Whole or half tails shall be neatly folded or arranged with as much as possible of the red pigment of the epidermis of the flesh visible on the outside.

7.3.1.1.2 Lobster and rock lobster tails with other meat

The contents of the container shall be neatly and uniformly arranged. The tails shall be folded and packed around the other meat, the latter being centred in the container as far as possible. As much as possible of the pigment of the tails and other meat shall be visible.

7.3.1.1.3 Lobster and rock lobster limb and body meat

Where packed in pieces retaining to a large extent their original shape and size, the meat shall be neatly arranged in the container with as much as possible of the pigmented surfaces uppermost. Where the product is described only as "meat", this requirement shall not apply.

7.3.1.2 Drained mass requirements

7.3.1.2.1 Plain packs

The drained mass, when determined in accordance with 11.5, of the product shall be not less than 75 % of the d.n.m.

7.3.1.2.2 Packs in sauce medium

The drained mass, when examined in accordance with 11.5, shall be not less than 70 % of the d.n.m.

7.3.2 Lobster tomalley

The hepatopancreas, roe, meat from the limbs and body, and other edible parts of the lobster may be used. The gills, guts, stomach, shell particles, cartilage, and other unsuitable parts and any unsound parts shall be not used. Filler or other extraneous ingredients shall be not used.

7.3.3 Shrimps, prawns and langoustines

7.3.3.1 General preparation and presentation

Canned shrimps, prawns and langoustines shall be prepared from edible species of the families designated in 10.3.5(g)(h)(j) from which heads, shell and antennae have been removed.

The name of the product shall optionally be "shrimp", "shrimps" or "prawns" or where applicable "langoustines". (Both "shrimps" and "prawns" shall hereafter be denoted in the term "shrimp").

Canned shrimp may be presented as follows:

a) **Peeled:** Shrimp that have been headed and the shell and tail fin removed but without removal of the dorsal tracts;

b) **Peeled and de-veined or cleaned:** Peeled shrimp that the back have been cut open and the dorsal tract removed at least to the last segment of the tail.

c) **Cocktail (picnic):** Mixture of peeled shrimp sizes that when determined in accordance with 11.8(ii) does not contain more than a mass fraction of 15 % broken shrimp in a container.

d) **Salad:** Mixture of peeled shrimp sizes that when determined in accordance with 11.8(ii) does not contain more than a mass fraction of 50 % broken shrimp in a container.

e) **Broken:** Pieces of peeled shrimp consisting of less than four segments. This may also denote product containing more than the percentage of broken shrimp permitted in the above categories.

7.3.3.2 Size designation of shrimp

Canned shrimp may be designated by size in accordance with (a) the actual count range adherent on the label, or (b) as per provisions stated below.

The terms "extra large", "jumbo", "large", "medium", "small", "tiny" may be used provided that the range is in accordance with table 1. The number of whole shrimp (including pieces greater than 4 segments) per 100 g of drained product are indicated in table 1.

Table 1 □ Size designation of canned shrimp

1	2
Designation	**Number of whole shrimp per 100 g of drained product**
Extra large, jumbo	13 or less
Large	14-19
Medium	20-34
Small	35-65
Tiny or miniscule	More than 65

7.3.3.3 Drained mass

The drained mass of shrimp or langoustines when determined in accordance with 11.5, shall be not less than 60 % of the d.n.m.

7.3.3.4 Absence of particular defects

a) Criteria for broken shrimp:

When examined in accordance with 11.8, the presence of broken shrimp shall not exceed the criteria in tables 2 and 3.

Table 2 □ Broken shrimp permitted per size designation

1	2
Size designation	**Maximum percentage (as a mass fraction) of broken shrimp permitted**
Extra large, jumbo	5
Large	5
Medium	5
Small	10
Tiny, miniscule	15
No size designation	10

Table 3 □ Broken shrimp permitted per style designation

1	2
Style	**Maximum percentage (as a mass fraction) of broken shrimp permitted**
Picnic, cocktail	15
Salad	50
Broken	No maximum

b) Criteria for broken langoustines:

When examined in accordance with 11.8, langoustines shall contain not more than a mass fraction of 5 % of broken units.

c) Cleaned or deveined:

When examined in accordance with 11.8, not more than a mass fraction of 5 % improperly deveined or cleaned units shall be present in a product labelled as "deveined" or "cleaned".

d) Discolouration:

Except for sulphide staining (blackening) and when determined in accordance with 11.8, not more than a mass fraction of 15 % of the units shall be affected by distinct discolouration of more than 10 % of the surface area of the individual shrimp or with faded pigment or liver stain.

Black stained units due to sulphide staining developed on the inside surfaces of containers shall not be present.

7.3.4 Crab meat

7.3.4.1 Preparation and presentation

Canned crab meat shall be prepared single or in combination with the leg, claw, body and shoulder meat from which the shell has been removed from edible species designated in section 10.3.5(i).

The name of the product shall be "crab" or "crab meat" and shall be preceded or followed by the common or usual name applied to the species if the possibility exists of the consumer being confused.

In addition, the product name shall include descriptive terms which accurately reflect the contents without misleading or confusing the consumer.

Where leg meat is presented, the leg meat shall be neatly arranged on top, or may also be at the bottom of the container with as much as possible of the pigmented surfaces uppermost.

When leg meat is declared as a percentage of leg meat in the product, the composition of leg meat shall be determined as a percentage of the total drained mass of the contents.

Where a product is presented as chunk meat at least 50 % of the total drained mass of the contents shall consist of solid pieces or chunks of crab meat.

7.3.4.2 Drained mass

The drained mass, when determined in accordance with 11.5, shall be not less than 70 % of the d.n.m.

7.3.5 Canned crustaceans and vegetables and/or fruits and/or cereals and/or edible garnish

7.3.5.1 Preparation and presentation

The product may be prepared from crustaceans with vegetables and/or fruits and/or cereals with or without edible garnish, seasoning materials, spices or other appropriate ingredients.

7.3.5.2 Drained mass

The drained mass when determined in accordance with 11.5, shall be not less than 55 % of the d.n.m. When crustaceans appear first in the name of the product, the mass of crustaceans shall be not less than 25 % of the d.n.m., unless the fact that the mass is less than 25 % of the d.n.m. appears on the label. When crustaceans do not appear first in the name of the product, the crustacean content shall constitute not less than 10 % of the d.n.m, unless the fact that it constitutes less than 10 % of the d.n.m. is declared on the main panel of the label.

7.4 Canned seafood mixtures

7.4.1 General

The raw material for canned seafood of any mixture of fish, molluscs and crustaceans with or without vegetables and/or fruits and/or cereals falling within the scope of this specification, shall comply with the requirements in section 5 as applicable.

7.4.2 Drained mass

The drained mass of any mixture of fish, molluscs and crustaceans when determined in accordance with 11.5, shall be not less than 60 % of the d.n.m.

When any mixture of fish, molluscs and crustaceans are presented with vegetables and/or fruits and/or cereals the drained mass of the total solids shall be not less than 55 % of the d.n.m. When reference is made in the product name or indicating any mixture ingredient of fish, molluscs or crustaceans, the drained mass of that mixture ingredient shall be not less than 25 % of the d.n.m., unless the fact that it is less than 25 % of the d.n.m. appears on the label.

When the meat ingredient of the mixture does not appear first in the name of the product, the meat content shall constitute not less than 10 % of the d.n.m, unless the fact that it constitutes less than 10 % of the d.n.m. is declared on the main panel of the label.

7.5 Canned fish pies or puddings

When determined in accordance with 11.5, the drained mass shall be as follows:

a) in pies or puddings containing only fish or marine molluscs or crustaceans or any mixture of these, the mass of fish or marine molluscs or crustaceans within the pie crust or pudding shall be not less than 35 % of the d.n.m.;

b) in pies or puddings containing fish, or marine molluscs or crustaceans or any mixture of these with vegetables and/or mushrooms and/or fruit, and/or cereal, the mass of fish or marine molluscs or crustaceans shall be not less than 25 % of the d.n.m. The mass of vegetable and/or mushroom and/or fruit and/or cereal as relevant as the part of the product in the pie crust or pudding shall constitute not less than 15 % of the d.n.m.

   Where the name of a minor ingredient also appears in the name of the product, the mass of that minor ingredient shall constitute not less than 5 % of the d.n.m.

7.6 Unspecified canned seafood

7.6.1 General

Any product falling within the scope of this specification shall be prepared from material complying with the requirements in section 5. The product shall be appropriately described on the label.

7.6.2 Drained mass

Subject to the container being filled to practical capacity (see 5.1.4) the drained mass when determined in accordance with 11.5 shall be as follows:

a) Fish:

1) Canned fish not less than 70 % of the d.n.m.

2) Canned fish products not less than 60 % of the d.n.m.

b) Molluscs:

1) Canned molluscs not less than 60 % of the d.n.m.

2) Canned molluscs products not less than 55 % of the d.n.m.

c) Crustaceans:

1) Canned crustaceans not less than 60 % of the d.n.m.

2) Canned crustaceans products not less than 55 % of the d.n.m.

Where the drained mass of any unspecified fishery product is less than 50 % of the d.n.m., the product description shall clearly indicate that it is a special type of product of which fish, crustaceans or molluscs are an ingredient and the fish, crustaceans or molluscs content shall be declared on the label.

7.7 Semi-preserved or pasteurized canned products

7.7.1 Product definition and methods of preservation

Canned fish, molluscs and crustaceans or their products covered by this standard, may be packed as semi-preserved. The product is preserved by any combination of salting, brining, pickling, smoking, low acid or preservatives allowed in terms of regulations under the Foodstuffs, Cosmetics and Disinfectants Act and chilled in storage below 5 °C. Products may also be rendered shelf stable by incorporating heat processing and at least a pasteurization treatment process.

7.7.2 Product requirements

Particular product descriptions shall comply with the requirements for the particular products as relevant on condition that where product is preserved by the packing medium and is labelled semi-preserved, the drained mass may be a minimum of 50 % of the d.n.m. (This requirement is not applicable to products in 7.1.9).

8 Microbiological requirements

8.1 Commercially sterilized products

8.1.1 Incubation

a) The frequency and number of samples from a production lot to be incubated shall be determined at the discretion of the authority administering this specification. Such discretion shall be established on criteria such as, the past records and ability of the factory to produce a microbiologically safe product, the length of time the factory was idle, any delays or deviations occurring in the scheduled processing plan for the product and the use of raw materials, ingredients or packing material or production of unaccepted, defective or doubtful quality.

The capability of a factory depends on attributes such as adequate supervision, competent and technically trained personnel, a positive attitude and commitment, the use of calibrated instruments and consistent and carefully maintained and adjusted equipment, and adequate implementation of management systems based on programmes such as good manufacturing and sanitation practices, quality management and process control and the successful application of a system that identifies specific hazards and preventative measures for their control to ensure the safety of the product.

b) The factory shall provide sufficient incubation facilities at the factory. The incubation of the samples shall be under the sole control of the authority administering this specification.

8.1.2 Microbiological spoilage

A product in its container, after incubation at 37 °C for 14 d or after it has been kept at ambient temperature, shall be considered to have undergone microbiological spoilage if the container

a) shows a positive pressure,

b) leaks, or

c) whether having a positive pressure or not, shows evidence of bacterial proliferation indicated, when compared with sound samples by a significant change in pH value, or by disintegration or decomposition, or by significant discolouration of the product. Evidence of bacterial proliferation shall be confirmed by microscopical or cultural examination (see 12.1 and 12.2).

8.1.3 Microbiological requirements

When examined or tested (or both) in accordance with 12.1 and 12.2, products in containers shall show no evidence of microbiological spoilage or of the presence of viable pathogenic organisms or organisms liable to cause spoilage of the product under normal conditions of storage.

8.2 Pasteurized, semi-preserved and salt-preserved products

8.2.1 Microbiological spoilage

A product in its container shall be considered to have undergone microbiological spoilage if the container

a) shows a positive pressure,

b) leaks, or

c) whether having a positive pressure or not, shows evidence of bacterial proliferation indicated, when compared with sound samples, by a significant change in pH value, or by disintegration or decomposition, or by significant discoloration of the product.

Evidence of bacterial proliferation shall be confirmed by microscopical or cultural examination (see 12.1 and 12.2).

8.2.2 Microbiological requirements

When tested in accordance with 12.1 and 12.2, products in containers examined or tested or both shall show no presence of viable micro-organisms considered to be pathogenic nor the evidence of microbiological spoilage or of viable spoilage organisms in numbers liable to cause spoilage of the product during storage at the temperature recommended by the canner, or, in the case of pasteurized or semi-preserved products at the required storage temperature in accordance with 10.2.1(e) that is stated on the label.

9 Requirements to control the integrity of cans and other types of containers

9.1 General requirements

Containers, including lids or caps shall meet the following requirements:

a) be capable of maintaining the preservation of their contents in a sound wholesome condition;

b) be made of a suitable material and constructed so that they can be easily closed and sealed;

c) be sufficiently durable to withstand mechanical and thermal stresses during the canning processes and to resist physical damage and maintain their normal appearance during normal distribution and storage;

NOTE Collapsible tubes if unsuitable for heat sterilization, should be used only for products such as fish pastes or fish roe with a high salt content where heat sterilization is not obligatory.

d) protect the contents from contamination by micro-organisms or any other substance;

e) be suitable for the type of product and the conditions of storage and transportation;

f) their inner surfaces shall be adequately coated with a suitable material and shall not react with the contents in any way that would adversely affect the product or the containers;

g) the internal surface coating such as lacquer shall be uniformly applied and shall not become loose or peel off the surface of the can or lid during processing and normal storage conditions;

h) the outer surfaces shall be resistant to corrosion under normal storage and retail conditions;

i) the compound sealing material on lids or caps shall be suitable for the purpose and for the type of product used;

j) lids shall be tamper-proof, a tamper detector shall be provided in cases where lids or caps can be removed by hand, such as with screw-on caps on jars; and

k) the containers shall be such that the contents can be easily emptied out.

9.2 Condition of containers and closures

Containers or lids with signs of poor or doubtful container integrity shall not be used. The inner surfaces of all containers and closures shall, at the time of use, be clean and in the case of cans, free from corrosion, pinholes, evidence of de-tinning, de-lacquering, damages, serious solder

splashing or excess application of solder. When lacquered cans or lids or both are used, the lacquer shall be free from drops or splashes of lacquer, significant scratches and other imperfections, and it shall have no detrimental effect on the product such as foreign flavours, foreign odours and discolouration. The seams and seals, where applicable, shall be normal in appearance with a strong leakproof structure and quality. The sealing compound on closures shall be evenly applied around the entire contour with a normal appearance and adhesion.

Can bodies and lids with scoring lines for easy opening purposes of the final product by the consumer, shall be subjected to appropriate examinations for integrity. There shall be no signs of corrosion in the scoring lines.

9.3 Transport and storage of empty containers

Containers and lids or closures from manufacturers shall be delivered covered by wrapping material or in covers and shall be transported and stored under protection against risk of contamination, damaging and the weather. The storage area shall be kept clean and shall be insect-, bird- and rodent-proof. Containers and lids or closures shall be stored in a dry store, protected against wind, rain or vapour from the sea and away from steam, humidity, condensation or sudden temperature variations. The storage area shall be used solely for the storage of empty containers and lids.

The stacking of pallets with empty cans shall be such that the cans shall be not damaged. Empty cans or pallets with empty cans shall be not stepped on.

9.4 Inspection on receipt

The can manufacturer shall, by means of applying a quality management system, ensure that consignments of containers and lids supplied to the canner are in compliance with the correct characteristics and documented parameters that were agreed upon between the can manufacturer and the canning factory. The canning factory shall on receipt of the consignments, conduct a routine inspection system that includes a visual examination and physical testing to determine the freedom of integrity defects and other defects.

Inspection results and corrective procedures where applicable shall be documented and kept on file. Consignments not in compliance with the standards set by the container manufacturer shall not be used.

Each pallet or package with containers and lids shall be provided with a means of identity of the container and lid manufacturer. A system of collecting and retaining these identities shall be exercised and be such that, should problems arise, the affected containers or lids from a particular pallet or package can be related and traced to a specific production code lot from which these containers or lids were selected.

9.5 Handling of containers in the canning operation

Containers shall be not exposed to contamination or damaging to their bodies, seams or flanges while distributed, on runways or feeding lines. Containers shall be removed from the runways or feeding lines at the end of production unless the containers are adequately covered and protected against risks of contamination and damages.

9.6 Coding and sealing of containers

9.6.1 Coding

Each container shall be indelibly and legibly marked, and visible with the naked eye, coded from which the details of manufacture (see 10.2(g)) including the seamer and/or packing line identification and where applicable any sub-coding system used, can be determined.

Sub-coding may indicate and change according to the following: intervals or periods during a work shift; personnel shift changes; batches or catches, provided that containers comprising such batches shall not extend over a period of more than one personnel shift.

When coding is done by embossing, the lids or closers shall not be damaged.

9.6.2 Seam closing machines

Lids or closures and containers shall not be damaged during handling or sealing or closing of containers. Only specially trained and adequately qualified personnel shall conduct the correct operation, careful maintenance, adjustment and frequent regular inspection of the seam closing machines. The seam closing operation shall be performed at a speed that is consistent with the speed of the production line to prevent a delay of containers before the seamer, resulting in a subsequent drop in contents temperature.

A system of identifying each retort trolley, basket or crate being filled with containers after sealing and the time of sealing shall be in place.

9.6.3 Sealing

9.6.3.1 Seam quality

All container closures shall be strongly and accurately made and well formed with the parameters and dimensions within the accepted tolerances for the particular double seam or closure attributes of the container.

9.6.3.2 Seam evaluation

Routine evaluations at regular intervals of the quality of the closures shall be conducted by competent personnel under illumination complying with 3.2.7. Such evaluations shall be a formalised programme that shall include visual inspections for the absence of defects likely to affect the hermetic seal and internal inspections of the seams in accordance with the standards, parameters, attributes and methods of evaluation provided by the container manufacturer and shall be available at the container seam inspection station.

9.7 Container washing prior to retorting

9.7.1 Water used in a detergent solution for container washing purposes or in water sprays for washing shall be clean potable water in compliance with 3.4.1.

9.7.2 All dirt, grease and organic material shall be removed from the outside surfaces of the containers.

9.7.3 The detergent solution shall be regularly replaced to ensure its effectiveness and to prevent accumulation of contaminates.

9.7.4 The temperature of the washing water or detergent solution shall be such to ensure that the product temperature remains in compliance with the initial temperature specified in the sterilization schedule.

9.8 Handling of the product between container closure and retorting

9.8.1 Damaging of containers during collection or loading in the retort baskets or trolleys shall be avoided. The stacking of containers shall be such to avoid obstruction of the flow of the heat medium in the retort.

9.8.2 The period of time between the closing of containers and retorting shall be kept to a minimum. Unnecessary delays between the closure of containers and the retort process shall be avoided.

9.8.3 If the temperature of the product before retorting dropped below the initial temperature that has been used to determine the time-and-temperature process of the product, the retort sterilization schedule shall be extended according to a pre-determined plan that shall ensure commercial sterility of the product. Just before the start of the retort process whenever a drop of the normal schedule initial temperature is suspected, the content of the coldest container to be processed shall be shaken or stirred to determine the average temperature.

9.8.4 A system for product traffic control shall be established to prevent the product from by-passing the thermal processing operation and being accidentally taken into the storage area, or being subjected to multiple processing. A method to indicate whether a retort trolley or basket has been thermally processed such as with the application of a heat sensitive tape or tag shall be employed. A container on top of a retort trolley or basket shall be conspicuously marked with a heat sensitive tape or a heat sensitive tag shall be tied to the retort trolley or basket.

9.8.5 Containers with product requiring different retort processes that are being packed at the same time shall be identified and routed to receive the specified processes.

9.8.6 Retorts containing containers not yet processed shall be identified by means such as with a distinctive marker to prevent confusion.

9.8.7 Retorts shall not be closed until ready to start the process.

9.8.8 A clean new time and temperature chart or thermogram (see 3.3.6(k)) shall be installed at the start of each day's operation and be synchronized with the time indicated on the wall clock. The recording pen shall be filled with ink and the functioning of the timing mechanism and the correct length of the recorder pen arc shall be checked. After a power failure where the thermograph was inactivated, the time and temperature chart or thermogram shall be reset to the correct time.

9.9 Thermal processing of product

9.9.1 In the case of products in containers other than semi-preserves and salt-preserved products, the filled containers shall, where appropriate, be exhausted, hermetically sealed, and fully thermally processed. The containers of semi-preserves and salt preserved products shall be hermetically sealed.

9.9.2 The thermal process shall be continuous.

9.9.3 All rigid containers shall be exhausted, sealed, and processed in a proper manner resulting in their ends remaining concave and the bodies remaining normal during normal commercial conditions of storage and distribution.

9.9.4 The time-temperature process in the case of heat-preserved products shall ensure

a) the destruction of pathogenic organisms, and

b) freedom from microbiological spoilage.

9.9.5 Retorts and other heat processing equipment are to be operated as per requirements for the particular type of retort or equipment by trained and qualified individuals. The processor is required to document prescribed operating procedures for each product and container size and these procedures have to be available for inspection and validation by the authority administering this specification.

9.9.6 Appropriate alternative sterilization schedules shall be provided for immediate application in case of any deviations in processing.

9.9.7 Processing data and recorded charts of all processes that deviate from the scheduled process, shall be submitted to the heat processing authority that investigated and authorised the original documented scheduled process. The heat processing authority shall submit a written report on the heat dose calculated for the particular deviation for submission to the authority administering this specification.

9.10 Handling of sealed containers after heat processing

Any container whose process status before and after the retort process is unknown shall be immediately destroyed.

After having been removed from the retort in their baskets or trolleys the containers shall not be subjected to after-sterilization contamination. Hot or wet containers or containers having a positive internal pressure after the retort process shall not be removed out of their trolleys or baskets or be handled individually or be touched by hand. Containers shall not be handled or bulk-stacked before being thoroughly dried and cooled to an internal temperature not in excess of 50 °C.

A clean separated area for the sole purpose of cooling containers after retorting shall be provided. Such an area shall be

a) enclosed with unauthorized entrance being restricted,

b) physically separated from areas from which steam is emitted, and

c) away from other normal factory traffic, other than the handling of trolleys or baskets with containers after retorting. There shall be no crossflow of other factory traffic along the route of the baskets or trolleys between the retorts and the cooling area.

After the containers have been cooled and dried, and only on instruction from a designated person, may the baskets or trolleys be moved out of the cooling area to a pick-up area. The process of removing the containers out of the trolleys or baskets and the stacking shall be done in such a way as to avoid rough handling or damaging of the containers or causing unnecessary stress to their seams or seals.

Containers, and in particular their seams, shall not be exposed to contamination. The equipment and conveyors used for the pick-up and stacking of containers shall be regularly sanitized.

9.11 Storage of the end product

9.11.1 General

The end product storage areas shall be used solely for the intended purpose.

All containers of the same production code or batch code or sub code, where applicable, shall be stored together and not be mixed with containers of other production days' codes. Each stack or pallet with containers shall be identified with the code appearing on the containers and with their inspection status. Any production lots in which defects or a deviation from process requirements were detected, shall be identified as such and be stored separately from other production lots. Any non-conforming production lots, shall be identified as such and stored in an area physically separated from the rest of the end product stock.

9.11.2 Products not requiring refrigeration

Canned products not requiring refrigeration shall, both before and after labelling and packaging for commercial distribution, be stored orderly in dry conditions, protected against steam, condensate, moisture, dust and the weather. Canned products shall not be stored under conditions that are conducive to corrosion of the containers or be exposed to extreme temperatures.

The final product shall be stacked in such a way that container damage shall not occur due to pressure from excessive mass of pallets with containers stacked above. Workers shall not be allowed to step on containers or on pallets with containers. Precautions shall be exercised to avoid container damaging in particular with fork-lift truck handling.

9.11.3 Products requiring refrigeration

Where products are required to be stored under refrigeration, the storage temperature shall not exceed 5 °C. Refrigeration rooms shall be clean and shall be hygienically maintained. The product shall be protected against risks of corrosion.

10 Labelling and marking

10.1 Labelling operations

10.1.1 Labelling area

Before the start of the labelling operation, the area shall be cleared of any stray cans. The labelling area shall be maintained in a clean, tidy and orderly condition.

10.1.2 Condition and handling of containers during labelling

Containers shall be in a condition complying with 9.2.

The handling of containers during the labelling process shall be done in a manner so as to avoid container abuse or damaging or their seams being subjected to undue stress or mechanical shock.

10.1.3 Labels

Labels, outer wrappers, outer cartons, lithographic markings and printing on containers, pictorial presentation and colouring shall be in accordance with the labelling requirements of 10.2.

The size of the label, outer wrapper and outer carton shall be suitable to the container size without being oversized. Printing shall be correct, proper and neat.

It is recommended that the authority administering this specification be consulted with regard to the printed lettering size, statements, pictorial presentation and colouring on newly designed labels, outer wrappers, outer cartons or lithographed cans before they are taken into use.

10.1.4 Attachment of labels

Labels, outer wrappers or outer cartons shall not be attached or applied to containers by any person other than the manufacturer or by his authorized agent.

Labels, outer wrappers or outer cartons on containers, shall be clean, neat, unspoiled, undamaged and labels or outer wrappers shall be securely attached at the time of despatch from the factory (or at the time of arrival when imported).

Misaligned labels, excess glue or lack of glue, or loose or pleated labels or outer wrappers shall not be present. Labels or outer wrappers shall not be superimposed over other labels or over outer wrappers that have been affixed on to containers or onto lithographic printed containers.

Materials such as adhesives or glues used for attaching or applying labels, outer wrappers or outer cartons or closing of packages shall not be hygroscopic, or liable to deteriorate during storage after being applied or conducive to corrosion of the can or lid.

10.1.5 Packages – outer containers

Packages in which containers are packed shall be clean, neat and undamaged. Outer containers such as boxes or cases shall be suitable for the purpose of use, be of correct size to avoid damaging of containers by squeezing or loose movement of the containers inside the outer container. Containers shall not be packed in outer containers in positions prone to cause damaging such as packing containers on their sides.

Outer containers shall be strong enough to protect the finished product during normal handling and transport.

10.1.6 Marking of packages

The following regarding the containers in the package shall be printed or stencilled on the outside of every package: The number and size or net mass of the containers and the information required by 10.2(a), 10.2(b), 10.2(g), 10.2(h), 10.2(i) (where applicable) and 10.2(f). The business address of the manufacturer need not be the full address but shall be sufficient for identification purposes.

In addition to the date code required by 10.2(h), any sub-coding indicating a time period of the production date, and/or any line or seamer number, that appeared on the containers shall also be printed or stencilled on every package. When a code system other than the conventional lettering and digital form such as a bar or edge coding system is used, sufficient information shall appear on the packages to identify the production date and any sub-coding.

10.1.7 Containers for export

Provided that the requirements of the importing country are met and subject to there being no attempt to misrepresent the product, products may be exported either unlabelled, or labelled differently from the requirements of this specification. The requirements of 10.1.6 shall, however, apply, except that a code mark may be used in lieu of the name of the manufacturer.

10.2 Details required on each container or label

The following information shall appear on each container or label, clearly visible in legible and indelible markings not affected by pictorial or other matter, printed or otherwise, in type of such size and presentation as prescribed by regulation promulgated under the said Foodstuffs, Cosmetics and Disinfectants Act and the Trade Metrology Act, 1973 (Act 77 of 1973) (as amended from time to time):

a) the name and full physical address of the manufacturer, importer, producer, proprietor or controlling company, or in the case of containers packed on behalf of any other person or body, the name and full physical address of that person or body;

b) taking cognisance of the provisions of the correct Merchandise Mark Act the name and true description of the contents (see 10.3), including where applicable, the nature of the packing medium in which the product is packed;

   1) the description "natural oil" or "natural" shall not be used for products in a "plain" or "brine" packing medium;

2) where the product is packed in oil, the name of the type of oil. If the term "vegetable oil" appears in the name of the product, the specific type of vegetable oil shall be declared in the list of ingredients;

3) if the product has been smoked or smoked flavoured, this information shall appear on the label in close proximity to the name of the product. The qualifying word(s) e.g. "smoked" or "smoke-flavoured" whatever is appropriate shall appear in immediate conjunction to the product name in a letter size at least half that in that the product name is featured and in equal prominence and boldness;

c) where applicable, a list of ingredients including the name(s) of the fish, molluscs or crustacean species;

d) where permitted by the Foodstuffs, Cosmetics and Disinfectants Act, the presence of artificial colorants;

e) where the product is required to be stored under refrigeration, the words "Perishable – Keep under refrigeration at a temperature not exceeding 5 °C" in a prominent position on the main panel, in plain capital letters at least half the size of that used for the product name, with a minimum of 3 mm in height, except that the word "Perishable" shall be in bold type of at least 4,0 mm in height;

f) the d.n.m. of the contents;

g) the product identification, the date of canning, the batch number (if used) and the factory identification embossed or otherwise indelibly marked on the container or, in the case of jars, on the cap or label (see 9.6.1); any mark or code used for the foregoing shall be disclosed to the authority administering this standard. Where individual containers are labelled, wrapped in an outer wrapper or packed inside an outer carton in such a way that the code on the container is not visible without removing the label, outer wrapper or outer carton, the corresponding code of the container shall be marked on the label or outer carton;

h) words indicating the country of origin where the product was produced; and

i) information required in terms of the relevant subsection(s) dealing with the specific product.

10.3 True description of the canned product

10.3.1 General

10.3.1.1 The name of canned fish, molluscs or crustaceans declared on the label shall be the common or usual name applied to the species.

10.3.1.2 The product shall be correctly described in the name of the product appearing on the label.

10.3.1.3 In addition to 10.3.1.1 and 10.3.1.2, the label shall include other descriptive terms that will avoid misleading or confusing the consumer.

10.3.1.4 Any descriptive terms used including those denoting style of presentation, shall accurately reflect the contents of the container.

10.3.1.5 No fish, molluscs or crustaceans shall be labelled under a name or designation that is misleading or no descriptive terms or statements that are misleading or confusing to the consumer shall be used.

10.3.1.6 Where the words "selected fish" or similar words are used to describe the product, the name of the fish, molluscs or crustaceans shall appear in plain type of the same letter size and colour as the product name.

10.3.1.7 The name of the product shall be qualified by a term descriptive of the representation. A product presented as solid pack or chunks or as flaked, grated, shredded, minced or similarly prepared, shall be described by the appropriate word(s) on the main panel of the label in letters of the same size and prominence as the name of the product that shall include the name of the fish. Where the name of a minor ingredient appears in the name of the product, the mass of the minor ingredient shall not constitute less than 5 % of the d.n.m.

10.3.1.8 Fish packs other than whole packs (heads and tails removed and eviscerated) such as cutlets, fillets or slices shall be appropriately described on the main panel(s) of the label.

10.3.1.9 Pictorial presentations shall not be misleading or confusing to the consumer. Any fish, molluscs or crustaceans depicted on the container, label, outer wrapper or outer carton shall bear a reasonable likeness to the type of fish, molluscs or crustacean, cut of fish or colour of fish or product in the container.

10.3.1.10 Where applicable, the common or usual name of the product shall be qualified by the country, or region of origin.

10.3.1.11 The "Best before" date or expiry date shall appear legibly on the label.

10.3.2 True description of canned fish

10.3.2.1 Where stockfish is used in the preparation of products labelled "curried fish", "fried fish", or "pickled fish" the name "stockfish" need not to appear in the title; in the case of other fish used for these types of products the name of the fish shall appear in the title in conjunction with the descriptions. The type of fish used shall appear in the list of ingredients (see 10.2.1(c)).

10.3.2.2 Mullet shall be described only as "Mullet" or "Haarders" / "Harders".

10.3.2.3 Marsbanker (*Trachurus spp.*) shall be described only as "Marsbanker" or "Jack Mackerel".

10.3.2.4 Mackerel (*Scomber spp.*) in any form shall be described only as "Mackerel"/"Makriel" or "Middlecut".

10.3.2.5 The words "middle cut"/"middelstuk" shall be used only when coupled with the name of the fish and when in fact middle cuts have been packed; the words "middle cut"/"middelstuk" shall appear in type of the same size and prominence as that of the name of the fish.

10.3.2.6 Canned sardines or sardine type products are prepared from the following species:

Sardina pilchardus

Sardinops melanostictus, S. neopilchardus, S. ocellatus, S. sagax, S. caeruleus,

Sardinella aurita, S. brasiliensis, S. maderensis, S. longiceps, S. gibbosa

Clupea harengus

Sprattus sprattus

Hyperlophus vittatus

Nematalosa vlaminghi

Etrumeus teres

Etrumeus whiteheady

Ethmidium maculatum

Engraulis anchoita, E. mordax, E. ringens

Opisthonema oglinum

Depending on the species used, the name of the product shall be

a) "Sardines" exclusively reserved for *Sardina pilchardus* (Walbaum); or

b) "X sardines" where "X" is the name or description of a country, the species, or the common name of the species in accordance with this specification and in a manner not confusing or misleading to the consumer (see 10.3.1) in close proximity and in a letter size at least half the size of the word sardines and in equal prominence, with the exception that the species ***Sprattus sprattus*** may be described as brisling sardines.

c) Except when packed in accordance with 7.1.2, pilchards (*Sardinops ocellatus, S. melanostitus, S. neopilchardus, S. sagax and S. caeruleus*) shall only be described as "Pilchards"/"sardientjies"/"Sardyntjies". When packed in accordance with 7.1.2, pilchards may be described as "Sardines".

d) *Sardinella spp* shall be described as "Sardinella". The descriptive terms "Pilchards" shall be not used for packs consisting of *Sardinella spp.*

e) *Etrumeus spp.* shall be described as "X herring" where "X" is the name or description of a country, a geographic area, the species, or the common name of the species in a manner not to mislead or confuse the customer. The species *Etrumeus whiteheadi* (Rooi-oog ronde haring) qualify for labelling "South Atlantic herring"/"Suid Atlantiese Haring".

f) *Engraulis spp.* shall be described as anchovies.

g) Canned Saury shall be prepared from *Scomberesox spp.* and *Cololobis spp.*

10.3.2.7 Snoek (*Thyrsites atun*) in any form shall be described only as "Snoek", "Barracouta" or "Atun".

10.3.2.8 Subject to 10.3.2.1, South African *Merluccius spp.* shall be described only as "Hake" or "Stockfish"/"Stokvis" or as Cape Whiting.

10.3.2.9 Yellow-tail (*Seriola spp.*) shall be described only as "Yellow-tail"/"Geelstert", "Halfkoord", "Amberjack".

10.3.2.10 Canned Tuna and Bonito (see 6.1.4) are the product consisting of the flesh of any of the appropriate species listed below:

Thunnus alalunga

Thunnus albacares

Thunnus atlanticus

Thunnus obesus

Thunnus maccoyii

Thunnus thynnus

Thunnus tongoe

Euthynnus affinis

Euthynnus alletteratus

Euthynnus lineatus

Katsuwonus pelamis (syn. Euthynnus pelamis)

Sarda chilensis

Sarda orientalis

Sarda sarda

10.3.2.10.1 The name of the product as declared on the label shall be "Tuna" or "Bonito" and may be preceded or followed by the common or usual name of the species in a manner not confusing or misleading to the consumer.

10.3.2.10.2 The name of the product labelled as "Tuna" shall be qualified or accompanied by a term descriptive of the representation in accordance with 10.3.1.7 and of the colour of the product provided that the term "white" shall be used only for the product of the meat of the tuna species *Thunnus alalunga* that shall comply with the requirements of 7.1.4.2(a). The term "light" shall be used for a tuna product that corresponds to the colour designation as set out in 7.1.4.2(b). A tuna product that corresponds to a colour designation as set out in 7.1.4.3 shall be labelled as "dark". Blends of tuna of different colour designation shall be specifically described in the title of the product. All colour designation terms qualifying "tuna" shall be in letters of at least the same size and prominence as "Tuna" or "Tunny".

The name "Albacor" when used for the labelling of tuna shall be reserved for the tuna species *Thunnus alalunga* and shall be coupled with "Tuna" or "Tunny" in letters of the same size and prominence.

10.3.2.10.3 Products consisting of the meat of *Sarda spp.* shall be labelled as "Bonito" and shall not be described as "Tuna" or any reference made to tuna.

10.3.2.11 Kabeljou shall be described only as "Kabeljou" or "Cape Cob".

10.3.2.12 Canned salmon (see 7.1.6) is the product prepared from any of the species listed below, with the proviso that the common names in brackets may only be used in conjunction with the corresponding species names as follows:

Salmo salar - (Atlantic salmon, salmon);

Oncorhynchus nerke - (Sockeye salmon, red sockeye salmon, red salmon);

Oncorhynchus kisutch - (Coho salmon, silver salmon, medium red coho salmon);

Oncorhynchus tschawytscha - (Chinook salmon, spring salmon, king salmon);

Oncorhynchus gorbuscha - (Pink salmon, humpback salmon);

Oncorhynchus keta - (Chum salmon, keta salmon, dog salmon); and

Oncorhynchus masou - (Cherry salmon, Japanese or Masou salmon).

Tips, tails, minced and similar forms of canned salmon shall be labelled to disclose their true nature, all words qualifying the word "salmon" being in type of the same size and prominence as "Salmon".

The species *Oncorhynchus gorbuscha* - (Pink salmon, humpback salmon) is the only species that may be labelled "Pink Salmon". The colour of the fish flesh in the can may deviate from the characteristic pink colour provided

a) that the fish is from the abovementioned species,

b) that written verification from an authority in the country where the fish is canned is provided,

c) that there is no pictorial presentation depicting pink salmon on the label, and

d) if white fish is depicted in the pictorial presentation on the label it may not be labelled "Pink Salmon".

The colour of the fish flesh depicted in the pictorial presentation shall be a true reflection of the fish flesh colour of the contents.

10.3.3 True description of the contents of fish paste

Any fish named in the description of a fish paste shall be used in sufficient quantity to justify the use of the name. If only one variety of fish is named, the paste (except in the case of anchovy) shall contain at least 60 % by mass of that fish. Where two or more varieties are named, except where one variety is anchovy, the total quantities of the named fish shall be not less than 60 % by mass and the quantity of any one particular variety of fish named shall be not less than 15 % by mass. In the case of fish paste labelled anchovy, the anchovy content shall be not less than 30 % by mass. Where anchovy appears in the name of the product, the anchovy content shall be not less than 10 % by mass and the total quantities of the varieties of fish indicated in the name of the product shall be not less than 50 % by mass. In the case of fish pastes made from more than one variety of fish, the names of the varieties featuring in the title shall appear in the title in decreasing order of amounts by mass present. All types of fish used in the preparation shall appear in the list of ingredients in decreasing order of amounts by mass present. For the purpose of this subsection the term "fish" shall be deemed to include molluscs and/or crustacea, provided that the presence of molluscs and/or crustacea as a fish paste ingredient shall be specifically stated on the label.

10.3.4 True description of molluscs

The common names given in table 4 may be used as indicated:

Table 4 □ Common and scientific names of molluscs

1	2
Common name	**Scientific name**
Abalone/Perlemoen	*Haliotis midae* and other edible species of the family *Haliotidae*.
Mussel	Edible species of the family *Mytilidae*.
White mussel	*Donax serra*
Black mussel	*Chloromytilus meridionalis, mytilus gallo provincialis*
Brown mussel	*Perna perna*
Green mussel	*Perna canaliculus, mytilus smaragdinus*
Oyster	Edible species of the *crassostrea spp* and other edible species of the *Ostreidae* family.
Knysna oyster	*Crassostraea margoritacea*
Razor shell (Razor clam)	Edible species of *Solenidae* family.
Octopus (Seacat)	Edible species of the *Octopus spp, Polypus spp; Eledone spp.*
Cuttlefish	Edible species of the *Sepia spp; Sepiola spp.*
Squid, Inkfish, Inks, Sea arrow, Calamari	Edible species of the *Loligmidae* family.
Clams	*Menetrix spp.* *Donax spp.* *Corbicula spp.* *Mya arenaria* *Saxidomus giganteus* *Saxidomus nuttali* *Venus mortoni* *Protothaca thaca* *Protothaca stamina* *Paphia stamina* *Austrovenus stutchburyi* *Mercenaria mercenaria* *Venus mercenaria* *Mactra sachalinensis* *Anadara subcrenata* *Tilaria cordata* *Tivela stuttorum* *Spisula solidissima* *Ensis directus* *Arctic islandica*
Cockle	Edible species of the *Veneridae* and *Cordidae* families.
Scallop	Edible species of the *Pectinidae* family.
NOTE Where molluscs are not shucked, the presence of shells shall be reflected in the description of the product on the main panel of the label.	

10.3.5 True description of crustaceans

The common names given in table 5 may be used as indicated:

Table 5 □ Common and scientific names of crustaceans

1	2
Common name	**Scientific name**
Rock lobster, spiny lobster	*Jasus spp*
Crawfish	*Palinurus spp* and *Panulirus spp*
West coast rock lobster,	*Jasus lalandii*
Cape rock lobster, kreef	
Vema rock lobster,	*Jasus tristani*
Tristan rock lobster	
Natal rock lobster	*Palinurus gilchristi*
Crayfish	*Panulirus homarus.* Freshwater lobsters of *Cambarus spp* and *Astacus spp.*
Port Elizabeth mud crayfish	*Scyllorus elizabethae*
Langoustine	Edible *Nephrops spp*
King prawn	*Nephrops andamanica*

Crab meat shall be prepared from any of the edible species of the sub-order *Brachyura* of the order *Decapoda* and all species of the family *Lithodidae.*

The name "Shrimp", "Shrimps" or "Prawns" shall only be used for the product prepared from species of the families *Penaeidae, Pandalidae, Crangonidae, Palaemonidae.*

"X Shrimp", "X Shrimps" or "X Prawns" may be used where the "X" is the name of a country or a geographic area from that the shrimps originate or the common name.

Size designations or count ranges are not required on the label, but if used, they shall be in accordance with 7.3.3.2. Where a count range is declared on the label in place of a size designation; no tolerances shall be applicable to the specified count ranges.

11 Methods of physical examination

NOTE A sample unit consists of a container of product and the entire contents thereof.

11.1 External and internal examination of containers

11.1.1 Determine whether the code digits are legible and indelible and if embossed, examine for any abnormalities such as damage of the tinplate or lacquer.

11.1.2 Examine the seams, seals or closures and outer and inner surfaces of the container for any abnormalities or integrity defects.

11.2 External and internal examination of seams

Conduct internal and external examinations of container seams, seals or closures in accordance with the method provided by the container manufacturer to determine whether the container seam, seal or closure is in compliance with the prescribed standards, parameters and attributes supplied by the container manufacturer to ensure the integrity of the hermetic sealing.

11.2.1 Leak test by applying vacuum inside the can

11.2.1.1 Preparation of the cans

a) Empty unused cans:

Immerse empty unused cans for 5 min in boiling water. Remove the cans from the boiling water and cool to 30 °C or below before testing.

b) End product:

In the case of 3-piece cans – Open the end product by cutting out one of the lids of the can without damaging the circumference of the seam. In case of 2-piece cans, remove the bottom of the can (opposite the seam) without damaging the expansion ring on the bottom end. After removal of the content, immerse the can for 60 min in boiling water. Remove from the boiling water and dry for 6 h at approximately 55 °C before testing.

11.2.1.2 Testing

Add some water to submerge the entire seam. Place a rubber seal on the open end to cover the entire top of the circumference of the seam or expansion ring. Place a perspex plate connected with a vacuum tube on top of the rubber seal. Observe the entire seal covered with water at the opposite end of the can during the removal of air out of the can. Appearance of a succession of air bubbles from the seam into the water indicates leakage through the seam at that particular point.

11.3 Determination of net mass of the contents of the container

11.3.1 Weigh unopened container.

11.3.2 Open container and remove the contents.

11.3.3 Wash, dry and weigh the container complete with lid.

11.3.4 Subtract the mass of the empty container from the mass of the unopened container. The resultant figure is the net mass.

11.4 Determination of the vacuum inside a container, the net headspace and the fill of the container

11.4.1 Vacuum

Tap the unopened container slightly on the surface of the inspection table to move the contents away from the inside surface of the lid. Impress the point of a vacuum gauge through the lid to measure the vacuum inside the container. Check for compliance with 6.1.7.

11.4.2 Net headspace

In case of

a) a container with a lid attached by a double seam, partially cut out lid without removing or altering the height of the double seam, or

b) another type of container, remove the lid.

Determine the average vertical distance, in mm, from the inside surface of the lid of the container to the upper level of the contents by taking measurements over the surface of the contents. The result is the net headspace.

11.4.3 Fill of container

In case of containers with lids attached by double seams, fill the container with water at room temperature to a vertical distance of 5 mm below the top level of the container. Weigh the container thus filled and determine the mass of the water by subtracting the mass of the container.

Draw off water from the filled container to the level of the contents, weigh the container with the remaining water and determine the mass of the remaining water by subtracting the mass of the container.

Divide the mass of the remaining water by the mass of the water and multiply by 100. The result is the percentage of the total volume capacity of the container occupied by the content expressed as the fill of the container.

In case of a container with a lid attached otherwise than by a double seam, remove the lid and proceed as above, but fill the container to the top or to the level of the inside surface of the lid instead of to 5 mm below the top.

11.5 Determination of drained mass

11.5.1 Maintain the container at room temperature approximately between 20 °C and 30 °C for a minimum of 12 h prior to examination.

11.5.2 Open and tilt the container to distribute the entire contents from the container on a pre-weighed sieve having a wire mesh with square openings of 2,8 mm × 2,8 mm.

11.5.3 Incline the sieve at an angle of approximately 17° to 20° and allow the contents to drain for 2 min, measured from the time the product is poured onto the sieve.

11.5.4 Immediately weigh the sieve containing the contents.

11.5.5 In case of a product with a sauce adhering to the contents or onto the sieve, wash the sauce off with a gentle spray of warm tap water (approximately 40 °C) using a wash bottle (e.g. plastic). Incline the sieve at an angle of approximately 17° to 20° and allow the contents to drain for 2 min, measured from the time the washing has finished.

11.5.6 Immediately remove adhering water from the bottom of the sieve by use of a paper towel and weigh the sieve containing the washed contents.

11.5.7 In case of products packed in a jelled medium that does not liquefy at a room temperature between 20 °C and 30 °C within 12 h, remove the jelled medium by hand and weigh the solid contents.

11.5.8 The drained or washed mass (A) is obtained by subtracting the mass of the sieve from the mass of the sieve with the drained or washed product.

11.5.9 In case of products containing optional ingredients such as vegetables, fruits, cereals or garnish, determine the total drained or washed mass (B) as described above, then separate the optional ingredients and re-weigh. The mass of the material remaining on the sieve is the drained or washed mass of the fish content (C).

11.5.10 In case of products wrapped in parchment paper such as crab meat, proceed as above but remove the parchment paper after removing any adhering meat.

11.5.11 The percentage drained or washed mass (% P_A) is expressed as:

$$\% P_A = \frac{A}{d.n.m.} \times 100$$

where

A is the drained or washed mass.

d.n.m. is the declared net mass.

11.5.12 The percentage total drained or washed mass (% P_B) is expressed as:

$$\% P_B = \frac{B}{d.n.m.} \times 100$$

where

B is the total drained or washed mass.

d.n.m. is the declared net mass.

11.5.13 The percentage drained or washed mass of the fish content (% P_C) is:

$$\% P_C = \frac{C}{d.n.m.} \times 100$$

where

C is the drained or washed mass of the fish content.

d.n.m. is the declared net mass.

11.6 Determination of percentage exuded liquid in an oil packing medium

Drain the entire liquid packing medium from a container and collect by means of a funnel directly into a graduated volumetric measuring glass cylinder of a suitable size. Record the total volume *(T)* in mL. After the oil has been separated, record the volume *(V)* in mL of the exuded watery liquid.

Express the percentage exuded liquid as (% P_{EL}):

$$\% P_{EL} = \frac{V}{T} \times 100$$

where

V is the volume of the exuded liquid in mL.

T is the total volume of packing medium in mL.

The average exuded liquid in a number of containers of the same batch code can be obtained by collecting the entire packing medium of all the samples examined into a glass measuring cylinder and proceed as above.

11.7 Determination of percentage of tuna

11.7.1 Open the can and drain the contents, following the procedures outlined in 11.5.

11.7.2 Remove and place the contents onto a tared 12 mm mesh screen equipped with a collecting pan.

11.7.3 Separate the fish with a spatula being careful not to break the configuration of the pieces. Ensure that the smaller pieces of fish are moved to the top of a mesh opening to allow them to fall through the screen onto the collecting pan.

11.7.4 Segregate the material on the pan according to flaked, grated (shredded) or paste and weigh the individual portions to establish the mass of each component.

11.7.5 If declared as a "chunk" pack, weigh the screen with the fish retained and record the mass. Subtract the mass of the sieve from this mass to establish the mass of solid and chunk fish.

11.7.6 If declared as "solid" pack remove any small pieces (chunks) from the screen and reweigh. Subtract the mass of the sieve from this mass to establish the mass of "solid" fish.

11.7.7 Express the mass of flaked, grated (shredded and paste) *(F)* as a percentage of the total drained mass of fish.

$$\% \text{ F} = \frac{M_F}{M_T} \times 100$$

where

M_F is the mass of flaked, grated or shredded fish.

M_T is the total mass of fish.

11.7.8 Calculate the mass of solid and chunk fish (M_{SC}) retained on the screen by difference and express as a percentage of the total drained mass of fish.

$$\% \text{ SC} = \frac{M_{SC}}{M_T} \times 100$$

where

M_{SC} is the mass of solid or chunk fish.

M_T is the total mass of fish.

11.7.9 Calculate the mass of solid fish (M_S) retained on the screen by difference and express as a percentage of the total mass of drained mass.

$$\% \text{ S} = \frac{M_S}{M_T} \times 100$$

where

M_S is the mass of solid fish.

M_T is the total mass of fish.

11.8 Examination methods for shrimps, prawns and langoustines

11.8.1 Determination of size designation

The size designation *(SD)* if expressed as the number of shrimps or prawns of 100 g of drained product, shall be determined from the number of whole units *(N)* and the actual drained mass *(M)*, using the following equation:

$$SD = \frac{N}{M} \times 100$$

where

N is the number of whole units.

M is the total number of units.

11.8.2 Determination of percentage broken units

Separate the broken pieces from the whole units and calculate the percentage of broken units (% BU) by using the following equation:

$$\% \text{ BU} = \frac{M_B}{M} \times 100$$

where

M_B is the number of broken units.

M is the total number of units.

11.8.3 Determination of percentage undeveined units

Separate any units not deveined or cleaned from the product labelled as "deveined" or "cleaned" and calculate the percentage units not deveined or cleaned (M_U) by using the following equation:

$$\% \text{ Mu} = \frac{M_U}{M} \times 100$$

where

M_U is the number of undeveined units.

M is the total number of units.

11.8.4 Determination of percentage discoloured units

Separate units with distinct discolouration of more than 10 % of their surface area and calculate the percentage discoloured units (% DU) by using the following equation:

$$\% \text{ DU} = \frac{M_D}{M} \times 100$$

where

M_D is the number of discoloured units.

M is the total number of units.

11.9 Sensory and physical examination of contents

11.9.1 Open container.

11.9.2 Carefully remove the contents out of the container onto a white coloured tray for physical examination.

11.9.3 Assess immediately the odour remaining in the empty container.

11.9.4 Assess the odour, flavour and texture of the contents.

11.9.5 Assess the product in accordance with the applicable requirements stipulated for the product.

11.9.6 Where the product is cross cut, round pilchards (not filleted) or sardinella packs or sardines in round cans, determine whether scales are present by gently scratching with the finger tips, any remaining scales off from the surface of the skin.

11.9.7 Split the units length wise open from the dorsal side down to the ventral side to determine the texture of the flesh, the bones, the colour of the flesh, the flavour and the presence of any remains of intestines with feed. Check for compliance with 6.1.9.

11.10 Examination of fish paste, fish spread

Transfer the contents from the container onto a white ceramic tile. Examine the contents for discolouration, defects or any other abnormalities. Spread the contents in thin layers over the tile with a spatula, in order to detect any sandiness, grittiness or other coarse pieces or tough portions or clots and examine the product for compliance with 7.1.16.1.

11.11 Measurement of blob diameter of tomato paste

Measure the blob diameter at 25 °C by placing a cylindrical chromium-plated copper tube of height 60 mm and inside diameter 19 mm on a horizontal glass plate, and filling it to the level of the top rim with the paste under test and gently lifting the tube from the plate at a slow and even rate such that the time taken to empty the cylinder is 4 s. Then immediately measure the lengths, in mm, of two diameters (at right angles to each other) of the paste blob, including in the measurements, any exuded liquid, and record the mean of these values. Perform this determination twice and record the overall mean value as the blob diameter. Check for compliance with 4.3.7.

11.12 Determination of Munsell value of canned tuna

11.12.1 Apparatus

11.12.1.1 An apparatus for comparing the reflectance of the tuna sample and the neutral Munsell discs.

11.12.1.2 A light source suitable for illuminating the sample and the Munsell disc with the radiating light at a wavelength centered at 555 nm (540 nm to 570 nm), or a comparator device fitted with a filter (on the eyepiece) that transmits light centered at the above wavelength.

11.12.1.3 Munsell discs of values 6,3 and 5,3.

11.12.2 Preparation of sample

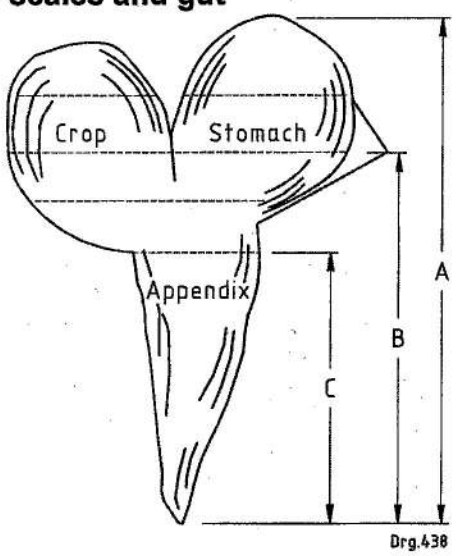
Pass the contents of the container through a sieve of nominal aperture size 6,7 mm. Mix the sieved material and place it in a 84 mm × 46 mm open-top can with a false bottom 13 mm deep, the can being painted flat black inside and out. Fill the can to within 3 mm to 6 mm of its top edge. In the case of blended tuna, separate the flesh of the two colours and proceed as indicated with each colour separately.

11.12.3 Procedure

Within 10 min of sieving the sample determine the Munsell value as follows:

Using two Munsell discs of the same value each mounted 8 mm below the top edge of a 84 mm × 46 mm open-top can (painted as in 11.12.2), regulate the source of illumination so that, when viewed, the two discs appear to be of equal brightness. Without altering the adjustment, remove one can and replace it by the prepared sample and observe whether the sample appears to be lighter or darker than the standard. For tuna designated "white" and "light" conduct the comparison using Munsell discs of value 6,3 and 5,3 respectively. Check for compliance with 7.1.4.2.

11.13 Determination of scales and gut



Symbols

A – complete gut
B – half gut
C – one-third gut

Figure 1 □ External gut

Determination of the seriousness of the defect caused by the presence of gut

The undermentioned symbols are used to indicate the degree to which gut is present in fish units but have no bearing on the degree to which feed is present in the gut.

The presence of the extremity of the anal canal is allowed and is therefore not considered in determining the extent of the presence of gut. Gut without feed is not considered to be a significant defect.

The degree to which the gut is full is indicated by means of the following symbols:

D – Serious (half full to full gut)
E – Less serious (less than half full gut)
F – Slight (presence of feed in the gut not obvious)

From the above it follows that a complete gut which is half to totally full is considered to represent one serious defect, viz., 1 AD. The following formulae are used for the purpose of calculating the equivalent number of AD's in a production of canned fish in which gut, containing feed, is present:

1 AD = 2 AE = 2 BD = 4 BE

1 AD = 3 CD = 6 CE

A unit containing spilt green or red feed with or without gut is considered to be a serious defect and constitutes 1 AD.

11.14 Interpretation and calculation of scales

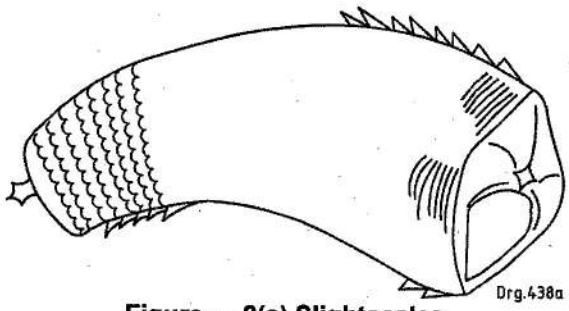


Figure — 2(a) Slightscales

Slight scales on one side = 1/8 unit full scales.
Slight scales on both sides = 1/4 unit full scales.

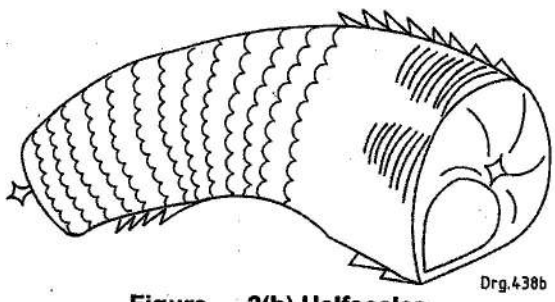


Figure — 2(b) Halfscales

Half with scales on one side = 1/4 unit full scales.
Half with scales on both sides = 1/2 unit full scales.

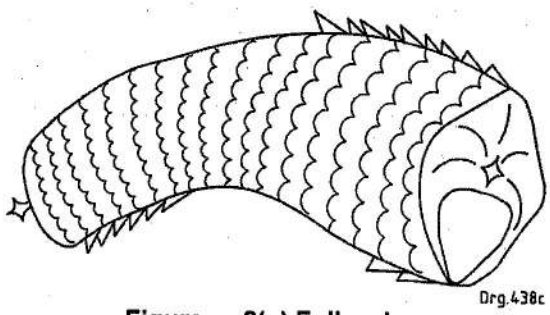


Figure — 2(c) Fullscales

Full of scales on one side = 1/2 unit full scales.
Full of scales on both sides = 1 unit full scales.

Figure 2 □ Interpretation and calculation of scales

12 Microbiological test methods

12.1 Microbiological spoilage

Use SANS 6257 (SABS SM 1257), *Microbiological examination of canned meat and fish products.*

12.2 Tests for pathogenic organisms

Use the following test methods:

SANS 6579/ISO 6579 (SABS ISO 6579), *Microbiology – General guidance on methods for the detection of Salmonella.*

SANS 6888-1/ISO 6888-1 (SABS ISO 6888-1), *Microbiology of food and animal feeding stuffs – Horizontal method for enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species) – Part 1: Technique using Baird-Parker agar medium.*

SANS 7932/ISO 7932 (SABS ISO 7932), *Microbiology – General guidance for enumeration of Bacillus cereus – Colony count technique at 30 °C.*

SANS 7937/ISO 7937 (SABS ISO 7937), *Microbiology of food and animal feeding stuffs – Horizontal method for enumeration of Clostridium perfringens – Colony count technique.*

13 Chemical test methods

13.1 Determination of protein nitrogen

Use SANS 6317, *Methods of chemical analysis of meat and fish products*, or any other internationally recognized method that delivers equivalent results.

13.2 Determination of starch content

Use SANS 6317, *Methods of chemical analysis of meat and fish products*, or any other internationally recognized method that delivers equivalent results.

13.3 Determination of salt content (as sodium chloride)

13.3.1 Reagents

13.3.1.1 Silver nitrate solution, 0,1 N, accurately standardized.

13.3.1.2 Potassium thiocyanate solution, 0,1 N.

13.3.1.3 Ferric alum indicator – a cold saturated aqueous solution of ferric ammonium sulphate to which a few drops of 6 N nitric acid have been added.

13.3.1.4 Sodium carbonate solution – a saturated aqueous solution.

13.3.1.5 Nitrobenzene.

13.3.2 Procedure

Weigh accurately a suitable quantity of the prepared sample into an evaporating basin or crucible, moisten with the sodium carbonate solution and dry on a waterbath. Char the dried sample and ash it at a temperature not exceeding 500 °C. Extract the residue with dilute nitric acid (about 6 N) and filter into a 100 mL volumetric flask. Make up to volume with the dilute nitric acid.

To a suitable aliquot in a 250 mL Erlenmeyer flask add 25 mL of the silver nitrate solution, 5 mL nitrobenzene and 1 m ferric alum indicator. Shake well. Titrate with 0,1 N potassium thiocyanate to the end point – colour change to reddish brown. Carry out a blank determination omitting the sample. From the difference between blank titration and the test titration determine the volume (A) of silver nitrate solution applicable to the sample used.

13.3.3 Calculation

Calculate the result as follows:

$$\% \text{ sodium chloride} = \frac{A \times 5{,}845 \times N}{W}$$

where

A is the volume of silver nitrate solution used by the aliquot, in mL;

N is the normality of silver nitrate used;

W is the mass of original sample represented by the aliquot used in the titration, in grams.

No. R. 1077 **1 August 2003**

STANDARDS ACT, 1993

WITHDRAWAL AND REPLACEMENT OF THE COMPULSORY SPECIFICATION FOR MOTOR VEHICLES OF CATEGORY N1

I, Alexander Erwin, Minister of Trade and Industry, hereby under Section 22(1)(a)(I) of the Standards Act, 1993 (Act No. 29 of 1993), and on the recommendation of the Council of the South African Bureau of Standards, withdraw the compulsory specification for motor vehicles of category N1, and replace it with the compulsory specification as set out in the Schedule, with effect from the date 2 months after the date of publication of this notice.

A ERWIN
Minister of Trade and Industry

SCHEDULE

COMPULSORY SPECIFICATION FOR MOTOR VEHICLES OF CATEGORY N_1

1 Scope

1.1 This specification covers the requirements for motor vehicle models of category N_1 not previously registered or licensed in South Africa, and motor vehicle models assembled from new bodies and used parts from earlier designs of motor vehicle models, designed or adapted for operation on a public road.

1.2 The requirements of this specification shall, in so far as the parts already incorporated are concerned, apply in respect of an incomplete motor vehicle model supplied for further manufacture by one manufacturer to another, and the entire specification shall apply to the vehicle after completion thereof by the last-mentioned manufacturer. In addition, the requirements shall apply to designs of bodies sold for the purposes of incorporating new or used parts of motor vehicle models previously homologated (or previously produced) by other manufacturers.

1.3 This specification does not apply to

a) experimental or prototype vehicles constructed or imported for the purpose of testing, assessment or development; or

b) a motor vehicle model that was manufactured before 1965, that was not previously registered or licensed in South Africa, and that is so certified by a motor club approved by the relevant Minister.

1.4 The relevant requirements of this specification that take effect on any specified date, shall not apply to vehicles manufactured or imported before that date.

1.5 Homologation shall comprise the confirmation by the Regulatory Authority that the manufacturer has provided the Regulatory Authority with the following specific evidence in respect of the commodity covered by this specification:

a) a summary of evidence showing that all relevant tests have been conducted with successful results under appropriate controls in respect of the model or type of commodity;

b) sufficient data to enable a relevant model or type and its components to be identified and related to (a) above;

c) relevant samples for the conducting of whatever tests and inspections are considered appropriate by the Regulatory Authority, to verify any or all of the evidence provided;

d) details of the quality management system applied by the manufacturer;

e) when relevant, documentation to advise subsequent manufacturers of incomplete commodities of their responsibilities; and

f) agreement by the manufacturing source to permit conformity of production audits to be carried out by the Regulatory Authority or by the Regulatory Authorities appointed agent at the relevant manufacturing, assembling and test facilities.

The Regulatory Authority may issue such confirmation, on application, in respect of new models or types, provided that such confirmation may not be used for the purpose of advertising or to imply that all units of the commodity necessarily or consequently comply with all the requirements of this specification.

1.6 Where a South African national standard, an international standard or an ECE Regulation adopted by South Africa as a national standard, is incorporated by reference into this specification, only the technical requirements/specification for the commodity and the tests to verify compliance, apply.

2 Definitions

For the purposes of this specification, the following definitions apply:

2.1
airbag assembly
device that is installed to supplement safety belts and restraint systems in power-driven vehicles which, in the event of a severe impact affecting the vehicle, automatically deploys a flexible structure intended to limit, by compression of the gas contained within it, the gravity of the contact of one or more parts of the body of an occupant of the vehicle with the interior of the passenger compartment

2.2
builder
person who builds a category N_1 motor vehicle, and "build" has a corresponding meaning

2.3
category N_1 motor vehicle, hereinafter referred to as a vehicle
motor vehicle that has a maximum mass not exceeding 3,5 t, that has at least four wheels (or, provided that the maximum mass exceeds 1 t, at lea st three wheels), and that is used for the carriage of goods

2.4
child restraint
arrangement of components which may comprise a combination of straps or flexible components with a securing buckle, adjusting devices, attachments, and, in some cases, a supplementary chair or an impact shield (or both), capable of being anchored to a power-driven vehicle. It is so designed as to diminish the risk of injury to the wearer, in the event of a collision or of an abrupt deceleration of the vehicle, by limiting the mobility of the wearer's body

2.5
importer
person who imports a category N_1 motor vehicle, and "import" has a corresponding meaning

2.6
Inspectorate Authority
organization appointed by the Minister of the National Department of Transport as an inspectora te of manufacturers, importers and builders

2.7
manufacturer
person who manufacturers, produces, assembles, alters, modifies, or converts a category N_1 motor vehicle, and "manufacture" has a corresponding meaning

2.8
model
manufacturer's description for a series of vehicle designs that do not differ in respect of body shell, cab structure, profile, or the number of axles, by which they are introduced to South Africa, by a specific source

The Regulatory Authority reserves the right to decide which variations or combinations of variations

constitute a new model, and might also take cognisance of the classification system applied in the country of origin of the design.

The following variations do not necessarily constitute a new model:

a) a variant of the model in relation to trim or optional features for which compliance has been fully demonstrated;

b) different engine and transmission combinations, including petrol and diesel engines, and manual and automatic transmissions;

c) minor variations in profile, such as front air dams or rear spoilers;

d) air management systems;

e) a different number of doors;

f) sleeper cabs on trucks;

g) wheelbase variations;

h) a cargo body or equipment fitted to a truck and that has no effect on compliance; and

i) the number of driven axles.

If a vehicle is manufactured in a number of configurations, such as a sedan, a hatchback, or a station wagon, and a single or double cab, each of these may be regarded as a variant to the base model.

3.1 Requirements for lights and lighting equipment

3.1.1 Lights

Main and dipped-beam headlights, direction-indicator lights, stoplights, and front and rear position lights fitted to a vehicle shall comply with the relevant requirements given in SABS 1376 -1:1983, *Lights for motor vehicles – Part 1: Incandescent lamps,* as published by Government Notice no. 563 of 29 July 1983, SABS 1376-2:1985, *Lights for motor vehicles – Part 2: Headlights,* as published by Government Notice no. 1263 of 14 June 1985, and SABS 1376-3:1985, *Lights for motor vehicles – Part 3: Secondary lights,* as published by Government Notice no. 2328 of 18 October 1985:

Provided that all other lights required or allowed to be fitted in terms of 3.1.2 are hereby excluded for the purposes of this subsection of the compulsory specification.

3.1.2 Lighting

Lighting shall be fitted to a vehicle and shall comply with the relevant requirements given in SABS 1046:1990, *Motor vehicle safety specification for lights and light-signalling devices installed on motor vehicles and trailers,* as published by Government Notice no. 1735 of 27 July 1990:

Provided that

a) the requirements for the installation of retro -reflectors as given in 4.14, 4.16 and 4.17 of the said SABS 1046 may be met by the use and fitting of retro -reflectors that are defined in the relevant regulations of the National Road Traffic Act, 1996 (Act 93 of 1996) and, in addition, the requirements may also be met by the use and fitting of retro- reflectors that are integral portions of any other light lens assembly; and

b) the specific requirements of the said SABS 1046 for

   1) dipped-beam adjustment devices as set out in 4.2.6 and appendix 1;

2) end-outline marker lights as set out in 4.13, and

3) rear fog lights as set out in 4.11,

shall be treated as **OPTIONAL** for the purposes of this compulsory specification:

Provided that, if any motor vehicle is fitted with such devices or lamps, they shall comply with the applicable requirements.

3.2 Requirements for rear-view mirrors and vision

3.2.1 Rear-view mirrors

Rear-view mirrors shall be fitted to a vehicle and shall comply with the relevant requirements given in SABS 1436:1989, *Motor vehicle safety specification for the rear-view mirrors of motor vehicles of categories M and N,* as published by Government Notice no. 2008 of 22 September 1989.

3.2.2 Windscreens, windows and partitions

3.2.2.1 Windscreens

3.2.2.1.1 A windscreen shall be fitted to a vehicle and shall be of safety glass that complies with the relevant requirements given in SABS 1191:1978, *High penetration-resistant laminated safety glass for vehicles,* as published by Government Notice no. 463 of 9 July 1982.

3.2.2.1.2 For the purposes of this specification, the marking requirements shall be as follows:

a) the windscreen shall bear the glass manufacturer's registered trademark; and

b) the glass fitted shall comply with an approved national standard, recognized by the Regulatory Authority; that will provide a method of identifying the glass type.

3.2.2.2 Windows and partitions

3.2.2.2.1 Glass partitions and glass windows fitted to a vehicle shall be of safety glass that complies with the relevant requirements given in the said SABS 1191 or in SABS 1193:1978, *Toughened safety glass for vehicles,* as published by Government Notice no. 463 of 9 July 1982.

3.2.2.2.2 For the purpose of this specification, the marking requirements shall be as follows:

a) the glass shall bear the glass manufacturer's registered trademark; and

b) the glass fitted shall comply with an approved national standar d, recognized by the Regulatory Authority, that will provide a method of identifying the glass type.

3.2.3 Windscreen wipers

A vehicle shall be fitted with at least one windscreen wiper that is capable of operation by means other than manual, and the windscreen wiper blade, when in operation, shall wipe the outside of the windscreen directly in front of the driver, evenly and efficiently.

3.3 Requirements for brakes and braking equipment

3.3.1 Braking equipment shall be fitted to a vehicle and shall comply with the requirements given in 1207:1985, *Motor vehicle safety standard specification for braking,* as published by Government Notice no. 6 of 3 January 1986, or the requirements in SABS ECE R13 *Uniform provisions concerning the approval of vehicles of categories M, N and O with regard to braking* to the level of ECE R13.08.

3.3.2 For vehicles fitted with anti-lock braking systems, the braking equipment shall, in terms of braking performance, at least comply with the braking performance requirements for N1 vehicles without anti-lock braking systems fitted.

3.3.3 For the purposes of this compulsory specification, the following requirements of SABS ECE R13 are excluded:

a) the banning of asbestos in brake linings; and

b) anti-lock specific brake test procedure and its requirements (paragraph 5 of annex 13 of SABS ECE R13).

3.3.4 For the purposes of this compulsory specification, annex 4, paragraph 2.3.6 of SABS ECE R13 is amended to read as follows:

To check compliance with the requirements specified in paragraph 5.2.1.2.4 of SABS ECE R13, a Type-O test shall be carried out with the engine disconnected at an initial test speed of 30 km/h. The mean fully developed deceleration on application of the control of the parking brake system and the deceleration immediately before the vehicle stops shall be not less than 1,5 m/s^2. The test shall be carried out with a laden vehicle. The force exerted on the braking control device shall not exceed the specified values.

3.4 Requirements for controls, audible warning devices and steering mechanism

3.4.1 Controls

3.4.1.1 General

All controls that are fitted to a vehicle, and that are required for the operation of the vehicle, shall be so located that the driver can reach and operate them when he is seated in the normal driving position:

Provided that in the case of vehicles of gross vehicle mass not exceeding 2 500 kg, the normal driving position shall be with the seat belt fastened.

3.4.1.2 Right-hand drive

A vehicle shall be of a right-hand drive configuration, except as allowed in terms of 3.4.1.3.

3.4.1.3 Central steering

A vehicle may have a central steering configuration.

3.4.2 Audible warning devices

A vehicle shall be fitted with one or more audible warning devices such that, when they are operated, a continuous sound is emitted at a level of at least 93 dB, determined in accordance with SABS 0169:1984, *Determining the performance of audible warning devices (hooters) after installation in a motor vehicle,* as published by Government Notice No. 966 of 11 May 1984.

3.5 Requirements for door latches, hinges, entrances and exits

3.5.1 Door latches and hinges

Side doors fitted as a means of entrance or exit in a vehicle shall have door latches and hinges that comply with the relevant requirements given SABS 1443:1987, *Motor vehicle safety specification for door latches and hinges,* as published by Government Notice No.2227 of 9 October 1987.

Provided that section 3 in annex 1 of the said SABS 1443 is excluded for the purposes of this compulsory specification.

3.5.2 Entrances and exits

3.5.2.1 The means of entrance to and exit from a vehicle that is designed and constructed with a

fixed hood or canopy and that has a tare exceeding 570 kg, shall be as follows:

a) at least one ready means of entrance and exit on the left and right sides of the vehicle, each such means being equipped with a permanent device that is capable of being operated from both the inside and the outside of the vehicle for the purpose of opening and closing; or

b) a means as specified in (a) above, provided on one side of the vehicle and, on the other side or at the back, an accessible means of escape, of size at least 450 mm x 450 mm, that is readily removable from both the inside and the outside of the vehicle or is equipped with a permanent device for opening and closing as specified in (a) above; and

c) at least one ready means of entrance and exit at the back, if the vehicle has a separate passenger compartment that does not have entrances or exits and, if relevant, a ready means of escape as specified in (a) and (b) above or that does not afford passengers unobstructed access to the driving compartment.

3.5.2.2 The means of entrance and exit, and the means of escape shall be equipped with a door or other effective barrier, provided that the means of entrance and exit at the back of a motor vehicle need not be so equipped. Such door or other effective barrier shall be capable of being opened and closed from both the inside and the outside of the vehicle, provided that this provision shall not apply to the ready means of escape that has a barrier capable of being opened by being knocked out of its frame.

3.6 Requirements for seats, seat anchorages, restraining device anchorages, restraining devices (safety belts) and supplementary restraining devices (airbags)

3.6.1 Seats and seat anchorages

A vehicle shall be fitted with seats and seat anchorages that comply with the relevant requirements given in SABS 1429:1987, *Motor vehicle safety specification for strength of seats and of their anchorages,* as published by Government Notice no. 1878 of 4 September 1987.

3.6.2 Restraining device anchorages

All restraining devices that are fitted to a vehicle shall have restraining device anchorages that comply with the relevant requirements given in SABS 1430:1987, *Motor vehicle safety specification for anchorages for restraining devices in motor vehicles,* as published by Government Notice no. 1878 of 4 September 1987.

3.6.3 Restraining devices (safety belts)

3.6.3.1 The restraining devices (safety belts) that are fitted to a vehicle shall comply with the relevant requirements given in SABS 1080:1983, *Restraining devices (safety belts) for occupants of adult build in motor vehicles (Revised requirements),* as published by Government Notice no. 264 of 17 February 1984.

3.6.3.2 The type and location of the restraining devices (safety belts) required to be fitted to a vehicle and the method of installation thereof shall comply with the relevant requirements given in in SABS 0168:1983, *The installation of restraining devices (safety belts) in motor vehicles,* as published by Government Notice no. 265 of 17 February 1984

3.6.4 Child restraints

In the case of any vehicle manufactured with child restraints installed, such child restraints shall comply with the compulsory specification for *Child-restraining devices for use in motor vehicles*, as published by Government Notice no. 642 of 2 May 1997.

3.6.5 Supplementary restraining devices (airbags)

3.6.5.1 If a motor vehicle is fitted with an airbag assembly, it shall carry information to the effect that

it is equipped with such an assembly.

3.6.5.2 In the case of a motor vehicle fitted with an airbag assembly intended to protect the driver, this information shall consist of the inscription "AIRBAG" located in the interior of the circumference of the steering wheel; this inscription shall be durably affixed and easily visible.

3.6.5.3 In the case of a motor vehicle fitted with a passenger airbag intended to protect the front seat occupants other than the driver, this information shall consist of a warning label. An example of a possible design of a pictogram is shown in figure 1.

3.6.5.4 A motor vehicle fitted with one or more passenger airbags shall carry inform ation about the extreme hazard associated with the use of rearward-facing child restraints on seats equipped with airbag assemblies.

3.6.5.5 Every passenger seating position which is fitted with an airbag shall be provided with a warning label warning against the use of a rearward- facing child restraint in that seating position. The warning label, in the form of a pictogram which may include explanatory text, shall be durably affixed and located such that it is easily visible in front of a person about to install a rearward -facing child restraint on the seat in question. An example of a possible design of a pictogram is shown in figure 1. A permanent reference should be visible at all times, in case the warning is not visible when the door is closed. This requirement does not apply to those seats equipped with a device which automatically deactivates the airbag assembly when a rearward -facing child restraint is installed.

Colours

The pictogram should be red.

The seat, child restraint and contour line of the airbag should be black.

The word "AIRBAG" and the airbag should be white.

Figure 1 — Airbag warning label

3.7 Requirements for anti-theft devices

Anti-theft devices shall be fitted and shall comply with the relevant requirements of SABS 1248:1986, *Devices to prevent the unauthorized use of motor vehicles (anti-theft devices),* as published by Government Notice no. 936 of 16 May 1986.

4 Requirements for the control of environmental interference

4.1 Suppression of radio and television interference

A vehicle, its components and its accessories shall comply with the current applicable regulations relating to interference with communications, promulgated under the Telecommunications Act, 1996

(Act 103 of 1996).

4.2 Suppression of atmospheric pollution

4.2.1 The exhaust emission from the engine of a vehicle shall be such as to comply with the current applicable regulations promulgated under the Atmospheric Pollution Prevention Act, 1965 (Act 45 of 1965).

4.2.2 The gaseous and particulate emissions from the vehicle shall comply with the requirements in SABS ECE R83, *Uniform provisions concerning the approval of vehicles with regard to the emission of pollutants according to engine fuel requirements,* to the level of ECE R83.02, except for the type V test (durability of pollution control devices).

4.3 Suppression of noise emission

4.3.1 Vehicles in motion

With the exception of noise emission originating from audible warning devices, any noise emitted by a vehicle, determined in accordance with SABS 0205:1986, *The measurement of noise emitted by motor vehicles in motion,* as published by Government Notice no. 936 of 16 May 1986, shall not exceed 82 dB(A). To allow for any lack of precision in the measuring equipment, the highest sound level reading obtained shall be reduced by 1 dB(A).

4.3.2 Vehicles when stationary

With the exception of noise emission originating from audible warning devices, any noise emitted by a vehicle, determined in accordance with SABS 0181:1981, *The measurement of noise emitted by road vehicles when stationary,* as published by Government Notice no. 463 of 9 July 1982, and SABS 0281:1994, *Engine speed (S values), reference sound levels and permissible sound levels of stationary road vehicles,* as published by Government Notice no. 1313 of 25 August 1995, shall be recorded for homologation purposes.

5 Requirements concerning metrological data

5.1 Vehicle dimensions

The dimensions of a vehicle shall comply with the applicable requirements of the relevant regulations of the National Road Traffic Act, 1996 (Act 93 of 1996).

5.2 Information plates

5.2.1 Data plates

5.2.1.1 A vehicle shall have a metal data plate or plates affixed by rivets, or by welding, or by any other method that will achieve permanency of attachm ent during the life of the vehicle, in a conspicuous and readily accessible position on a part not subject to replacement.

5.2.1.2 As an alternative to the above, a data plate may be a self -adhesive tamperproof metal or plastics label that is not transfe rable from one vehicle to another, is clearly legible, and undergoes permanent and obvious damage on removal. The self-adhesive tamperproof label shall be resistant to engine oils, to engine coolants, to normal engine temperatures and to humidity. In addition, it shall have permanency characteristics similar to those of the plate(s) described in 5.2.1.1.

5.2.1.3 The data plate(s) shall be legibly and indelibly printed or stamped with the following details of the model type or of the vehicle, as applicabl e:

a) the gross vehicle mass, in kilograms, for the model type, denoted and prefixed by the letters GVM/BVM;

b) the gross combination mass, in kilograms, for the model type, denoted and prefixed by the letters GCM/BKM; and

c) the gross axle mass-load of each axle, or the gross axle unit mass-load of each axle unit, in kilograms, for the model type, denoted and prefixed by the letters GA/BA or GAU/BAE, as applicable.

5.2.2 Optional data plate

The abbreviations given in 5.2.1.3(a), 5.2.1.3(b) and 5.2.1.3(c) are not required if the information is supplied in the following order:

a) gross vehicle mass;

b) gross combination mass, and

c) gross axle masses in the order front to rear.

5.2.3 Information on vehicle engine

The requirements for the vehicle engine number shall comply with the relevant regulations of the National Road Traffic Act, 1996 (Act 93 of 1996).

5.2.4 Vehicle identification number (VIN)

The vehicle identification number shall comply with the relevant requirements given in SABS ISO 3779:1983, *Road vehicles – Vehicle identification number (VIN) – Content and structure,* and SABS ISO 4030:1983, *Road vehicles – Vehicle identification number (VIN) – Location and attachment,* as published by Government Notice no. 3160 of 20 November 1992. However, the requirements for marking the VIN, as given in clause 5 of the said SABS ISO 4030, shall, for the purpose of this compulsory specification, be taken to read as follows:

5 VIN attachment

5.1 The VIN shall be marked direct on any integral part of the vehicle; it may be either on the frame, or, for integral frame body units, on a part of the body not easily removed or replaced.

5.2 The VIN shall also be marked on the data plate.

5.3 Deleted.

5.4 The height of the roman letters and the arabic numerals of the VIN shall be as follows:

- at least 7 mm if marked in accordance with 5.1 (frame, body, etc.) on motor vehicles and trailers; and

- at least 3 mm if marked in accordance with 5.2 (data plate).

5.2.5 Visible identification

An identification code made up of all or part of the VIN shall be applied to the motor vehicle, such that it is readily visible to a person standing outside the vehicle, without the use of aids.

In cases where only part of the VIN is used, the code shall be sufficient to provide unique identification of any unit of a model, provided the model is known.

5.3 Measuring units

All gauges, indicators or instruments that are fitted to a motor vehicle and are calibrated in physical

units shall be calibrated in units as prescribed by the current applicable regulations promulgated under the Measuring Units and National Measuring Standards Act.

6 Requirements for vehicle equipment, components and systems

6.1 Speedometers

A vehicle that is capable of exceeding a speed of 25 km/h on a level road shall be equipped with speedometer equipment that complies with the relevant requirements given in SABS 1441:1987, *Motor vehicle safety specification for speedometer equipment on motor vehicles,* as published by Government Notice no. 1878 of 4 September 1987.

6.2 Engine, exhaust system and transmission

6.2.1 Engine

The engine of a vehicle shall be so fitted with a cover that any part of the engine that constitutes a source of danger is out of normal reach of a person.

6.2.2 Exhaust system

The exhaust system of a vehicle shall comply with the relevant regulations of the National Road Traffic Act, 1996 (Act 93 of 1996).

6.2.3 Transmission

A vehicle the tare of which exceeds 570 kg shall be equipped with a transmission that enables it to be controlled and driven in both a forward and a reverse direction.

6.3 Fuel system

6.3.1 Fuel filler cap

The orifice for filling a fuel tank on a vehicle shall be fitted with an effective cap that prevents incidental ingress of water or other foreign matter.

6.3.2 Fuel filler inlet

A vehicle equipped with a positive-ignition engine shall be fitted with a fuel filler inlet orifice so designed that it prevents the tank from being filled from a petrol pump delivery nozzle which has an external diameter of 23,6 mm or an external diameter exceeding 23,6 mm.

For the purposes of this subsection, category N_1 vehicles which are also offered in M_2 configuration shall be considered to be of category M_2 .

6.4 Tyres

The tyres fitted to the wheels of a motor vehicle shall comply with the relevant requirements of the compulsory specification for *Pneumatic tyres for commercial vehicles and trailers* as published by Government Notice no. 1125 on 16 November 2001 and the Nati onal Road Traffic Act, 1996 (Act 93 of 1996).

6.5 Vehicle bodies

Vehicle bodies referred to in 1.2 shall be provided with sufficient instructions on the selection and assembly of components, such that the completed vehicle complies (or is capable of complying) with the requirements of this specification, when the instructions are followed.

7 Compliance requirements

Proof of compliance shall be provided by the manufacturer, importer or builder (MIB) to the Inspectorate Authority in respect of each moto r vehicle model covered by the scope of this specification.

Such proof of compliance shall consist of the relevant documentation to enable the inspectorate authority to satisfy itself that compliance has been achieved before any such vehicle is registered in the Republic of South Africa.

8 Equivalent requirements

The requirements of any of the national standards in the appropriate parts of sections 3 to 6 given in table 1, shall be deemed to have been met if compliance with the equivalent standards give n or to their later level is achieved.

COMPULSORY SPECIFICATION FOR MOTOR VEHICLES OF CATEGORY N_1

SCHEDULE 1 — Operative dates

1	2	3	4	5
Sub-section	**Item**	**Operative date**	**Exclusions**	**Exclusions expiry date**
3.1.1	Lights to SABS 1376	15 July 1987	Vehicle models homologated before 15 July 1987	1 January 2001
3.1.2	Lights to SABS 1046	1 July 1991	Fitment of category 5 indicators as per 4.5 of SABS	1 January 2001
3.2.1	Rear-view mirrors to SABS 1436	1 July 1991	Vehicle models homologated before 1 July 1991	1 January 2001
3.3.1	Braking to SABS 1207	15 July 1987	Vehicle models homologated before 15 July 1987 shall	1 January 2001
3.3.1	Braking to the requirements in SABS ECE R13 equivalent to ECE R13.08	1 January 2001	Vehicle models homologated before 1 January 2001	To be agreed
3.6.1	Seats and seat anchorages to SABS 1429	1 July 1991	Vehicle models homologated before 1 July 1991	1 January 2001
3.6.2	Restraining device anchorages to SABS 1430	1 July 1991	Vehicle models homologated before 1 July 1991	1 January 2001
3.6.4	Child restraints (if fitted) to the relevant compulsory specification	1 July 1991	Vehicle models homologated before 1 July 1991	1 January 2001
3.6.5	Supplementary restraining devices (airbags)	1 January 2001	Vehicle models homologated before 1 January 2001	To be agreed
3.7	Anti-theft devices to SABS 1248	1 July 1987	Vehicle models homologated before 1 July 1987	1 January 2001
4.2.2	Vehicle emissions to SABS ECE R83 to the level of ECE R83.02	18 months after final gazetting	Vehicle models homologated before the operative date	To be agreed
5.2.5	Visible identification	1 August 2001	Nil	
6.1	Speedometers to SABS 1441	1 July 1991	Vehicle models homologated before 1 July 1991	1 January 2001
6.3	Fuel filler inlet	2 months after final gazetting	Nil	

COMPULSORY SPECIFICATION FOR VEHICLES OF CATEGORY N_1

TABLE 1 — Equivalent standards that shall be deemed to comply with SABS standards

1	2	3	4	5	6	7	8	9
Sub-section	Item	SABS No.	Dated	Equivalent standards				Remarks
				EEC	Incl.	ECE	Others	
3.1.1	Lights	1376-1 1376-2 1376-3	1983 1985 1985	76/757 76/758 76/759 76/760 76/761 76/762 77/538 77/539 77/540		R1 R2.02 R3.02 R4 R5.01 R6.01 R7.01 R8.04 R19.01 R20.02 R23 R31.01 R37.02 R38 R77		Applicable only for headlamps, direction indicators, stoplights, front and rear position lights
3.1.2	Installation of lighting	1046	1990	76/756	89/278	R48		
3.2.1	Rear-view mirrors	1436	1989	71/127	88/321	R46.01		
3.2.2.1	Windscreens	1191	1978	92/22		R43		
3.2.2.2	Windows and partitions	1191 or 1193	1978 1978	92/22 92/22		R43 R43		
3.3	Braking	1207 or ECE R13	1985 1996	71/320	79/489	R13.04 R13.08		
3.4.2	Audible warning devices	0169	1984	70/388		R28.01		
3.5.1	Door latches and hinges	1443	1987	70/387		R11.02		
3.6.1	Seats and seat anchorages	1429	1987	74/408	81/577	R17.02		
3.6.2	Restraining device anchorages	1430	1987	76/115	82/318	R14.02		
3.6.3.1	Restraining devices	1080	1983	77/541	82/319	R16.03		
3.6.3.2	Installation of restraining devices	0168	1983	77/541	82/319	R16.03		
3.7	Anti-theft devices	1248	1986	74/61		R18.01		
4.1	Radio interference	Act	1996	72/245		R10.1		
4.2	Atmospheric pollution	Act	1965	70/220 72/306		R15 R24		
4.2.2	Vehicle emissions	ECE R83	1993	70/220	93/59	R83.02		
4.3.1	Noise in motion	0205	1986	70/157	77/212	R51		
4.3.2	Noise when stationary	0181 0281	1981 1994	70/157	84/424	R51		
5.2.1	Data plate			76/114	78/507			
5.2.4	VIN	ISO 3779 ISO 4030	1983 1983				ISO 3779 ISO 4030	
6.1	Speedometer	1441	1987	75/443		R39		
6.4	Tyres	Act	1996	92/93		R54		

No. R. 1078 **1 August 2003**

STANDARDS ACT, 1993

COMPULSORY SPECIFICATION FOR MATERIAL FOR CONTOUR MARKING ON MOTOR VEHICLES

I, Alexander Erwin, Minister of Trade and Industry, hereby under Section 22(1)(a)(I) of the Standards Act, 1993 (Act No. 29 of 1993), and on the recommendation of the Council of the South African Bureau of Standards, with effect from the date two months after the date of publication of this notice, declare the specification contained in the Schedule, to be compulsory.

A ERWIN
Minister of Trade and Industry

SCHEDULE

COMPULSORY SPECIFICATION FOR MATERIAL FOR CONTOUR MARKING ON MOTOR VEHICLES

1. **Scope**
   This standard covers retro-reflective material used for contour marking for heavy and long vehicles and their trailers.

2. **Definitions**
   For the purposes of this standard, the definitions given in SABS ECE R104 apply.

3. **Requirements**
   Retro-reflective marking material shall comply with the requirements given in the following clauses of SABS ECE R104: 1998, *Uniform provisions concerning the approval of retro - reflective markings for heavy and long vehicles and their trailers*, as published by Government Notice No. 72 of 22 January 1999 (Government Gazette No. 19685), as amended from time to time:

   4. Trade names and other marks
   5.4 International approval marks
   6. General specifications
   7. Special specifications

No. R. 1079 **1 August 2003**

STANDARDS ACT, 1993

AMENDMENT OF COMPULSORY SPECIFICATION FOR ELECTRICAL AND ELECTRONIC APPARATUS

I, Alexander Erwin, Minister of Trade and Industry, hereby under section 22 (1) (a) (i) of the Standards Act, 1993 (Act No. 29 of 1993), and on the recommendation of the Council of the South African Bureau of Standards, with effect from the date two months after the date of publication of this notice, declare the amendment to the specification contained in the Schedule, to be compulsory.

A Erwin
Minister of Trade and Industry

SCHEDULE

AMENDMENT TO THE COMPULSORY SPECIFICATION FOR ELECTRICAL AND ELECTRONIC APPARATUS

Subsection 3.3

In the first line, delete "3.3.7" and insert "3.3.8".

Subsection 3.3.2.17

In the heading and in the first and third lines, delete "refrigerators, food-freezers and ice-makers" and insert "refrigerating appliances, ice-cream appliances and ice-makers".

Subsection 3.3.2.48

Delete the entire subsection and insert "Deleted by amendment.".

Subsection 3.3.3

Delete the existing subsection and insert the following:

3.3.3 Particular requirements for luminaires

Luminaires shall comply with the requirements of the appropriate of the following specifications:

SABS IEC 60598-1, *Luminaires – Part 1: General requirements and tests*, as published by Government Notice No. 250 of 20 February 1998;

SABS IEC 60598-2-1, *Luminaires – Part 2: Particular requirements – Section 1: Fixed general-purpose luminaires*, as published by Government Notice No. 22031 of 09 February 2001;

SABS IEC 60598-2-2, *Luminaires – Part 2: Particular requirements – Section 2: Recessed luminaires*, as published by Government Notice No. 399 of 1 April 1999;

SABS IEC 60598-2-3, *Luminaires – Part 2: Particular requirements – Section 3: Luminaires for road and street lighting*, as published by Government Notice No. 399 of 1 April 1999;

SABS IEC 60598-2-4, *Luminaires – Part 2: Particular requirements – Section 4: Portable general purpose luminaires*, as published by Government Notice No. 1288 of 16 October 1998;

SABS IEC 60598-2-5, *Luminaires – Part 2-5: Particular requirements – Floodlights*, as published by Government Notice 973 or 6 October 2000;

SABS IEC 60598-2-6, *Luminaires – Part 2: Particular requirements – Section 6: Luminaires with built-in transformers or convertors for filament lamps*, as published by Government Notice No. 22031 of 09 February 2001;

SABS IEC 60598-2-7, *Luminaires – Part 2: Particular requirements – Section 7: Portable luminaires for garden use*, as published by Government Notice No. 22031 of 09 February 2001;

SABS IEC 60598-2-8, *Luminaires – Part 2: Particular requirements – Section 8: Handlamps*, as published by Government Notice No. 22031 of 09 February 2001;

SABS IEC 60598-2-9, *Luminaires – Part 2: Particular requirements – Section 9: Photo and film luminaires (non-professional)*, as published by Government Notice No. 22031 of 09 February 2001;

SABS IEC 60598-2-10, *Luminaires – Part 2: Particular requirements – Section 10: Portable child-appealing luminaires*, as published by Government Notice No. 22031 of 09 February 2001;

SABS IEC 60598-2-17, *Luminaires – Part 2: Particular requirements – Section 17: Luminaires for stage lighting, television, film and photographic studios (outdoor and indoor)*, as published by Government Notice No. 22031 of 09 February 2001;

SABS IEC 60598-2-18, *Luminaires – Part 2: Particular requirements – Section 18: Luminaires for swimming pools and similar applications*, as published by Government Notice No. 22031 of 09 February 2001;

SABS IEC 60598-2-19, *Luminaires – Part 2: Particular requirements – Section 19: Air-handling luminaires (safety requirements)*, as published by Government Notice No. 22031 of 09 February 2001;

SABS IEC 60598-2-20, *Luminaires – Part 2: Particular requirements – Section 20: Lighting chains*, as published by Government Notice No. 22031 of 09 February 2001;

SABS IEC 60598-2-23, *Luminaires – Part 2: Particular requirements – Section 23: Extra low voltage lighting systems for filament lamps*, as published by Government Notice No. 22031 of 09 February 2001;

SABS IEC 60598-2-24, *Luminaires – Part 2-24: Particular requirements – Luminaires with limited surface temperatures*, as published by Government Notice No. 1288 of 16 October 1998;

SABS IEC 60598-2-25, *Luminaires – Part 2: Particular requirements – Section 25: Luminaires for use in clinical areas of hospitals and health care buildings*, as published by Government Notice No. 22031 of 09 February 2001;

SABS 1464-22, *Safety of luminaires – Part 22: Luminaires for emergency lighting*, as published by Government Notice No. 841 of 24 May 1996; and

SABS IEC 60570, *Electrical supply track systems for luminaires*, as published by Government Notice No. 1585 of 4 October 1996.

Subsection 3.3.8

Add the following new subsection:

3.3.8 Requirements for electrical equipment for measurement, control and laboratory use.

Electrical equipment for measurement, control and laboratory use shall comply with the requirements of the appropriate of the following specifications, as published by Government Notice No. 841 of 24 May 1996:

SABS IEC 61010-1; *Safety requirements for electrical equipment for measurement, control, and laboratory use*

Part 1: General requirements;

Part 2-010: Particular requirements for laboratory equipment for the heating of materials;

Part 2-020: Particular requirements for laboratory centrifuges;

Part 2-031: Particular requirements for hand-held probe assemblies for electrical measurement and test.

No. R. 1080 **1 August 2003**

STANDARDS ACT, 1993

PROPOSED REPLACEMENT OF THE COMPULSORY SPECIFICATION FOR THE MANUFACTURE, PRODUCTION, PROCESSING AND TREATMENT OF CANNED MEAT PRODUCTS

It is hereby made known under section 22(3) of the Standards Act, 1993 (Act No. 29 of 1993) that the Minister of Trade and Industry intends to withdraw the compulsory specification for the manufacture, production, processing and treatment of canned meat products, as amended, published by Government Notice No 406 of 7 March 1980 and to replace it with the specification contained in the Schedule.

Any person who wishes to object to the intention of the Minister to thus replace the compulsory specification concerned, shall lodge his objection in writing with the President, South African Bureau of Standards, Private Bag X191, Pretoria, 0001, on or before the date two (2) months after publication of this notice.

A ERWIN
Minister of Trade and Industry

SCHEDULE

PROPOSED COMPULSORY SPECIFICATION FOR THE MANUFACTURE, PRODUCTION, PROCESSING AND TREATMENT OF CANNED MEAT PRODUCTS

1 Scope

This specification specifies requirements for the manufacture, production, processing and treatment of canned meat products intended for human consumption.

2 Definitions

For the purposes of this specification, unless the context indicates otherwise, the following definitions apply:

2.1
acceptable
acceptable to the authority administering this specification

2.2
actual lean meat content, per cent
result after the mass percentage of nitrogen, represented by the non-meat proteinaceous material present in the product, multiplied by a factor of 30, has been deducted from the lean meat content, per cent

2.3
actual total meat content, per cent
actual lean meat content, per cent (see 2.2) plus the total fat content, per cent

2.4
address
address in the Republic of South Africa, that includes the street or road number (if a number has been allotted), the name of the street or road and the name of the town, village or suburb or that, in the case of a farm or a smallholding, includes the name of the farm or smallholding and of the magisterial district in which it is situated .

NOTE In the case of imported foodstuffs, "address" means the address of the manufacturer or supplier or importer.

2.5
adequate
sufficient to accomplish the intended purpose of this specification, and

a) **in regard to quality:** of quality such as to ensure performance of the projected activity or function

b) **in regard to quantity (or size):** of such magnitude as will comfortably accommodate the maximum number of persons or operations (or size of unit) envisaged as being involved

2.6
appropriate
acceptable to, or required by the authority administering this specification

2.7
batch-code
sub-code
numbers(s), letter(s) or marking(s) or any combination of these in addition to the code representing a particular time on the date of canning and may also include identification of the production line or particular lot of raw material

2.8
bleeders
small orifices on a retort through which steam and other gases are emitted from the retort throughout the entire thermal process

2.9
canned meat product
article of food that is manufactured from meat or from edible offal or from both, including, when specifically permitted, bone, and with or without vegetables, including mushrooms, fruit or cereal or any combination of the three, or sauces or gravies and other appropriate ingredients, such as vegetable protein, edible fats, seasoning ingredients, spices, thickening agents, sweeteners and caramel, and packed and preserved or semi-preserved in hermetically sealed containers

NOTE This definition does not include packaged meat products (open pack meat products), or products containing vegetables, fruit or cereals or any combination of the three, with meat or edible offal or both, where the content of meat or edible offal or both in the end product, or the meat content of prepared units containing meat or edible offal or both in the end product is less than 10 % by mass

2.10
cereal
wheat, maize, rice or other edible grain, or flour or starch made therefrom

2.11
"clean area worker"
worker who operates in an area that is required to be maintained in a hygienic condition

2.12
cleaning
removal of soil, food and fat residues, dirt, grease or other objectionable matter from surfaces

2.13
code
number(s), letters or markings or any combination of these indelibly affixed to containers representing the factory identity, type of product and date of canning as required by 12.1.1(g)

2.14
commercially sterilized product
product

a) that is processed in such a manner as to reduce the number or activity (or both) of viable micro-organisms to such an extent that none are detectable by the methods given in clause 11, and

b) in which no spoilage or toxicity of microbial origin is detectable under normal, non-refrigerated conditions of storage, distribution and handling

2.15
container
bin
container that is made of suitable metal, glass, semi-rigid plastics (or any combination of these), a plastics retort pouch, a collapsible tube or other acceptable material or combinations of materials that excludes permeation of gas, and that is capable of being hermetically sealed

2.16
contamination
occurrence of any undesirable matter in the product

2.17
count
number of units of preformed meat present in the container

2.18
critical control point
step at which control can be applied and that is essential to prevent or eliminate a food safety hazard or reduce it to an acceptable level

2.19
curing salts
sodium or potassium nitrates and nitrites that are listed as preservatives under the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act 54 of 1972), with or without the addition of common salt

2.20
declared net mass (d.n.m.)
net mass of the contents that is declared on the container

2.21
"dirty area worker"
worker who operates in an area that cannot be maintained in a completely hygienic condition

2.22
disinfection
application of hygienically satisfactory chemical or physical agents and processes to clean surfaces with the intention of eliminating micro-organisms

2.23
distinct
capable of being readily perceived by sight, smell, touch or taste, through a sharp, clear, unmistaken impression, not blurred, obscured or indefinite

2.24
drained mass
mass of the contents without packing medium, of a container in which equilibrium has been reached and determined in accordance with 10.5

2.25
edible offal

a) in the case of food animals other than poultry: blood, blood plasma, brain, cow-heels, diaphragm, gut (casings), washed head, kidneys, omentum, pancreas, pluck [oesophagus, trachea, lungs, heart, pericardium, associated lymph nodes, pillars of the diaphragm and liver or part thereof (without the gall bladder)], rind and skin, spleen, tail, thymus, tongue, cleaned tripe, trotters and udder (in the case of a heifer)

b) in the case of poultry: giblets (the heart, the clean and stripped gizzard and the liver without the gall bladder)

2.26
exhaust
to remove air from a container and its contents

2.27
extraneous matter
any objectionable matter or any material in the product which has not been derived from meat, edible

offal or other ingredients used

2.28
fat
edible vegetable fat or edible animal fat

2.29
food animal
any animal used as food

2.30
hazard
biological, chemical or physical agent in, or condition of, food with the potential to cause an adverse health effect

2.31
hazard analysis critical control point (HACCP)
system that identifies, evaluates and controls hazards that are significant for food safety

2.32
inedible offal
a) in the case of food animals other than poultry: with the exception of bone, all parts of the animal not covered by the definitions of meat (see 2.34) and edible offal (see 2.25)

b) in the case of poultry: the head, trachea, lungs, crop, intestines, gall bladder, oviducts, oil glands, shanks, and feet

2.33
lean meat content, per cent
mass percentage of protein nitrogen, multiplied by a factor of 30

2.34
meat
sound skeletal musculature, excluding the musculature of the lips, snout, scalp and ears, of healthy food animals, with or without connective tissue, blood vessels, lymphatic and nerve tissue, bone, fat, cartilage, scraped skin (pigs), and defeathered skin (poultry) that are naturally associated with such musculature *in situ* in the dressed carcass and head

2.35
mechanically recovered meat
pulped material that consists predominantly of musculature tissue, collagen, marrow and fat, and that has been recovered by a process of mechanical separation from bone

2.36
MIG thermometer
mercury-in-glass thermometer

2.37
name of the product
product name
name and true description of the contents that appear on the main panel of the container or label on the container as required by 12.1.1(b)

2.38
non-meat proteinaceous materials
any nitrogen protein obtained from sources other than from meat

2.39
off-flavour
persistent and distinct objectionable flavour abnormal for the type of product

2.40
off-odour
persistent and distinct objectionable odour abnormal for the type of product

2.41
packing medium
any medium in which solid foods are packed in a container

2.42
pasteurized products
products heat-treated in the container to a minimum centre temperature of 66 °C for a specified time

2.43
per cent
percentage
per cent (percentage) by mass, unless otherwise indicated or inconsistent with the text

2.44
preserve
to maintain in sound edible condition by the prevention of deterioration

2.45
process
course of operations during production of the product

2.46
product
particular canned meat product indicated by the context, either prepared or in the course of preparation

2.47
retort
pressure vessel designed for thermal processing of product packed in hermetically sealed containers

2.48
retort process
entire process which starts when the steam is admitted after the containers are loaded in the retort and the door(s) are closed, continuing through the coming-up time, sterilization time, and ends at the end of the cooling process when the retort door is opened

2.49
semi-preserved products
products that, for purposes of continuous preservation during storage, have to be kept under refrigeration

2.50
suitable
suitably
complying with the requirements of the intended purpose

2.51
suitably prepared
prepared for the intended purpose

2.52
time-temperature process
continuous heat treatment, expressed in terms of time and temperature, that is applied in the processing of heat-preserved products after the container has been sealed

2.53
total meat content, per cent
lean meat content, per cent (determined in accordance with 11.3), plus the fat content, per cent (determined by analysis in accordance with 11.4)

2.54
tripe
scraped and scalded rumen or the scraped and scalded reticulum of ruminant food animals

2.55
uniformity of size
except where a filler piece is allowed, the mass, size, length or thickness of no individual unit shall deviate more than 20 % from the average mass of units in a container

2.56
vents
relatively large, controlled ports in retorts used for purging or eliminating air from the retorts

3 Management system

Producers shall implement and maintain an acceptable quality management system such as the HACCP system (see 2.31).

4 Requirements for the factory and for employees

4.1 General

Where a part of the preparation of a product for canning is done at a factory other than the canning factory, the other factory concerned and its employees shall comply with the requirements of 4.1 to 4.6 inclusive.

All the statutory requirements contained in the Occupational Health and Safety Act, 1993 (Act 85 of 1993), in the Health Act, 1977 (Act 63 of 1977), in the Perishable Products Export Control Act, 1983 (Act 9 of 1983), or in any other relevant act shall be complied with. (All Acts as amended from time to time.)

The factory, equipment and the water used in the preparation of the product shall comply with the requirements given in 4.2 to 4.5 inclusive.

4.2 Factory construction, layout and conditions

4.2.1 Location, size, hygienic design, conditions and maintenance

4.2.1.1 The factory shall be situated in an environment suitable for the canning of the product.

The location of the premises and the designed construction of the factory buildings shall be such that it can be kept acceptably free from objectionable odours, smoke, dust and other contamination in order to comply with the relevant requirements for hygiene and sanitation.

4.2.1.2 The factory buildings and structures shall be of suitable size, construction design, and location to facilitate

a) maintenance and operation for their intended purpose,

b) large enough to prevent crowding of equipment and employees,

c) sufficient space for orderly arrangement of equipment and storage of raw materials and utensils used in any of the operations,

d) an orderly uninterrupted flow of production without any cross flows that could have an adverse effect on the quality of the product,

e) adequate cleaning and the maintenance of hygiene,

f) processing of raw materials without undue delay,

g) product quality and safety, and

h) functions such as quality management, quality control and process control.

4.2.1.3 The factory shall have the necessary fittings, equipment, utensils, technical supervision, skilled labour and workers to carry out the production in progress at any time for which it is designed (see 4.3.1).

4.2.1.4 The factory grounds shall be graded to ensure proper drainage, elimination of stagnant water and shall not be subject to flooding. There shall be no inadequately drained areas that might contribute to contamination of the product through seepage of food-borne filth and by providing breeding places for insects or micro-organisms.

4.2.1.5 The factory and grounds shall be of sound construction and well maintained in a clean and hygienic state and shall be effectively fenced to keep out large animals (see 4.5.9 and 4.5.11).

4.2.1.6 There shall be no accumulation of unused equipment, litter, waste, refuse, and uncut weeds or grass within the immediate vicinity of the product processing plant buildings or structures that might constitute an attraction, breeding place or harbourage for rodents, insects or other pests.

4.2.1.7 A system of control without risking contamination of the product shall be maintained to keep the factory free from birds, rodents, insects and other vermin (see 4.5.9).

4.2.1.8 Outdoor working areas and roads and pathways on the premises shall have a permanent surface of concrete, brick, bitumen or other durable material suitable for wheeled traffic. Areas outside buildings and not in actual use shall be covered by lawn or any other suitable surface that is not liable to produce dust or any toxic substances. Precautions shall be taken to ensure that contamination is not brought into the processing areas by foot or by vehicles such as fork trucks.

4.2.1.9 A schedule and routine inspection system of the condition and maintenance of the factory construction and facilities shall be implemented and maintained. Procedures for corrective actions in the event of non-compliance shall be instituted. Findings of such inspections and correction of non-conformance or the time limit to correct such non-conformance shall be documented and kept (see also 4.2.17).

4.2.2 Roofs and ceilings

4.2.2.1 The roofs, valleys and gutters shall be weatherproof and well maintained to prevent contamination of the product, ingredients and empty containers, and to keep the walls, floor and other structures from becoming damp. Roofs, valleys and gutters shall be kept clear of debris including insects, dead birds and rodents and their droppings.

4.2.2.2 The roofs and ceilings shall be at least 300 mm above any overhead equipment and in no case, less than 3 m from the floor. Ceilings, and roofs where no ceilings are fitted, shall be faced with a smooth material that is impermeable to water, light in colour and capable of being easily cleaned without damage, and so designed, constructed, installed and finished as to be dust-proof and minimize condensation, mould development, flaking paint and the lodgement and accumulation of dirt (see 4.5.2.4). Effective measures shall be taken to avoid contamination and to prevent loose or detachable material and drips from falling on the product from overhead structures in processing and storage rooms. They should be insulated where appropriate.

4.2.2.3 Areas where the sauce is prepared, cooked product is handled or ingredients are stored, must be provided with overhead ceilings. A ceiling is not required where a canopy covers the entire open product.

In areas where the open product is handled, all overhead structures and fittings shall be installed in such a manner as to avoid direct or indirect contamination of the product by condensation, drip or other falling matter and shall not hamper cleaning operations.

4.2.3 Walls and doors

4.2.3.1 Outer walls shall be weatherproof and impermeable to water. Interior wall surfaces shall be faced with a smooth surface, without crevices, (unplastered brick surface is unacceptable), hard, light-coloured, material that is impermeable to water, to a height of not less than 2 m above the floor. In addition, the walls in the preparation, processing and packing areas shall be faced with a suitable corrosion-resistant, light-coloured washable and impact-resistant non-toxic material that is impermeable to water, to a height of at least 2 m above the floor, except that when soiling of the walls might occur above this height this facing shall be continued to a higher level appropriate to the operation (see 4.5.2.6). All ledges occurring in wall construction shall be sloped at an angle of at least 45°. The walls shall be free from unnecessary projections and ledges.

4.2.3.2 Openings for conveyors, services, vents, etc. shall be smooth and shall be sealed.

4.2.3.3 Fixtures, signboards, switch boxes, etc. shall be avoided on internal wall surfaces in the processing areas and where necessarily present, shall be adequately sealed to prevent harbourage of pests and accumulation of dirt.

4.2.3.4 Windowsills shall be sloped to the inside at an angle of at least 45° and shall be at least 1 m above floor level. Windows and other openings shall be so constructed as to avoid accumulation of dirt. Windows shall be tight fitting into their frames (see 4.2.8). Joints on panelled walls and junctions of the panels and floor surface shall be adequately sealed. Where appropriate the walls shall be protected from damage by moving equipment and fork trucks such as galvanized guardrails.

4.2.3.5 Wall-to-wall and wall-to-floor junctions in production areas shall be closed and coved. The minimum radius of the coving shall be 25 mm and 40 mm respectively. Junctions between walls and ceilings shall be closed and coved. Wall surfaces shall be easy to clean and disinfect.

4.2.3.6 Doors, through which products are moved between processing areas shall be of adequate width. Doors and door-frames shall be made from corrosion-resistant material that has high impact resistance. Doors and door-frames shall have a smooth, seamless, light-coloured, readily cleanable surface that is impermeable to water. Doors that open direct from the outside into the preparation, processing and packaging areas shall be tight fitting unless provided with effective air-curtains, and shall, as far as is practicable, be of a self-closing type.

4.2.3.7 Direct entrance(s) from the outside that is (are) used by the employees shall be provided with an entrance hall. External doors shall be constructed as to prevent the entry of rainwater into the factory building. Plastic curtains, if not properly maintained and clean, can be a serious source of contamination. Where used, plastic curtains shall not be located after the use of hand washing facilities upon entering the processing area.

4.2.4 Floors and drainage in processing and food handling areas

4.2.4.1 Floors shall be constructed of concrete or other suitable material that is impermeable to water, non-toxic, resistant to wear and corrosion, easy to clean and maintain and laid to an even surface that is smooth but not slippery, free from cracks, crevices and open joints (see 4.5.2.5).

4.2.4.2 Floor surfaces shall be resistant to attack by product spillages, cleaning agents and cleaning solutions of normal dilution. In the case of floor tiles, the grouting between the tiles must be of a non-absorbent and durable material that is resistant to erosion and corrosion.

4.2.4.3 Floors and drainage channels shall be graded to have a fall of at least 1 in 60 and be drained to internal drainage channels connected to accessible gullies, sumps and external sewers. Outlets shall have a suitable drain trap immediately outside the factory.

4.2.4.4 Floors and drainage channels shall be in good condition and repair, and have strainers in place. Internal drainage channels shall be of the open type with, where necessary, removable covers.

4.2.4.5 Installations obstructing flow and cleaning shall not be present in drainage channels. The capacity of drainage channels shall be sufficient to cope with the maximum flow of liquid during peak demand without overflowing and causing flooding.

4.2.4.6 Where necessary, duckboards of easily cleaned material that is impermeable to water shall be provided for workers.

4.2.5 Lift cages and staircases

4.2.5.1 Lift cages shall have a smooth, corrosion-resistant inside surface that is impermeable to water, and lift shafts shall be properly drained and shall be accessible for cleaning.

4.2.5.2 Staircases in rooms where food is processed or handled shall have solid risers, and shall be provided with closed balustrades that have a height of at least 1,3 m as to prevent contamination of products underneath the stairs.

4.2.5.3 Stairs, lift cages and auxiliary structures such as platforms, ladders, chutes, catwalks shall be so situated and constructed as not to cause contamination of the products.

4.2.5.4 Walkways, catwalks, bridges and mezzanine floors over the open product, product contact surfaces, empty containers, conveyors for empty containers or the open product or handwash facilities shall be completely sealed underneath and shall have side walls.

4.2.5.5 Chutes shall be constructed where appropriate with inspection and cleaning hatches. Equipment or lifts for conveying the product shall be mechanically operated.

4.2.6 Cables and pipes

4.2.6.1 Cables and pipes shall be

a) fixed above ceilings, or

b) chased into walls, or

c) carried under floors, or

d) fixed away from walls or ceilings and above the floor, and spaced in such a manner that the ceilings, walls, floor, cables and pipes can be easily cleaned and maintained in a hygienic condition.

4.2.6.2 Overhead cable and pipework and girders and other structures shall be kept to a minimum to aid cleaning and if present shall be free from dust, rust, mould, flaking paint, cobwebs and other extraneous material.

4.2.6.3 Cladding around steam pipes shall be suitable for use in a food factory and shall not be ragged and shall be covered with a suitable metal sheet.

4.2.6.4 Pipes in which the product is conveyed, shall have no dead ends or sharp corners.

4.2.7 Illumination

4.2.7.1 General illumination shall be such as to permit efficient operations during manufacture of the product.

4.2.7.2 An illuminance of at least 220 lux for general operations in the manufacture, production, processing or treatment of the product, and at least 540 lux at points where close examination of the product is carried out shall be provided, situated in such a way to cause the minimum stress to the workers who carry out these examinations.

4.2.7.3 The area where container seam examination other than seam projections are performed shall have close-up illuminance of at least 540 lux with minimum reflections. In other areas the illuminance shall be at least 110 lux.

4.2.7.4 Artificial illumination, if used, shall be such that the colours of products are not significantly altered.

4.2.7.5 Luminaires suspended over the product at any stage of preparation, packaging and processing areas or where the open product ingredients or empty cans are handled, shall be of the safety type or otherwise protected to prevent contamination of the product in case of breakage of luminaire or lamp.

4.2.7.6 Suspended fixtures shall be so constructed and so situated to facilitate easy cleaning and maintenance.

4.2.8 Ventilation

4.2.8.1 The ventilation shall keep the air fresh, prevent the build-up of excessive heat, remove excess steam, vapour and shall prevent the formation of condensate and growth of mould. Natural ventilation shall be augmented, if necessary, by mechanical means.

4.2.8.2 Airflow shall be from the more hygienic to the less hygienic areas of the factory.

4.2.8.3 Windows that open for ventilation purposes or ventilation openings shall be insect screened and made out of corrosion-resistant material and kept in good repair (see 4.2.3). The screens shall be easily removable for cleaning and shall be regularly cleaned.

4.2.8.4 Fork truck or other vehicles emitting exhaust gasses shall not be operated in the preparation and processing areas. The air shall be free from noxious fumes, smoke, vapour, dust, chemicals and contaminating aerosols.

4.2.8.5 Air intake points for ventilation shall be fitted with dust filters and shall be located so as to avoid the intake of air contaminated by micro-organisms and other contaminants.

4.2.9 Hand washing facilities

4.2.9.1 The following shall be provided at the entrances to the preparation and processing areas of the factory that are used by the employees, and at other strategic and conveniently situated places in the preparation and processing areas or where their absence would present a food safety risk and within easy reach of the employees and at the toilets in such a position that the employee must pass them when returning to the processing area:

a) an adequate number of wash-hand basins, with an abundant supply of hot and cold running potable water complying with 4.4.1 and from taps operated by means other than hands or elbows, or warm water in the temperature range of 40 °C to 50 °C under adequate pressure;

b) abundant unscented liquid soap or suitable hand cleaning preparation, nail brushes and single-use disposable towels;

c) receptacles shall be provided for used disposable towels at each hand-washing facility. These receptacles shall be regularly emptied; and

d) notices shall be conspicuously posted requiring employees or where applicable, visitors, to wash their hands with soap or detergent; (see 4.6.6)

1) after using the toilet,

2) when entering the preparation, processing areas or product handling areas,

3) when their hands become dirty or whenever necessary before handling the product.

4.2.9.2 Hand-washing facilities at the entrance to the processing and food handling areas shall be under protection against environmental contamination inside the building and shall be preferably located in a lobby or entrance hall. They shall be placed in such a position that employees are forced to pass them upon entering and if necessary to be guided by a rail.

4.2.9.3 The hand-washing facilities at the entrances to the processing areas and inside the processing area shall be located in a position where employee practices can be supervised (see 4.6.6).

4.2.9.4 Access to hand-washing facilities shall, at all times, be unobstructed by equipment and operating activities. Hand-washing basins shall be of a suitable corrosion-resistant impermeable material, they shall have a smooth finish, be easy to clean and shall drain direct into drainage channels.

4.2.9.5 Hand-washing facilities shall not be used for other purposes than the washing of hands.

4.2.9.6 Disinfectant hand dips, where provided shall be of such design that they can be adequately cleaned. Hand dips shall not be allowed to become a source of contamination. Disinfectant solutions shall be monitored and replaced regularly.

4.2.10 Foot-baths and boot-wash basins

4.2.10.1 Unless their absence in particular circumstances is acceptable, or unless alternative acceptable cleaning and disinfecting facilities are provided, footbaths or boot-wash basins that contain a suitable active disinfectant solution shall be provided at each entrance to the preparation, processing and packaging areas that is used by employees and be so located that employees cannot obtain access to those areas without disinfecting their footwear.

4.2.10.2 There shall be adequate provision for the drainage and cleaning of footbaths.

4.2.10.3 Footbaths or boot-wash basins shall be positioned before the hand-washing facility upon entering the processing area and shall be located inside the factory, protected against environmental contamination.

4.2.10.4 Boot-wash basins shall be provided with suitable brushes consisting out of non-absorbent material of hygienic design, water sprays under suitable pressure and boot scrubbing powder and a disinfectant dip.

4.2.11 Production areas

Product handling areas shall not be used during production for any other purposes than that for which they have been designed. The production areas shall be designed, constructed, staffed and the equipment shall be arranged in a manner to permit

a) control of access,

b) proper supervision,

c) adequate working space to allow free movement of workers for the satisfactory performance of all operations,

d) functions such as quality and process control from arrival of raw materials, ingredients and packaging materials, the handling, processing to the finished product,

e) easy and adequate cleaning and proper maintenance of hygiene and hygienic operations and facilitate free movement and cleaning of movable equipment,

f) physical separation of the preparation and processing areas from any storage, designated cleaning, workshop, and comfort areas,

g) rapid and efficient handling and processing without mechanical or other damage of the product,

h) an orderly undelayed flow of production,

i) prevention of crossflows of operations that might have an adverse effect or reduction in the quality of the product or separation between those operations that might cause cross contamination,

j) where necessary, temperature control areas,

k) effective separation of those operations or areas with potential adverse effects on the product such as the separation of areas where the uncleaned ingredients are handled from areas where cleaned ingredients are handled, or where raw materials are being handled from areas where cooked food is being handled, or separation of low temperature control areas from heat control areas, and

l) minimization of product contamination risk.

4.2.12 Chill rooms, freezers and freezer storage rooms

4.2.12.1 Chill rooms, freezers and freezer storage facilities shall operate efficiently and shall be hygienically maintained.

4.2.12.2 Refrigeration and freezing units, such as compressors, shall not be installed in an area where the product is handled, with the exception of equipment that is an integral part of a production unit. Where freezers, chill rooms and freezer storage rooms are located in processing areas, their floors shall either be an integral part of the floor of the processing area or adequately sealed to that floor. Any storage units shall be installed high enough above the floor to permit easy and adequate cleaning of the area under them.

4.2.12.3 The walls and floors shall be in good condition. The surfaces of ceilings, walls and floors shall be of suitable corrosion-resistant material, be impermeable to water and shall be smooth, free from cracks, crevices and flaking of surface material. The floors shall be drainable, and the floors of chill rooms shall be sloped to effect complete draining.

4.2.12.4 Freezer storage rooms in factories other than factory ships shall be equipped with automatic temperature recorders that have enough suitably placed sensing elements to monitor the overall air temperature. The temperature in freezer storage rooms shall be automatically and continuously monitored and a record of the temperature shall be kept and shall be available for inspection. Temperature charts shall be so graduated that each division represents not more than 2 °C within the storage range, and shall be easily readable, to the nearest 1 °C, within the storage range. Batch freezers, other than plate freezers, shall be fitted with external gauges or other temperature indicators.

4.2.12.5 The entrances to chill rooms, freezers and freezer storage rooms shall be protected from the inflow of warm air by the provision of an ante-room or a mechanical air curtain or self-closing shutters.

4.2.13 Thawing areas

Thawing devices shall have sufficient capacity to avoid delay, shall be designed and constructed for ease of cleaning and disinfecting and shall allow adequate evacuation of water. The thawing of frozen meat shall be performed in a separated, well-drained and cool area where the air temperature can be maintained below 20 °C. The design of thawing shelves shall ensure adequate drainage. Dripping onto meat from shelves above shall be prevented.

4.2.14 Storage facilities for meat and red meat offal

4.2.14.1 Edible red meat offal for human consumption (cleaned where applicable), if not stored separately, shall be stored only in chill rooms or freezer storage rooms that are used for the storage of carcasses. No uncleaned edible offal shall be stored in any room that contains carcasses or cleaned edible offal.

4.2.14.2 Inedible offal, unless scalded and cleaned, and boxed and frozen, shall not be stored in any chill room or freezer storage room containing meat or edible offal.

4.2.14.3 In storage, unprotected meat shall be kept separate from boxed or protected meat. Raw materials other than meat and edible offal that require cold storage or freezer storage shall only be stored in the same room as meat and edible offal if held in a prepared and neatly packaged form in hygienic containers. No carcass or edible offal, whether wrapped or not, shall rest immediately on the floor or against the walls.

4.2.15 Storage facilities for edible ingredients other than meat or edible offal

4.2.15.1 Edible materials shall be stored in clean, tidy, dust free, insect, vermin and bird proof areas, away from the wall and floor surfaces and protected against any source of contamination and separated from the processing areas. Non-edible materials shall not be stored in the same rooms where edible or packing materials are stored.

4.2.15.2 Edible raw materials requiring storage under cool, chilled or frozen conditions shall be stored under such conditions.

4.2.15.3 Edible materials supplied by the manufacturer in containers or in packages shall be stored in closed containers or packages. Opened containers or packages with partly used ingredients shall be re-sealed or transferred to closed containers for further storage.

4.2.15.4 Edible dry ingredients and other ingredients in containers or packages such as tomato paste shall be stored under dry conditions.

4.2.16 Storage facilities for non-edible material

Stores capable of contaminating the product and spare parts for machinery (see 4.2.18, 4.2.19 and 4.2.20) shall be kept away from the processing area.

4.2.17 Storage facilities for packing and packaging materials

Containers, closures, cartons, and labels for the packing and packaging of the product shall be stored in clean, dustproof, vermin-proof, dry storerooms reserved for the purpose. Precautions shall be exercised that containers and closures are not exposed to environmental elements or excessive steam or moisture during storage. Packing and packaging materials shall be stored at a height of at least 250 mm above floor level and away from the walls.

4.2.18 Storage facilities for poisonous and harmful materials

4.2.18.1 Storage facilities for pesticides and other poisonous materials

Poisonous or other harmful materials, pesticides and equipment for their application, shall be stored in a well-ventilated room in which no foodstuff or food-handling equipment or packing material or containers are stored and shall be kept locked. These poisonous or harmful substances shall at all times be segregated from edible materials. All these materials shall be prominently and distinctly labelled with the warning about their toxicity and use, and shall be registered for the purpose of use. Their containers shall be kept closed during storage.

4.2.18.2 Storage facilities for cleaning and disinfecting materials

Cleaning and disinfecting materials and equipment for their application, shall be stored in a lockable room where no foodstuff or food-handling equipment or packaging materials or containers or lids are stored and shall, at no time, come into contact with containers, raw materials or the product. All materials shall be prominently and distinctly labelled.

4.2.19 Fuel storage area

Any storage area or tank, for the storing of fuels such as coal or hydrocarbons shall be located, designed, protected, controlled and maintained in such a manner as not to present a risk of the product being polluted during the storage and manipulation of these fuels.

4.2.20 Storage of lubricants

Lubricants shall be stored away from the production areas in such a manner that they shall not be a cause of contamination to the product.

4.2.21 Storage facilities for utensils and spare parts

Utensils and equipment parts that, when in use, come in contact with the product shall, when not in use, be kept in a disinfectant solution or be stored in a hygienic manner in an area that is dry, free from dust and any other source of contamination and is vermin proof. Suitable stands and/or shelves shall be provided for the storage of loose equipment and utensils. Spare parts for equipment and tools that can contaminate the product shall be kept in a separate storage area away from the processing areas and not stored with utensils and equipment parts that come in contact with the product when in use.

4.2.22 Storage facilities for end products

End products awaiting dispatch shall be stacked in well ventilated, acceptably dust-free, dry and clean rooms. The storage area for end products shall be physically separated from areas where steam is generated. The design and location of the storage area shall be such that the end product shall be protected against elements of the environment or any other condition that could adversely affect the product.

4.2.23 Smoke units

Smoke units shall be maintained in a hygienic condition and they shall not be fired from the inside of the processing area of the factory. In the case of prefabricated smoke kilns where the smoke generating equipment forms part of the kiln, the smoke generator shall not emit any smoke into the processing area, and the area adjacent to such a generator shall be partitioned off from the processing area to prevent contamination of the area with sawdust. Exposed sawdust shall not be transported through the processing areas. Sawdust shall be contained in bins with lids on. Doors of smoke rooms and kilns shall be tight fitting. The inner surfaces of smoke units shall be finished with a smooth lining such as stainless metal, to facilitate the cleaning of the walls with steam and water. Trolleys or trays used in smoke units shall be of hygienic design and shall be regularly cleaned.

4.2.24 By-products

Any processing of by-products and non-meat products that are not intended for human consumption shall be conducted in buildings that are physically separated from the factory in such a way that there is no possibility of contamination of the product. There shall be no direct access from a by-product plant to the preparation and processing areas of the cannery. Equipment and utensils used in by-product plants shall be identified and shall not be used in areas where food for human consumption is processed.

4.2.25 Refuse

A separate room or other equal adequate and suitable refuse facility shall be provided on the premises and shall be cleaned daily. The design and construction shall be such as to prevent harbourage of pests and contamination of the product, the equipment or buildings used for the production of the product.

4.2.26 Effluent sewage and waste disposal

4.2.26.1 Establishments shall have an efficient effluent sewage and waste disposal system that shall, at all times, be maintained in good order and repair. All effluent lines (including sewer systems) shall be large enough to carry peak loads and shall be so constructed as to avoid contamination of potable water supplies or the environment and not constitute a source of contamination to the product, product contact surfaces, ingredients or create an unsanitary condition or nuisance. Drainage and sewer pipes shall not be installed direct over the preparation, processing or packaging areas, or the product or product contact surfaces or empty container storage areas or in any manner that accidental leakages could contaminate the product. Sewer pipes shall have an inside diameter of at least 100 mm and shall be properly vented to the outside atmosphere.

4.2.26.2 Effluent sewage and waste water lines shall be identified as such and the disposal shall be made into a public sewerage system or in the absence thereof, into an adequate private sewerage system in a manner which will not cause a health hazard.

4.2.26.3 Offal and rubbish shall be so conveyed, disposed, or stored as to minimize the development of bad odours, prevent waste from becoming an attractant and harbourage or breeding place for vermin and prevent contamination of the product or product contact surfaces, ground surfaces or water supplies.

4.2.26.4 Manholes shall be not present in preparation and processing areas.

4.2.26.5 Combustible waste, if incinerated, shall be burned in an incinerator of an approved design and located at an adequate distance from the factory to avoid contamination of air supplies. Effluent shall not be treated on the premises or close to the factory premises in such a position as to risk air contamination. Hazardous substances shall be disposed of in an environmentally acceptable manner.

4.2.27 Comfort facilities

4.2.27.1 An adequate number of suitable dining rooms, change-rooms, shower baths, hand-wash basins whose taps operate as described in 4.2.9, toilets (separate for each sex) and, where appropriate, urinals, shall be provided. The design, layout, construction and location of the comfort facilities shall be such as not to create a health hazard. Each shower shall have a fresh (potable) hot and cold water supply and soap shall be supplied. Comfort facilities shall be separated and not open direct into a preparation, processing, packaging or storage area but be connected with these areas by means of a vestibule or lobby. The location of the change-rooms shall be such as to enable workers to dress with the required protective clothes (see 4.6.3) before entering the preparation and processing areas.

4.2.27.2 Toilets shall be conveniently located and be provided at a suitable distance from the production areas and shall be completely separated from change-rooms. If toilets do not open in a vestibule or a lobby, they shall be fitted with close-fitting self-closing doors. Doors of toilets rooms shall not open direct into areas where the product could be exposed to airborne contamination. The comfort facilities shall be kept neat and clean and maintained in a sanitary condition and in good repair and free from bad odours.

4.2.27.3 The layout and equipment shall be such as to permit proper cleaning and maintenance and prevent harbourage and breeding of pests. The toilets shall be so designed as to ensure hygienic removal of waste matter. Exit from a vestibule or lobby to the processing, food handling or storage area shall be equipped with a footbath located inside the vestibule or lobby. Provision shall be made for proper drainage of the floor surfaces. Where comfort facilities by means of a vestibule or lobby are connected with the food handling or storage areas, the fall of the floor shall be such that no water from the floor surface of the comfort facilities can enter the food handling or storage areas. An adequate supply of toilet paper shall be provided at the toilets.

4.2.27.4 Lockers shall be provided or alternatively an effective controlled basket system for the storage of personal clothes shall be used. Personal effects of workers shall not be allowed to accumulate in the lockers or baskets. The lockers or baskets shall be not used for the storage of food or items attracting vermin and shall be emptied at the end of each working shift. The lockers or baskets shall be maintained in a clean and good condition and repaired or shall be replaced when necessary. Lockers or facilities to be used for the storage of any personal effects may preferably be provided, and if provided these shall not be located inside the complex accommodating the comfort facilities. The comfort facilities shall be adequately ventilated and illuminated. Toilets shall be separately ventilated to external air in such a way as not to contaminate the air in the processing areas. Change-rooms and dressing rooms shall not be used as living quarters or for the preparation of food or as dining rooms. Staff dining rooms shall be separate from the change-rooms or dressing rooms. Separate comfort facilities shall be provided for "clean area" and "dirty area" workers. The comfort facilities shall not be used as storage areas.

4.2.28 Living quarters

Living quarters shall not be located on the same premises that accommodate the areas where the product is prepared, processed, packaged or stored.

4.2.29 Facilities for washing and laundering of protective clothing

For the cleaning of waterproof protective clothing, plastic brushes on corrosion-resistant chains, disinfecting soap or powder such as hypochlorite, and a spray nozzle shall be provided at the wash-hand basins (see 4.2.9). If cloth types of protective clothing other than waterproof protective clothing are to be washed at the factory, laundering facilities shall be supplied in an area away from the product handling area or stores for ingredients (see 4.6.3).

4.2.30 Facilities for cleaning and disinfecting portable equipment

Facilities with proper drainage shall be provided for the washing and disinfecting of portable or movable equipment such as trolleys and bins and utensils or food contact parts capable of being separated from stationary equipment. Such facilities shall be located in a separate room or in a designated area which should, where necessary, be partitioned off in the preparation, processing and packaging areas where there will be no possibility of contaminating the product or product contact surfaces. Suitable drying stands or shelves shall be provided to keep equipment and utensils off the floor. An ample supply of cold potable water, and hot water if required, or saturated steam, or clean seawater, at adequate pressure, that complies with the requirements of 4.4.1 shall be provided. High pressure or high frequency oscillating water or detergent equipment shall be available where possible. The floor of the room or area shall be smooth-surfaced and graded, to facilitate proper disposal of waste liquids from the cleaning process. The drainage shall be in a direction away from the food handling areas.

4.3 Equipment

4.3.1 General

4.3.1.1 Layout

4.3.1.1.1 Processing areas shall be so designed, equipped and staffed as to allow free movement of employees to facilitate cleaning and maintenance of hygiene and product quality.

4.3.1.1.2 Equipment such as tables shall be installed or placed away from the walls. Aisles and working spaces between equipment and between equipment and walls shall be unobstructed and of sufficient width to permit employees to perform their duties without contamination of the product or food contact surfaces with clothing or personal contact.

The position of stationary equipment shall not impede drainage of water towards the drainage canals.

4.3.1.2 Installation

4.3.1.2.1 Equipment shall be so constructed and installed as to prevent hygienic hazards and to minimise the build-up of contamination with organic material and dirt, and to facilitate its cleaning and disinfecting, and adjacent areas and those areas beneath it.

4.3.1.2.2 All permanently mounted or readily movable equipment shall be installed away from the walls or ceiling and be either installed high enough above the floor at distances sufficient to provide access for cleaning and inspection, or completely sealed to the floor.

4.3.1.2.3 Equipment shall preferably not be sunk into the floor but, if this is unavoidable, the equipment shall be installed in an acceptable manner. Sunken areas shall be well drained.

4.3.1.3 Design

4.3.1.3.1 Equipment, implements and utensils shall be designed and of a workmanship that is suitable for their intended use and shall facilitate rapid and efficient handling of the product.

4.3.1.3.2 The design, construction, installation and use of equipment and where applicable, utensils, shall be such as to prevent hygienic hazards and shall preclude contamination of the product with lubricants, fuel, metal fragments, soiling, contaminated water or any other contaminants.

4.3.1.3.3 All equipment used in the production of the product shall be in a well-maintained and sound condition, durable and easy to maintain, inspect or monitor, movable or easy to dismantle or able to be disassembled or to be opened for cleaning. They shall be of hygienic design with no open joints or pits or crevices or dirt traps.

4.3.1.3.4 All parts that come into contact with the product shall be easily accessible for cleaning and disinfecting. Where necessary, as in the case of equipment that cannot be cleaned *in situ*, it shall be possible for easy dismantling to expose the food contact surfaces for effective cleaning and disinfection.

4.3.1.3.5 Surfaces with which the product comes into contact shall not be painted and shall be constructed to reduce projections, sharp corners or other features that could cause damage to the product. Bearings in equipment or revolving of equipment within reach of the product contact surfaces shall be of a sealed type and shall not cause any soiling of the product through seepages.

4.3.1.4 Construction

4.3.1.4.1 All plant, equipment, implements and utensils or surfaces that come into contact with the product shall be smooth and of a suitable corrosion-resistant, non-absorbent material which does not transmit toxic substances, odour, taste or staining or cause colour changes and soiling of the product and shall be inert to the product, detergents and disinfectants under normal operating conditions.

4.3.1.4.2 The equipment, implements and utensils may have an acceptable plastics-coated surface capable of withstanding repeated cleaning and disinfection or shall preferably be made of stainless steel suitable for use with food. Dissimilar metal material shall not be used where electrolytic corrosion can occur. Wooden equipment or utensils are unacceptable.

4.3.1.4.3 Copper, lead and their alloys other than solder, and other metals or materials detrimental to health, shall not be used in the construction of equipment that comes into contact with the raw materials or with the unprotected product at any stage of its processing. The use of solder in equipment shall be minimized.

4.3.1.4.4 Equipment and utensils shall not be removed from the processing areas except for repairs.

4.3.1.4.5 Equipment and utensils used for inedible materials or waste shall be identified as such and shall not be used for edible products. Equipment and utensils used in areas outside the food for human consumption areas such as the toilets and ablution facilities shall not be used in food for human consumption handling areas. Such equipment and utensils shall be identified as such.

4.3.2 Equipment for the packing medium

4.3.2.1 Pipes, valves, joints, pumps, homogenizers, cyclones or any equipment coming into contact with the packing medium shall be of a hygienic design with no dead ends, sharp bends or uneven joints.

4.3.2.2 Pipelines shall be easily dismantled for cleaning.

4.3.2.3 Branches occurring in pipelines shall be fitted with suitable stopcocks in such position as to avoid dead ends and the development of a stagnant packing medium. Any bend occurring in the pipeline, shall permit dismantling at both sides of the bend.

4.3.2.4 Mixing equipment, stirrers mesh screens and storage tanks shall be of stainless steel. Storage tanks must be provided with suitable covers.

Water used in the mixing tanks shall only be supplied by means of a permanently fixed water pipe. Water hoses shall not be used to supply water as an ingredient in the product.

4.3.3 Tables

4.3.3.1 Wooden tables shall not be used in preparation, processing and packaging areas.

Tables shall be of a design and construction that will not allow the development of unhygienic conditions and microbial build-up.

4.3.3.2 Frames shall be made of suitable smooth, corrosion-resistant metal or steel with no openings in the construction.

4.3.3.3 The tops of preparation and packaging tables shall be of a suitable impermeable, smooth, seamless, corrosion-resistant metal (preferably stainless steel) or other material with similar surface characteristics. The tops shall either be removable for cleaning, or so secured to their frames as to allow cleaning and disinfection.

4.3.3.4 Tables shall, as far as possible, allow rapid and effective draining and shall be easy to clean and be free from cracks, crevices or openings in the framework.

4.3.3.5 Where metal tops are folded at the edges, the fold shall be effectively soldered, welded or sealed with an acceptable mastic sealant in such a way as to prevent organic matter and dirt from entering the folded section. All joints shall be watertight.

4.3.4 Cutting boards

If cutting boards are used they shall be easily removable cutting boards or blocks of hygienic construction, made of acceptable light-coloured solid and smooth material (other than wood or other absorbent or porous material) and suitable for use with food. The shape and size shall be such as to facilitate cleaning and disinfecting.

4.3.5 Utensils and implements

Knives, shovels, brooms and other utensils or implements shall not have handles of wood or other absorbent or porous material. Utensils used for the topping-up of cans shall be made of stainless metal or of rigid plastics and of hygienic design.

4.3.6 Heat processing equipment

4.3.6.1 Retorts shall have an adequate supply of energy, steam and where applicable, water or air. Their capacities shall be sufficient for production flow to avoid undue delays.

4.3.6.2 Steam, water and compressed air used in the operation of retorts shall not contain any substances that might be hazardous to health or that might contaminate the product. Steam shall be made from potable water. The steam quality for steam retorts shall be pure saturated and free from air. All heat-processing equipment, temperature control and measuring devices shall be maintained in good order. All temperature-indicating devices shall be installed in such a way and location and maintained to accurately measure the actual temperature within the retort. The installation shall be such to ensure a constant flow of the heating medium past the length of the probe or bulb of the temperature-indicating device.

4.3.6.3 Retorts shall comply with the following:

a) An **automatic steam controller**, to maintain the processing temperature accurately (see 4.3.6.3(c)). Steam controllers may be combined with the temperature and time recording device (see 4.3.6.3(e)) to function as recording-controlling instruments.

b) The **construction of the retort**, the steam supply and steam distribution in the retort shall be such so as to ensure a rapid and even rise of temperature, provide uniform heat distribution throughout the retort and ensure an adequate heat process. The steam supply shall be sufficiently provided for the greatest number of retorts that might be brought to sterilization temperature simultaneously.

   The steam pressure and size of steam inlet shall be large enough and shall enter at points and be distributed to facilitate adequate flushing of air out of the retort and to provide steam for proper operation of the retort.

   Steam shall be evenly distributed by means of steam spreaders and shall flow unobstructively throughout the retort load without any air pockets remaining in the retort.

   Steam spreaders are perforated continuations of the steam inlet inside the retort. Horizontal retorts shall be equipped with steam spreaders extending the entire bottom length of the retort occupied by the retort trolleys. In retorts of at least 6 m in length, the steam shall enter the spreader near the centre of the retort. In retorts of length less than 6 m, the steam may enter either at the ends or at the centre. When the steam inlet enters the spreader at the end, the cross sectional area of the latter shall not be less than the inlet pipe, when the inlet enters at the centre, the cross sectional area of each arm of the spreader shall not be less than two-thirds of the inlet pipe. Retorts over 9 m length shall have two steam inlets connected to the spreader at approximately equal divisions of its length.

   In vertical retorts, bottom spreaders when present, shall be in the form of a cross pipe.

   Spreaders shall be perforated over its entire length along the top 90° of this pipe, that is, within 45° on either side of the top centre. The ends of the spreader shall be closed. The number and size of perforations in the steam spreader shall be such that the total cross sectional area of the perforations is equal to 1½ to 2 times the cross sectional area of the smallest restriction in the steam inlet pipe.

c) If the **controller** is smaller than the steam inlet pipe, a steam by-pass around the controller is necessary for a rapid, even rise during the coming-up time.

d) At least one indicating **mercury-in-glass (MIG) thermometer**, easily readable to 0,5 °C. The divisions shall not exceed 10 °C for each 20 mm of graduated scale. The temperature range shall adequately encompass scheduled retort temperatures to be used. Bulbs of MIG thermometers shall be installed within the retort shell or in external wells attached to the retort body. Thermometers with separable wells or sleeves for the bulb shall not be used. Thermometers shall not be installed in the lid or door of a retort. Thermometers with a divided mercury column shall be replaced immediately for repair.

e) A **recording thermometer device (thermograph)** with time and temperature chart (thermogram) to provide a permanent record of thermal processing, installed in such a way that their proper operation is not affected by steam or vibration.

The correct time and temperature chart shall be used. The time and temperature charts shall have a temperature scale of not less than 1,0 mm/°C and a time scale of not less than 20 mm/h over a range of ± 5 °C of the processing temperature. The recording accuracy shall be equal to or better than ± 0,5 °C at the sterilizing temperature. The temperature recorded shall never be higher than and not more than 0,5 °C lower than the MIG thermometer at sterilizing temperature. Means of preventing unauthorized changes in adjustment shall be provided.

The heat processes of not more than one retort shall be recorded on a particular time-temperature chart. Where multi-point plotting chart-type devices are used, temperature recordings shall be printed at intervals not exceeding 30 s. Records of the retort process shall be kept and shall be available for control reference for at least the expected shelf life of the products.

f) A **pressure gauge**, with the diameter of the dial at least 100 mm, connected to the retort by means of a gauge siphon or gooseneck.

g) **Vents:**

1) **Location:** Vents shall be located in that portion of the retort opposite to the steam inlet. Vents shall be of a size and be designed, installed, arranged on the retort and operated in such a way that air is rapidly flushed out of the retort during the coming-up time before the start of the sterilization timing.

Vents on horizontal retorts shall not be located more than 750 mm from the ends of the retort. The spacing of vents on horizontal retorts depends on the size of each vent, such as one 25 mm vent for every 1,5 m of retort length or one 20 mm vent for every 1 m retort length.

2) **Size:** The total cross sectional area of the vents on horizontal retorts shall be at least one vent size larger than the cross sectional area of the steam inlet.

Where vents from a single horizontal still steam retort are connected with a manifold, the cross sectional area of the manifold shall be larger than the total cross sectional area of the connecting vents. Where a manifold header connecting vents or manifolds from several retorts, the cross sectional area of the header-manifold shall be at least equal to the total cross sectional area of all connecting manifold pipes or vents from the maximum number of retorts to be vented simultaneously. If the manifold header is of excessive length, it shall be at least one manifold pipe size larger.

Vents or where applicable the manifold, shall be controlled with a suitable gate or plug-type valve(s) with at least the same opening of the vent or manifold in which they are installed.

The manifold header connecting manifolds from several retorts shall <u>not</u> be equipped with a valve.

3) **Discharge:** Vents and manifolds shall be of a size and layout to allow unobstructive discharge of the retort without any condition which could retard the discharge or without the production of back pressure.

Vents, manifolds or manifold headers on horizontal retorts shall discharge direct into the atmosphere. They shall not be connected direct to a drainage system or discharged under water.

Vents on vertical retorts which also serve as overflows, shall have a break in the pipe before their connections to a drainage system.

4) Means of indicating the functioning of the vents shall be provided.

h) **Bleeders:**

Bleeders on retorts shall be installed in such a way and in such a position as to facilitate proper removal of air and a flow of steam throughout the retort load after the vents have been closed.

The following are required:

1) a bleeder of at least 3 mm at each thermometer pocket or external well accommodating bulbs or probes of temperature devices located to provide a full flow of steam past the entire length of these bulbs or probes especially of the MIG thermometer;

2) a 6 mm bleeder on a vertical retort located in that portion of the retort opposite the steam inlet;

3) 6 mm bleeders along the top of horizontal retorts spaced not more than 2,5 m apart and one approximately 300 mm of each end of the retort.

All bleeders shall discharge direct into the atmosphere and shall be arranged so that the retort operator can observe that they are functioning properly.

Where vents or bleeders are installed in positions other than those indicated above, the establishment shall provide evidence in form of heat distribution data or other scientific proof that the arrangement accomplishes the purpose set above.

i) **Water retorts:**

Whether still, agitating, or rotating retorts, the bulbs, or probes of temperature-indicating devices and controllers shall be located in such a position that they are beneath the surface of the water so that steam does not strike them direct or that there is no opportunity for steam impingement on the control bulb or probe. The temperature-indicating device bulb or probe shall extend direct into the water without a separate well or sleeve.

There shall be a means of determining the water level in the retort during operation.

In retorts for processing products packed in glass jars, the incoming cooling water shall not impinge direct on the jars in order to minimize glass breakage by thermal shock.

When a water recirculation system is used for heat distribution, the water shall be drawn from the bottom of the retort through a suction manifold and discharged through a spreader that extends the length/circumference of the top of the retort. The holes in the water spreader shall be uniformly distributed. Suction outlets shall be protected with non-clogging screens to keep debris from entering the recirculation system. The pump shall be equipped with a signal device to warn the operator when it is not running, and with a bleeder to remove air when starting operations. Alternative methods for recirculation of water in the retort may be used, provided there is documentation proof of effectiveness in the form of heat distribution test data that shall be maintained on file at the factory.

j) **Stacking equipment, divider plates and baffle plates:**

Retort baskets, trolleys, crates or other devices for holding product containers and divider plates shall be fabricated to ensure that steam or water or whatever applicable, can freely circulate around the containers during the entire retort process, and in still steam retorts ensure adequate purging or eliminating of air and adequate distribution of steam and prevention of air pockets.

In the case of still steam retorts, the retort baskets, trolleys or crates and in particular their bottoms, shall not obstruct steam circulation. When perforated sheet metal is used, perforations shall be approximately 25 mm holes on 50 mm centres or their equivalent in percent open area.

Divider plates, if used, shall have at least the same perforations (25 mm holes on 50 mm centres) or their equivalent in percent open area as required for retort trolleys above. A divider plate shall not be placed on bottoms of trolleys, etc. before container loading. Not more than one divider plate shall be used to separate any two layers of product.

Baffle plates shall not be used in the bottom of vertical or horizontal still steam retorts due to their tendency to direct steam flow around container lots rather than through container lots.

k) **Agitating or rotary retorts:**

The rotational speed of the retort or reel is critical if specified in the sterilization schedule. A recording tachometer or other acceptable device shall be used to provide a continuous record of the speed.

l) **Safety valve:**

There shall be an effective safety valve.

m) **Process timing devices:**

A large, easily read fixed wall clock in at least one minute divisions or an accurate timing device shall be used for recording the retort process and to monitor the recording of the timing of the time and temperature controlling device. The wall clock shall, in the case of a power failure, be independent of the main electricity supply. The wall clock shall be located in such a position that it can be readily observed by the retort operator while controlling the retort process. A wristwatch or pocket watch shall not be used for retort timing. A clock not indicating seconds shall not be used unless the specified operating process including the venting and sterilization schedules have an added one-minute or greater safety factor over the schedule process.

The wall clock and the timing controlling devices used to measure the retort process shall ensure that the specified venting time and the sterilization schedule time have been achieved.

n) **Compressed air:**

Any supplies of compressed air and/or water shall be capable of being shut-off adequately to prevent any leakage into the retort in order to prevent adverse effects on the retort process.

o) **Positioning of operating controls and instrumentation:**

All manually controlled devices necessary for retort operating shall be easily accessible and in a position convenient for the operator. MIG thermometers and other temperature, pressure and timing devices with adequate available light shall be located where they can be easily and accurately read to enable the retort operator to operate the retort from virtually one spot.

p) **Retort identification:**

Each retort shall be conspicuously identified with a number.

q) **Calibration pocket:**

A calibration pocket shall be installed in a position where steam freely circulates alongside the bulb of the MIG thermometer (see 4.3.6.2(d)) and the probe of the recording thermometer or thermograph (see 4.3.6.2(e)) with a bleeder (see 4.3.6.2(h)(i) next to them. This arrangement should be preferable in an extension well on the retort body. The calibration pocket shall be approximately 125 mm in length and 13 mm in diameter and be kept nearly filled with a high boiling point oil such as cylinder-head oil. The opening of this pocket shall be fitted with a screw-in plug for the purpose, to be kept closed when not used.

4.3.7 Measuring instrumentation, devices and equipment

4.3.7.1 The calibration of measuring instrumentation devices and equipment shall ultimately be traceable to national specifications. The following shall at least be annually calibrated by an accredited body or institution and the calibration certificates shall be available to the authority administering this specification:

a) all thermometers and temperature controlling and recording devices on retorts and other processing equipment;

b) pressure gauges on retorts;

c) timing controlling devices on the thermal processing equipment and wall clock at retorts;

d) in case of a rotary or agitating retorts, the retort or reel speed timing device;

e) micrometers, callipers and other measuring devices used for container closure examination;

f) massmeters and any masses used; and

g) in general, all pieces of equipment that are used to confirm that the product is in compliance with specifications shall be calibrated.

4.3.7.2 The thermometers, temperature recording devices and pressure gauges shall, after calibration, be certified *in situ* on the retort, at sterilization temperature(s) used for processing(s). A calibrated specification MIG thermometer shall be inserted in the calibration pocket (see 4.3.6.2(q)) and then packed into the mouth of the pocket with thermal insulated material. After 10 min of sterilization the temperature readings of the MIG thermometer (see 4.3.6.3(d)) and recording thermometer (see 4.3.6.3(e)) shall be taken against the reading of the inserted thermometer in the calibration pocket. The reading of the pressure gauge shall be correlated against the above three readings of the thermometers. These certifications shall be available to the authority administering this specification.

4.3.7.3 All measuring equipment, devices or instruments shall carry a unique identification number throughout their working lives. An acceptable system of identifying if the instrument is still in calibration shall be employed. Action on equipment found to be out of calibration shall be prescribed.

4.3.7.4 A system of in-house monitoring and verification of accuracy against known accurate specifications of the measuring pieces, equipment and instruments shall be employed on a routine basis or at any time that their accuracy is questioned between calibrations. In case of temperature measuring devices the routine verification of accuracy shall only be done against a calibrated and certified MIG thermometer.

4.3.7.5 Records of each measuring instrument shall be kept covering the following details:

a) the type of instrument and measurement scale;

b) instrument identification;

c) location of instrument usage;

d) date of calibrations;

e) accuracy and results of calibration;

f) traceability of accuracy against calibrated specifications used;

g) method of calibration;

h) status of calibration; and

i) maintenance and repairs.

4.3.8 Containers, bins and trays

All containers that contain foodstuffs, other than those containing the finished product and sealed cans in retort baskets, shall at all times be kept on shelves or dunnage stands of corrosion-resistant material at a minimum height of 250 mm above the floor level. Containers shall be of hygienic design and light-coloured or have a bright metal finish.

Containers used for inedible products and waste shall be leakproof and constructed of suitable water-impermeable material that is easy to clean and shall be identifiable. The same type of containers used for the product shall not be used for collecting offal and waste. Containers, bins or trays shall be identified so that containers that are used for the unprepared product shall not be used for the unpacked processed product.

4.3.9 Conveyors, elevators, runways and flumes

Conveyors, elevators, runways and flumes for transferring the product shall be so designed to allow for effective cleaning and, when necessary, disinfection and to prevent damage to the product such as by sharp corners, projections, long drops, crushing or contamination of the product. Electrical motors and transmissions driving the conveyors shall not be installed above the open product or in such a position that the product is exposed to soiling. Conveyor systems and runways to transport empty containers shall be designed and constructed to prevent contamination and damaging of the containers.

4.3.10 Compressed air and gases

Compressed air and gases used in direct or indirect contact with food or with food contact surfaces shall not contain substances that could be hazardous to health or that could contaminate the food with particles of oil. Pipes of compressed air used to clean empty containers/cans shall be fitted with effective oil traps or filters just before the point where cans are blown out. The compressed air supply at the point of cleaning on a conveyor line for empty containers shall be fitted with a mechanism to activate the outlet of compressed air into the container when passing that point.

The point where empty containers are blown out with compressed air shall not be located in such a position where the open product can be contaminated. Compressed air shall not be used for other cleaning purposes in the preparation and processing areas due to the risk of spreading contaminants.

4.3.11 Seamers or sealing equipment

Every seamer or sealing equipment shall be clearly and indelibly numbered where a processing plant is equipped with more than one seamer or sealing equipment.

Every seamer or sealing equipment shall be equipped with a coding device to indelibly mark, emboss or project symbols, letters or numbers on containers.

Seamers or sealing equipment shall be equipped with an effective, automatically operated device for counting the number of containers processed.

4.3.12 Maintenance and condition of production facilities, equipment and utensils

The equipment and utensils shall be maintained in an acceptable condition of maintenance.

A schedule and routine inspection system of the condition and maintenance of the production facilities, equipment and utensils shall be implemented and maintained. Procedures for corrective action in the event of non-compliance shall be instituted. Findings of such inspection and correction of non-conformance or the time limit to correct the non-conformance shall be documented and kept.

Procedures for the inspection, maintenance, repair, adjustment of apparatus and equipment, in particular the sealing machines and retorts shall be established. Procedures shall specify, for each piece of equipment, the methods to be used, the person in charge of the application, and the frequency. Lubrication of machines shall be such to avoid risks of soiling the product. Only lubricants that have been officially approved for use in food establishments shall be used. Sealed bearings shall be used where possible, in places where the risk of lubrication seepage to the product could occur. Regular inspection for leaking oil seals for replacement shall be conducted.

4.3.13 Facilities for storage, treatment and distribution of water supplies

Facilities for storage, treatment and distribution of potable water and container cooling water shall be adequately protected against contamination. Air vents on storage tanks and reservoirs shall be insect and rodent proof. Each supply and pipeline carrying potable water, treated retort cooling water, treated sea water and non-treated sea water shall be completely separate from each other and identified as such. There shall be no cross connection between each of them, above or with non-potable water or with waste water lines and without any back siphonage.

The pipe system and the installation of sea water supplies shall be capable of being adequately drained to prevent any stagnant sea water in the system when the plant is not in operation. The intake for sea water shall be located in such a position to avoid contamination.

4.3.14 Disinfecting and cleaning facilities

Disinfecting facilities for gloves and knives shall be available at convenient and acceptable points.

4.3.15 Ice-making equipment

All surfaces of ice-making equipment that come into contact with the ice shall be of suitable corrosion-resistant material. The ice-making equipment shall be of hygienic construction throughout. Whenever ice is transferred, stored or transported, it shall be effectively protected from contamination.

4.4 Water

4.4.1 Potable water

4.4.1.1 Every cannery shall have an adequate supply of clean potable water under adequate pressure and shall be capable of coping with peak demand. The water supply shall be free from suspended matter and from substances that could be deleterious to the product or harmful to health. In addition, the water shall have been so treated, by flocculation, filtration, chlorination or other acceptable process, as to ensure compliance with the following requirements:

a) **total count:** when tested in accordance with 11.19, the total count of viable micro-organisms shall not exceed 100 per mL:

b) **coliform organisms:** the count of coliform organisms shall not exceed five organisms per 100 mL of the water (see 11.20); and

c) **faecal coliform bacteria:** faecal coliform bacteria shall not be detectable in 100 mL of the water (see 11.21).

4.4.1.2 For the purposes of the water examination, the coliform group shall include all Gram-negative, non-spore-forming rods that are capable of fermenting lactose with the production of acid and gas at 37 °C in less than 48 h. Faecal coliform bacteria shall be regarded as Gram-negative, non-spore-forming rods that are capable of fermenting lactose with the production of acid and gas at both 37 °C and 44 °C in less than 48 h, and of producing indole in tryptone water.

4.4.1.3 Chlorinated water that could have any deleterious effect on the product shall be dechlorinated immediately before use. In all cases, the free residual chlorine concentration shall be determined by the *N,N*-diethyl-1,4-L-phenylene diamine test or other acceptable test that has equivalent sensitivity.

4.4.2 Chlorination of water for container cooling in the retorts

Water used for container cooling after the retort process shall comply with the microbiological requirements of potable water set out in section 4.4.1. Water that is used for container cooling but is not circulated for re-use shall be continuously chlorinated to contain a minimum of 2 mg/L of free available chlorine content measured at the retort inlet. Where water for container cooling is circulated for re-use it

shall, before recirculation, be treated to remove solids and chlorinated after the circulated water has been cooled, to ensure, after a contact period of at least 20 min, a minimum free available chlorine content of 2 mg/L at the retort inlet. In all cases the free residual chlorine concentration shall be determined by the N,N-diethhyl-1,4-L-phenylene diamine test or other test of equivalent sensitivity.

The free available chlorine content shall also be measured immediately after the can cooling process. (The presence of free chlorine is an indication that the level of chlorine available during cooling was sufficient.) After being used for container cooling, the water shall not be drained onto the floor surface and then be circulated for re-use. All pipelines, reservoirs, tanks, cooling towers, treatment facilities and equipment employed in the handling of re-circulated water for container cooling shall be kept clean and so constructed and installed to facilitate cleaning and inspection. The pipelines, tanks and reservoirs shall be a closed system. Recirculated container cooling water shall be protected against contamination.

4.4.3 Steam

Steam used in direct contact with the open product or food contact surfaces such as, but not limited to hot exhaust boxes, or indirect contact with the product such as in retorts, shall be made from potable water and shall not contain substances that might be hazardous to health or that risk contamination of the product. Boilers shall be properly operated and maintained.

4.4.4 Ice

Ice shall be manufactured, handled and stored in a manner that protects it from contamination. The purity of ice shall be such that the water derived from it immediately after the ice has been manufactured (by melting the ice under aseptic conditions at a temperature not exceeding 10 °C) shall comply with the microbiological requirements of 4.4.1.

4.4.5 Water for processing

In addition to complying with the requirements of 4.4.1, water used in the manufacture of the product and water (other than container cooling water) used to wash equipment and plant, with which the product comes into contact during processing and manufacture shall, unless it already contains at least two parts per million of free available chlorine, be continuously chlorinated to contain a minimum of two parts per million of free available chlorine at the point of use.

Where water thus treated affects the product deleteriously in any way, the water shall be dechlorinated immediately before use. In the case of brine solutions held continuously prior to filling at a temperature not below 75 °C, the use of chlorinated water in the preparation of the brine is not essential.

4.4.6 Water for cleaning

Water used for the cleaning of plant and equipment shall comply with 4.4.1 or 4.4.2 as relevant and shall be continuously chlorinated to contain a minimum of two parts per million of free available chlorine or, alternatively, it shall contain such germicidal substances as will ensure sanitation of plant and equipment. Flexible hoses used to supply water for cleaning purposes shall be stored on a reel or an equivalent.

4.4.7 Non-potable water

Non-potable water shall be carried in completely separate lines with no cross-connection with, or back siphonage into, the system that carries potable water. Non-potable water lines shall be identified as such and the water shall be considered unsafe and shall not be used for drinking or for use in food handling areas or allowed to come into contact with food-contact surfaces or for hand washing purposes.

4.5 Hygienic operating requirements

4.5.1 General

4.5.1.1 An orderly, neat and hygienic image of the factory and its grounds shall be conveyed.

In relation to the handling, transportation, processing, packaging, and storage of the product, no operation shall be performed, or conditions exist, that are detrimental to the product.

4.5.1.2 Smoke from factory chimneys and smoke rooms shall not be allowed to enter the factory building in a quantity or manner that is offensive, injurious or dangerous to health, or causes contamination at any stage during the processing of the product. Vehicles that emit exhaust fumes shall not be used in any area where the unprotected product is exposed.

4.5.1.3 Uncooked meat or meat products shall, in the course of handling, processing and storage, not be unnecessarily exposed to conditions that affect them adversely.

4.5.1.4 Care shall be taken that there is no contact between raw materials and finished products, uncleaned and unprepared vegetables shall not be prepared or stored in areas where unprotected meat is handled or stored. Raw food shall not be handled or stored in areas where the cooked product is handled or stored.

4.5.1.5 Effective measures shall be taken to inhibit mould growth and to prevent dust, dirt, flaking paint and other loose or extraneous material being present in the processing or in the product storage areas, cold storage and refrigeration rooms, change-rooms and toilets. Processing areas shall be kept free from surplus water.

4.5.2 Cleaning and disinfecting

4.5.2.1 Cleaning and disinfecting system

A permanent cleaning and disinfection system shall be established to ensure that the processing areas, equipment and material, including vessels used for transportation, are cleaned and disinfected appropriately and regularly. This program shall state precisely the methods for cleaning and disinfecting to be used, as well as methods for monitoring the cleaning schedule, the kind of detergents and disinfectants, instructions for cleaning and the results of cleaning (see 4.5.6).

The programme shall be regularly reviewed and regular examination of its effectiveness and cleaning methods should be done.

The cleaning schedule shall be designated to critical areas and equipment for special attention.

The cleaning and disinfecting of the preparation, processing and packaging areas of the factory and of all auxiliary equipment and utensils shall be organised on a regularly scheduled basis and carried out by trained employees. A permanent member of the factory shall be designated to be responsible for the cleanliness of the plant. He shall have an understanding of the significance of contamination and the hazards involved. He should preferably be independent of production. All persons responsible for handling of the product shall be trained and informed continuously on the hygiene rules to be respected. All employees shall be sensitised to their responsibilities for the quality and safety of the canned product produced.

4.5.2.2 Cleaning materials

Only cleaning agents, sanitizers and disinfectants that have been officially approved for use in food establishments shall be used. Detergents and disinfectants shall be suitable for the purpose intended, safe and effective under conditions of use. A combined detergent disinfectant may be used.

An adequate supply of cleaning materials, steam, hot and cold water, complying with 4.4.6, hose-piping, brushes and other requisites for proper cleaning shall be available. Brooms and brushes shall be made of impermeable material and shall have nylon bristles and shall be maintained in a clean and good condition. Bristles shall be conspicuously coloured to enable easy detection in case of detached bristles. When not in use, brooms and brushes shall be hung up with bristles facing downwards to aid drying. Brooms and brushes used on floors shall not be used on product contact surfaces. Wire wool or metal scouring wool shall not be used for cleaning surfaces that come in contact with the product. Steam used in direct contact with the product and product contact surfaces shall comply with 4.4.3. Cleaning equipment and utensils shall be identified. Cleaning equipment or utensils used in areas other than where food for human consumption are handled, such as the toilets and ablution facilities or by-product plants shall not be used in areas where food for human consumption is handled.

4.5.2.3 Physical facilities

The building, premises, plant, equipment, utensils and all other physical facilities of the factory shall be kept clean and in good repair and shall be maintained in an orderly, clean and hygienic condition. The plant shall be cleaned and/or disinfected and rinsed as frequently as necessary whenever circumstances demand. Where necessary, provision shall be made for cleaning-in-place (CIP) of pipes and tanks used for the product. Couplings and other fittings of pipelines used for transporting packing medium, shall, when dismantled, not be left on floor surfaces but be kept in a disinfectant solution or stored dry under hygienic conditions (see 4.3.1).

The entire plant, equipment and utensils shall be thoroughly cleaned with a detergent or other cleaning agent and disinfected at each change of operations. Immediately at the end of operations, the entire system shall be both cleaned and disinfected. Where equipment and utensils are used in a continuous production line basis, the product contact surfaces of such equipment or utensils shall be cleaned and disinfected on a predetermined schedule. Immediately before the commencement of operations, equipment shall be thoroughly rinsed with water (see 4.4.) to remove any dust and any disinfectant residues, and if necessary, a detergent and disinfectant shall be used.

Cleaning operations shall be conducted and adequate precautions shall be taken to prevent the product or product contact surfaces from being contaminated during cleaning or disinfection of the processing areas and equipment. Cleaning operations shall be carried out while waste and organic materials are still wet, before these become dry.

All utensils and product contact surfaces of equipment shall be maintained in a sanitary condition through cleaning as frequently as necessary to prevent contamination of the product. Non-product contact surfaces of equipment used in the processing plant shall be cleaned as frequently as necessary to be kept free of accumulated dust, dirt, food particles and other debris.

4.5.2.4 Ceilings (see 4.2.2)

Ceilings shall be regularly cleaned. Accumulation of dust above the ceiling shall not be allowed.

4.5.2.5 Floors, drainage channels and foot-baths (see 4.2.4 and 4.2.10)

During periods of operation, the floors and the drainage channels in the preparation, processing and packaging areas shall be kept clean and if necessary, by regular sweeping and flushing with water. The product shall be protected from being splashed with water. Refuse shall not be permitted to accumulate in drainage channels. Thorough cleaning of floors and drainage channels shall take place as often as is necessary and at the end of each day's operations in order to maintain hygienic conditions. Foot-baths shall be drained and cleaned regularly and the disinfectant kept in active condition.

4.5.2.6 Walls of preparation, packaging and processing areas (see 4.2.3)

The inside surfaces of walls of preparation, packaging and processing areas shall be thoroughly washed immediately after each day's operations and as often as necessary during the production periods. The rooms shall be kept as free from dust as possible.

4.5.2.7 Preparation, processing and packaging systems

The product shall be prepared, packed and processed under strictly hygienic conditions.

The filling and closing equipment shall be cleaned regularly to prevent soiling and contamination of the product.

The preparation, processing and packaging systems shall be rinsed during each break in production that lasts for more than 1 h, or whenever it is deemed necessary, and effectively cleaned at the end of each shift and at the end of each day's operations. They shall be clean at the time of further use. Knives, saws and other loose items of equipment shall, during breaks in production, immediately after use, or at any time when disinfecting is necessary, be thoroughly cleaned and then disinfected by the use of either saturated steam, chlorinated water or other acceptable disinfectant solution or procedure (see 4.3.8). Loose parts or pieces of equipment that come in contact with the product shall be cleaned and disinfected immediately at the end of operations and shall be stored in a hygienic manner when not in use. When the factory is in operation, equipment and utensils shall not be removed from the work area except for repair, cleaning or replacement.

Any discharge system and conveyance system of the factory, including elevators and holding tanks, shall be cleaned both before and after use.

4.5.2.8 Installations for the treatment of water (see 4.3.13 and 4.4.1)

Factory installations for the treatment of water shall be thoroughly cleaned once a week by an acceptable method.

4.5.3 Emergency repair

Maintenance or repairs shall be conducted without the risk of affecting the product adversely. Whenever maintenance or repairs have been carried out in production areas, tools and replaced equipment shall be immediately removed from these areas and the affected equipment thoroughly cleaned and disinfected.

Welding repairs or other repairs involving a high risk of contamination in the areas where (and when) the product is handled, prepared, processed or packaged, shall be performed as an emergency during breakdown only, and in such a way that the product is not exposed to welding fumes, splatter or slag particles.

4.5.4 Cleaning and disinfecting portable equipment (see 4.2.30)

If a separate room is not provided, the area to be used and the method of cleaning shall be of such a nature that there will be no possibility of contamination of the product.

4.5.5 Containers, bins and crates for handling the product (see 4.3.8)

Containers holding food materials shall not be stacked one upon the other in such a manner that the contents of one container can be contaminated by the bottom of another container. Containers shall not be stacked immediately on the floor or against the wall. Whenever containers are moved, they shall be effectively protected from contamination.

4.5.6 Efficacy of cleaning

Daily routine inspections and scheduled in depth inspections shall be conducted. Suitable records shall be kept of the findings. Corrective action procedures shall be stipulated.

The efficacy of the cleaning and disinfecting process specified in 4.5.2 shall be such that, in samples taken in accordance with 11.18, the percentage efficacy of cleaning and disinfecting in the sample, determined in accordance with 11.18, is acceptable when scored by the system set out in 11.18.

4.5.7 Spare parts (see 4.2.21 and 4.5.2.7)

Spare parts for machinery, and other items capable of contaminating the product, shall be stored away from the preparation, processing, packaging and product storage areas.

4.5.8 Removal of refuse (see 4.2.25 and 4.2.26)

A permanent and effective system of waste and refuse removal shall be established, implemented and maintained.

Litter, waste and overflow shall not be allowed to accumulate or to give rise to unhygienic conditions, and shall be disposed of promptly. Offal shall be removed from the processing area on a continuous basis or as often as necessary, in an efficient and sanitary manner. Containers with offal awaiting removal from the factory area shall be well separated from the processing areas. The refuse room or other acceptable refuse facility, equipment and utensils used for waste, offal and refuse removal, collecting or storage, shall be cleaned and disinfected daily. Refuse, offal or waste shall be handled and stored without a risk of contamination to the product, potable water, equipment, utensils or the environment. Hazardous substances shall be disposed of in an environmentally acceptable manner.

4.5.9 Vermin control

All buildings in which raw materials, ingredients and the product are stored, or in which the product is handled, prepared, processed or packaged, shall be kept free from insects, rodents, birds and other vermin. The factory and its premises shall be regularly inspected by trained personnel for the evidence of infestation by insects or rodents and for the presence of birds and wild or domestic animals (see 4.2.1 and 4.5.11). All rooms in which raw materials and ingredients are stored shall, in addition, be rodent proof. Potential breeding sites shall be eliminated.

An effective and continuous programme for pest control shall be established, implemented and maintained (see 4.5.10).

A site drawing and register of all bait stations shall be kept up to date and open baits shall not be present in processing areas or ingredient, product and empty container and lid stores.

4.5.10 The use of pesticides or poisonous or other harmful materials (see 4.2.18.1)

Only pesticides that have been officially approved for use in food establishments shall be used.

Pesticides shall not be used in work areas while preparation, processing and packaging are in progress. Adequate precautionary measures shall be taken to prevent contamination of the product, product contact surfaces, equipment and utensils during and after application of pest control treatments. Precautions shall be taken to ensure that equipment, product contact surfaces and other work surfaces are free from pesticide residues before being used again. Containers with pesticides, bait or open bait shall not be present in an area or room where the exposed product or ingredients are present or handled. Pesticides shall not, at any time, be allowed to come into contact with containers intended for packing the product or ingredients, or raw materials, or the product, or product contact surfaces. Pesticides or poisonous or other harmful materials shall only be dispensed, handled or applied by authorized and properly trained personnel or by persons under strict supervision of such authorized and trained persons.

Insect electrocuters shall be fitted with catch trays of adequate size and shall not be located over areas where the unprotected product is handled, or over product contact surfaces or in such a position where there is a risk of product contamination.

4.5.11 Animals (see 4.2.1 and 4.5.9)

Animals, including birds, shall not be allowed in any part of the factory. Security dogs shall not be allowed in, or come in contact with production or product handling areas or product contact surfaces.

4.5.12 Supervision

Responsibility for ensuring observance of the requirements of this section, by all personnel, shall be given specifically to competent staff members.

4.6 Requirements for employees engaged in the handling, preparation, processing, packaging and storage of the product

4.6.1 Operating requirement

The production planning shall be such that workers will not be subjected to such exhausting long working hours that could result in a lack of their concentration with the risk of adversely affecting the product quality and safety.

4.6.2 Health

4.6.2.1 Before being engaged, employees shall pass an appropriate medical examination to ensure that they are free from communicable diseases, and shall thereafter pass an annual medical examination.

4.6.2.2 No person who is suffering from any communicable disease, a carrier of pathogenic micro-organisms such as *Salmonella*, *Shigella* presumed pathogenic *Staphylococcae* and A-type haemolytic *Streptococcae*; or parasites such as any vegetative or cystic amoeba, tape-worm or any type of helminthiasis, or shows symptoms of or is suffering from gastro-enteritis or an enterobacterial infection or a disorder or condition causing discharge of fluid from any part of the skin or body, shall be allowed to come into contact with the product, containers or product contact surfaces. Any such person or worker in the factory in a capacity in which there is a possibility of the product or ingredients becoming contaminated or the disease being transmitted to other individuals, shall immediately report to the factory management.

4.6.2.3 The management shall ensure that no employee who is known or suspected to be affected with a disease capable of being transmitted through food shall be permitted to work in any part of the factory in a capacity in which there is a possibility of the employee's contaminating the product with pathogenic organisms.

4.6.2.4 In the case of any absence of more than one day due to illness, the employee shall, before resuming duty, report the nature of the illness which necessitated the absence to the factory hygiene officer who shall, should he deem it necessary, take the appropriate steps to obtain a medical opinion on the employee's fitness for work.

4.6.2.5 An appropriate medical record of each employee shall be kept. Medical records and any medical certificate submitted by a factory employee shall be available for inspection by the authority administering this specification.

4.6.2.6 The management shall ensure that no employee who is suffering from any cut, injury, infected wounds, infected skin irritations, shall be allowed to come into contact with the product, ingredients, containers, product contact surfaces, unless the cut or injury has been so treated or dressed that the discharge of body fluid has been prevented, and the wound and its dressing have been so covered as to ensure that infection or contamination of the product is no longer possible. Such dressing and its covering shall be conspicuous in colour.

4.6.2.7 Employees performing close-up inspections shall undergo an eye-sight test at least annually.

4.6.3 Protective clothing

4.6.3.1 All employees engaged in the handling, preparation and processing of the product up to and including the cooling of cans after retorting, but excluding employees operating within freezer storage rooms, shall wear clean, light-coloured, protective clothing covering the entire body except for the face, forearms and hands, suitable waterproof boots, and clean, washable or disposable headgear that completely covers their hair including beards and if necessary, hair nets.

4.6.3.2 Employees handling the open product shall wear light-coloured waterproof aprons.

4.6.3.3 Gloves if used, shall be made of impermeable material and be washable. The wearing of gloves shall not exempt workers from washing their hands.

4.6.3.4 Woollen caps may be worn in freezer rooms only.

4.6.3.5 Overalls shall completely cover the personal clothing of the employees. At the end of each working day soiled overalls and headgear shall be handed in for laundering. Employees shall not take protective clothing used in the processing area home for washing and shall not wear their protective clothing outside the factory premises.

4.6.3.6 Sleeves shall not extend below the elbows, except when covered by plastics sleevelets or when worn in freezer storage rooms.

4.6.3.7 Protective clothing, other than waterproof aprons, sleevelets and gloves, shall not be stored in work areas; when not in use it shall be kept in change-rooms and shall not be removed from the premises except for laundering under hygienic conditions. The homes of employees shall not be regarded as acceptable for laundry purposes.

4.6.3.8 Waterproof protective clothing shall be of a plastics, rubber or other acceptable material. All protective clothing shall be of hygienic design, shall not have external pockets above the waistline, shall be in good repair and shall not constitute a source of contamination to the product.

4.6.3.9 Employees shall not visit the toilets and cloakrooms with their waterproof aprons, gloves and plastic sleevelets on. Hooks and pegs shall be provided at the exit before the hand-wash facilities upon leaving the processing areas, for hanging waterproof aprons and gloves. Pegs for gloves shall not be located above other protective clothing in such a way that contamination by means of dripping water can occur. Hooks for aprons shall be adequately spaced apart to prevent contact between aprons and a consequent build-up of contaminants.

4.6.3.10 Waterproof aprons, sleevelets and gloves shall be cleaned and disinfected immediately at the end of each shift and at the end of each days' operations, at each time of undress and as frequently as necessary, and shall be hung on hooks or pegs at exits from work areas during intervals between work and during visits to the lavatory. Waterproof protective clothing such as aprons shall not be washed on the floors. Waterproof aprons, sleevelets and gloves, as well as equipment used in the preparation, processing and packaging of the product, shall be not removed from the work areas except for repairs and for cleaning under hygienic conditions.

4.6.4 Personal hygiene

4.6.4.1 Workers shall at all times be clean of person and maintain a high degree of personal cleanliness and conform to hygienic practices while on duty. Workers shall be trained and educated in personal cleanliness and hygienic practices. Adequate control shall be exercised to ensure that employees are in compliance with the hygienic requirements such as supervision at the hand-washing facilities before commencing work at the beginning of a work shift and after breaks.

4.6.4.2 Before commencing work, and after each absence from the factory preparation, processing or packaging area, after blowing their noses, after handling unwashed vegetables, at regular intervals during production, or at any time necessary such as after handling contaminated material, and after using the toilet, employees shall wash their hands with warm running water complying with 4.4.1, and an acceptable unscented liquid soap or detergent, after which they shall rinse their hands in clean, running,

potable water complying with 4.4.1. They may then immerse their hands in an acceptable disinfectant, after which they shall rinse their hands in clean running potable water, complying with 4.4.1 if so required by the usage directions of the hand dip.

4.6.4.3 Fingernails shall be kept short and clean and free from varnish or lacquer. Jewellery shall not be worn by employees who handle raw materials or the unprotected product.

4.6.4.4 The necessary precautions and control shall be exercised to prevent contamination through the workers of the product with micro-organisms and foreign substances including but not limited to, perspiration, hair, cosmetics, chemicals and medicants, or any behaviour that could result in the contamination of the product. Workers handling the unprotected product shall keep their hands away from their noses, eyes, ears, hair, mouths or licking their fingers when handling the unprotected product.

4.6.4.5 Workers shall not cough, sneeze or blow their noses over the unprotected product. Containers used in the preparation, processing or packaging of the product shall not be used for any other purpose. The use of chewing gum and tobacco in any form shall not be allowed within the areas where the product and its ingredients and packaging materials are handled or stored. Spitting shall not be allowed anywhere within the factory premises.

4.6.5 Personal effects

Neither workers' personal effects nor their food shall be present in the preparation, production, processing and packaging areas or where the product, its ingredients or packaging materials are handled or stored. Employees' personal effects including their personal clothes shall be kept in lockers or hangers provided for this purpose in cloakrooms. No food or drink, other than that forming part of the product produced, shall be prepared and no food or drink shall be consumed in these areas.

4.6.6 Notices and supervision

Notices prohibiting eating, spitting and the use of chewing gum and tobacco in any form, shall be posted in each production area and in each area for the storage of ingredients. Notices requesting employees to wash their hands on entering the production areas shall be posted at each entrance used by employees to gain access to those areas. Notices shall be posted at the toilets directing employees to wash their hands after using the toilet (see 4.2.9.1(d)).

Adequate supervision shall at all times be practised to ensure compliance with this section.

Responsibility for ensuring observance of all personal practices, operations and requirements of this section by all people and employees shall be given specifically to competent staff members.

4.6.7 Visitors

A strict control of visitors entering the factory shall be exercised.

Any person who visits or enters the preparation, processing or packaging areas during the hours of operation shall, when in those areas, observe and adhere to all relevant hygiene requirements and shall wear clean protective clothing that shall be provided by the factory.

5 Ingredient requirements

5.1 General

All ingredients and the quantities used, whether specified or not, shall comply with the relevant provisions of the Trade Metrology Act, 1973 (Act 77 of 1973), the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act 54 of 1972) and any relevant regulations framed under that Act. (All Acts as amended from time to time.)

5.2 Condition of ingredients

All ingredients shall be clean and sound and in every way fit for human consumption. The temperature of prepared cold meat and cold product emulsions of mixtures that are awaiting processing shall not be more than 7 °C. The transportation of ingredients shall take place under hygienic conditions. The transportation of meat shall be executed in accordance with the requirements of the Abattoir Hygiene Act, 1992 (Act 121 of 1992) (as amended from time to time).

5.3 Meat and offal

Meat and edible offal shall have been inspected and passed as fit for human consumption in accordance with the statutory provisions governing animal slaughtering, meat hygiene and meat inspection. The use of frozen meat and edible offal is allowed, provided that they have been frozen and stored under acceptable conditions and show no evidence of rancidity or discolouration and have been defrosted in a way that does not adversely affect quality. Only chilled carcasses in which rigor mortis has occurred fully or carcasses that have been frozen and thawed may be deboned for processing, unless hot deboning is used.

Meat and edible offal shall be free from off-odours, off-flavours, and taint. Meat and edible offal that are bruised, meat that is from parts of the head other than the masseter muscles, and, in the case of pork, the teat line, shall not be used. Inedible offal shall not be used. Cartilage, glands, blood clots, major sinews, major tendons and major blood vessels shall be removed, except that sinews and tendons may be used in natural binder.

Except where other statutory regulations apply, the deboning of red meat carcasses and the cutting up and preparation of meat for canning shall, except where the nature of the process makes it impossible, be performed in work areas where the temperature does not exceed 15 °C. The temperature of meat being deboned shall at no time exceed 7 °C, except when hot deboning is performed. These areas shall be physically separated from the heat processing areas of the factory.

5.4 Fat

Fat shall be pure, edible and free from obvious rancidity. Anti-oxidants may be used in accordance with the provisions of the said Foodstuffs, Cosmetics and Disinfectants Act.

5.5 Salt

Salt shall be of good edible quality and shall be free from bitterness.

5.6 Seasoning ingredients

Seasoning ingredients shall be pure natural spices or herbs or their preparations, essential oils and essences, and shall be free from foreign matter and of a microbiological quality that conforms with the requirements of the current Foodstuffs, Cosmetics and Disinfectants Act.

5.7 Sodium glutamate

Sodium glutamate used in the product shall be specially prepared for use in foods.

5.8 Tomato purée and tomato paste

Tomato purée and tomato paste shall comply with the requirements for specification grade canned tomato purée and canned tomato paste prescribed by the regulations under the current Agricultural Products Specifications Act, 1990 (Act 119 of 1990) (as amended from time to time).

5.9 Fruit and vegetables

Fruit and vegetables, whether fresh, frozen, canned or dehydrated, shall be suitably prepared from fresh fruit and vegetables that are free from insect infestation and contamination and that comply with the requirements for pesticidal residues under the current Foodstuffs, Cosmetics and Disinfectants Act. Canned fruit and canned vegetables shall comply with the relevant requirements for specification grade prescribed by the regulations under the said Agricultural Product Specifications Act.

5.10 Mushrooms

Fresh, frozen, canned, or dehydrated mushrooms, free from insect infestation and contamination and that comply with the requirements for pesticidal residues under the current Foodstuffs, Cosmetics and Disinfectants Act may be used. They shall be suitably prepared. Canned mushrooms shall comply with the relevant requirements for specification grade prescribed by the regulations under the said Agricultural Product Specifications Act.

5.11 Caramel

Caramel used shall be suitably prepared for use in foodstuffs.

5.12 Sweetening ingredients

All sweetening ingredients used shall comply with the requirements prescribed by the regulations under the current Foodstuffs, Cosmetics and Disinfectants Act.

5.13 Gravy thickeners

Only edible vegetable flours, gelatine, edible gums, modified starches, and agar-agar, the last three in concentrations in the gravy of not more than 1 % by mass, may be used as thickeners in the preparation of gravy.

5.14 Curing salts

Curing salts shall be of a quality intended for use in foods.

5.15 Phosphates

Phosphates shall be suitable for use in meat products.

5.16 Citric, lactic, and ascorbic acids

Citric, lactic, and ascorbic acids shall be of British Pharmacopoeia quality. Sodium ascorbate shall be of a grade intended for use in foods.

5.17 Starchy (farinaceous) materials

Subject to the requirements of the current Foodstuffs, Cosmetics and Disinfectants Act, fillers used shall be cereal, rusk, biscuit meal, potato flour, or other edible starchy (farinaceous) material, including edible gums and modified starches.

5.18 Soya and other non-meat proteinaceous materials

Subject to the requirements of the regulations under the said Foodstuffs, Cosmetics and Disinfectants Act, and subject to the conditions in 6.12, soya and other non-meat materials may be used.

5.19 Milk powder

Milk powder shall be pure, fresh and sweet and when tested in accordance with 11.19, no sample shall have a total bacterial colony count in excess of 50 000 organisms per gram. When tested in accordance with 11.20, no sample shall contain *E. coli* in 1 g.

5.20 Eggs

Eggs (fresh, dried, or liquid) shall be sound and when tested in accordance with 11.22, shall not contain *Salmonella* organisms.

5.21 Colourants

Any colourant used (see 6.6) shall be one of those permitted by the regulations under the said Foodstuffs, Cosmetics and Disinfectants Act.

5.22 Garnish

Garnish, if used, shall consist of pimento, cured olives or other suitably prepared, sound, edible vegetable material.

5.23 Natural binder (see 6.13, 12.1.1.5 and 12.1.1.6)

Natural binder shall be finely comminuted gelatinous material derived from one of the following:

a) in the case of beef or mutton, gelatinous materials such as sinews, connective tissues and other suitable parts of the carcass including skin acceptably processed into collagen and lips and snouts acceptably cleaned and processed;

b) in the case of pork, gelatinous materials such as the skin, sinews and face pieces; or

c) in the case of poultry, the skin and connective tissues.

5.24 Stabilizers

Stabilizers shall comply with the said Foodstuffs, Cosmetics and Disinfectants Act.

5.25 Lard

Lard shall comply with the requirements of 7.10 for canned edible lard.

6 Product requirements

6.1 General

In the event of doubt regarding the compliance of the product with any requirement of this specification that relies wholly or partially for its interpretation on the experience or judgement of the person carrying out the assessment, the decision of the authority administering this specification shall be final.

6.2 Flavour, odour, colour, and appearance

The canned product shall have a flavour, an odour, a colour and an appearance that are characteristic of its type. Foreign flavours and foreign odours, and off-flavours and off-odours shall not be present.

6.3 Texture

The product shall have a texture characteristic of its type. Vegetables or fruit, if present as garnish, shall be tender but not mushy, abnormally fibrous or stringy. Cereals, if present, shall not have an abnormally mushy or soggy texture.

6.4 Freedom from defects

Bone and skin, except where one or both are specifically permitted, blood clots, and cartilage, shall not be present. Permitted bone shall not be dangerously sharp. The proportion of soft connective tissue present in the product shall be the same as that present in the carcass or meat cuts used. The product shall be free from dirt, grit, hair, loose pieces of solder and other extraneous matter.

6.5 Fill of container

Except where otherwise specified, the product shall occupy at least 90 % of the total volume capacity of the container (see 10.4).

6.6 Colourants

Except where specifically permitted, artificial colourants shall not be present (see 5.21).

6.7 Curing salts

Where the presence of curing salts is permitted the limits specified by the current Foodstuffs, Cosmetics and Disinfectants Act shall be complied with.

6.8 Phosphates

The presence of phosphates, where permitted, shall be in accordance with the requirements prescribed by the regulations under the current Foodstuffs, Cosmetics and Disinfectants Act.

6.9 Smoke preparations

Smoke preparations suitable for human consumption may be used (see 12.1.1.2.3).

6.10 Anti-oxidants

All anti-oxidants used shall be as prescribed by the current Foodstuffs, Cosmetics and Disinfectants Act.

6.11 Preservation

With the exception of products of which the label states that the product is to be kept under refrigeration (see 12.1(e)) and semi-preserved products (see below), all canned meat products shall have been commercially sterilized by heat treatment.

Canned meat products covered by this specification and packed as semi-preserved meats shall have been preserved by salting, brining, pickling or smoking, or any combination of these, and may in addition have been pasteurized (partially heat processed). The presence of preservatives shall be subject to the regulations under the current Foodstuffs, Cosmetics and Disinfectants Act. The products shall not contain inorganic acids.

6.12 Soya and other non-meat proteinaceous materials

The product may contain soya and/or other non-meat proteinaceous materials subject to the following:

6.12.1 If required to do so by the authority administering this specification or the authority administering

the regulations under the current Foodstuffs, Cosmetics and Disinfectants Act, the manufacturer of the canned meat product shall disclose to the authority the composition of the non-meat proteinaceous preparation that has been used and the concentration at which it is present in the meat product.

6.12.2 Where soya and/or other non-meat proteinaceous material is present in products that contain the meat content called for by this specification, the presence of non-meat proteinaceous material shall be declared in the ingredients panel of the label. The meat content of the product may be declared immediately below the title in type of at least half the size of that used for the words in the title and of minimum size 2 mm.

6.12.3 Where any part of the meat content of a product laid down by this specification has been replaced by soya and/or other non-meat proteinaceous material, the presence of this substituted material shall be declared conspicuously and prominently in the title of the product, in the main panel of the label, in the same colour as the rest of the title and in type of at least half the size of that of the words appearing in the rest of the title. The meat content shall be declared immediately below the title in type of at least half the size of the larger type used for the words in the title and of minimum size 2 mm.

6.12.4 Subject to the provisions of 6.12.3, up to 25 % of the lean meat content of emulsified or comminuted canned meat products may have been replaced by soya and/or other non-meat proteinaceous material. In the form of textured vegetable protein, substitution to the same extent may have taken place in canned stewed meat products.

6.12.5 Soya or other non-meat proteinaceous material or both, may be present in the following products:

a) corned meat;

b) meatballs;

c) meat pastes, potted meat, minced meat and gravy;

d) meat patties;

e) meat rolls;

f) sausages other than boerewors and raw species sausage and raw mixed-species sausage; and

g) stewed or braised meat products.

6.12.6 In the case of new products, specific approval from the authority administering this specification shall be obtained for the use of soya or other non-meat proteinaceous material.

6.12.7 Soya or other non-meat proteinaceous material shall not be present in the following products:

a) boerewors or raw species sausage or raw mixed-species sausage;

b) brawn;

c) corned beef and corned beef with cereal;

d) ham, cured shoulder and solid pressed beef;

e) infant's food; or

f) tongue.

6.13 Natural binder (see 5.23)

The natural binder used shall be derived only from the same type of animal(s) from which the meat used in the product is derived unless labelled in accordance with 12.1.1.5 or 12.1.1.6.

6.14 Microbiological requirements

6.14.1 Commercially sterilized products

6.14.1.1 Microbiological spoilage

A product in its container, after incubation in accordance with 11.16 or after it has been kept at ambient temperature, shall be considered to have undergone microbiological spoilage if the container:

a) shows a positive pressure;

b) leaks; or

c) whether having a positive pressure or not, shows evidence of bacterial proliferation indicated, when compared with unincubated sound samples, by a significant change in pH value, or by disintegration or decomposition, or by significant discolouration of the product.

Evidence of bacterial proliferation shall be confirmed by cultural examination (see 11.17).

6.14.1.2 Requirement

Products in containers examined or tested or both, shall show no evidence of microbiological spoilage (see 11.17).

6.14.2 Pasteurized, semi-preserved, and salt-preserved products

6.14.2.1 Microbiological spoilage

A product in its container shall be considered to have undergone microbiological spoilage if the container:

a) shows a positive pressure;

b) leaks; or

c) whether having a positive pressure or not, shows evidence of bacterial proliferation indicated, when compared with sound samples, by a significant change in pH value, or by disintegration or decomposition, or by significant discolouration of the product.

Evidence of bacterial proliferation shall be confirmed microscopically or by cultural examination (see 11.17).

6.14.2.2 Requirement

Products in containers examined or tested or both, shall show no evidence of microbiological spoilage or of the presence of viable pathogenic organisms, or of organisms that are liable to cause spoilage of the product during storage at the temperature recommended by the canner, and, in the case of pasteurized products only, of viable non-spore-forming organisms (see 11.17).

7 Specific requirements for particular products

7.1 Stewed or braised meat, stewed oxtail, stewed tripe, stewed or braised kidneys, stewed or braised heart, stewed or braised liver, meatballs, stewed meat and kidney pudding, and similar stewed products, with or without gravy, sauces, or dressing

7.1.1 Preparation of meat and edible offal

Musculature meat for use in stewed or braised meat products shall be trimmed until it is free from perceptible fat, free surface-showing connective tissue and fascia, and where applicable it shall be cut into pieces of approximately the same size and shape that are not more than 50 mm long.

If the meat is minced and then formed into units, the units shall be approximately regular in size and shape. When determined in accordance with 11.3 and 11.4, the actual total meat content of ingoing units shall be not less than 50 % by mass. The ingoing units may contain starchy (farinaceous) material to the extent of not more than 6 % determined in accordance with 11.5 and calculated as crude starch. The units in the product described as meatballs, shall be formed into a characteristic shape and shall be readily separable. Meat patties shall be formed with substantially the same diameter as that of the container.

Kidneys shall be acceptably trimmed and free from adhering fat, connective tissue, renal ducts, urine flavour, and black or blue discolouration. Kidneys for use in kidney pudding shall be cut to acceptable size. Kidneys, liver, tongue, heart and tripe for use in stewed or braised products and puddings, shall be suitably prepared and cut into pieces that appear regular in size and shape, the smallest dimension of pieces of kidney being at least 10 mm. The product shall be free from any odour or flavour of urine.

Only oxtail, mutton and game meat from the ribs and neck may be packed on the bone. No free bone or sharp bones shall be present.

7.1.2 Texture of meat and edible offal in prepared product

In the prepared product, meat and edible offal shall not be fibrous, tough or mushy. Individual pieces of meat in stewed steak shall substantially retain their shape; pieces of meat shall be easily separable. The product shall be practically free from sinews and/or connective tissue.

7.1.3 Sauce, gravy or broth

Although vegetables and/or fruit shall not be present as chunks or as large pieces or whole units, they may be used in the preparation of sauce or gravy. The sauce or gravy may contain starchy (farinaceous) material that shall be not more than 6 % by mass determined in accordance with 11.5 and calculated as crude starch. The sauce or gravy may be suitably spiced.

Where the product is claimed to have been packed in natural broth, or in thick or rich sauce or gravy, the character of the packing medium shall, after equilibrium has been reached, be in accordance with the claim made. A canned meat product that has been packed in natural broth shall not be labelled as having been packed in gravy or in sauce.

7.1.4 Curing salts

The product shall not contain curing salts unless its name indicates the presence of cured meat.

7.1.5 Composition

The composition of the product shall comply with the relevant requirements given in table 1, the specified meat content and edible offal content percentages being applicable to the drained mass determined in accordance with 10.5. In addition, coagulated exuded fat shall not constitute more than 12 % of the required meat content or edible offal content and shall not be considered to be part of the drained mass requirement of the product.

Table 1 □ Composition of particular products

1	2
Product category	**Requirements**
Stewed or braised meat with or without kidney or other edible offal ingredient in exuded juice or thin, watery broth or thin watery packing medium.	When determined in accordance with 10.5, the drained mass of meat with or without edible offal shall be at least 50 % of the d.n.m. of the container. Where the name of an edible offal ingredient appears in the name of the product, the drained mass of that edible offal ingredient, when determined in accordance with 10.5, shall be at least 12,5 % of the d.n.m.
Stewed or braised meat of a specific sort with or without a minor meat ingredient and with or without kidney or other edible offal ingredient, and with gravy, sauce or dressing.	When determined in accordance with 10.5, the drained mass of meat with or without edible offal shall be at least 50 % of the d.n.m. Where the name of any minor meat or edible offal ingredient present appears in the name of the product, the mass of that ingredient shall be at least 10 % of the d.n.m. Where the meat is mutton-on-the-bone or game-on-the-bone or a similar pack, the meat-on-the-bone content shall be at least 60 % of the d.n.m. and the bone content shall not exceed 12,5 % of the d.n.m. Free bone, especially chips, splinters or sharp pieces of bone, shall not be present. In a product labelled as goulash and packed in a thick sauce or a thick rich gravy, at least 50 % of the d.n.m. shall be meat.
Hearts stewed or braised; kidneys, stewed, braised, or in brine; liver, stewed or braised, and similar packs, with or without gravy, sauce or dressing.	When determined in accordance with 10.5, the drained mass of edible offal shall be at least 60 % of the d.n.m. except where the product is packed in thick rich gravy, sauce or other dressing in which case at least 55 % of the d.n.m. shall be edible offal.
Meat patties, with or without gravy, sauce or dressing.	Where the product is packed in gravy, sauce or dressing, at least 55 % of the d.n.m. shall be preformed units of meat, as determined in accordance with 10.5. Where the product is packed dry, at least 70 % of the d.n.m. shall be preformed units of meat.
Meatballs, with or without gravy or sauce; sausages in gravy or sauce; and similar packs.	Where the product is packed in gravy or sauce, at least 50 % of the d.n.m. shall be preformed units of meat, as determined in accordance with 10.5. Where meatballs are packed dry, at least 70 % of the d.n.m. shall be preformed units of meat.
Tripe, stewed with or without sauce or dressing, or in brine.	When determined in accordance with 10.5, the drained mass of tripe in stewed tripe or tripe in brine shall be at least 65 % of the d.n.m. Where the product is packed with sauce or dressing, at least 55 % of the d.n.m. shall be tripe.
Oxtail, with or without gravy, sauce or dressing.	In the case of a dry pack at least 60 % of the d.n.m. shall be oxtail on bone, as determined in accordance with 10.5. Where the product is packed in gravy, sauce or dressing, at least 45 % of the d.n.m. shall be oxtail on bone.
Pork, with or without gravy, sauce or dressing or fat.	In the case of a dry pack at least 65 % of the d.n.m. shall be pork, as determined in accordance with 10.5. Where the product is packed in gravy, sauce or dressing or fat, at least 50 % of the d.n.m. shall be pork.

7.2 Stewed meat products containing meat or edible offal or both with vegetables (or fruit) or cereal or both

7.2.1 Preparation of meat and edible offal

The requirements of 7.1.1 for the preparation of meat and edible offal for use in stewed or braised meat products and the requirements of 7.1.2 for the texture of meat and edible offal in the prepared product shall apply.

7.2.2 Vegetables (or fruit) and cereals

Vegetables and/or fruit may be used as such or as preparations. Root vegetables shall be in the form of clean-cut dice, slices or pieces, except that, if of acceptable size, these vegetables may be packed whole. Dice shall be approximate cubes. The thickness of slices shall not exceed 15 mm. Pieces shall appear regular in size and shape and shall be practically free from scrap pieces. The texture shall be soft but not broken up or disintegrated. Onions, fresh or pickled, shall be sliced, diced, shredded or chopped, or, if of acceptable size, they may be used whole. Dehydrated onion may also be used. Grains of rice shall separate easily. Beans and peas shall be mostly intact and not split or broken, and shall be free from loose shells. Cereals such as spaghetti and noodles shall not be disintegrated or abnormally broken up, and the texture shall not be abnormally mushy or soggy.

7.2.3 Sauce, gravy or broth

The sauce or gravy shall not contain more than 6 % by mass of starchy (farinaceous) material and it may be spiced.

Where the product is claimed to have been packed in exuded broth or in thick or rich sauce or gravy, the character of the packing medium shall, after equilibrium has been reached, be in accordance with the claim made.

A product packed in exuded or thin broth shall not be labelled as having been packed in gravy or sauce. A product that claims to have been packed in tomato sauce, shall have a characteristic tomato colour and the sauce shall not be thin and watery.

The ingredients of the sauce, gravy or broth shall not tend to separate from one another when the product is turned out of the container.

7.2.4 Curing salts

The product shall not contain curing salts unless its product name indicates the presence of cured meat.

7.2.5 Drained mass and washed mass

When determined in accordance with 10.5, the drained mass of products other than pudding packs shall be at least 60 % of the d.n.m. Where the product is required to be washed (see 10.5), the drained mass shall be not less than 50 % of the d.n.m.

7.2.6 Composition

The composition of the product shall comply with the relevant requirements given in table 2, the specified meat content and edible offal content percentages being applicable to the drained mass, determined in accordance with 10.5, except in the case of products where chemical analysis is specified. In addition, coagulated exuded fat shall not constitute more than 5 % by mass of the required meat contents of the container, and shall not be considered as part of the drained mass requirement of the product.

Table 2 □ Product category and requirements

1 Product category	2 Requirements
Products that contain beef and vegetables (or fruit) or cereal or both with or without packing medium.	When determined in accordance with 10.5, the drained mass of meat shall be at least 25 % of the d.n.m., except in the case of spaghetti bolognaise where the actual total meat content determined in accordance with 11.3 and 11.4, shall not be less than 25 %.
Products that contain mutton, including mutton-on-the-bone, or game-on-the-bone or similar packs, and vegetables (or fruit) or cereal or both, with or without packing medium.	In the case of mutton products other than mutton-on-the-bone, at least 25 % of the d.n.m. shall be mutton (without bone), as determined in accordance with 10.5. Where the meat is mutton-on-the-bone or game-on-the-bone at least 30 % of the d.n.m. shall be meat-on-the-bone. The bone-to-meat ratio, determined by weighing, shall not exceed 1:4. Free bone, especially chips, splinters or sharp pieces of bone, shall not be present.
Products that contain pork and vegetables or cereal or both, with or without packing medium.	When the drained mass is determined in accordance with 10.5, at least 25 % of the d.n.m. shall be pork with lean meat to fat proportions (see 10.6) of at least 3:1.
Products that contain meatballs, and vegetables (or fruit) or cereal or both, sausages and vegetables or cereal or both, and similar packs, with or without packing medium.	When determined in accordance with 10.5, the drained mass of the units of meat shall be at least 25 % of the d.n.m.
Products that contain steak or edible offal (other than tripe) or both and onion, with or without packing medium, or formed patties or meat balls and onion, with or without packing medium.	When the drained mass of ingredients is determined in accordance with 10.5, at least 50 % of the d.n.m. shall be steak or edible offal (other than tripe) or both, as relevant, or patties or meat balls, and at least 10 % of the d.n.m. shall be onion.
Products that contain liver or, other edible offal (other than tripe) or both, and vegetable(s) (or fruit) (other than onion alone) or cereal or both with or without packing medium.	When the drained mass of the ingredients is determined in accordance with 10.5, at least 25 % of the d.n.m. shall be liver or other edible offal (other than tripe) or both, as relevant.
Products that contain oxtail and vegetables (or fruit) or cereal or both, with or without packing medium.	When determined in accordance with 10.5, the drained mass of oxtail with bone shall be at least 25 % of the d.n.m.
Steak and kidney pie, chicken and ham pudding, steak and ham pudding, and similar packs.	When the drained mass of ingredients is determined in accordance with 10.5, at least 25 % of the d.n.m. shall be meat or meat plus edible offal. Where the name of an edible offal or minor meat ingredient appears in the name of the product, that edible offal or minor meat ingredient shall be at least 7 % of the d.n.m.
Puddings that contain meat of a specific sort, and vegetables (or fruit) or cereal, or both, with or without a minor meat or edible offal ingredient, or puddings that contain edible offal and vegetables (or fruit) or cereal or both, and similar packs.	When the drained mass of ingredients is determined in accordance with 10.5, at least 25 % of the d.n.m. shall be meat or edible offal or both, as relevant, and, where the name of a minor edible offal or minor meat ingredient appears in the name of the product, that minor edible offal or minor meat ingredient shall be at least 5 % of the d.n.m. The vegetable (or fruit) content or the cereal content or the vegetable (or fruit) and cereal content, as relevant, of the part of the product within the pie crust shall be at least 15 % of the d.n.m.
Products that contain meat (cured or uncured) and potato or other vegetable(s) (or fruit) or cereal or both as a solid pack.	When determined in accordance with 11.3, the actual lean meat content shall be at least 35 %. The appearance of the product shall clearly and prominently reflect the presence of the meat ingredient in accordance with this requirement.

7.3 Sliced bacon and sliced cured shoulder of pork

7.3.1 Preparation

Sliced bacon shall be cured and prepared from the bacon strip of a pig. Sliced cured shoulder of pork shall be cured and prepared from the shoulder of a pig.

7.3.2 Meat

Meat used in the preparation of bacon shall be derived from the carcasses of gilts or barrows that are suitable for the manufacture of bacon. Meat from boars of an age not exceeding 6 months may be used.

7.3.3 Curing

The product shall be adequately cured and may be smoked or unsmoked.

7.3.4 Packing

The product shall be packed in containers and in the form of rashers of uniform size, thickness and shape, that may be interleaved with clean parchment paper, cellulose film or other suitable material. The rashers shall be readily separable one from the other.

7.3.5 Appearance

The product shall be of attractive appearance and colour, and shall, when determined in accordance with 10.6, have a meat-to-fat ratio of at least 3:1 for bacon and 7:1 for shoulder of pork, and shall be free from seed, bruises, rust, discolouration, unsightly pieces of skin and excessive cartilage.

7.3.6 Fill of container

The container shall be filled as full as is practicable.

7.4 Corned mutton

7.4.1 Preparation

Corned mutton shall be adequately cured, and shall be prepared as a solid pack of mutton.

7.4.2 Meat

The meat used shall be obtained only from the skeletal musculature of sheep, and shall not include meat from the head, the masseter muscles excepted, or any offal other than skirt (diaphragm). Mechanically recovered meat shall not be used. The meat shall be well trimmed until free from perceptible sinews, tendons and other tough connective tissue. Thin flank and skirt shall, if used, be well trimmed and such that the connective tissue content of the end product does not detract from its appearance. The actual lean meat content, determined in accordance with 11.3, shall be at least 108 %.

7.4.3 Fat origin

The product shall not contain any intestinal or kidney fat, and only fat of ovine origin shall be permitted (see 12.1.2.5).

7.4.4 Fat content

The fat content, determined in accordance with 11.4, shall not exceed 25 % by mass.

7.4.5 Natural binder

If used, not more than 5 % by mass of natural binder shall be added to the product (see 5.23 and 12.1.2.5). Only natural binder of ovine origin is permitted.

7.4.6 Salt

In the preparation of the product, salt may be added to give a concentration of total chlorides, determined in accordance with 11.6 and expressed as sodium chloride, of not more than 3 % by mass.

7.4.7 Gelatine, agar-agar and carboxymethyl cellulose

The product may contain added gelatine, agar-agar or carboxymethyl cellulose and, in the case of the last two, not more than 1,0 % by mass and 0,5 % by mass, respectively, may be added to the product.

7.4.8 Phosphates

No phosphates shall have been added to the product.

7.4.9 Appearance, colour and texture

The product shall be of attractive appearance and shall have an acceptably uniform colour and a uniform firm coarse meat texture, both characteristic of this type of product. The original muscle structure shall be predominantly retained.

There shall, be no excessive exudation of gelatinous matter or moisture. When determined in accordance with 10.7, exuded fat, if any, shall not exceed 7 % of the d.n.m. The exuded fat shall be distributed in a reasonably even layer around the entire product surface and it shall not be hard at ambient temperature. Internal fat shall be evenly distributed in the product; no lumps of fat shall be present. The product shall be sliceable at a product temperature of between 10 °C and 15 °C. The product shall not stick to the sides of the container and it shall be free from large surface cavities and discolouration.

7.5 Corned beef

7.5.1 Preparation

Corned beef shall be adequately cured and prepared as a solid pack of beef.

7.5.2 Meat

The meat used shall be obtained only from the skeletal musculature of bovines, but not more than 5 % may be heart meat, or the masseter muscles of head meat, or skirt meat (diaphragm), or any combination thereof. Mechanically recovered meat shall not be used. The meat shall have been trimmed until free from perceptible sinews, tendons and other tough connective tissue. The actual lean meat content determined in accordance with 11.3, shall be at least 108 %.

7.5.3 Fat origin

The product shall not contain intestinal fat, and only fat of bovine origin shall be permitted (see 12.1.2.5).

7.5.4 Fat content

Corned beef shall have been packed only as:

a) "Corned beef" without further qualification, in which case the fat content determined in accordance with 11.4, shall not exceed 20 % by mass, or

b) "Lean corned beef" in which case the fat content determined in accordance with 11.4, shall not exceed 15 % by mass, or

c) "Special lean corned beef", "Special lean-cut corned beef", or "Extra lean-cut corned beef", in which case the fat content determined in accordance with 11.4, shall not exceed 12 % by mass.

Words qualifying the title shall be in accordance with the regulations framed under the current Foodstuffs, Cosmetics and Disinfectants Act.

7.5.5 Natural binder

If used, not more than 5 % by mass of natural binder (see 5.23 and 12.1.2.5) of bovine origin shall be added to the product. Its presence shall be declared in the ingredients panel of the label in plain type of not less than 1,5 mm face measurement.

7.5.6 Salt

In the preparation of the product, salt may be added to give a concentration of total chlorides, determined in accordance with 11.6, and expressed as sodium chloride, of not more than 3 % by mass.

7.5.7 Gelatine, agar-agar and carboxymethyl cellulose

In the preparation of the product, gelatine, agar-agar or carboxymethyl cellulose may be added, and in the case of the last two, not more than 1,0 % by mass and 0,5 % by mass respectively may be added to the product.

7.5.8 Phosphates

When tested in accordance with 11.15, no phosphates shall have been added to the product.

7.5.9 Appearance, colour and texture

The product shall be of attractive appearance and shall have an acceptably uniform colour and a uniform firm coarse meat texture, both characteristic of this type of product. The original muscle structure shall be predominantly retained. The product shall be free from a dispersion of denatured proteinaceous matter.

There shall be no excessive exudation of gelatinous matter or moisture. When determined in accordance with 10.7, exuded fat, if any, shall not exceed 10 % of the d.n.m. The exuded fat shall be distributed in a reasonably even layer around the entire product surface and it shall not be hard at ambient temperature. Internal fat shall be evenly distributed in the product; no lumps of fat shall be present. The product shall be sliceable at a product temperature of between 10 °C and 15 °C. The product shall not stick to the sides of the container and it shall be free from large surface cavities and discolouration.

7.6 Corned beef with cereal

7.6.1 Preparation

Corned beef with cereal shall be adequately cured, and shall be prepared as a solid pack of beef containing not more than 6 % of crude starch.

7.6.2 Meat

7.6.2.1 Actual lean meat content

The requirements given in 7.5.2 shall apply, but the actual lean meat content determined in accordance with 11.3, shall be at least 80 %.

7.6.2.2 Fat origin

The product shall not contain intestinal fat, and only fat of bovine origin shall be permitted (see 12.1.2.5).

7.6.2.3 Fat content

The fat content determined in accordance with 11.4, shall not exceed 20 % by mass.

7.6.2.4 Natural binder

If used, not more than 5 % by mass of natural binder shall be added to the product (see 5.23 and 12.1.2.5). Its presence shall be declared in the ingredients panel of the label in plain type of not less than 1,5 mm face measurement.

7.6.2.5 Salt

In the preparation of the product, salt may be added to give a concentration of total chlorides, determined in accordance with 11.6 and expressed as sodium chloride, of not more than 3 % by mass.

7.6.2.6 Agar-agar and gelatine

The product shall not contain added agar-agar. Not more than 1 % by mass of gelatine may be added to the product.

7.6.2.7 Phosphates

No phosphates shall be added to the product.

7.6.2.8 Appearance, colour and texture

The product shall be of attractive characteristic appearance and shall have an acceptably uniform colour and a characteristic fairly coarse texture, free from springiness. There shall be no significant amount of finely chopped or finely minced meat or emulsified material present. The product shall be sliceable at a product temperature of between 10 °C and 15 °C. Exuded fat, when determined in accordance with 10.7, shall not be more than 10 % of the d.n.m., and there shall be no excessive exudation of gelatinous matter, cereal or moisture. No lumps of fat or cereal shall be present. The product shall not stick to the sides of the container and shall be free from large surface cavities and discolouration.

7.6.3 Labelling

The product shall be labelled without further qualification of the title, either as:

a) "Corned beef with cereal", in which case all the words shall appear in type of the same size and prominence and in a colour that affords a distinct contrast to the background colour of the label, or as

b) "Corned beef containing 6 % cereal" or "Corned beef – contains 6 % cereal", in which case the words qualifying "corned beef" shall appear immediately below "Corned beef" in plain type of not less than half the size of that used for "corned beef" with a minimum size of 2,5 mm face measurement, and in a colour that affords a distinct contrast to the background colour of the label.

7.7 Corned meat

7.7.1 Preparation

Corned meat shall be adequately cured and shall be prepared as a solid pack of meat, with or without permitted edible offal. Mechanically deboned meat not exceeding 25 % by mass of the total ingoing mix may be added.

Not more than 6 % by mass of cereal may be added.

7.7.2 Meat

The meat used shall be obtained from the skeletal musculature of food animals. The meat shall be well trimmed until free from perceptible sinews, tendons and other tough connective tissue. The actual lean meat content determined in accordance with 11.3, shall be at least 60 %.

7.7.3 Permitted edible offal (see 12.1.2.5 and 12.1.2.6)

a) One of the following constituent limitations shall apply, and the nature of the offal shall be declared on the ingredients panel:

   1) Any one of heart, tongue, kidney or liver may be used to the extent of 10 % of the product.

   2) Any one other edible offal may be used to the extent of not more than 5 % of the product.

   3) Two or more edible offal may be used together to the extent of not more than 10 % of the product.

b) If more than 10 % (or more than 5 % in the case of lungs and spleen) but not more than 35 % of the product consists of one or more edible offal, the nature of the offal(s) shall be declared in the title of the product by name in print of the same colour and prominence as the rest of the title and in at least half the size of the print used for the rest of the title.

c) Where offal is the major meat ingredient as in a product described as "Corned offal and meat", the skeletal muscular meat content shall not be less than 20 % of the product.

7.7.4 Fat content (see 12.1.2.5 and 12.1.2.6)

When determined in accordance with 11.4, the fat content shall not exceed 25 % by mass.

7.7.5 Natural binder

Not more than 10 % by mass or, where edible offal is used, not more than 8 % by mass of natural binder shall be added to the product (see 5.23 and 6.13).

Its presence shall be declared in the ingredients panel of the label in plain type of not less than 1,5 mm face measurement.

7.7.6 Salt

In the preparation of the product, salt may be added to give a concentration of total chlorides, determined in accordance with 11.6 and expressed as sodium chloride, of not more than 3 % by mass.

7.7.7 Gelatine or agar-agar

The product may contain added gelatine or agar-agar and, in the case of the latter, not more than 1 % by mass shall be added to the product.

7.7.8 Phosphates

The product may contain added phosphates.

7.7.9 Appearance, colour and texture

The product shall be of attractive appearance and shall have an acceptably uniform colour and texture, both being characteristic of this type of product. It may be fine in texture, but shall not have a close, springy texture and shall not be soggy or doughy when cooled to between 10 °C and 15 °C. Emulsified matter shall not be predominant. When determined in accordance with 10.7, exuded fat, if any, shall not exceed 14 % of the d.n.m. The exuded fat shall be distributed in a reasonably even layer around the product surface and shall not be hard at ambient temperature. In addition, other exuded material, determined in accordance with 10.7, shall not exceed 5 % of the d.n.m. Internal fat shall be evenly distributed in the product. No lumps of fat or lumps of cereal or other material shall be present. The product shall not stick to the sides of the container and it shall be free from large surface cavities and discolouration.

7.7.10 Labelling

7.7.10.1 Where meat other than beef, pork, mutton or goats' meat is used, the kinds of meat present shall be disclosed in the product name, and, in all cases, the kinds of meat used shall be declared in the ingredients panel of the label if they do not appear in the title. Where fat of other origin than the kind(s) of animal(s) declared on the label is used, the kind(s) of fat origin shall also be declared.

7.7.10.2 Subject to 7.7.10.1 above, corned meat shall be labelled as "corned meat" without further qualification.

7.8 Ham, cured shoulder of pork, and cured solid pressed beef

7.8.1 Ham

Ham shall be prepared from the ham (gammon) of a pig and shall be adequately cured and canned, and either pasteurized or commercially sterilized by heat treatment. This product shall have a meat-to-fat ratio, determined in accordance with 10.6, of at least 9:1. The fat on the outside of the ham shall be fairly evenly distributed. In the case of hams labelled as defatted ham, all surface fat shall, as far as practicable, be trimmed off. The actual lean meat content, determined in accordance with 11.3, shall be at least 80 % by mass.

7.8.2 Cured shoulder of pork

Cured shoulder of pork shall be prepared from the shoulder of a pig and shall be adequately cured and canned, and either pasteurized or commercially sterilized by heat treatment. This product shall have a meat-to-fat ratio, determined in accordance with 10.6, of at least 7:1. The fat on the outside of the product shall be fairly evenly distributed. The description of this product shall not include the word "Ham", and in the description all the words used in the title shall appear in plain type of the same size and prominence. The actual lean meat content, determined in accordance with 11.3, shall be at least 80 %.

7.8.3 Cured solid pressed beef

Cured solid pressed beef shall be prepared from skeletal musculature beef and shall be adequately cured and canned, and either pasteurized or commercially sterilized by heat treatment. It shall be free from excessive exuded fat and moisture. After all gelatinous material or other jelled materials have been removed from the surface of the contents, the product shall have an actual lean meat content of at least 80 % by mass, determined in accordance with 11.3.

7.8.4 Meat

Meat used in the preparation of ham and cured shoulder of pork shall be derived from the carcasses of gilts or barrows up to baconer stage. The carcasses of sows and boars exceeding the age of six months shall not be used. Meat that is bruised, soft or oily shall not be used. Frozen meat shall have been stored at a temperature of -18 °C or lower. Soya and other non-meat proteinaceous materials shall not be used.

7.8.5 Gelatin or agar-agar

Gelatin or agar-agar may be added to the product. In the case of the latter, not more than 2 % by mass may be added.

7.8.6 Phosphates

Phosphates may be added to the product.

7.8.7 Curing

The product shall be adequately cured and, where necessary, shall be adequately cleaned after curing and before packing.

7.8.8 Smoking

The product may be either smoked or unsmoked (see 12.1.2.2.3).

7.8.9 Salt

In the preparation of the product, salt may be added to give a concentration of total chlorides, determined in accordance with 11.6 and expressed as sodium chloride, of not more than 3 % by mass.

7.8.10 Trimming and packing

The product shall be adequately trimmed and shall be free from bone. Whether the product is manufactured from one or more pieces, it shall be compact and permit slicing without breaking into pieces. Where the product is in the form of compressed pieces, and its appearance and sliceability suffer in consequence, this fact shall be conspicuously declared in the main panel of the label in compliance with the regulations under the current Foodstuffs, Cosmetics and Disinfectants Act.

Gammon may be packed with rind but only if the rind is intact and sliceable. Shoulder shall not be packed with rind. Gelatine or agar-agar may be used to solidify the juices provided that in the case of agar-agar, the content does not exceed 2 %. The juices in the container shall be a gel at a product temperature of 20 °C or lower. Shoulders shall be neatly tied.

7.8.11 Appearance and texture

Upon removal from the container, the product shall have essentially the same shape as that of the container and shall be as free as is practicable from surface cavities that significantly affect its appearance. The product shall be free from bruises, blood spots, discolouration, surface contamination and other forms of blemish. The original muscular structure shall be retained. Ham and cured shoulder of pork products shall not have a "chopped meat" texture. The texture of the product shall not have an emulsified appearance. Layers of fat shall be evenly distributed in the product. The manufacturing process shall be such as to ensure that the product has a cured colour and a texture that are characteristic. The product shall be sliceable at a product temperature of 20 °C or lower.

7.8.12 Freedom from defects

The product shall be free from hair follicles, loose fat, loose rind, gristle, cartilage, superficial glands and tough sinews. Poisonous and deleterious substances including solder and flux shall not be present. The product shall be free from scorched or burnt portions and the container shall be free from visible internal corrosion that might affect the product adversely.

7.8.13 Sliceable mass

The mass of the product, freed from adhering jelled materials and loose fat, and other unattached material from the surface of the contents shall be at least 80 % of the d.n.m. in the case of pasteurized ham, 75 % in the case of pasteurized cured shoulder of pork, and 65 % in the case of ham and cured shoulder of pork that have been commercially sterilized. In the case of cured solid pressed beef, the mass of the product, freed from adhering jelly, shall be not less than 80 % of the d.n.m.

7.8.14 Fill of container

The container shall be filled as full as is practicable.

7.8.15 Pasteurized products

Pasteurized products shall be stored under refrigeration at a temperature not exceeding 4 °C or at such lower temperature as might be desirable (see 12.1(e) for labelling).

7.9 Edible lard

7.9.1 Preparation

Edible lard shall be prepared by heat-rendering the fresh tissue fat of pigs that are in good health at the time of slaughter. Reprocessed lard or pressings from crackling shall not be included and the lard shall be free from flesh, fibrous tissue and crackling.

7.9.2 Rancidity

Freedom of the product from any odour or taste of rancidity shall be ensured by the method of processing.

7.9.3 Foreign fat

The rendered fat of any animal other than pig and any other foreign fat or oil shall not be present in the product.

7.9.4 Fill of container

Subject to the requirements of the regulations under the current Trade Metrology Act, the container shall be filled as full as is practicable.

7.9.5 Salt (sodium chloride)

Sodium chloride shall not be added to the product.

7.9.6 Physical and chemical requirements of the product

7.9.6.1 Iodine value

The Wijs iodine value, determined in accordance with 11.9, shall be within the range 52 to 77.

7.9.6.2 Refractive index

When determined at a temperature of 60 °C, in accordance with 11.13, the refractive index shall be within the range 1,4510 to 1,4535.

7.9.6.3 Melting point

The melting point, determined in accordance with 11.12, shall be within the range 25 °C to 46 °C.

7.9.6.4 Free fatty acids

The free fatty acid content, determined in accordance with 11.10 and calculated as oleic acid, shall not exceed 0,6 % by mass.

7.9.6.5 Saponification value

The saponification value determined in accordance with 11.11 shall be within the range 192 mg to 202 mg KOH/g.

7.9.6.6 Moisture

The moisture content of the lard, determined in accordance with 11.7, shall not exceed 0,25 % by mass.

7.10 Edible beef dripping

7.10.1 Preparation

Edible beef dripping shall be prepared by heat-rendering the fresh fat, exclusive of intestinal fat, of beef from animals in good health at the time of slaughter. Flesh and fibrous tissue shall be removed.

7.10.2 Rancidity

Freedom of the product from any odour or taste of rancidity shall be ensured by the method of processing.

7.10.3 Foreign fat

The rendered fat of any animal other than the bovine and any other foreign fat or oil shall not be present in the product.

7.10.4 Fill of container

Subject to the requirements of the regulations under the current Trade Metrology Act, the container shall be filled as full as is practicable.

7.10.5 Salt (sodium chloride)

Sodium chloride shall not be added to the product.

7.10.6 Physical and chemical requirements of the product

7.10.6.1 Iodine value

The Wijs iodine value, determined in accordance with 11.9, shall be within the range 35 to 48.

7.10.6.2 Refractive index

When determined at a temperature of 60 °C, in accordance with 11.13, the refractive index shall be within the range 1,4566 to 1,4587.

7.10.6.3 Melting point

The melting point, determined in accordance with 11.12, shall be within the range 40 °C to 46 °C.

7.10.6.4 Free fatty acids

The free fatty acid content, determined in accordance with 11.10 and calculated as oleic acid, shall not exceed 0,75 % by mass.

7.10.6.5 Saponification value

The saponification value, determined in accordance with 11.11, shall be within the range 193 mg to 205 mg KOH/g.

7.10.6.6 Moisture

The moisture content of the dripping, determined in accordance with 11.7, shall not exceed 0,25 % by mass.

7.11 Meat rolls (meat loaves)

7.11.1 Preparation

Meat rolls (meat loaves) shall be prepared from chopped or comminuted meat of bovines or pork. Any other meat used shall be declared on the main panel of the label. Permitted edible offal, seasoning and flavouring substances, water, fat, starchy (farinaceous) materials (see 5.17), phosphates, milk powder, eggs and other acceptable ingredients may be added.

7.11.2 Natural binder

Not more than 5 % by mass of natural binder may be added to the product. The nature of the natural binder shall be in accordance with the nature of the product; binder derived from pork shall not be used in a pure beef product nor shall binder derived from beef be used in a pure pork product (see 5.23 and 12.1.2.5).

7.11.3 Permitted edible offal (see 12.1.2.5)

The product shall contain only the following edible offal: heart, liver, kidney and tongue (see 7.12.4). The use of blood shall be limited to the preparation of blood sausage or blood roll.

7.11.4 Composition requirements

7.11.4.1 Meat rolls (loaves) other than liver rolls

Meat rolls (loaves) other than liver rolls shall comply with the following requirements:

a) the actual total meat content of the product, determined in accordance with 11.3 and 11.4, shall be at least 75 %, except that corned beef roll (loaf) shall have a actual total meat content of at least 80 %;

b) the fat content of the roll (loaf), determined in accordance with 11.4, shall not exceed 35 % of the actual total meat content, except that in corned beef roll (loaf) the fat content of the roll shall not exceed 30 % of the actual total meat contents;

c) the starchy (farinaceous) material determined in accordance with 11.5 and calculated as crude starch shall not exceed 6 % by mass;

d) corned beef roll (loaf) shall not contain heart, liver, kidney or tongue; and

e) in products other than corned beef roll (loaf), not more than 8 % by mass may consist of heart, liver, kidney, tongue or any mixture of these (see 12.1.2.5 and 12.1.2.6), provided that the presence of such edible offal is declared in the ingredients panel of the label in plain type of not less than 1,5 mm face measurement.

7.11.4.2 Liver roll (loaf)

Liver rolls (loaves) shall comply with the following requirements:

a) the actual total meat content determined in accordance with 11.3 and 11.4, shall be at least 70 %;

b) the liver content shall be at least 25 % by mass;

c) the fat content (see 12.1.2.5 and 12.1.2.6) of the product determined in accordance with 11.4, shall not exceed 40 % of the actual total meat content;

d) the starch content determined in accordance with 11.5 and calculated as crude starch shall not exceed 6 % by mass; and

e) not more than 10 % by mass shall be heart, kidney, or tongue or any mixture of these (see 12.1.2.5 and 12.1.2.6), provided that the presence of such edible offal is declared in the ingredients panel of the label in plain type of not less than 1,5 mm face measurement.

7.11.4.3 Meat rolls (loaves) with garnish

Where a product contains garnish, the specified meat content requirements shall be applicable to the meat constituent.

7.11.5 Curing salts

Corned beef roll (loaf) shall be adequately cured. Other products may contain curing salts (see 7.7).

7.11.6 Phosphates

Phosphates may be added to the product.

7.11.7 Agar-agar

The agar-agar content shall not exceed 0,2 % by mass.

7.11.8 Blood plasma

Except in the case of blood sausage or blood roll, blood plasma shall not be added to the product.

7.11.9 Appearance and texture

Discolouration that detracts from the appearance of the product shall not be present. The product shall not stick to the inside surfaces of the container. The exterior surface of the product, after the product has been removed from the container, shall be free from unevenness that detracts from its appearance. Exuded material, when determined in accordance with 10.7, shall not exceed 3 % of the d.n.m. The product shall be readily sliceable at a product temperature of 20 °C or lower. Except in the case of liver rolls, the product shall not have a doughy, soggy or pasty texture. The product shall be free from grittiness, cavities, perceptible sinews, tendons or other tough connective tissue.

7.11.10 Flavour

The product shall have a characteristic meaty flavour and not a predominantly spicy or non-meaty flavour, and shall not be excessively salty.

7.12 Poultry

7.12.1 Preparation

7.12.1.1 Poultry shall be prepared from chicken, duck, goose, turkey or game birds and, subject to 7.13.3, shall be packed as one of the following:

a) flesh only;

b) pressed meat;

c) dissected poultry; or

d) whole poultry.

7.12.1.2 Poultry packed as flesh only shall be free from bones.

7.12.1.3 Poultry packed as pressed meat, shall have a flavour characteristic of poultry, shall not have a soggy texture, and shall be sliceable at a product temperature of 20 °C or lower. After removal from the container, the product shall have essentially the same shape as that of the container. No surface cavities or discolouration shall be present. Colour variation shall not be present in the product.

7.12.1.4 All packs shall be free from arteries and tough tendon tissues, except that, in the case of whole poultry, the two main arteries that lead to the shoulders may be present and also those tendon tissues that, because of the nature of the pack, cannot be removed. Only birds that are free from deformities shall be packed as whole poultry. Edible offal may be included, provided that the product is so labelled as to disclose its true nature.

7.12.2 Trimming

The product shall be cleanly trimmed and shall be free from bruised and discoloured portions of flesh.

7.12.3 Packing

The product shall be packed in one of the following media:

a) a jellied medium that may, to assist in the formation of a firm jelly, contain added gelatine or agar-agar, the latter not exceeding 1 % by mass; the jellied medium shall be a gel at a product temperature of 20 °C or lower;

b) a suitable sauce or meat juice medium;

c) poultry fat;

d) lard, that shall only be used for whole poultry; or

e) with sauces or dressings, and with or without vegetables (or fruit) or cereal or both.

7.12.4 Drained mass and percentage of flesh

7.12.4.1 Packs without cereal and vegetables (or fruit)

Unless the product is packed in a prepared sauce medium or in exuded chicken broth, the drained mass, determined in accordance with 10.5 and expressed as a percentage of the d.n.m. shall be as follows:

a) flesh only packs: at least 70 %;

b) dissected poultry: at least 65 %;

c) whole poultry packs: at least 55 %; and

d) canned liver and canned heart packs: at least 70 %.

Where the product is packed in a prepared sauce medium or in chicken broth, the drained mass shall be at least 50 % of the d.n.m.

7.12.4.2 Packs with vegetables (or fruit) or cereal or both

The drained mass, determined in accordance with 10.5, shall be at least 55 % of the d.n.m. The mass of flesh in a pack that is bone-free shall be at least 25 % of the d.n.m. In a pack that contains dissected poultry the mass of flesh plus bone shall be at least 30 % of the d.n.m. and the ratio of bone to flesh shall not exceed 1:4. No free bone shall be present.

Different types of product may be labelled "Chicken Suprême" conditional on the descriptive title for each product accompanying the title. The product may consist of chicken meat in a rich prepared sauce, in which case it shall comply with the relevant requirement of table 2, or it may consist of chicken meat in a rich sauce with vegetables (or fruit), in which case the washed mass of the meat ingredient shall constitute at least 45 %, and the total drained mass at least 60 % of the d.n.m.

7.12.4.3 Pressed meat packs

In a pressed meat pack, the actual lean meat content determined in accordance with 11.3, shall be at least 80 %.

7.12.4.4 Dissected poultry packs

In a dissected pack the constituent parts present in the pack shall be in the same proportions as in whole poultry. Constituent parts may be packed separately, provided that the product is so labelled as to disclose its true nature. The ratio of bone to flesh shall not exceed 1:4. No free bone shall be present. The drained mass shall comply with the requirements for a dissected pack given in table 2, as relevant.

7.12.5 Freedom from defects

Feathers, including pinfeathers, shall not be present in the product. In the case of poultry packed on the bone, splinters or grit of bone or sharp bones shall not be present.

7.12.6 Texture

The meat or edible offal and, where present, the vegetables and/or fruit shall have a firm but tender texture. Chicken pie filling shall contain an acceptable proportion of visible muscle meat without bone, and shall have an acceptably viscous consistency.

7.13 Sausages, raw species sausage and raw mixed-species sausage

7.13.1 Preparation

Sausages, raw species sausage and raw mixed-species sausage shall be prepared from minced meat, with or without permitted edible offal. Seasoning and flavouring substances, water, fat, starchy (farinaceous) material, phosphates (see 6.8), milk powder (see 5.19), eggs and other acceptable ingredients may be added. Sausages shall be filled into casings with or without subsequent treatment or shall be otherwise formed into shape.

7.13.2 Natural binder

Natural binder (see 5.23, 12.1.2.5 and 12.1.2.6) shall not be more than 8 % by mass of the total sample contents. The nature of the natural binder used shall be in accordance with the nature of the product: binder derived from pork shall not be used in a pure beef product nor shall binder derived from beef be used in a pure pork product.

7.13.3 Permitted edible offal

The product may contain only the following edible offal: heart, liver, kidney and tongue.

7.13.4 Composition requirements

7.13.4.1 Sausages in brine, agar-agar or other aqueous medium, whether gelled or not

Sausages shall comply with the following requirements:

a) the composition, determined by chemical analysis, of the canned sausages after they have been drained on a sieve of nominal aperture size 2 mm and after any adhering packing medium has been removed, shall, subject to (b) below, comply with the appropriate requirements given in table 3; and

b) if the actual total meat content of the sausage, determined by chemical analysis, is less than the specified minimum of 65 % but the product of the actual total meat content percentage and the drained mass as a percentage of the d.n.m. (see 7.13.5.1) divided by 100 gives a value of at least 49, the product shall be regarded as acceptable in relation to meat content.

Table 3 □ Limits for sausage contents

1	2	3	4
Type of sausage	**Minimum actual total meat content[a] %**	**Maximum fat content as a percentage of actual total meat content[b] %**	**Maximum crude starch content[c] %**
Pork sausage	65	38	5
Beef sausage	65	30	5
Mixed meat sausage	65	35	5
Vienna sausage	65	25	5
Frankfurter sausage	65	25	5

[a] Determined in accordance with 11.3.
[b] Determined in accordance with 11.4.
[c] Determined in accordance with 11.5.

7.13.4.2 Sausages in fat and sausages without packing medium

The composition of the canned sausages (determined by chemical analysis) after any fat used as packing medium has been removed by gentle scraping, shall comply with the appropriate requirements as given in table 4.

7.13.4.3 Boerewors, raw species sausage and raw mixed-species sausage

At the point of packing into the container, boerewors, raw species sausage or raw mixed-species sausage shall have an actual total meat content of not less than 90 % by mass and an actual lean meat content of not less than 60 % by mass as determined by chemical analysis.

7.13.4.4 Content of permitted edible offal

In the case of sausages other than boerewors, not more than 5 % of the d.n.m. shall be heart, liver, kidney, or tongue used either singly or in combination, which might have been included in the product, provided that the presence of such permitted edible offal is declared in the ingredients panel on the label in plain type of not less than 1,5 mm face measurement. Boerewors shall not contain liver, kidney, heart or tongue.

Table 4 □ Limits for sausage contents

1	2	3	4
Type of sausage	**Minimum actual total meat content[a] %**	**Maximum fat content as a percentage of actual total meat content[b] %**	**Maximum crude starch content[c] %**
Pork sausage	75	43	5
Beef sausage	75	36	5
Mixed meat sausage	75	40	5

[a] Determined in accordance with 11.3.
[b] Determined in accordance with 11.4.
[c] Determined in accordance with 11.5.

7.13.5 Mass of sausage in pack[1)]

7.13.5.1 Except as allowed in terms of 7.13.5.2, the mass of sausage in a container when determined in accordance with 10.5, shall be at least 75 % of the d.n.m., except that in the case of frankfurters, viennas and cocktail viennas packed in natural casings, and provided that the container was packed to practical capacity with sausages, the drained mass shall be at least 60 % of the d.n.m. In the latter case, where the normal drained mass of 75 % cannot be achieved, the actual mass of sausages in the container shall be declared on the label, in addition to the net mass of the contents, in plain type of the same size and prominence as that used for the net mass.

In the case of boerewors packed in rich gravy, the mass of sausage packed shall be at least 70 % of the d.n.m.

7.13.5.2 If the actual drained mass of sausages packed as in 7.13.5.1, is less than the specified minimum of 75 % and the product of the actual drained mass as a percentage of the d.n.m. and the percentage of actual total meat content (determined in accordance with 11.3 and 11.4), divided by 100 gives a value of at least 49, the product shall be regarded as acceptable in relation to drained mass, provided that the product complies with 7.13.13.

1) The requirements of this clause are subject to compliance with the Regulations under the Trade Metrology Act, 1973.

7.13.6 Curing salts

The product may contain curing salts (see 6.7).

7.13.7 Blood plasma

Except in the case of blood sausages, no blood plasma may be added to the product.

7.13.8 Packing medium

Sausages other than viennas and frankfurters may be packed in fat characteristic of the meat used, in brine, or in a medium of agar-agar content not exceeding 2 % by mass. Viennas may be packed in brine of salt content 2 % to 6 %, or in a medium of gelatine content not exceeding 5 % by mass, or agar-agar content not exceeding 2 % by mass. Frankfurters shall be packed only in brine of salt content 2 % to 6 %. In the case of viennas and similar products, the packing medium shall not be uncharacteristically dark. When sausages are packed in a brine or clear packing medium, the packing medium shall not be turbid or cloudy, and shall be free of sediment.

7.13.9 Casings

Hog, sheep and synthetic casings that are of acceptable quality, sound and in a hygienic condition shall be used. Non-edible synthetic casings shall be removed from the sausage, without significant marking of the sausage, before it is canned.

7.13.10 Appearance and uniformity of size, shape and colour

The units in any one container shall be acceptably uniform in colour, size and shape and the shape of the units shall not be distorted or twisted. Any splitting and end-bursting shall not be such as to detract from the appearance of the product. Skinless units shall be completely separate one from the other. Cross-filling of units shall not be present. Cross-cut units shall be cleanly cut at right angles to the longitudinal axis. The units shall be free from impression marks, e.g. marks caused by the expansion rings of the side walls of a container.

7.13.11 Texture

Frankfurters, viennas and cocktail viennas shall have an evenly fine smooth and firm filled texture. The units shall be free from grittiness, coarse particles of natural binder, gristle and sinews, cavities or air pockets. The product shall not be soggy.

Sausages other than frankfurters, viennas and cocktail viennas, such as beef sausages, pork sausages and mixed meat sausages shall have a firm filled texture. It may be coarse, with pieces of meat characteristic of the product. The product shall be free from grittiness and internal and surface cavities. The product shall not be soggy.

7.13.12 Fill of container

The container shall be filled as full as is practicable with sausages.

7.13.13 Freedom from defects

The sausage units shall be free from staining, discolouration, serious rupturing of casings that detract from the normal appearance of the product, ragged ends, burst, damaged and broken units, and pieces of non-edible casings. The product shall be free from exuded fat or other material that detracts from its appearance. The sausage units shall not adhere to each other or to the inside surfaces of the container. The sausage units shall not be excessively salty.

The product shall be free from sour flavours and off-flavours.

7.14 Vienna pieces and vienna offcuts

7.14.1 Preparation

Vienna pieces and vienna offcuts shall be prepared from portions of vienna sausages that comply with the applicable requirements of 7.14.5. If held overnight or longer before packing, pieces and offcuts shall be kept under refrigeration.

7.14.2 Vienna pieces

The units shall be portions of vienna sausages that have been cleanly cut at right angles to their longitudinal axes, and their length shall be not less than 20 mm and not more than 25 mm. They shall not be stained, discoloured, ragged or broken, and in any one container the units shall, as far as is practicable, be of uniform length. The product shall be labelled "Vienna pieces" and both words shall appear in print of the same size and prominence.

7.14.3 Vienna pieces, irregular in size

The units shall be portions of vienna sausages that have been cleanly cut at right angles to their longitudinal axes. They shall not be stained, discoloured, ragged or broken, and in any one container the units may vary in length from 20 mm to 40 mm. There shall be not more than one flattened or malformed end per A1 or No. 1M can. In the cases of larger sizes of container, the count of such ends shall be proportionate to the volume capacity of the container relative to the A1 can. The product shall be labelled "Vienna pieces, irregular in size" and all the words shall appear in print of the same size and prominence.

7.14.4 Vienna offcuts, irregular in size and shape

The units shall be offcut portions of vienna sausages and may have flattened or malformed end portions, but shall not be stained or discoloured, and ragged ends shall not be present. The units may vary in length from 10 mm to 40 mm and may vary in shape.

The product shall be labelled "Vienna offcuts, irregular in size and shape" and all the words shall appear in print of the same size and prominence.

7.14.5 General

All other requirements given in 7.13 that are applicable and relevant to vienna sausages shall apply to the packs described in 7.14.2, 7.14.3 and 7.14.4.

7.15 Tongue

7.15.1 Preparation

Tongue shall be prepared from adequately cured tongues of food animals.

Tongue shall be neatly trimmed at the root end and shall be free from bone, epiglottis, external fat, glands, main arteries or veins and, in the case of ox tongue, skin. Tongue may be either precooked or cooked in the container or both. Ox tongue may be longitudinally cut and may be reduced (by cutting) only at the root end, if necessary for it to fit the container. Only one small additional loose portion of tongue may be added per container to make up mass.

7.15.2 Packing medium

Tongue may be packed in brine or in a medium prepared from bone stock, with or without the addition of gelatine or agar-agar or both, or in a medium prepared from gelatine or agar-agar or both, or in any other acceptable medium. The agar-agar content of the packing medium shall not exceed 2 % by mass. The packing medium shall be characteristic in appearance.

7.15.3 Mass of tongue in pack

When determined in accordance with 10.5, the drained mass of the tongue in a container shall, for ox tongue, be at least 80 % of the d.n.m. and for sheep tongue, at least 75 % of the d.n.m.

7.15.4 Appearance and texture

The product shall be uniformly cured and discolouration that detracts from the appearance of the product shall not be present. The product shall not be tough, soggy or damaged.

7.15.5 Flavour and odour

The product shall have a characteristic, pleasant fresh flavour and odour, and shall have no foreign flavours, foreign odours, off-flavours or off-odours.

7.15.6 Salt

In the preparation of the product, salt may be added to give a concentration of total chlorides, determined in accordance with 11.6, expressed as sodium chloride, of not more than 3 % by mass.

7.15.7 Labelling

The product shall be so labelled as to indicate the true nature and origin of the tongue.

7.16 Tongue slices

7.16.1 Preparation

7.16.1.1 Tongue slices shall consist of slices of the adequately cured tongue of food animals and the product shall be so labelled as to indicate the true nature and origin of the tongue.

7.16.1.2 The slices shall be obtained from tongue prepared in accordance with 7.16.1.1. The slices in any production lot shall be acceptably uniform in thickness and have a maximum thickness of 10 mm. Slices shall not be ragged or damaged.

7.16.2 Packing medium

The product may be packed in accordance with 17.6.1.1 or with sauce, gravy or dressing. If packed in brine, slices shall be fairly uniform in size.

7.16.3 Appearance and texture

The product shall be uniformly cured and discolouration that detracts from the appearance of the product shall not be present. The product shall not be tough or soggy.

7.16.4 Flavour and odour

The product shall have a characteristic, pleasant fresh flavour and odour and shall have no foreign flavours, foreign odours, off-flavours or off-odours.

7.16.5 Mass of tongue in pack

When determined in accordance with 10.5, the drained mass of the tongue in a container shall, in the case of tongue slices packed in accordance with 7.16.2, be at least 70 % of the d.n.m, and in the case of tongue slices packed in sauce, gravy or dressing, at least 50 % of the d.n.m.

7.16.6 Salt

In the preparation of the product, salt may be added to give a concentration of total chlorides, determined in accordance with 11.6, expressed as sodium chloride, of not more than 3 % by mass.

7.17 Meat paste, potted meat and chopped meat

7.17.1 Preparation

7.17.1.1 Meat paste and potted meat

Meat paste and potted meat shall be prepared from meat, with or without edible offal (see 7.17.2), that has been so comminuted as to form a spreadable paste, with or without the addition of tomato, starchy (farinaceous) material, and other acceptable ingredients. Bone shall not be used in any form in the product other than in chicken paste and similar pastes derived from dressed whole poultry, in which milled bone may be present, provided that it does not detract from the quality in any way and that bone content in the end product is not in excess of the bone-to-flesh ratio that naturally exists in dressed whole poultry.

7.17.1.2 Chopped meat

Chopped meat shall be cured and prepared as a solid pack of chopped meat which may contain a maximum of 5 % starchy (farinaceous) material, calculated as starch. Soya and other non-meat proteinaceous material shall not be added to the product.

7.17.2 Edible offal (see 12.1.2.5 and 12.1.2.6)

Where edible offal is used in the manufacture of the product, its nature and species origin shall be declared in the title of the product.

7.17.3 Natural binder (see 5.23, 12.1.2.5 and 12.1.2.6)

In potted meat and in pastes other than liver paste, added natural binder shall constitute not more than 5 % by mass. Natural binder shall not be added to liver paste or to chopped meat.

7.17.4 Composition requirements

7.17.4.1 Meat pastes

Where the product is described in the title as containing tomato, the actual total meat content determined in accordance with 11.3 and 11.4, shall be at least 65 % and the fat content shall not exceed 40 % of the actual total meat content. In other cases the actual total meat content determined in accordance with 11.3 and 11.4, shall be at least 70 % and, except in liver paste, not more than 40 % of the actual total meat content shall be fat. Liver paste shall contain at least 25 % of liver and not more than 45 % of the actual total meat and edible offal content, determined in accordance with 11.4, shall be fat.

Subject to the regulations under the current Foodstuffs, Cosmetics and Disinfectants Act, and the conditions governing the use of soya and other foreign protein (see 6.12), the product may contain these and milk powder and eggs. The starchy (farinaceous) material determined in accordance with 11.5 and calculated as crude starch, shall be not more than 6 % by mass. Approved colourants may be used.

7.17.4.2 Potted meat

When determined in accordance with 11.3 and 11.4, the actual total meat content of the product shall be at least 90 % and when determined in accordance with 11.4, the fat content shall not exceed 37 % of the actual total meat content. The starchy (farinaceous) material, determined in accordance with 11.5 and calculated as crude starch, shall not exceed 5 %.

7.17.4.3 Chopped meat

In case of chopped ham, the word "chopped" must be in letters of the same prominence and colour (and printed next to and on the same line) as the word "ham".

When determined in accordance with 11.3 and 11.4, the actual total meat content of the product shall be at least 90 % and, except in the case of a pork product, when the fat content is determined in accordance with 11.4, it shall not exceed 37 % of the actual total meat content. In a pork product the fat content shall not exceed 42 % of the actual total meat content when determined in accordance with 11.4. Colourants shall not be used.

7.17.5 Curing salts

The product may contain curing salts (see 6.7).

7.17.6 Phosphates

The product may contain added phosphates (see 6.8).

7.17.7 Texture and appearance

7.17.7.1 Pastes and potted meats

The texture of pastes and potted meat shall be such that they can be readily spread, and they shall be practically free from pieces of sinew, gristle, bone, sandiness and grittiness. The contents of any one container shall be acceptably uniform throughout and acceptably free from internal and surface cavities. The product shall be acceptably free from separated fat, starch or aqueous material. Discolouration, other than light surface discolouration due to oxidation, shall not be present.

7.17.7.2 Chopped meat

Chopped meat shall have a coarse to medium-coarse, firm, compact and chopped texture. The muscular structure shall be visible in the chopped pieces of meat. The product shall not have a predominantly emulsified texture. Fat present shall be evenly distributed throughout the product. The product shall be free from visible exuded material. Chopped meat shall have a characteristic meaty flavour and shall be free from surface and internal cavities. It shall be free from pieces of bone, cartilage and gristle and shall be free from discolouration. The contents shall not adhere to the insides of the container. A chopped ham product shall not be presented or packed in such a way as to mislead the consumer into believing that it is a ham or pork shoulder product as specified in 7.8.

7.17.8 Percentage fill of container

When determined in accordance with 10.4.3, the percentage fill of the container with product shall be at least:

a) 90 % in the case of cans; and

b) 85 % in the case of glass jars.

7.18 Brawn

7.18.1 Preparation

Brawn shall be prepared from meat that has been cured or cooked or both and shall be suitably dispersed in a gelling medium of gelatinous material derived from bovine, sheep or pig carcasses. It may be spiced.

7.18.2 Offal

Edible offal, other than trotters, shall not be used.

7.18.3 Meat content

When determined in accordance with 11.3 and 11.4, the actual total meat content shall be at least 65 %.

7.18.4 Curing salts

The product may contain curing salts (see 6.7).

7.18.5 Phosphates

Phosphates shall not be added to the product.

7.18.6 Cereal

The product shall not contain cereal or cereal products.

7.18.7 Colourants

The product may contain colourants (see 5.21).

7.18.8 Agar-agar

The product shall not contain agar-agar.

7.18.9 Appearance

The product shall be attractive in appearance, and the meat particles shall be evenly dispersed throughout the product.

7.18.10 Set

The product shall have a firm set at 4,5 °C, and shall be sliceable.

7.19 Infant foods prepared with meat

7.19.1 Preparation

Food intended for use in the diet of infants and that includes meat shall be prepared from meat, with or without a vegetable or a mixture of vegetables and other acceptable ingredients.

7.19.2 Offal

The product may contain brain, heart, pancreas, thymus, kidney and tripe provided that the type and species origin of edible offal is declared in the title of the product.

7.19.3 Natural binder

Natural binder shall not be added to the product.

7.19.4 Nitrate and nitrite

Nitrate and nitrite shall not be added to the product other than when bacon or ham is a constituent of the product, in which case it may be present to an extent not exceeding a mass fraction of 0,002 %.

7.19.5 Freedom from harmful ingredients

Ingredients of the product shall be known to be non-injurious to infants (see 5.1).

7.19.6 Stabilizers

The product may contain natural edible vegetable gums and agar-agar in a total concentration not exceeding 1 %. Artificial thickeners, phosphatic additives, chemical emulsifiers and thickeners, and anti-oxidants other than ascorbic acid shall not be used.

7.19.7 Composition

When determined in accordance with 11.3 and 11.4, the actual total meat content shall be at least 10 % by mass of which the fat content shall not exceed 25 % of the actual total content, except that, in the case of products that contain bacon, the fat content shall not exceed 30 % of the actual total meat content.

7.19.8 Salt content

The total chloride content, determined in accordance with 11.6 and expressed as sodium chloride, shall not exceed 1,0 % by mass.

7.19.9 Fibre content

The fibre content, determined in accordance with 11.8, shall not exceed 1,5 % by mass.

7.20 Minced meat and minced meat in gravy

7.20.1 Preparation

Minced meat and minced meat in gravy shall be prepared by canning minced meat in its own juice or in a prepared gravy. Spices and other seasoning may be present.

The meat used shall be obtained from the skeletal musculature of food animals. The product shall not contain edible offal or added natural binder.

7.20.2 Composition

When determined in accordance with 11.3, the actual lean meat content (see 2.2) of minced meat canned in its own juice, shall be at least 70 %. The actual lean meat content of canned minced meat in gravy and canned minced meat in gravy containing invisible onions and peppers shall be at least 60 %. When determined in accordance with 11.5, the starchy (farinaceous) material, calculated as crude starch, shall not exceed 5 % by mass.

7.20.3 Appearance

The product shall have a characteristic processed minced meat appearance. The texture shall be uniformly minced without containing excessively large coarse pieces but shall also not be finely ground or be emulsified or be smooth or pasty. The fibre of the meat shall be visible and be free from excessive pieces of sinew and connective tissue. Coagulated exuded fat shall not be present at ambient temperature. Excessive exuded material shall not be present.

7.21 Minced meat with vegetables (or fruit) or cereal or a combination of these in gravy

7.21.1 Preparation

Minced meat with vegetables (and/or fruit) or cereal or both in gravy shall be prepared by canning minced meat together with one or more vegetables or fruit or a cereal or both in gravy. The meat used shall be obtained from skeletal musculature of food animals. The product shall not contain edible offal or added natural binder.

7.21.2 Composition

In the case of minced meat with onions or peppers that contains a visible quantity of onions or peppers, the actual lean meat content, determined in accordance with 11.3, shall be at least 55 %.

In the case of minced meat with vegetables (or fruit) or cereal or both, the actual lean meat content (see 2.2), determined in accordance with 11.3, shall be at least 40 %. The drained mass, determined in accordance with 10.5, of the cereal or the vegetables (or fruit) or both, shall be at least 35 % of the d.n.m.

7.21.3 Appearance

The appearance of minced meat shall be as given in 7.20.3. The vegetables (or fruit) or cereals or both shall be as given in 7.2.2.

7.22 Unspecified meat products

7.22.1 General

Any meat product for which requirements are not specifically prescribed in 7.2 to 7.22 inclusive but which falls within the scope of this specification, shall comply with the relevant requirements given in sections 4, 5, 6, 8, 9 and 12 of this specification.

7.22.2 Drained mass

In the case of packs other than solid packs, the drained mass shall be at least 70 % of the d.n.m, except that in the case of products packed in sauce or gravy the washed or drained mass, when determined in accordance with 10.5, shall be at least 50 % of the d.n.m.

7.22.3 Curing salts

Packs other than those that contain cured meat shall not contain curing salts.

7.22.4 Freedom from defects

The product shall be free from sand, grit, pieces of shell, dirt and other extraneous contaminants.

7.23 Snails

7.23.1 Packing

The product may be packed in clear brine, water, or sauce. It may be spiced. The product shall be neatly packed. The container shall be filled to practical capacity, over-filling being avoided.

7.23.2 Drained mass

The drained mass, determined in accordance with 10.5, shall be at least 60 % of the d.n.m.

7.23.3 Appearance, texture and colour

The product shall be attractive in appearance and characteristic in colour. The units shall not have a greyish or brownish off-colour. The units in any one container shall be reasonably uniform in colour and size. The units shall not have a ragged appearance. The product shall have a characteristic firm but soft texture, and shall not be soggy or mushy or excessively tough or dry.

7.23.4 Flavour and odour

The flavour and odour of the product shall be fresh and characteristic. Off-flavours and off-odours shall not be present.

7.23.5 Freedom from defects

The product shall be free from sand, grit, and pieces of shell, dirt and other extraneous contaminants. Snail eggs shall be absent. When snails are packed in brine or in water, the packing medium shall not be turbid or cloudy and shall be free of sediment.

8 Containers

8.1 Types of container

Containers including lids or caps shall meet the following requirements:

a) be capable of maintaining the preservation of their contents in a sound, wholesome condition;

b) be made of a suitable material and constructed so that they can be easily closed and sealed;

c) be sufficiently durable to withstand mechanical and thermal stresses during the canning processes and to resist physical damage and maintain their normal appearance during normal distribution and storage;

d) protect the contents from contamination by micro-organisms or any other substance;

e) be suitable for the type of product and the conditions of storage and transportation;

f) their inner surfaces shall be adequately coated with a suitable material and shall not react with the contents in any way that would adversely affect the product or the containers;

g) the internal surface coating such as lacquer shall be uniformly applied and shall not become loose or peel off the surface of the can or lid during processing and normal storage conditions;

h) the outer surfaces shall be resistant to corrosion under normal storage and retail conditions;

i) the compound sealing material on lids or caps shall be suitable for the purpose and for the type of product used;

j) lids shall be tamper-proof, and a tamper detector shall be provided in cases where lids or caps can be removed by hand, such as with screw-on caps on jars; and

k) the containers shall be such that the contents can be easily emptied out.

8.2 Condition of containers

Containers or lids with signs of poor or doubtful container integrity shall not be used. The inner surfaces of all containers and closures shall, at the time of use, be clean and in the case of cans, free from corrosion, pinholes, evidence of detinning, delacquering, damages, serious solder splashing or excess application of solder. When lacquered cans or lids or both are used, the lacquer shall be free from drops or splashes of lacquer, significant scratches and other imperfections and it shall have no detrimental effect on the product such as off-flavours, off-odours and discolouration. The seam/s and seals, where applicable, shall be normal in appearance with a strong leakproof structure and quality. The sealing compound on closures shall be evenly applied around the entire contour with a normal appearance and adhesion.

Can bodies and lids with scoring lines for easy opening purposes of the final product by the consumer, shall be subjected to appropriate examinations for integrity. There shall be no signs of corrosion in the scoring lines.

8.3 Transport and storage of empty containers

Containers and lids or closures shall be delivered from the manufacturer wrapped or in covers and shall be transported and stored under protection against risk of contamination, damaging and the weather. The storage area shall be kept clean and shall be insect, bird and rodent proof. Containers and lids or closures shall be stored in a dry store, protected against wind, rain or vapour from the sea and away from steam, humidity, condensation or sudden temperature variations. The storage area shall be used solely for the storage of empty containers and lids.

The stacking of pallets with empty cans shall be such that the cans shall not be damaged. Empty cans or pallets with empty cans shall not be stepped on.

8.4 Cleaning of empty containers

Containers shall be cleaned immediately before use. Containers shall be in an inverted position when the cleaning is by means of blowing out with compressed air. After having been cleaned, the containers shall be protected against risk of contamination.

8.5 Distribution and handling of containers

Containers shall not be exposed to contamination or damaging to their bodies, seams or flanges while distributed, on runways or feeding lines. Containers shall be removed from the runways or feeding lines at the end of production unless the containers are adequately covered and protected against risks of contamination and damage.

8.6 Integrity of containers

In the end product, the containers and closures shall be free of integrity defects that could compromise the hermetic condition of the containers and closures or affect the product quality and appearance adversely.

9 Packing and processing requirements

9.1 Filling under hygienic conditions

The product shall be filled and processed under strictly hygienic conditions into containers that have been acceptably cleaned.

9.2 Processing

9.2.1 Where thermal processing of the product is required, it shall be carried out without delay after the sealing of the lids on the container.

9.2.2 Filled containers of product other than pasteurized products and semi-preserved products (see 6.11), shall be exhausted where appropriate, hermetically sealed or processed in such a way as to reduce the number or activity or both of viable micro-organisms to such an extent that none are detectable in the treated food by the methods given in clause 11. Containers of pasteurized products shall be exhausted, hermetically sealed, and pasteurized.

9.2.3 The filling, exhausting, sealing, and heat-processing of containers shall be performed in such a way that the ends of the cans or the caps of the jars

a) are not convex, or

b) do not become convex under normal transport and storage conditions.

There shall be no undue delay between filling, sealing of lids and the start of heat processing that could affect the product adversely. The thermal process shall be continuous (see 9.2.7).

9.2.4 When tested in accordance with 10.2, all container closures shall be strongly made. Cans of diameter 99 mm or less, shall not leak on vacuum leak testing under a maximum negative gauge pressure of 65 kPa, and cans of diameter greater than 99 mm shall not leak under a maximum negative gauge pressure of 50 kPa (see 10.2). Written records of seam examination shall be kept and shall be available for scrutiny for 2 years after the date of production.

9.2.5 The heat distribution in each retort used shall be determined and the heat penetration of each product in each can size at the coldest spot in the retort under the most unfavourable conditions likely to occur during processing, shall be determined to establish the time-and-temperature process necessary to obtain biological stability of the product. These tests shall be carried out by a competent body or person.

9.2.6 The time-temperature process in the case of heat-preserved products shall be conducted by adequately trained operators.

9.2.7 The time-temperature process (see 9.2.3) shall ensure

a) the destruction of pathogenic organisms, and

b) freedom from microbiological spoilage (see section 11).

9.2.8 Immediately after heat-processing, the filled containers shall be cooled as rapidly as possible to a container centre temperature not exceeding 50 °C.

9.3 Handling of sealed containers after heat processing

9.3.1 Any container whose process status before and after the retort process is unknown shall be immediately destroyed.

9.3.2 After having been removed from the retort in their baskets or trolleys the containers shall not be subjected to after-sterilization contamination. Hot or wet containers or containers having a positive internal pressure after the retort process shall not be removed out of their trolleys or baskets or be handled individually or be touched by hand. Containers shall not be handled or bulk-stacked before being thoroughly dried and cooled to an internal temperature not in excess of 50 °C.

9.3.3 A clean separated area for the sole purpose of cooling containers after retorting shall be provided. Such an area shall be:

a) enclosed with unauthorized entrance being restricted;

b) physically separated from areas in which steam is emitted; and

c) situated away from other normal factory traffic, other than the handling of trolleys or baskets with containers after retorting, there shall be no crossflow of other factory traffic along the route of the baskets or trolleys between the retorts and the cooling area.

9.3.4 After the containers have been cooled and dried, and only on instruction from a designated person, the baskets or trolleys may be moved out of the cooling area to a pick-up area. The process of removing the containers out of the trolleys or baskets and the stacking shall be done in such a way as to avoid rough handling or damaging of the containers or causing unnecessary stress to their seams or seals.

9.3.5 Containers, and in particular their seams, shall not be exposed to contamination. The equipment and conveyors used for the pick-up and stacking of containers shall be regularly sanitized. Hard metal surfaces against which the containers come into contact during the pick-up process in particular sharp points, projections or corners, shall where possible, be avoided or otherwise be covered with shock absorbing material to prevent damaging of the containers. Such pick-up equipment and conveyor lines shall be subjected to a regular routine inspection.

9.3.6 In the case of continuous cookers or retorts, the container runways on which the containers are transported from the cookers or retorts shall be maintained in a hygienic state and cans shall not roll on their double seams on the container runways.

9.4 Exterior of the end product container

The containers shall be clean with a normal appearance and metal cans shall be free from corrosion and shall not be deformed or have an abnormal appearance or be damaged. Containers shall be free from any defective seams, seals or closures, or signs of leaking or other defects.

Containers shall be free from abnormal stains.

9.5 Storage of the end product (see 4.2.22)

9.5.1 General

The end product storage areas shall be used solely for the intended purpose. The end product shall be stacked away from the floors and walls.

All containers of the same production code or batch code shall be stored together and not be mixed with containers of other production day's codes. Each stack or pallet with containers shall be identified with the code appearing on the containers and with their inspection status. Any production lots in which defects or a deviation were detected, shall be identified as such and shall be stored separately from other production lots. Any non-conforming production lots shall be identified as such and stored in an area physically separated from the rest of the end product stock.

9.5.2 Products not requiring refrigeration

Canned products not requiring refrigeration shall, both before and after labelling and packaging for commercial distribution, be stored in an orderly manner, in dry conditions, protected against steam, condensate, moisture, dust and the weather. Canned products shall not be stored under conditions that are conducive to corrosion of the containers or be exposed to temperature extremes.

The final product shall be stacked in such a way that container damage shall not occur due to pressure from the excessive mass of pallets with containers stacked above. Workers shall not be allowed to step on containers or on pallets with containers. Precautions shall be exercised to avoid container damaging in particular, with fork-lift truck handling.

9.5.3 Products requiring refrigeration

Where products are required to be stored under refrigeration, the storage temperature shall not exceed 4 °C (see 12.2.1(e). Refrigeration rooms shall be clean and shall be hygienically maintained. The product shall be protected against risks of corrosion.

10 Methods of physical examination

10.1 External and internal examination of containers

10.1.1 Code: Determine whether the code digits are legible and indelible and if embossed, examine for any abnormalities such as damaging the tinplate or lacquer.

10.1.2 Examine the seams, seals or closures and outer and inner surfaces of containers for any abnormalities or integrity defects.

10.2 External and internal examination of seams

10.2.1 Integrity of the hermetic sealing

Conduct external and internal examinations of container seams, seals or closures in accordance with the method provided by the container manufacturer to determine whether the container seam, seal or closure is in compliance with the prescribed specifications, parameters and attributes by the container manufacturer to ensure the integrity of the hermetic sealing.

10.2.2 Leak test by applying vacuum inside the can

10.2.2.1 Preparation of cans

a) Empty unused cans:

Immerse empty unused cans for 5 min in boiling water. Remove the cans from the boiling water and cool to 30 °C or below before testing.

b) End product:

In the case of 3-piece cans, open the end product by cutting out one of the lids of the can without damaging the circumference of the seam. In the case of 2-piece cans, remove the bottom of the can (opposite the seam) without damaging the expansion ring on the bottom end. After removal of the contents, immerse the can for 60 min in boiling water. Remove the cans from the boiling water and dry for 6 h at approximately 55 °C before testing.

10.2.2.2 Testing

Add sufficient water to submerge the entire seam. Place a rubber seal on the open end to cover the entire top of the circumference of the seam or expansion ring. Place a perspex plate hermetically connected to a vacuum tube on top of the rubber seal. Observe the entire seal covered with water at the opposite end of the can during the removal of air from the can. Appearance of a succession of air bubbles from the seam into the water indicates leakage through the seam at that particular point.

10.3 Determination of net mass of the contents of the container

10.3.1 Weigh unopened container.

10.3.2 Open container and remove the contents.

10.3.3 Wash, dry and weigh the container complete with lid.

10.3.4 Subtract the mass of the empty container from the mass of the unopened container. The resultant figure is the net mass.

10.4 Determination of the vacuum inside a container, the net headspace and the fill of the container

10.4.1 Vacuum

Tap the unopened container slightly on the surface of the inspection table to move the contents away from the inside surface of the lid. Impress the point of a vacuum gauge through the lid to measure the vacuum inside the container.

10.4.2 Net headspace

10.4.2.1 In case of:

a) a container with a lid attached by a double seam, partially cut out lid without removing or altering the height of the double seam; or in case of

b) another type of container, remove the lid.

10.4.2.2 Determine the average vertical distance, in mm, from the inside surface of the lid of the container to the upper level of the contents by taking measurements over the surface of the contents. The result is the net headspace.

10.4.3 Fill of container

10.4.3.1 In case of containers with lids attached by double seams, fill the container with water at room temperature to a vertical distance of 5 mm below the top level of the container. Weigh the container thus filled and determine the mass of the water by subtracting the mass of the container.

10.4.3.2 Draw off water from the filled container to the level of the contents as determined in 10.4.2, weigh the container with the remaining water and determine the mass of the remaining water by subtracting the mass of the container.

10.4.3.3 Divide the mass of the remaining water (see 10.4.3.2) by the mass of the water (see 10.4.3.1) and multiply by 100. The result is the percentage of the total volume capacity of the container occupied by the content expressed as the fill of the container.

10.4.3.4 In case of a container with a lid attached otherwise than by a double seam, remove the lid and proceed in accordance with 10.4.3.1 to 10.4.3.3, but fill the container to the top or to the level of the inside surface of the lid instead of to 5 mm below the top (see 10.4.3.1).

10.5 Determination of drained mass

10.5.1 Preparation of the product

10.5.1.1 Packs other than pudding packs

10.5.1.1.1 Maintain the container at room temperature approximately between 20 °C and 30 °C for a minimum of 12 h prior to examination.

10.5.1.1.2 Open and tilt the container to distribute the entire contents from the container on a pre-weighed sieve having a wire mesh with square openings of 2,8 mm × 2,8 mm.

10.5.1.1.3 Incline the sieve at an angle of approximately 17° to 20° and allow the contents to drain for 2 min, measured from the time the product is poured onto the sieve.

10.5.1.1.4 Immediately weigh the sieve containing the contents.

10.5.1.1.5 In case of a product with a sauce adhering to the contents or onto the sieve, wash the sauce off with a gentle spray of warm tap water (approximately 40 °C) using a wash bottle (e.g. plastic). Incline the sieve at an angle of approximately 17° to 20° and allow the contents to drain for 2 min, measured from the time the washing has finished.

10.5.1.1.6 Immediately remove adhering water from the bottom of the sieve by use of a paper towel and weigh the sieve containing the washed contents.

10.5.1.1.7 In case of products packed in a jelled medium that does not liquefy at a room temperature between 20 °C and 30 °C within 12 h, remove the jelled medium by hand and weigh the solid contents.

10.5.1.1.8 The drained or washed mass is obtained by subtracting the mass of the sieve from the mass of the sieve with the drained/or washed product.

10.5.1.1.9 In case of products containing optional ingredients such as vegetables, fruits, cereals or garnish, determine the total drained or washed mass as described above, then separate the optional ingredients and re-weigh. The mass of the material remaining on the sieve is the drained or washed mass of the meat content.

10.5.1.1.10 In the case of mutton-on-bone and similar packs, separate and weigh the bone after the total drained or washed mass has been determined.

10.5.1.1.11 If any edible offal or minor meat ingredient is mentioned in the name of the pack, separate and weigh it after the total drained or washed mass has been determined.

10.5.1.1.12 If a minimum content is specified for a vegetable or a cereal, or a combination of these, separate these ingredients and weigh the meat and/or edible offal ingredient after the total drained or washed mass has been determined.

10.5.1.2 Pudding packs

Proceed as in 10.5.1 after removal of the pastry from the product.

10.5.2 Expression of results

The percentage drained or washed mass (% D_m) is expressed as:

$$\% D_m = \frac{D_m}{d.n.m.} \times 100$$

where

D_m is the drained or washed mass;

d.n.m. is the declared net mass.

The percentage total drained or washed mass (% D_{tm}) (see 10.5.1.1.9) is expressed as:

$$\% D_{tm} = \frac{D_{tm}}{d.n.m.} \times 100$$

where

D_{tm} is the total drained or washed mass;

d.n.m. is the declared net mass.

The percentage drained or washed mass of the meat content (% D_{mmc}) is expressed as:

$$\% D_{mmc} = \frac{D_{mmc}}{d.n.m.} \times 100$$

where

D_{mmc} is the drained or washed mass of the meat content;

d.n.m. is the declared net mass.

Record the results as percentages of the *d.n.m.*

10.6 Meat-to-fat ratio

10.6.1 Remove the contents from the container.

10.6.2 Remove any packing material(s), fat or exuded material.

10.6.3 At ambient temperature, physically separate the fat from the meat. Determine the masses of the separated fat and the meat. Calculate the meat-to-fat ratio by dividing the mass of the meat by the mass of the separated fat.

10.7 Exuded fats and exuded material

10.7.1 Remove the contents from the container.

10.7.2 At ambient temperature, physically remove the exuded fat and determine the mass of the exuded fat. Calculate the percentage of exuded fat by dividing the mass of the exuded fat by the d.n.m of product and multiplying by 100.

10.7.3 At ambient temperature, physically remove any other exuded material and determine the mass of the exuded material. Calculate the percentage of exuded material by dividing the mass of the exuded fat by the d.n.m. of product and multiplying by 100.

11 Methods of chemical analysis

11.1 General

During the analysis, use only reagents of recognized analytical grade and use only distilled water or water of equivalent purity.

11.2 Preparation of sample for chemical analysis

11.2.1 Corned beef, corned meat, meat rolls, chopped meat and similar solid packs, minced meat products, meat pastes and potted meats

11.2.1.1 Where a product such as ham or cured shoulder of pork is packed in a jelled packing medium, separate and remove the packing medium, scraping it off where it adheres.

11.2.1.2 In the case of ham or cured shoulder without the packing medium and other applicable products, pass the **entire** contents of the container twice through a meat grinder.

11.2.1.3 Mix the ground sample thoroughly, using a pestle and mortar. Store the prepared sample in a well-closed container, in a refrigerator until it is required for use.

11.2.2 Sausages, meat balls and similar products

After draining the product or, in the case of sausages packed in fat or agar-agar or other jellied packing medium, after scraping off the adhering packing medium, pass the product twice through a meat grinder and then proceed as in 11.2.1.3.

11.2.3 Packing medium

Where the packing medium is required for analysis, strain it through a sieve of nominal aperture size 2 mm, or scrape it off where jellied packing medium adheres to the interior sides of the container or to the units, mix thoroughly, and transfer it to a container and store it as in 11.2.1.3.

11.2.4 Fats for melting point determination

Melt 10 g to 20 g of the fat in a small beaker and allow it to cool, stirring occasionally, until a faint turbidity appears. Stir the sample until it is homogeneous and set it aside for 24 h at 10 °C before determining the melting point.

11.3 Determination of protein nitrogen, protein and actual lean meat contents

Use SANS 6317, *Methods of chemical analysis of meat and fish products,* to determine the protein nitrogen content and then calculate the protein content by multiplying the nitrogen content by 6,25 and calculate the actual lean meat by multiplying the nitrogen content by 30.

11.4 Determination of fat content

Use SANS 6317, *Methods of chemical analysis of meat and fish products,* to determine the fat content.

11.5 Determination of crude starch content

Use SANS 6317 *Methods of chemical analysis of meat and fish products,* to determine the starch content.

11.6 Determination of chloride content (as sodium chloride)

11.6.1 Reagents

11.6.1.1 Nitrobenzene.

11.6.1.2 Nitric acid, diluted 1:2.

11.6.1.3 Sodium carbonate solution, a saturated solution.

11.6.1.4 Specification potassium thiocyanate solution, c(KCNS) = 0,1 mol/L.

11.6.1.5 Specification silver nitrate solution, $c(AgNO_3)$ = 0,1 mol/L, accurately specificationized.

11.6.1.6 Ferric alum indicator

A cold saturated solution of ferric ammonium sulfate ($NH_4Fe(SO_4)_2.12H_2O$) to which a few drops of the diluted nitric acid (11.6.1.2) have been added.

11.6.2 Procedure

11.6.2.1 Weigh accurately a suitable quantity of the prepared sample into an evaporating basin or crucible, moisten with the sodium carbonate solution, and dry on a water bath.

11.6.2.2 Char the dried sample and ash it at a temperature not exceeding 500 °C.

11.6.2.3 Extract the residue with the dilute nitric acid and filter into a 100 mL volumetric flask. Repeat the extraction and filtration once, wash the filter thoroughly with the dilute nitric acid, dilute the solution in the flask to the mark with the dilute nitric acid, and mix.

11.6.2.4 To a suitable aliquot in a 250 mL Erlenmeyer flask add 25 mL of the specification silver nitrate solution, 5 mL of the nitrobenzene, 1 mL of the ferric alum indicator, and shake well.

11.6.2.5 Titrate with the specification potassium thiocyanate solution.

11.6.2.6 Carry out a blank determination omitting the sample.

11.6.2.7 The difference between the blank titre and the test titre is the volume of silver nitrate used in the determination.

11.6.2.8 Calculate the chloride content (as sodium chloride), expressed as a percentage (% NaCl) of the product, using the formula:

$$\% \text{ NaCl} = \frac{V \times 5{,}845 \times c}{m}$$

where

V is the volume, in millilitres, of specification silver nitrate solution used in the determination;

c is the concentration of specification silver nitrate solution, in moles per litre;

m is the mass, in grams, of original sample represented by the aliquot used in the titration.

11.7 Determination of moisture content

Use SANS 6317, *Methods of chemical analysis of meat and fish products,* to determine the moisture content.

11.8 Determination of fibre content

11.8.1 Reagents

11.8.1.1 Sulfuric acid solution (0,255 ± 0,005) N. 1,25 g H_2SO_4/100mL. Concentration must be checked by titration.

11.8.1.2 Sodium hydroxide solution (0,313 ± 0,005) N. 1,25 g NaOH/100 mL, free or nearly so from Na_2CO_3. Concentration must be checked by titration.

11.8.1.3 Prepared ceramic or asbestos fibre

Place 60 g ceramic or asbestos fibre in a blender, add 800 mL H_2O, and blend for 1 min at low speed.

11.8.1.4 Alcohol 95 % or reagent alcohol, methanol or isopropanol.

11.8.1.5 Antifoam

Polydimethylsiloxane compound diluted 1 + 4 with mineral spirits or petroleum ether, or polydimethylsiloxane emulsion diluted 1 + 4 with H_2O.

11.8.1.6 Bumping chips or granules

Aluminium 90 grit granules.

11.8.2 Apparatus

11.8.2.1 Digestion apparatus with a condenser to fit a 600 mL beaker, and a hotplate adjustable to a temperature that will bring 200 mL H_2O at 25 °C to a rolling boil in (15 ± 2) min.

11.8.2.2 Sinter quartz crucibles

11.8.2.3 Desiccator with efficient desiccant such as 4-8 mesh silica gel. $CaCl_2$ is not satisfactory.

11.8.3 Procedure

11.8.3.1 Extract 2 g of ground sample with ether or petroleum ether (If fat is < 1%, extraction may be omitted).

11.8.3.2 Prepare a blank by treating ± 2 g (dry mass) ceramic or asbestos fibre with acid and alkali as in the procedure below.

11.8.3.3 Transfer the sample to the 600 mL beaker, avoiding fibre contamination from paper or brush. Add ± 1,5 g to 2,0 g dry mass of prepared ceramic or asbestos fibre (see 11.8.1.3), 200 mL boiling 1,25 % H_2SO_4 and 1 drop diluted antifoam (see 11.8.1.5). Bumping granules (see 11.8.1.6) may also be added.

11.8.3.4 Place the beaker on the digestion apparatus with the pre-adjusted hotplate (see 11.8.1.1) and boil for exactly 30 min, rotating the beaker periodically to keep solids from adhering to the sides.

11.8.3.5 Remove the beaker and filter through a sinter quartz crucible.

11.8.3.6 Return the material and residue on the crucible to the beaker by washing with 200 mL boiling 1.25 % NaOH, and boil for exactly 30 min.

11.8.3.7 Remove the beaker and filter as in 11.8.3.5.

11.8.3.8 Wash the filter 3 times with boiling water. Drain free of excess water and wash with 25 mL alcohol.

11.8.3.9 Dry the crucible for 2 h at 130 °C ± 2 °C. Cool in a desiccator and weigh.

11.8.3.10 Ignite for 30 min at 600 °C ± 15 °C. Cool in a desiccator and reweigh.

11.8.4 Calculation

The percentage crude fibre in the ground sample is C

$$\text{where } C = \frac{(\textit{Loss in mass on ignition} - \textit{loss in mass of ceramic fibre blank}) \times 100}{\textit{mass of sample}}$$

11.9 Determination of iodine value (according to Wijs)

11.9.1 Reagents

11.9.1.1 Carbon tetrachloride, re-distilled.

11.9.1.2 Glacial acetic acid

11.9.1.3 Iodine trichloride solution, one ampoule.

11.9.1.4 Iodine

11.9.1.5 Iodine monochloride solution

Dissolve 8 g of iodine trichloride (ampoule) in ± 200 mL of glacial acetic acid. Dissolve 9 g of iodine in 300 mL of carbon tetrachloride. Mix the two solutions and dilute with glacial acetic acid to 1L.

NOTE Iodine monochloride solution should be kept in a stoppered bottle, protected from light and stored at a temperature not exceeding 15 °C.

11.9.1.6 Specification sodium thiosulfate solution, $c(NaS_2O_3)$ = 0,1 mol/L, accurately specificationized.

11.9.1.7 Starch indicator solution

Mix approximately 0,5 g of soluble starch to a paste with a little cold water and run it, with constant stirring, into 25 mL of boiling water. Boil for 2 min and allow to cool. Use 0,5 mL of this solution for each determination.

11.9.2 Procedure

11.9.2.1 Accurately weigh out 0,1 g of the fat (lard or dripping) into a clean glass-stoppered iodine flask of capacity 250 mL.

11.9.2.2 Dissolve the fat in 10 mL of the carbon tetrachloride and add exactly 25 mL of the iodine monochloride solution.

11.9.2.3 Allow to react in the dark for exactly 60 min, add 100 mL of water and 20 mL of the potassium iodide solution.

11.9.2.4 Titrate the excess iodine with the specification thiosulfate solution using the starch solution as indicator.

11.9.2.5 Carry out a blank determination omitting the fat.

11.9.3 Calculation

Calculate the iodine value (Wijs) using the formula:

$$\text{Iodine value} = \frac{(V_1 - V_2) \times 12{,}69 \times c}{m}$$

where

V_1 is the volume, in millilitres, of specification sodium thiosulfate solution required for the blank;

V_2 is the volume, in millilitres, of specification sodium thiosulfate solution required for the fat;

c is the concentration of the specification sodium thiosulfate solution, in moles per litre;

m is the mass, in grams, of fat taken for the determination.

11.10 Determination of free fatty acids as oleic acid

11.10.1 Reagents

11.10.1.1 Diethyl ether.

11.10.1.2 Ethanol, 96 %.

11.10.1.3 Specification potassium hydroxide solution, c(KOH) = 0,1 mol/L, accurately specificationized.

11.10.1.4 Phenolphthalein indicator solution

A solution of 10 g/L in ethanol.

11.10.2 Procedure

11.10.2.1 Dissolve approximately 10 g of the fat, accurately weighed, in a mixture of equal volumes of the ether and the ethanol that has been neutralized with the specification potassium hydroxide solution to a faint pink shade using the phenolphthalein solution as indicator.

11.10.2.2 Titrate with the specification potassium hydroxide solution to a faint pink shade that persists for 15 s.

11.10.2.3 Calculate the free fatty acids (as oleic acid), expressed as a percentage by mass of the product, using the formula:

$$\text{\% free fatty acids} = \frac{V \times c \times 28{,}25}{m}$$

where

V is the volume, in millilitres, of specification potassium hydroxide used;

c is the concentration of the specification potassium hydroxide solution, in moles per litre;

m is the mass, in grams, of sample taken.

11.11 Determination of saponification value

11.11.1 Reagents

11.11.1.1 Alcoholic potassium hydroxide solution

Dissolve 1,5 g of silver nitrate in 3 mL of water and add the solution to 1 L of ethanol (96 %).

11.11.1.2 Specification hydrochloric acid solution, c(HCl) = 0,5 mol/L, accurately standardized.

11.11.1.3 Phenolphthalein indicator solution

Prepare as in 11.10.1.4.

11.11.2 Procedure

11.11.2.1 Accurately weigh approximately 2 g of fat into a 250 mL flask, add exactly 25 mL of the alcoholic potassium hydroxide, and heat under reflux for 1 h.

11.11.2.2 Cool, add 0,5 mL of the phenolphthalein indicator, and titrate with the 0,5 N hydrochloric acid.

11.11.2.3 Carry out a blank determination in the same way, omitting the fat.

11.11.2.4 Calculate the saponification value, expressed as milligrams KOH per gram of the product, using the formula:

$$\text{Saponification value} = \frac{(V_1 - V_2) \times 56{,}1 \times c}{m}$$

where

V_1 is the volume, in millilitres, of specification hydrochloric acid solution required for the blank;

V_2 is the volume, in millilitres, of specification hydrochloric acid solution required for the fat;

c is the concentration of the specification hydrochloric acid solution, in moles per litre;

m is the mass, in grams, of sample taken.

11.12 Determination of melting point

11.12.1 Apparatus

An acceptable Ubbelohde apparatus for flow and drop points.

11.12.2 Procedure

11.12.2.1 Fill the cup that fits on to the thermometer with the prepared fat sample (see 11.2.4), and so compress the sample that all air bubbles are excluded.

11.12.2.2 Attach the cup to the thermometer and use a cork to so fit the thermometer into a boiling tube that the cup is approximately 20 mm to 30 mm from the bottom of the tube.

11.12.2.3 Immerse the tube in a beaker of water equipped with a stirring device, and heat the water at a rate of 1 °C/min.

11.12.2.4 Regard the temperature at which the first drop of liquid falls from the cup as the melting point of the sample.

11.13 Determination of the refractive index

Determine the refractive index at the stated temperature in a Abbé type refractometer.

11.14 Determination of nitrite and nitrate contents

Use SANS 6317, *Methods of chemical analysis of meat and fish products,* to determine the nitrite and nitrate content.

11.15 Determination of phosphorus

Use SANS 6317, *Methods of chemical analysis of meat and fish products,* to determine phosphorus content.

11.16 Incubation and inspection of containers

11.16.1 Commercially sterilized cured products

11.16.1.1 Incubation at 37 °C

Incubate the containers at 37 °C for 14 d and then examine a representative sample(s), in accordance with 12.2 for evidence of spoilage.

11.16.1.2 Incubation at 55 °C

Incubate the containers at 55 °C for 10 d and then examine a representative sample(s), in accordance with 12.2, for evidence of spoilage.

11.16.2 All other products except rendered fats and semi-preserved products

11.16.2.1 Incubation at 37 °C

Incubate the containers at 37 °C for 14 d and then examine a representative sample(s), in accordance with 11.17, for evidence of spoilage.

11.16.2.2 Incubation at 55 °C

Incubate the containers at 55 °C for 10 d and then examine a representative sample(s), in accordance with 11.17, for evidence of spoilage.

11.16.3 Fats

Incubate the containers at 37 °C for 14 d and then examine a representative sample(s), in accordance with 11.17, for evidence of spoilage.

11.17 Examination for general spoilage organisms

Use SANS 6257 (SABS SM 1257), *Microbiological examination of canned meat and fish products.* Evaluate for compliance with 6.14.2.1.

11.18 Test for efficacy of cleaning and disinfecting of plant, equipment and utensils

Use SANS 5763 (SABS SM 763), *Efficacy of cleaning plant, equipment and utensils: swab technique.* Evaluate for compliance with 4.5.6.

11.19 Determination of the total count of viable organisms

Use SANS 4833/ISO 4833 (SABS ISO 4833), *Microbiology – General guidance for enumeration of micro-organisms: colony count technique at 30 °C.* Evaluate for compliance with 4.4.1.

11.20 Determination of the presence of E. coli

Use SANS 7251/ISO 7251 (SABS ISO 7251), *Microbiology – General guidance for the enumeration of presumptive Escherichia coli; Most probable number technique.* Evaluate for compliance with 5.19.

11.21 Microbiological examination of water

Use SANS 5221 (SABS SM 221), *Microbiological analysis of water – General test methods.* Evaluate for compliance with 4.4.1.

11.22 Determination of viable Salmonella organisms

Use SANS 6579/ISO 6579 (SABS ISO 6579), *Microbiology – General guidance on methods for the detection of Salmonella.* Evaluate for compliance with 5.20.

12 Labelling and marking of containers

12.1 Details required on each container, label or packing material

12.1.1 Details

Subject to 12.6 and in addition to the markings required in terms of the regulations promulgated under the Trade Metrology Act, as well as the Foodstuffs, Cosmetics and Disinfectants Act, the following information shall appear in legible and indelible marking on each container or on a label securely attached to each container:

a) The full name and physical address of the manufacturer, producer, proprietor, or controlling company or, in the case of containers packed for any other person or organization, the full name and physical address of that person or organization;

b) the name and true description, taking into cognizance the provisions of the Merchandise Marks Act 1941 (Act 17 of 1941) (as amended from time to time), of the contents (see also 12.1.2) including, where applicable, the nature of the medium in which the product is packed and the presence of bone that is, as such, a constituent of a product;

c) where applicable, a statement of ingredients, including the presence, as relevant, of non-meat proteinaceous material by name, and vegetable fat or oil, in descending order of quantities present on the ingoing basis and/or in the final product;

d) where applicable, the presence of artificial colourants in plain type of at least 1,5 mm face measurement;

e) where the product is required to be stored under refrigeration the words "Perishable - keep under refrigeration at a temperature not exceeding 4 °C", in a prominent position in plain type of at least half the size of that used for the name of the product with a minimum of 3 mm face measurement, except that the word "Perishable" shall be in bold type of at least 4,5 mm face measurement;

f) the declared net mass of the contents;

g) the product code, the date of canning, sub-code or the batch number (if used), and the factory identification embossed or otherwise indelibly marked on the container or, in the case of jars, on the cap or label; any mark or code used for the foregoing shall be disclosed for record purposes to the authority administering this specification;

h) information required in terms of the relevant clause dealing with the specific product; and

i) words indicating the country of origin where the product is produced.

12.1.2 True description of contents

12.1.2.1 Minimum meat content for meat product designation

A product presented or described as a meat product, or a product on which a statement or claim appears implying that the product is a meat product, or a product with wording in the product name or wording on the main panel implying that the product contains meat, shall contain at least 10 % by mass of actual total meat determined in accordance with the total result of 11.3 plus 11.4 or the drained mass of the meat content shall be at least 10 % of the d.n.m. determined in accordance with 10.5.

12.1.2.2 Designation of product

12.1.2.2.1 Unless the meat or edible offal or both (as appropriate) of a product consisting of meat or edible offal or both, and of vegetables, cereal, or other analogous ingredient, constitutes the largest single ingredient on the ingoing basis and, in the end product, constitutes at least 25 % of the d.n.m., the meat or edible offal or both (as appropriate) shall not appear first in the designation of the product.

12.1.2.2.2 In a product that consists of vegetables, cereal, and other similar ingredients with meat or edible offal or both (as such or in prepared form) and falls within the scope of this specification but does not comply with the particular requirements specified for meat or edible offal content, provided that the content of meat or edible offal or both is at least 15 % (10 % in the case of foods for infants), the presence of meat or edible offal shall be declared in the title of the product by means of descriptions such as "Y with X" or "Y containing X" where Y is the basic name of the product (e.g. baked beans in tomato sauce) and X is the meat or edible offal ingredient (e.g. meat balls, sausage).

12.1.2.2.3 Products which undergo a smoking process by exposure to generated smoke, shall be labelled "smoked X" on the main panel of the label or packing material. Any addition of a smoke-flavour that is not obtained by exposure to generated smoke, shall be declared on the main panel of the label. Smoke-flavoured products that have not undergone a process by exposure to generated smoke, shall be labelled as "smoke-flavoured" on the main panel of the label or packaging material. The qualifying word(s) e.g. "smoked" shall appear in immediate conjunction with the product name "X", in a letter size of at least half the size in which the name "X" is featured and of equal prominence and boldness.

12.1.2.3 Meat pastes

In a product, other than liver paste (see 7.17.4.1), in the name of which reference is made to one kind of meat only, at least 80 % of the total meat content shall consist of the named meat.

Where in the name of the product two kinds of meat are referred to, the named meats shall constitute at least 80 % of the total meat content. In addition, the kind of meat named first shall constitute at least 50 % of the total meat content, and that named second at least 20 %, except that if kidney or liver is named second, the minimum requirement shall be 10 % of the total meat and edible offal content.

If three kinds of meat are named in the description of the product, the named meats shall constitute at least 80 % of the total meat content. The meat named first shall constitute at least 40 % of the total meat content, and each of the other named meats at least 15 % (except that if kidney or liver is named second or third the minimum requirement for each shall be 10 % of the total meat and edible offal content). The three kinds of meat shall be named in descending order of contents.

For the purposes of true description of contents, cured pork may be regarded as ham.

12.1.2.4 Potted meat

In a product in the name of which reference is made to one kind of meat only, at least 85 % of the total meat content shall consist of the named meat.

In a product in the name of which two kinds of meat are referred to, the named meats shall constitute at least 85 % of the total meat content. In addition, the kind of meat named first shall constitute at least 50 % of the total meat content, and that named second at least 25 %. If three kinds of meat are named in the description of the product, the named meats shall constitute at least 85 % of the total meat content. The meat named first shall constitute at least 40 % of the total meat content, and each of the other named meats at least 15 %. The three kinds of meat shall be named in descending order of contents.

12.1.2.5 Use of generic names

When a generic name (or names) of animal meat(s) such as beef or pork appears in the name of the product, that product shall not contain any other meat, edible offal, fat, natural binder, etc., which did not originate from the type of animal meat that appear in the name of the product.

12.1.2.6 Origin of contents

The origin of edible offal, fats or natural binder or any preparation from types of animal other than those from which the meat used in the product is derived shall be declared on the label.

12.2 Labelling and marking

12.2.1 Labelling operations

12.2.1.1 Labelling area

Before the start of the labelling operation, the area shall be cleared of any stray cans. The labelling area shall be maintained in a clean, tidy and orderly condition.

12.2.1.2 Condition and handling of containers during labelling

Containers shall be in a condition complying with 9.4.

The handling of containers during the labelling process shall be done in a manner so as to avoid container abuse or damaging or that their seams are subjected to undue stress or mechanical shock.

12.2.1.3 Labels

Labels, outer wrappers, outer cartons, lithographic markings and printing on containers, pictorial presentation and colouring shall be in accordance with the labelling requirements of section 12.1.

The size of the label, outer wrapper, outer carton shall be suitable to the container size without being oversized. Printing shall be correct, proper and neat.

It is recommended that the authority administering this specification be consulted with regard to the printed lettering size, statements, pictorial presentation and colouring on newly designed labels, outer wrappers, outer cartons or lithographed cans before they are taken into use.

12.2.1.4 Attachment of labels

Labels, outer wrappers or outer cartons shall not be attached or applied to containers by any person other than the manufacturer or by his authorized agent.

Labels, outer wrappers or outer cartons on containers, shall be clean, neat, unspoiled, undamaged and labels or outer wrappers shall be securely attached at the time of despatch from the factory (or at the time of arrival when imported).

Misaligned labels, excess glue or lack of glue, or loose or pleated labels or outer wrappers shall not be present (see 12.2.1.9 and 12.2.1.10). Labels or outer wrappers shall not be superimposed over other labels or over outer wrappers that have been affixed on to containers or onto lithographic printed containers.

Materials such as adhesives or glues used for attaching or applying labels, outer wrappers or outer cartons or closing of packages shall not be hygroscopic, or liable to deteriorate during storage after being applied or conducive to corrosion of the can or lid.

12.2.1.5 Packages – outer containers

Packages in which containers are packed shall be clean, neat and undamaged. Outer containers such as boxes or cases shall be suitable for the purpose of use, be of correct size to avoid damaging of containers by squeezing or loose movement of the containers inside the outer container. Containers shall not be packed in outer containers in positions prone to cause damaging such as packing containers on their sides.

Outer containers shall be strong enough to protect the finished product.

12.2.1.6 Marking of packages

The following regarding the containers in the package shall be printed or stencilled on the outside of every package. The number and size or net mass of the containers and the information required by 12.1.1(a), (b), (f), (g), and (i) where applicable, (e), except that the business address of the manufacturer need not be the full address but shall be sufficient for identification purposes.

In addition to the date code required by 13.1 (g), any batch number or sub-coding indicating a time period of the production date, and/or any line or seamer number, which appeared on the containers shall also be printed or stencilled on every package. When a code system other than the conventional lettering and digital form such as a bar or edge coding system is used, sufficient information shall appear on the packages to identify the production date and any sub-coding.

12.2.1.7 Containers for export

Provided that the requirements of the importing country are met and subject to there being no attempt to misrepresent the product, products may be exported either unlabelled, or labelled differently from the requirements of this specification. The requirements of 12.2.1.6 shall, however, apply, except that a code mark may be used in lieu of the name of the manufacturer.

12.2.1.8 Control for correct labelling

Only production lots complying with this specification shall be labelled provided that containers of production lots which do not comply with or have not been manufactured in accordance with this specification shall not be labelled unless a sales permit has been issued by the authority administrating this specification and the label and consumer packages of the containers are in compliance with the conditions of that permit.

A system of control and precautionary measures shall be practised to prevent incorrect labelling or labelling of production lots or containers not qualified for a specific label. The system shall ensure that the correct label be identified and used.

Only production lots qualified and selected for that specific label used shall be labelled or be present in the labelling area during the time of labelling. Any containers of production lots not complying with the specific label used, shall not be within the immediate labelling area. Only containers of the same production lot code shall be labelled at a time. Lots existing out of a mixture of various production lot codes shall not be labelled.

Control checks shall be conducted on production lots immediately before labelling and after labelling. (See 12.2.1.9 and 12.2.1.10). Necessary screening of production lots such as for defected seams or defected, abnormal, rusted or damaged containers shall be completed before the production lots are taken into the labelling area.

Sighting stations for inspections shall be provided on the conveyor lines before and after labelling.

12.2.1.9 Control checks

Control checks shall be conducted and recorded on a regular basis during labelling (see 12.2.1.8 and 12.2.1.10). Such checks shall be done on the condition of containers and for the presence of abnormal containers (see 9.4 and 12.2.1.2), the condition of labels and incorrect labelling (see 12.2.1.3) defected attachment of labels (12.2.1.4), condition of packages (12.2.1.5), marking of packages (12.2.1.6 and 12.2.1.7) and for control for correct labelling (12.2.1.8) and condition of the labelling area (12.2.1.1).

12.2.1.10 Labelling records

12.2.1.10.1 A daily record shall be kept of the following:

a) product labelled;

b) code, including any sub-code or line code and container size;

c) label used;

d) where applicable, the serial number of the compliance certificate(s) of production lot(s) labelled;

e) number of containers labelled; and

f) destination of consignment with adequate information in case of a recall of the consignment.

12.2.1.10.2 Records shall be kept of control checks (see 12.2.1.8 and 12.2.1.9) done during labelling and consequent findings. Number of containers rejected due to obvious seam defects, damages and cans with an abnormal appearance shall be recorded.

12.2.1.11 Traceability and recall procedures

The record keeping system based on labelling records shall be established so that individual lots of the product in a consignment can be traced from the factory to the point of retail distribution. The recall procedures, when necessary, shall be established in consequence.

DEPARTMENT OF LABOUR
DEPARTEMENT VAN ARBEID

No. R. 1053 **1 August 2003**

LABOUR RELATIONS ACT, 1995

BARGAINING COUNCIL FOR THE CONTRACT CLEANING INDUSTRY (NATAL): EXTENSION OF RE-ENACTMENT AND AMENDMENT OF MAIN AND PROVIDENT FUND COLLECTIVE AGREEMENT TO NON-PARTIES

I, Membathisi Mphumzi Shepherd Mdladlana, Minister of Labour, hereby in terms of section 32 (2) of the Labour Relations Act, 1995, declare that the Collective Agreement which appears in the Schedule hereto, which was concluded in the Bargaining Council for the Contract Cleaning Industry (Natal), and is binding in terms of section 31 of the Labour Relations Act, 1995, on the parties which concluded the Agreement, shall be binding on the other employers and employees in that Industry with effect from 1 August 2003, and for the period ending 29 February 2004.

M.M.S. MDLADLANA

Minister of Labour

No. R. 1053 **1 Augustus 2003**

WET OP ARBEIDSVERHOUDINGE, 1995

BEDINGINGSRAAD VIR DIE KONTRAKSKOONMAAKBEDRYF (NATAL): UITBREIDING VAN HERBEKRAGTIGING- EN WYSIGING VAN HOOF- EN VOORSORGFONDS KOLLEKTIEWE OOREENKOMS NA NIE-PARTYE

Ek, Membathisi Mphumzi Shepherd Mdladlana, Minister van Arbeid, verklaar hierby kragtens artikel 32 (2) van die Wet op Arbeidsverhoudinge, 1995, die Kollektiewe Ooreenkoms wat in die Engelse Bylae hierby verskyn, en wat in die Bedingingsraad vir die Kontrakskoonmaakbedryf (Natal), aangegaan is en kragtens artikel 31 van die Wet op Arbeidsverhoudinge, 1995, bindend is op die partye wat die Ooreenkoms aangegaan het, bindend vir die ander werkgewers en werknemers in daardie Bedryf, met ingang van 1 Augustus 2003, en vir die tydperk wat op 29 Februarie 2004 eindig.

M.M.S. MDLADLANA

Minister van Arbeid

SCHEDULE

BARGAINING COUNCIL FOR THE CONTRACT CLEANING INDUSTRY (NATAL): RE-ENACTMENT AND AMENDMENT OF MAIN AND PROVIDENT FUND COLLECTIVE AGREEMENT

in accordance with the provisions of Labour Relations Act, 1995, made and entered into by and between the

National Contract Cleaners' Association (Kwa-Zulu Natal Branch)

(hereinafter referred to as the "employers" or the "employers organisation"), of the one part, and the

Bawn Allied Workers Union (South Africa)

National General Workers' Union (NAGEWU)

South African Transport and Allied Workers' Union (SATAWU)

(hereinafter referred to as the "employees" or the "trade unions"), of the other part, being the parties to the Bargaining Council for the Contract Cleaning Industry (Natal).

1. SCOPE OF APPLICATION OF AGREEMENT

(1) The terms of this Agreement shall be observed in the Contract Cleaning Industry in the Province of Natal as it existed immediately prior to the date of commencement of the Constitution of the Republic of South Africa, 1993 (Act No. 200 of 1993)—

(a) by all employers who are members of the employers' organisation and by all employees who are members of the trade unions; and

(b) by all employers and employees, other than those referred to in paragraph (a), who are engaged in the Contract Cleaning Industry in the area specified.

(2) The provisions of this Agreement do not apply to non-parties in respect of clauses 1 (1) (a), 2 and 3.

2. PERIOD OF OPERATION OF AGREEMENT

(1) This Agreement shall come into operation from date of promulgation and shall remain in force until 29 February 2004.

(2) The parties agree to abide by clause 10.4 of the Council Constitution which reads as follows:

"The parties agree that any agreement reached between them shall not be legally binding on any parties concerned unless such agreement has been reduced to writing, has been signed by all the parties, promulgated and extended to non parties by way of the *Government Gazette*."

3. SPECIAL PROVISIONS

The provisions of clauses 6, 11.3, 17.2 and 19 of the Agreement published under Government Notice No. R. 251 of 26 February 1999 as amended and extended by Government Notices Nos. R. 48 of 28 January 2000, R. 180 of 25 February 2000, R. 392 of 18 May 2001 and R. 241 of 1st March 2002 (hereinafter referred to as the Former Agreement") as further re-enacted, extended and amended from time to time, shall apply to employers and employees.

4. GENERAL PROVISIONS

The provisions of clauses 3 to 5, 7 to 11.2, 11.4 to 16, 17.1, 18 and 20 to 33 of the former agreement (as further extended, renewed, amended and re-enacted from time to time), shall apply to employers and employees.

5. CLAUSE 4: REMUNERATION

Substitute the following for clause 4 (1):

"An employer shall pay his employees for ordinary hours worked in the regions concerned at the following rates:

(1) Magisterial districts of Durban, Pinetown, Inanda and Chatsworth: R7,27 per hour (or part thereof), calculated on a *pro rata* basis for all employees.

(2) The rest of Natal: R6,22 per hour (or part thereof) calculated on a *pro rata* basis for all employees.".

6. CLAUSE 4: REMUNERATION

Substitute the following for clause 4 (5):

"An annual incentive bonus will be paid, to all employees in employment on 30 November, between 30 November and 15 December each year. The bonus will be as follows:

(a) An amount equivalent to three times the employee's weekly wage as at 30 November;

(b) in the year 2003 the third week of the incentive bonus will be *pro rata* from the date of promulgation to 30 November, calculated on the number of full calendar months divided by 12;

(c) should an employee be employed after 1 December each year, the bonus will be *pro rate* calculated on the number of full calendar months service divided by 12 and multiplied by three times his weekly wage as at 30 November, subject to clause (b) above.

7. CLAUSE 18: COUNCIL FUNDING

Substitute the following for clause 18.2 (a):

"shall deduct an amount of R4,00 from the monthly wage of each of his employees (other than casual employees);"

8. CLAUSE 18: COUNCIL FUNDING

Substitute the following for clause 18.2 (c):

"shall forward such combined employer/employee sum, in total, to the Secretary of the council, by not later than the seventh day of the month following that on which the transactions referred to in (a) and (b) above were performed."

9. CLAUSE 30: PROVIDENT FUND

Substitute the following for clause 30.5 (a):

Every member shall contribute 5% of his monthly wage to the fund.

10. ADD THE FOLLOWING CLAUSE

"CLAUSE 33: COMPANY PRIORITY LIST

33.1 A company will set up a priority list to assist cleaners whose fixed term contracts have come to an end due to the termination of the company's contract with the client.

33.2 The company will not employ any new staff until such time as all the ex-employees as mentioned above have been assigned a new fixed term contract unless—

33.2.1 should all ex-employees on the priority list not have suitable skills to carry out the tasks required by the client, the company may then employ someone new with the necessary skills;

33.2.2 when the company is granted a new contract and the client wishes for their existing staff to be employed, these staff will take preference over ex-employees on the priority list and may be employed.

33.3 Should there still be ex-employees on the priority list and the company lose another contract, then the ex-employees whose contract came to an end later will be placed at the bottom of the list. Ex-employees names will remain on the priority list for a maximum period of twelve (12) months.

33.4 The fixed term contracts offered may be more or less working hours per week than what they had been previously contracted for.

33.5 When the cleaner, whose fixed term contract has come to an end due to the contract with the client being terminated, is being paid their final remuneration they shall leave a telephone number in order for them to be contacted in regard a new fixed term contract.

The ex-employee's name will be taken off the priority list if—

33.5.1 he fails to report as instructed after the third phone call at the number given. When the ex-employee fails to report to the office as instructed on the first and second occasions the ex-employee's name will be placed at the bottom of the priority list;

33.5.2 an ex-employee has refused an offer of a new contract in the same municipal area for any reason, that person will be removed from the priority list.

33.6 Once another contract has been identified the ex-employee will sign a new fixed term contract and—

33.6.1 as new employees they will be eligible to join the provident fund as from the date of commencing the new fixed term contract;

33.6.2 as new employees the incentive bonus will be pro-rata from the date of commencing the new fixed term contract;

33.6.3 as new employees the sick and annual leave cycle will be calculated from the date of commencing the new fixed term contract.

33.7 This clause shall not apply to contracts lost due to poor performance in terms of the Labour Relations Act. However, the company must disclose the employee's file to show that the ex-employee was disciplined in the past six (6) months for poor performance.

33.8 This clause shall not in any way give employees expectation of continued employment over and above their fixed term contract of employment."

Signed at Durban on the 2nd day of April 2003 for the National Contract Cleaners Association (Kwa-Zulu Natal Branch).

D. E. SITHOLE

For BAWU

V. MHLONGO

For NAGEWU

S. NTSHAKALA

For SATAWU

E. WILLIAMS

As witness: Secretary of the Bargaining Council

No. R. 1094 **1 August 2003**

LABOUR RELATIONS ACT, 1995

BARGAINING COUNCIL FOR THE WORSTED TEXTILE MANUFACTURING INDUSTRY: RENEWAL OF PERIOD OF OPERATION FOR THE MAIN COLLECTIVE AGREEMENT

I, Thembinkosi Mkalipi, Executive Manager: Collective Bargaining, duly authorised thereto by the Minister of Labour, hereby, in terms of section 32 (6) (a) (ii) of the Labour Relations Act, 1995, declare the provisions of Government Notices Nos. R. 805 of 31 August 2001, R. 804 of 14 June 2002 and R. 163 of 7 February 2003 to be effective from the date of publication of this notice and for the period ending 30 June 2004.

T. MKALIPI

Executive Manager: Collective Bargaining

No. R. 1094 **1 Augustus 2003**

WET OP ARBEIDSVERHOUDINGE, 1995

BEDINGINGSRAAD VIR DIE KAMSTOFTEKSTIELNYWERHEID: HERNUWING VAN PERIODE VAN HOOF KOLLEKTIEWE OOREENKOMS

Ek, Thembinkosi Mkalipi, Uitvoerende Bestuurder: Kollektiewe Bedinging, behoorlik daartoe gemagtig deur die Minister van Arbeid, verklaar hierby, kragtens artikel 32 (6) (a) (ii) van die Wet op Arbeidsverhoudinge, 1995, dat die bepalings van Goewermentskennisgewings Nos. R. 805 van 31 Augustus 2001, R. 804 van 14 Junie 2002 en R. 163 van 7 Februarie 2003 van krag is met ingang van die datum van publikasie van hierdie kennisgewing en vir die tydperk wat op 30 Junie 2004 eindig.

T. MKALIPI

Uitvoerende Bestuurder: Kollektiewe Bedinging

DEPARTMENT OF TRANSPORT
DEPARTEMENT VAN VERVOER

No. R. 1089 **1 August 2003**

NATIONAL LAND TRANSPORT TRANSITION ACT, 2000 (ACT No. 22 OF 2000)

In terms of section 5 of the National Land Transport Transition Act, 2000 (Act No. 22 of 2000), I, Jeff Radebe, Acting Minister of Transport, after consultation with MECs have made regulations for the preparations of the outstanding transport plans as contained in this Schedule hereunder:

1. Minimum requirements for preparation of Operating License Strategy (OLS);
2. Minimum requirements for preparation of Rationalisation Plan (RATPLAN);
3. Minimum requirements for preparation of Integrated Transport Plan (ITP) and
4. Minimum requirements for preparation of Public Transport Plan (PTP) by all Planning Authorities.

J. RADEBE

Acting Minister of Transport

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