



REPUBLIC OF SOUTH AFRICA GOVERNMENT GAZETTE

REGULASIEKOERANT No. 1584

As 'n Nuusblad by die Poskantoor Geregistreer

PRYS 10c PRICE
OORSEE 15c OVERSEAS
POSVRY—POST FREE

REGULATION GAZETTE No. 1584

Registered at the Post Office as a Newspaper

VOL. 81]

PRETORIA, 10 MAART 1972
10 MARCH

[No. 3409

GOEWERMENSKENNISGEWINGS

DEPARTEMENT VAN ARBEID

No. R. 342 10 Maart 1972

WET OP VAKLEERLINGE, 1944, SOOS GEWYSIG
NASIONALE VAKLEERLINGSKAPKOMITEE VIR
DIE BOUNYWERHEID

VOORGENOME INTREKKING EN VOOR- SKRYWING VAN LEERVOORWAARDES

Ek, Marais Viljoen, Minister van Arbeid, handelende
krachtens artikel 16 van bogemelde Wet, is voornemens
om—

(a) Goewermenskennisgewings R. 3014 van 1 Augustus 1969, soos toegepas by Goewermenskennisgewing R. 3394 van 26 September 1969, R. 155 van 30 Januarie 1970, soos toegepas by Goewermenskennisgewing R. 1303 van 14 Augustus 1970, en R. 2042 van 20 November 1970, soos toegepas by Goewermenskennisgewing R. 89 van 29 Januarie 1971, in te trek;

(b) vir die Bounywerheid—

(i) die ambagte genommer 1 tot 2 en 4 tot 23 hieronder, aan te wys as ambagte ten opsigte waarvan die bepalinge van die Wet van toepassing is in die volgende gedeeltes van die regsgebied van die Nasionale Vakleerlingskapkomitee vir die Bounywerheid:

Distrikte A.—Die landdrosdistrikte Alberton, Benoni, Bethlehem, Boksburg, Brakpan, Germiston, Harrismith, Heidelberg (Transvaal), Johannesburg, Kempton Park, Krugersdorp, Letaba, Nigel, Oberholzer, Oos-Londen, Pietersburg, Potgietersrus, Pretoria (uitgesonderd die myngebied Premiermyn), Randfontein, Roodepoort, Senekal, Soutpansberg, Springs en Westonaria; die munisipale gebiede Bothaville, Brits, Bultfontein, Kroonstad, Middelburg (Transvaal), Nelspruit, Rustenburg, Theunissen, Ventersburg, Wesselsbron en Witbank; die gebied binne 'n radius van 15 myl vanaf die Hoofposkantoor, Bloemfontein; die gebiede binne 'n radius van 10 myl vanaf die Hoofposkantoor, Klerksdorp en Potchefstroom, en die gebiede binne 'n radius van 20 myl vanaf die Hoofposkantoor, Vereeniging, en vanaf die spoorwegstasie, Welkom.

Distrikte B.—Die landdrosdistrikte Camperdown, Dannhauser, Dundee, Durban (uitgesonderd daardie gedeelte wat voor 16 Augustus 1968 in die landdrosdistrik Umlazi geval het), Estcourt, Glencoe, Inanda,

GOVERNMENT NOTICES

DEPARTMENT OF LABOUR

No. R. 342 10 March 1972

APPRENTICESHIP ACT, 1944, AS AMENDED

NATIONAL APPRENTICESHIP COMMITTEE FOR
THE BUILDING INDUSTRY

PROPOSED WITHDRAWAL AND PRESCRIPTION OF CONDITIONS OF APPRENTICESHIP

I, Marais Viljoen, Minister of Labour, acting in terms of section 16 of the above-mentioned Act, propose to—

(a) withdraw Government Notices R. 3014 of 1 August 1969 as applied by Government Notice R. 3394 of 26 September 1969, R. 155 of 30 January 1970 as applied by Government Notice R. 1303 of 14 August 1970, and R. 2042 of 20 November 1970 as applied by Government Notice R. 89 of 29 January 1971;

(b) designate for the Building Industry—

(i) the trades numbered 1 to 5 and 7 to 23 below as trades in respect of which the provisions of the Act shall apply in the following portions of the area of jurisdiction of the National Apprenticeship Committee for the Building Industry:

Districts A.—The Magisterial Districts of Alberton, Benoni, Bethlehem, Boksburg, Brakpan, East London, Germiston, Harrismith, Heidelberg (Transvaal), Johannesburg, Kempton Park, Krugersdorp, Letaba, Nigel, Oberholzer, Pietersburg, Potgietersrus, Pretoria (excluding the mining area of Premier Mine), Randfontein, Roodepoort, Senekal, Soutpansberg, Springs and Westonaria; the municipal areas of Bothaville, Brits, Bultfontein, Kroonstad, Middelburg (Transvaal), Nelspruit, Rustenburg, Theunissen, Ventersburg, Wesselsbron and Witbank; the area within a 15-mile radius from the General Post Office, Bloemfontein; the areas within a 10-mile radius from the General Post Offices, Klerksdorp and Potchefstroom, and the areas within a 20-mile radius from the General Post Office, Vereeniging, and from the Welkom Railway Station.

Districts B.—The Magisterial Districts of Camperdown, Dannhauser, Dundee, Durban (excluding that portion which prior to 16 August 1968, fell within the Magisterial District of Umlazi), Estcourt, Glencoe,

Kliprivier, Lionsrivier, Newcastle, New Hanover, Pietermaritzburg, Pinetown, Richmond (Natal), Utrecht, Vryheid en daardie gedeelte van die landdrosdistrik Mooirivier wat voor 21 Augustus 1964 in die landdrosdistrikte Estcourt en Lionsrivier geval het.

Distrikte C.—Die landdrosdistrikte Albany, Barkly-Wes, Bellville, De Aar, Gordonia, Die Kaap, Kimberley, King William's Town, Kuruman, Mafeking, Paarl, Port Elizabeth, Postmasburg, Simonstad, Somerset-Wes, Stellenbosch, Strand, Uitenhage, Vryburg, Warrenton, Wellington, Worcester en Wynberg, en die munisipale gebied Queenstown.

Ambagte

1. Aanbring van plafonne (5).
2. Elastiese vloer- en muurbedekkingswerk (15).
3. Elektrotegniese draadwerker (6).
4. Houtmasjienwerk (23).
5. Klipmesselwerk (21).
6. Kunsklip- en terazzowerk (14).
7. Lakpolitoerwerk (13).
8. Letterskap- en klipversierwerk (8).
9. Letterskilderwerk (20).
10. Loodgieterswerk (12).
11. Marmermesselwerk (9).
12. Messelwerk (1).
13. Messel- en pleisterwerk (2).
14. Muur- en vloerteëlwerk (22).
15. Plaatmetaalwerk (17).
16. Pleisterwerk (11).
17. Saagherstelwerk (16).
18. Skilder- en versierwerk (10).
19. Skrynwerk (7).
20. Timmerwerk (3).
21. Timmer- en skrynwerk (4).
22. Winkeluitrusting (boukundige metaalwerk) (18).
23. Winkeluitrusting (houtwerk) (19);

(ii) die ambag elektrotegniese draadwerker, aan te wys as 'n ambag ten opsigte waarvan die bepalings van die Wet van toepassing is in die volgende gedeeltes van die regsgebied van die Nasionale Vakleerlingskap-komitee vir die Bounywerheid:

(aa) Distrikte A en die oorblywende gedeelte van die provinsie Transvaal;

(bb) Distrikte C;

(c) die leervooraardes hieronder gemeld, as leervooraardes voor te skryf ten opsigte van die ambagte gemeld in paragraaf (b) in die gebiede daarin vermeld; en

(d) te bepaal dat die bepalings van klousules 3 tot 9 van die leervooraardes hieronder gemeld, vanaf die datum van voorskrywing daarvan, ook van toepassing is op vakleerlinge wat in diens is in 'n ambag wat 'n aangewese ambag is of was in die Nywerheid en gebiede waarvoor gemelde Komitee ingestel is.

LEERVOORWAARDES

1. *Kwalifikasies om met Vakleerlingskap te Begin*

Die minimum ouderdom en opvoedkundige kwalifikasies om met vakleerlingskap te begin is 16 jaar en standaard VII of 'n verklaring van prestasie, uitgereik deur of namens die skool wat deur die voornemende vakleerling besoek is, waarin gemeld word dat hy op die standaard VII-peil geslaag het in die vakke Afrikaans, Engels, Rekenkunde of Algemene Wiskunde en minstens een ander vak.

Inanda, Kliprivier, Lions River, Newcastle, New Hanover, Pietermaritzburg, Pinetown, Richmond (Natal), Utrecht, Vryheid and that portion of the Magisterial District of Mooi River which prior to 21 August 1964, fell within the Magisterial Districts of Estcourt and Lions River.

Districts C.—The Magisterial Districts of Albany, Barkly West, Bellville, The Cape, De Aar, Gordonia, Kimberley, King William's Town, Kuruman, Mafeking, Paarl, Port Elizabeth, Postmasburg, Simonstown, Somerset West, Stellenbosch, Strand, Uitenhage, Vryburg, Warrenton, Wellington, Worcester and Wynberg, and the municipal area of Queenstown.

Trades

1. Bricklaying (12).
2. Bricklaying and plastering (13).
3. Carpentry (20).
4. Carpentry and joinery (21).
5. Ceiling erecting (1).
6. Electrical wireman (3).
7. Joinery (19).
8. Letter cutting and stone decorating (8).
9. Marble Masonry (11).
10. Painting and decorating (18).
11. Plastering (16).
12. Plumbing (10).
13. Polishing (7).
14. Reconstructed stone and terrazo working (6).
15. Resilient floor and wall covering (2).
16. Saw doctoring (17).
17. Sheetmetal-working (15).
18. Shopfitting (architectural metal working) (22).
19. Shopfitting (wood) (23).
20. Signwriting (9).
21. Stone masonry (5).
22. Wall and floor tiling (14).
23. Woodmachining (4);

(ii) the trade electrical wireman as a trade in respect of which the provisions of the Act shall apply in the following portions of the area of jurisdiction of the National Apprenticeship Committee for the Building Industry:

(aa) Districts A and the remainder of the Province of Transvaal;

(bb) Districts C;

(c) prescribe the conditions set out hereunder as conditions of apprenticeship in respect of the trades specified in paragraph (b) in the areas therein mentioned; and

(d) determine that the provisions of clauses 3 to 9 of the conditions of apprenticeship set out hereunder shall, from the date of prescription thereof, also apply to apprentices who are employed in any trade which is or was a designated trade in the Industry and areas for which the said Committee was established.

CONDITIONS OF APPRENTICESHIP

1. *Qualifications for Commencing Apprenticeship*

The minimum age and educational qualifications for commencing apprenticeship shall be 16 years and Standard VII or a statement of attainment issued by or on behalf of the school attended by the prospective apprentice reflecting a pass at Standard VII level in the subjects Afrikaans, English, Arithmetic or General Mathematics and at least one other subject.

2. *Leertyd*

Die leertyd is—

(a) vyf jaar in die aangewese ambag elektrotegniese draadwerker;

(b) twee en 'n half jaar in die aangewese ambagte aanbring van plafonne en elastiese vloer- en muurbedekkingswerk; en

(c) vier jaar in alle ander aangewese ambagte.

3. *Lone*

(a) 'n Werkgewer moet 'n vakleerling, wat in besit is van die volgende kwalifikasies en wat in diens is binne die regsgebied van 'n Nywerheidsraad, 'n loon betaal wat minstens gelyk is aan dié wat bereken is teen ondergenoemde persentasies van die loon wat weekliks ingevolge die Nywerheidsraadooreenkoms aan 'n vakman in die betrokke ambag en gebied betaalbaar is:

(I) *Ambag: Elektrotegniese draadwerker*

(i) Distrikte A en die oorblywende gedeelte van die provinsie Transvaal:

Jaar	Kwalifikasie A	Kwalifikasie B	Kwalifikasie C	Kwalifikasie D	Kwalifikasie E	Kwalifikasie F	Kwalifikasie G
Eerste.....	35	47	58	61	55	63	74
Tweede.....	40	52	63	66	60	68	79
Derde.....	50	62	73	76	70	78	89
Vierde.....	60	72	83	86	80	88	99
Vyfde.....	100	100	100	100	100	100	100

(ii) Distrikte C (uitgesonderd die landdrostdistrikte Paarl, Somerset-Wes, Stellenbosch, Strand, Wellington en Worcester):

Jaar	Kwalifikasie A	Kwalifikasie B	Kwalifikasie C	Kwalifikasie D	Kwalifikasie E	Kwalifikasie F	Kwalifikasie G
Eerste.....	30	42	53	56	50	58	69
Tweede.....	35	47	58	61	55	63	74
Derde.....	40,5	52	63	66	60	68	79
Vierde.....	50	62	73	76	70	78	89
Vyfde.....	100	100	100	100	100	100	100

(2) *Ambagte: Aanbring van plafonne en elastiese vloer- en muurbedekkingswerk*

(i) Distrikte A en B:

Jaar	Kwalifikasie A	Kwalifikasie B	Kwalifikasie C	Kwalifikasie D	Kwalifikasie E	Kwalifikasie F	Kwalifikasie G
Eerste.....	35	47	58	61	55	63	74
Tweede.....	40	52	63	66	60	68	79
Daarna.....	50	62	73	76	70	78	89

(ii) Distrikte C:

Jaar	Kwalifikasie A	Kwalifikasie B	Kwalifikasie C	Kwalifikasie D	Kwalifikasie E	Kwalifikasie F	Kwalifikasie G
Eerste.....	30	42	53	56	50	58	69
Tweede.....	35	47	58	61	55	63	74
Daarna.....	40,5	52	63	66	60	68	79

2. *Period of Apprenticeship*

The period of apprenticeship shall be—

(a) five years in the designated trade electrical wireman;

(b) two and a half years in the designated trades ceiling erecting and resilient floor and wall covering; and

(c) four years in all other designated trades.

3. *Wages*

(a) An employer shall pay an apprentice who is in possession of the following qualifications and who is employed within the area of jurisdiction of an industrial council a wage not less than that calculated on the under-mentioned percentages of the weekly wage payable to a journeyman in terms of the industrial council agreement applicable to the relative trade and area:

(1) *Trade: Electrical wireman*

(i) Districts A and the remainder of the Province of Transvaal:

Year	Qualification A	Qualification B	Qualification C	Qualification D	Qualification E	Qualification F	Qualification G
First.....	35	47	58	61	55	63	74
Second.....	40	52	63	66	60	68	79
Third.....	50	62	73	76	70	78	89
Fourth.....	60	72	83	86	80	88	99
Fifth.....	100	100	100	100	100	100	100

(ii) Districts C (excluding the Magisterial Districts of Paarl, Somerset West, Stellenbosch, Strand, Wellington and Worcester):

Year	Qualification A	Qualification B	Qualification C	Qualification D	Qualification E	Qualification F	Qualification G
First.....	30	42	53	56	50	58	69
Second.....	35	47	58	61	55	63	74
Third.....	40,5	52	63	66	60	68	79
Fourth.....	50	62	73	76	70	78	89
Fifth.....	100	100	100	100	100	100	100

(2) *Trades: Ceiling erecting and resilient floor and wall covering*

(i) Districts A and B:

Year	Qualification A	Qualification B	Qualification C	Qualification D	Qualification E	Qualification F	Qualification G
First.....	35	47	58	61	55	63	74
Second.....	40	52	63	66	60	68	79
Thereafter.....	50	62	73	76	70	78	89

(ii) Districts C:

Year	Qualification A	Qualification B	Qualification C	Qualification D	Qualification E	Qualification F	Qualification G
First.....	30	42	53	56	50	58	69
Second.....	35	47	58	61	55	63	74
Thereafter.....	40,5	52	63	66	60	68	79

(3) *Alle ander ambagte*

(i) Distrikte A en B:

Jaar	Kwalifikasie A	Kwalifikasie B	Kwalifikasie C	Kwalifikasie D	Kwalifikasie E	Kwalifikasie F	Kwalifikasie G
Eerste.....	35	47	58	61	55	63	74
Tweede.....	40	52	63	66	60	68	79
Derde.....	50	62	73	76	70	78	89
Vierde.....	60	72	83	86	80	88	99
*Vyfde.....	75	87	98	100	95	100	100

(ii) Distrikte C:

Jaar	Kwalifikasie A	Kwalifikasie B	Kwalifikasie C	Kwalifikasie D	Kwalifikasie E	Kwalifikasie F	Kwalifikasie G
Eerste.....	30	42	53	56	50	58	69
Tweede.....	35	47	58	61	55	63	74
Derde.....	40,5	52	63	66	60	68	79
Vierde.....	50	62	73	76	70	88	89
*Vyfde.....	75	87	98	100	95	100	100

* Alleenlik van toepassing op vakleerlinge wie se kontrakte voor 2 Augustus 1968 geregistreer is.

(b) 'n Werkgewer moet 'n vakleerling wat in besit is van die kwalifikasies vermeld in subklousule (a) en wat in diens is in enige van die gebiede wat in kolom A van die Bylae hieronder vermeld word, 'n loon betaal wat minstens gelyk is aan dié wat bereken is teen die persentasies uiteengesit in daardie subklousule van die loon wat weekliks ingevolge die Nywerheidsraadooreenkoms vermeld in kolom B van die Bylae aan 'n vakman in die betrokke ambag betaalbaar is:

BYLAE

A.—Gebiede	B.—Nywerheidsraadooreenkoms
(i) Dié gedeelte van die landdrostrik Oberholzer wat buite 'n radius van 30 myl vanaf die Hoofposkantoor, Krugersdorp, val	Nywerheidsraadooreenkoms vir die Bou- en Monumentklipmesselnywerheid, Transvaal.
(ii) Dié gedeelte van die landdrostrik Kempton Park wat buite 'n radius van 20 myl vanaf die Hoofposkantoor, Pretoria, val en wat voor 29 Maart 1956 in die landdrostrik Pretoria geval het	Nywerheidsraadooreenkoms vir die Bou- en Monumentklipmesselnywerheid, Transvaal.
(iii) Die landdrostrikte Letaba, Pietersburg, Potgietersrus en Soutpansberg	Nywerheidsraadooreenkoms vir die Bou- en Monumentklipmesselnywerheid, Transvaal.
(iv) Die munisipale gebiede Brits, Nelspruit en Rustenburg	Nywerheidsraadooreenkoms vir die Bou- en Monumentklipmesselnywerheid, Transvaal.
(v) Die landdrostrikte Bethlehem, Harrismith en Senekal; die munisipale gebiede Bothaville, Bultfontein, Theunissen, Ventersburg en Wesselsbron	Nywerheidsraadooreenkoms vir die Bou- en Monumentklipmesselnywerheid, Bloemfontein.
(vi) Die gebied binne 'n straal van 20 myl vanaf die spoorwegstasie, Welkom	Nywerheidsraadooreenkoms vir die Bou- en Monumentklipmesselnywerheid, Bloemfontein.
(vii) Die landdrostrik Uitenhage	Nywerheidsraadooreenkoms vir die Bounywerheid, Port Elizabeth.
(viii) Die landdrostrik King William's Town	Nywerheidsraadooreenkoms vir die Bounywerheid, Oos-Londen.

(3) *All other trades*

(i) Districts A and B:

Year	Qualification A	Qualification B	Qualification C	Qualification D	Qualification E	Qualification F	Qualification G
First.....	35	47	58	61	55	63	74
Second.....	40	52	63	66	60	68	79
Third.....	50	62	73	76	70	78	89
Fourth.....	60	72	83	86	80	88	99
*Fifth.....	75	87	98	100	95	100	100

(ii) Districts C:

Year	Qualification A	Qualification B	Qualification C	Qualification D	Qualification E	Qualification F	Qualification G
First.....	30	42	53	56	50	58	69
Second.....	35	47	58	61	55	63	74
Third.....	40,5	52	63	66	60	68	79
Fourth.....	50	62	73	76	70	88	89
*Fifth.....	75	87	98	100	95	100	100

* Applicable only to apprentices whose contracts were registered before 2 August 1968.

(b) An employer shall pay an apprentice who is in possession of the qualifications referred to in subclause (a) and who is employed in any of the areas set out in column A of the Schedule hereunder a wage not less than that calculated on the relevant percentages set out in that subclause of the weekly wage payable to a journeyman in the trade concerned in terms of the Industrial Council Agreement mentioned in column B of the Schedule:

SCHEDULE

A.—Areas	B.—Industrial Council Agreement
(i) That portion of the Magisterial District of Oberholzer falling beyond a 30-mile radius from the General Post Office, Krugersdorp	Industrial Council Agreement for the Building and Monumental Masonry Industries, Transvaal.
(ii) That portion of the Magisterial District of Kempton Park falling beyond a 20-mile radius from the General Post Office, Pretoria, which prior to 29 March 1956, fell within the Magisterial District of Pretoria	Industrial Council Agreement for the Building and Monumental Masonry Industries, Transvaal.
(iii) The Magisterial Districts of Letaba, Pietersburg, Potgietersrus and Soutpansberg	Industrial Council Agreement for the Building and Monumental Masonry Industries, Transvaal.
(iv) The municipal areas of Brits, Nelspruit and Rustenburg	Industrial Council Agreement for the Building and Monumental Masonry Industries, Transvaal.
(v) The Magisterial Districts of Bethlehem, Harrismith and Senekal, the municipal areas of Bothaville, Bultfontein, Theunissen, Ventersburg and Wesselsbron	Industrial Council Agreement for the Building and Monumental Masonry Industries, Bloemfontein.
(vi) The area within a 20-mile radius from the Welkom Railway Station	Industrial Council Agreement for the Building and Monumental Masonry Industries, Bloemfontein.
(vii) The Magisterial District of Uitenhage	Industrial Council Agreement for the Building Industry, Port Elizabeth.
(viii) The Magisterial District of King William's Town	Industrial Council Agreement for the Building Industry, East London.

A.—Gebiede	B.—Nywereidsraadooreenkoms
(ix) Die landdrosdistrikte Barkly-Wes, De Aar, Gordonia, Kuruman, Mafeking, Postmasburg, Vryburg en Warrenton; dié gedeelte van die landdrosdistrik Kimberley wat buite 'n straal van ses myl vanaf die Hoofpaskantoor, Kimberley, val	Nywerheidsraadooreenkoms vir die Bounywerheid, Kimberley.

(c) 'n Werkgewer moet 'n vakleerling in die ambag elektrotegniese draadwerker in die landdrosdistrikte Paarl, Somerset-Wes, Stellenbosch, Strand, Wellington en Worcester wat in besit is van die kwalifikasies hieronder vermeld, 'n loon betaal wat minstens gelyk is aan dié wat bereken is teen ondergenoemde persentasies van die hoogste loon wat weekliks aan 'n vakman betaalbaar is ingevolge die Nywerheidsraadooreenkoms vir die Bounywerheid van toepassing in die betrokke gebied:

Jaar	Kwalifikasie A	Kwalifikasie B	Kwalifikasie C	Kwalifikasie D	Kwalifikasie E	Kwalifikasie F	Kwalifikasie G
Eerste.....	30	42	53	56	58	63	69
Tweede.....	35	47	58	61	63	68	74
Derde.....	40,5	52	63	66	68	79	89
Vierde.....	50	62	73	76	78	88	99
Vyfde.....	100	100	100	100	100	100	100

(d) Indien 'n nywerheidsraadooreenkoms verstryk, moet die persentasieloon betaalbaar aan 'n vakleerling bereken word op die gemelde persentasies van die loon wat aan 'n vakman in die betrokke ambag en gebied betaalbaar was ingevolge die verstrekte ooreenkoms, totdat so 'n ooreenkoms weer van krag word.

(e) Die loon van 'n vakleerling wat gedurende sy leertyd 'n hoër opvoedkundige kwalifikasie verwerf, moet, vanaf die datum van uitreiking van die betrokke sertifikaat, bereken word teen die toepaslike hoër persentasie van die ambagsmansloon soos uiteengesit in hierdie klousule.

(f) Die loon van 'n vakleerling wat in 'n vrywillige toets ingevolge klousule 7 druip, maar minstens 'n algemene "D"-aanslag in sodanige toets verwerf, moet vir die oorblywende deel van sy leertydperk, en vanaf 'n datum 21 dae na die laaste dag van die toets, bereken word teen minstens 75 persent van die loon betaalbaar aan 'n vakman ingevolge die betrokke Nywerheidsraadooreenkoms, indien hy nie reeds op 'n hoër loon geregtig is nie.

(g) Indien 'n werkgewer en 'n voornemende meerderjarige vakleerling, voordat hulle 'n vakleerlingkontrak aangaan, ooreenkoms dat 'n hoër loon betaal moet word as dié wat in hierdie klousule voorgeskryf word, moet sodanige hoër loon in die kontrak gemeld en aan die vakleerling betaal word.

(h) Vir die doeleindes van hierdie voorwaardes—het "loon" die betekenis wat ingevolge die betrokke Nywerheidsraadooreenkoms daaraan geheg word;

beteken—

"kwalifikasie A" opvoedkundige kwalifikasies tot en met inbegrip van die standerd 7 of gelykwaardige sertifikaat;

"kwalifikasie B" die standerd 8-sertifikaat of die Nasionale Junior Sertifikaat sonder werkwinkelpraktik, of gelykwaardige sertifikaat;

"kwalifikasie C" die standerd 9-sertifikaat of die Nasionale Intermediêre Sertifikaat sonder werkwinkelpraktik, of gelykwaardige sertifikaat;

A.—Areas	B.—Industrial Council Agreement
(ix) The Magisterial Districts of Barkly West, De Aar, Gordonia, Kuruman, Mafeking, Postmasburg, Vryburg and Warrenton, that portion of the Magisterial District of Kimberley falling beyond a six-mile radius from the General Post Office, Kimberley	Industrial Council Agreement for the Building Industry, Kimberley.

(c) An employer shall pay an apprentice in the trade electrical wireman in the Magisterial Districts of Paarl, Somerset West, Stellenbosch, Strand, Wellington and Worcester, who is in possession of the qualifications referred to hereunder, a wage not less than that calculated on the following percentages of the highest wage payable to a journeyman in terms of the Industrial Council Agreement for the Building Industry applicable in the area concerned:

Year	Qualification A	Qualification B	Qualification C	Qualification D	Qualification E	Qualification F	Qualification G
First.....	30	42	53	56	58	63	69
Second.....	35	47	58	61	63	68	74
Third.....	40,5	52	63	66	68	79	89
Fourth.....	50	62	73	76	78	88	99
Fifth.....	100	100	100	100	100	100	100

(d) If an industrial council agreement lapses the percentages of the wages payable to an apprentice shall be calculated on the said percentages of the wage which was payable to a journeyman in the trade and area concerned in terms of the lapsed agreement until such an agreement again comes into force.

(e) The wage of an apprentice who obtains a higher educational qualification during his apprenticeship shall, with effect from the date of issue of the certificate concerned, be calculated on the relevant higher percentage of the journeymen's wage reflected in this clause.

(f) The wage of an apprentice who fails a voluntary test in terms of clause 7 but obtains at least a "D" overall assessment in respect of such test shall for the balance of his period of apprenticeship and as from a date 21 days after the last day of the test be calculated at not less than 75 per cent of the wage payable to a journeyman in terms of the relevant industrial council agreement if he is not already entitled to a higher wage than this.

(g) If an employer and a prospective major apprentice agree, before entering into a contract of apprenticeship, that wages shall be paid at rates higher than those prescribed in this clause, such higher wages shall be recorded in the contract and shall be paid to the apprentice.

(h) For the purpose of these conditions—

"wage" shall have the meaning assigned thereto in the relevant industrial council agreement;

"qualification A" shall mean educational qualifications up to and including the Standard 7 or equivalent certificate;

"qualification B" shall mean the Standard 8 or the National Junior Certificate without workshop practice, or equivalent certificate;

"qualification C" shall mean the Standard 9 or the National Intermediate Certificate without workshop practice, or equivalent certificate;

"kwalifikasie D" die Matrikulasiesertifikaat of die Nasionale Senior Sertifikaat sonder werkwinkelpraktik, of gelykwaardige sertifikaat;

"kwalifikasie E" die standerd 8-sertifikaat of die Nasionale Junior Sertifikaat met werkwinkelpraktik, of die Nasionale Tegnieise Sertifikaat, Deel I, of gelykwaardige sertifikaat;

"kwalifikasie F" die standerd 9-sertifikaat of die Nasionale Intermediêre Sertifikaat met werkwinkelpraktik, of die Nasionale Tegnieise Sertifikaat, Deel II, of gelykwaardige sertifikaat;

"kwalifikasie G" die Matrikulasiesertifikaat of die Nasionale Senior Sertifikaat met werkwinkelpraktik, of die Nasionale Tegnieise Sertifikaat, Deel III, of gelykwaardige of hoër sertifikaat.

4. Tegnieise Studies

(a) 'n Vakleerling wat in besit is van die sertifikaat of die alternatiewe kwalifikasie wat in klousule 1 van hierdie voorwaardes voorgeskryf word, moet tegnieise klasse bywoon wat in verband staan met die ambag waarvoor hy ingeboek is en in ooreenstemming is met die leerplanne wat deur die Departement van Nasionale Opvoeding, die Departement van Indiërsake of die Administrasie van Kleurlingsake, na gelang van die geval, voorgeskryf word en dié klasse moet bygewoon word by die naaste tegnieise inrigting wat uitsluitlik of gedeeltelik uit openbare fondse in stand gehou word en wat bedoel is vir die rassegroep waaraan die vakleerling behoort.

(b) Bywoning van klasse geskied op vyf dae per week gedurende 'n vakleerling se gewone werkure vir die duur van die eerste aaneenlopende studiekursus wat hy, behalwe vir afwesigheid van die aard gemeld in subklousule (h), in staat is om by te woon.

(c) 'n Vakleerling moet tegnieise klasse bywoon totdat hy in die eksamen vir die Nasionale Tegnieise Sertifikaat, Deel II, of gelykwaardige tegnieise sertifikaat, geslaag het: Met dien verstande dat 'n vakleerling wat in die eksamen vir genoemde sertifikaat druip maar wat wel slaag in die ambagsteorie wat betrekking het op die ambag waarvoor hy ingeboek is, nie verdere klasse hoef by te woon nie.

(d) 'n Vakleerling wat in die eksamen wat afgeneem word aan die einde van die eerste aaneenlopende studiekursus wat deur hom bygewoon word, die volle sertifikaat verwerf waarvoor hy ingeskryf het, is geregtig om voort te gaan om klasse by te woon op die grondslag in subklousule (b) voorgeskryf. 'n Vakleerling wat nie daarin slaag om die volle sertifikaat te verwerf nie, is nie geregtig om voort te gaan om klasse op voormelde grondslag by te woon nie, maar is verplig om vir klasbywoning in te skryf by die naaste tegnieise inrigting wat uitsluitlik of gedeeltelik uit openbare fondse in stand gehou word. Sodanige bywoning moet buite die vakleerling se gewone werkure plaasvind: Met dien verstande dat sodanige bywoning nie tot later as 7.15 nm. mag duur nie en voorts met dien verstande dat indien daar nie vervoer beskikbaar is nie om die vakleerling in staat te stel om voor 9 nm. na sy tuiste terug te keer nie, hy in plaas van sodanige bywoning 'n korrespondensiekursus mag volg wat deur die Witwatersrandse Kollege vir Gevorderde Tegnieise Onderwys aangebied word. By verwerwing van die volle sertifikaat is die vakleerling weer geregtig om klasse by te woon op die grondslag voorgeskryf in subklousule (b).

(e) 'n Werkgewer mag nie vereis dat 'n vakleerling wat klasse ingevolge subklousule (b) bywoon, hom vir die duur van sodanige kursus vir werk moet aanmeld nie.

(f) 'n Vakleerling wat 'n korrespondensiekursus volg, moet, waar die Registrateur van Vakleerlinge 'n studieplek vir sodanige korrespondensiekursus bepaal het, by sodanige plek studeer, en die bepalinge van die voorbehoudsbepaling van subklousule (d) is *mutatis mutandis* op sodanige vakleerling van toepassing.

"qualification D" shall mean the Matriculation or the National Senior Certificate without workshop practice, or equivalent certificate;

"qualification E" shall mean the Standard 8 or the National Junior Certificate with workshop practice, or the National Technical Certificate, Part I, or equivalent certificate;

"qualification F" shall mean the Standard 9 or the National Intermediate Certificate with workshop practice, or the National Technical Certificate, Part II, or equivalent certificate;

"qualification G" shall mean the Matriculation or the National Senior Certificate with workshop practice, or the National Technical Certificate, Part III, or equivalent or higher certificate.

4. Technical Studies

(a) An apprentice who is in possession of the certificate or the alternative qualification prescribed in clause 1 of these conditions shall attend technical classes relevant to the trade in which he is indentured and in accordance with the syllabuses prescribed by the Department of National Education, the Department of Indian Affairs, or the Administration of Coloured Affairs, as the case may be, and such classes shall be attended at the nearest technical institution maintained wholly or partly from public funds and catering for the racial group to which the apprentice belongs.

(b) Attendance of classes shall take place on five days per week during an apprentice's ordinary hours of work for the duration of the first continuous course of study which, but for absence of the nature referred to in subclause (h), he is able to attend.

(c) An apprentice shall attend technical classes until he attains the National Technical Certificate, Part II, or equivalent technical certificate: Provided that an apprentice who fails in the examination for the said certificate but obtains a pass in the trade theory relevant to the trade in which he is indentured, shall not be required to attend further classes.

(d) An apprentice who, at the examination conducted at the end of the first continuous course of study attended by him, obtains the full certificate for which he has entered, shall be entitled to continue attending classes on the basis prescribed in subclause (b). An apprentice who fails to obtain the full certificate shall not be entitled to continue to attend classes on the said basis but shall be required to enroll for class attendance at the nearest technical institution maintained wholly or partly from public funds. Such attendance shall take place outside the apprentice's ordinary hours of work: Provided that such attendance shall not extend beyond 7.15 p.m. and provided further that if there is no transport available to enable the apprentice to return to his home before 9 p.m., he may, in lieu of class attendance, take a correspondence course conducted by the Witwatersrand College for Advanced Technical Education. Upon attaining the full certificate the apprentice shall again be entitled to attend classes on the basis prescribed in subclause (b).

(e) An apprentice who attends classes in terms of subclause (b) shall, for the duration of such course, not be required by his employer to report for work.

(f) An apprentice taking a correspondence course shall, where the Registrar of Apprenticeship has fixed a place of study for such correspondence course, study at such place, and the provisions of the proviso to subclause (d) shall *mutatis mutandis* apply to such apprentice.

(g) Ondanks die bepalings van subklousules (c) en (d), mag daar nie van 'n vakleerling vereis word om verdere klasse by te woon of verdere korrespondensiekursusse te volg nie, na gelang van die geval, indien hy, nadat hy 'n aaneenlopende studiekursus bygewoon het, of nadat hy twee jaar lank klasse bygewoon of 'n korrespondensiekursus gevolg het, of ná 'n kombinasie van klasbywoning en korrespondensiekursusstudies vir twee jaar altesaam, nie die sertifikaat verwerf het waarvoor hy ten tye van die aanvang van sy tegniese studies ingeskryf het nie.

(h) Van 'n vakleerling wat, as gevolg van afwesigheid vir militêre opleiding ingevolge die Verdedigingswet, 1957, soos gewysig, nie in staat is nie om tegniese klasse vir die duur van 'n aaneenlopende studiekursus by te woon, of om vir minstens die helfte van 'n akademiese jaar tegniese klasse by te woon of 'n korrespondensiekursus te volg, na gelang van die geval, mag daar nie vereis word om sy studies gedurende sodanige jaar voort te sit nie.

(i) Die bepalings van subklousule (b) is *mutatis mutandis* van toepassing op 'n vakleerling, uitgesonderd 'n elektrotegniese draadwerkervakleerling in sy vyfde jaar, wat voldoen het aan die bepalings van subklousule (c) of wat reeds in besit is van 'n hoër tegniese kwalifikasie en wat sy studies in verband met die ambag waarvoor hy ingeboek is, vrywillig voortsit.

5. Vervoertoelae

Die werkgewer van 'n vakleerling wat verplig is of ingevolge klousule 4 (i) verkies om 'n aaneenlopende studiekursus te volg, wat verder as 12 myl vanaf die betrokke tegniese inrigting woonagtig is en nie in staat is om daagliks na sy tuiste terug te keer nie, moet die vakleerling voorsien van die reisgeld vir 'n tweedeklas-treinkaartjie, om hom in staat te stel om—

(a) na die tegniese inrigting te reis wanneer die gemelde studiekursus 'n aanvang neem;

(b) sy tuiste by twee geleenthede gedurende die kursus te besoek;

(c) by voltooiing van die kursus na sy tuiste terug te keer.

6. Betaling van Klas- of Kursus- en Eksamengelde

'n Werkgewer moet aan die betrokke tegniese inrigting die klas- of kursusgelde en die eksamengelde voorskiet wat betaalbaar is deur 'n vakleerling van wie daar vereis word om klasse by te woon of 'n korrespondensiekursus te volg, of wat ingevolge klousule 4 (i) verkies om klasse by te woon, en mag die bedrag aldus voorgeskiet, van die loon van die vakleerling aftrek in gelyke weeklikse paaieimente gedurende 'n tydperk van 12 maande vanaf die datum waarop die voorskot gemaak is: Met dien verstande dat—

(i) indien die vakleerling, in 'n eksamen, die sertifikaat verwerf waarvoor hy ingeskryf het, die volle bedrag wat ten opsigte van klas- of kursusgelde en eksamengelde vir daardie eksamen afgetrek is, deur die werkgewer aan hom terugbetaal moet word;

(ii) indien die vakleerling nie daarin slaag om die sertifikaat in (i) gemeld, te verwerf nie, die terugbetaling van klas- of kursusgelde en eksamengelde slegs gedoen moet word ten opsigte van daardie vakke waarin die vakleerling in die eksamen geslaag het.

7. Ambagstoetse

(a) 'n Vakleerling, uitgesonderd 'n vakleerling wat ingeboek is in die ambag elektrotegniese draadwerker, moet so kort moontlik voor die einde van sy leertyd 'n kwalifiserende ambagstoets, wat deur die Departement van Arbeid en die Departement van Nasionale Opvoeding afgeneem word, aflê in die praktyk van die ambag waarvoor hy ingeboek is.

(g) Notwithstanding the provisions of subclauses (c) and (d), an apprentice who, after attending a continuous course of study, or after two years' class attendance, or after taking a correspondence course for two years, or after a combination of class attendance and correspondence course studies for two years in the aggregate, has not attained the certificate for which he was enrolled at the time of commencement of his technical studies, shall not be required to attend further classes or take further correspondence courses, as the case may be.

(h) An apprentice who, because of absence on military training in terms of the Defence Act, 1957, as amended, is unable to attend technical classes for the duration of a continuous course of study, or to attend technical classes or to take a correspondence course for at least half an academic year, as the case may be, shall not be required to pursue his studies during such year.

(i) The provisions of subclause (b) shall *mutatis mutandis* apply to an apprentice, other than an apprentice electrical wireman in his fifth year, who has complied with the provisions of subclause (c) or who is already in possession of a higher technical qualification and voluntarily pursues studies relevant to the trade in which he is indentured.

5. Transport Allowance

The employer of an apprentice who is compelled or in terms of clause 4 (i) elects to attend a continuous course of study, who resides further than 12 miles from the technical institution concerned and is unable to return to his home daily, shall provide the apprentice with second class railway fare to enable him to—

(a) proceed to the technical institution at the commencement of the said course of study;

(b) visit his home on two occasions during the course;

(c) return to his home upon completion of the course.

6. Payment of Class or Course and Examination Fees

An employer shall advance to the technical institution concerned the class or course fees and the examination fees payable by an apprentice who is required to attend classes or to follow a correspondence course, or who in terms of clause 4 (i) elects to attend classes, and may deduct the amount so advanced from the wages of the apprentice in equal weekly instalments during a period of 12 months from the date on which the advance was made: Provided that—

(i) if, at an examination, the apprentice obtains the certificate for which he has entered, the full amount deducted in respect of class or course fees and the examination fees for that examination shall be refunded to him by the employer;

(ii) if the apprentice fails to attain the certificate mentioned in (i) the refund of class or course fees and examination fees shall be made in respect of only those subjects in which the apprentice obtained a pass at the examination.

7. Trade Tests

(a) An apprentice, other than an apprentice indentured in the trade electrical wireman, shall undergo a qualifying trade test conducted by the Departments of Labour and of National Education as shortly as practicable before the end of his period of apprenticeship in the practice of the trade in which he is indentured.

(b) 'n Vakleerling wat ingeboek is in die ambag elektrotegniese draadwerker moet so kort moontlik voor die einde van die vierde jaar van sy leertyd 'n kwalifiserende ambagstoets wat deur gemelde Departemente afgeneem word, aflê in die praktyk van sy ambag.

(c) 'n Vakleerling wat ingeboek is in enige van die ambagte wat in onderstaande Bylae gemeld word, mag 'n kwalifiserende ambagstoets vrywillig ondergaan ná voltooiing van die leertyd in die volgende Bylae gemeld:

BYLAE

Ambag	
Groep I	
Klipmesselwerk.....	} na 2 jaar
Kunsklip- en terrazzowerk.....	
Letterskilderwerk.....	
Messelwerk.....	
Messel- en pleisterwerk.....	
Pleisterwerk.....	
Skilder- en versierwerk.....	
Groep II	
Houtmasjienwerk.....	} na 3 jaar
Letterskap- en klipversierwerk.....	
Loodgieterswerk.....	
Skrynerwerk.....	
Timmerwerk.....	
Timmer- en skrynerwerk.....	
Winkeluitrusting (boukundige metaalwerk).....	
Winkeluitrusting (houtwerk).....	

(d) Ondanks die bepalings van subklousule (c) mag 'n vakleerling wat ingeboek is in enige van die ambagte in gemelde subklousule gemeld en wat die opvoedkundige kwalifikasies wat in onderstaande Bylae gemeld word, of gelykwaardige kwalifikasies, verwerf het, 'n kwalifiserende ambagstoets vrywillig ondergaan ná voltooiing van die leertyd in die volgende Bylae gemeld:

BYLAE

Opvoedkundige kwalifikasies behaal voor of gedurende vakleerlingskap	Groep I	Groep II
Kwalifikasies B en E.....	na 1½ jaar	na 2½ jaar
Kwalifikasies C en F.....	na 1¼ jaar	na 2¼ jaar
Kwalifikasies D en G.....	na 1 jaar	na 2 jaar

(e) 'n Vakleerling wat ingeboek is in 'n ambag, uitgesonderd 'n ambag wat in die Bylae van subklousule (c) gemeld word, en wat die opvoedkundige kwalifikasies wat in onderstaande Bylae gemeld word, of gelykwaardige kwalifikasies, verwerf het, mag 'n kwalifiserende ambagstoets vrywillig ondergaan ná voltooiing van die leertyd in die volgende Bylae gemeld:

BYLAE

Opvoedkundige kwalifikasies behaal voor of gedurende vakleerlingskap	In ambag elektrotegniese draadwerker	In ambagte aanbring van plafonne en elastiese vloer- en muurbekingswerk	In alle ander ambagte
(i) St. 9 of gelykwaardige sertifikaat met Wiskunde as een vak met welslae afgeleë..... Matrikulasi- of gelykwaardige sertifikaat sonder Wiskunde as 'n vak met welslae afgeleë..... Nasionale Senior Sertifikaat (nie-tegnies) sonder Wiskunde as 'n vak met welslae afgeleë.....	na 3½ jaar	na 2 jaar	na 3½ jaar

(b) An apprentice who is indentured in the trade electrical wireman shall undergo a qualifying trade test conducted by the said Departments as shortly as practicable before the end of the fourth year of his period of apprenticeship in the practice of his trade.

(c) An apprentice who is indentured in any of the trades scheduled hereunder may voluntarily undergo a qualifying trade test after completing the period of apprenticeship indicated in the following Schedule:

SCHEDULE

Trade		
<i>Group I</i>		
Bricklaying.....	}	after 2 years
Bricklaying and plastering.....		
Painting and decorating.....		
Plastering.....		
Reconstructed stone and terrazo working:.....		
Signwriting.....		
Stone masonry.....		
<i>Group II</i>		
Carpentry.....	}	after 3 years
Carpentry and joinery.....		
Joinery.....		
Letter cutting and stone decorating.....		
Plumbing.....		
Shopfitting (architectural metal working).....		
Shopfitting (wood).....		
Woodmachining.....		

(d) Notwithstanding the provisions of subclause (c) an apprentice who is indentured in any of the trades scheduled in the said subclause and who has attained the educational qualifications scheduled hereunder or equivalents, may voluntarily undergo a qualifying trade test after completing the period of apprenticeship indicated in the following Schedule:

SCHEDULE

Educational qualifications attained prior to or during apprenticeship	Group I	Group II
Qualifications B and E.....	after 1½ years	after 2½ years
Qualifications C and F.....	after 1¼ years	after 2¼ years
Qualifications D and G.....	after 1 year	after 2 years

(e) An apprentice who is indentured in a trade other than that scheduled in subclause (c) and who has obtained the educational qualifications scheduled hereunder or equivalents, may voluntarily undergo a qualifying trade test after completing the period of apprenticeship indicated in the following Schedule:

SCHEDULE

Educational qualifications attained prior to or during apprenticeship	In trade electrical wireman	In trades ceiling erecting and resilient floor and wall covering	In all other trades
(i) Std 9 or equivalent certificate with Mathematics as one subject passed..... Matriculation or equivalent certificate without Mathematics as one subject passed National Senior Certificate (non-technical) without Mathematics as one subject passed.....	after 3½ years	after 2 years	after 3½ years

Opvoedkundige kwalifikasies behaal voor of gedurende vakleerlingskap	In ambag- elektro- tegniese draad- werker	In ambagte aanbring van pla- fonne en elastiese vloer- en muurbe- dekkings- werk	In alle ander ambagte
(ii) Matrikulasie- of gelykwaardige sertifikaat met Wiskunde as een van die vakke met welslae afgelê..... Nasionale Senior Sertifikaat (nie-tegnies) (Matrikulasie- vrystelling) met Wiskunde as een van die vakke met welslae afgelê..... Ambagsteorie met welslae afgelê op die peil van die Nasionale Tegniese Sertifikaat, Deel II	na 3½ jaar	na 2 jaar	na 3 jaar
(iii) Nasionale Ambagskoolsertifi- kaat..... Nasionale Junior Sertifikaat (tegnies) met Werkwinkel- praktyk as een van die vakke met welslae afgelê..... Nasionale Tegniese Sertifikaat, Deel II..... Nasionale Intermediêre Sertifi- kaat (Tegnologie) sonder Werkwinkelpraktyk as een van die vakke met welslae af- gelê.....	na 3 jaar	na 2 jaar	na 2½ jaar
(iv) Nasionale Tegniese Sertifikaat, Deel III..... Nasionale Intermediêre Sertifi- kaat (Tegnologie) met Werk- winkelpraktyk as een van die vakke met welslae afgelê.... Nasionale Senior Sertifikaat (Tegnologie) sonder Werk- winkelpraktyk as een van die vakke met welslae afgelê....	na 2½ jaar	na 1½ jaar	na 2 jaar
(v) Nasionale Senior Sertifikaat (Tegnologie) met Werkwin- kelpraktyk as een van die vakke met welslae afgelê....	na 2 jaar	na 1 jaar	na 1½ jaar

(f) 'n Vakleerling wat 'n kwalifiserende ambagstoets druip mag 'n verdere kwalifiserende toets of toetse ondergaan op 'n datum of datums wat deur die Departement van Arbeid en die Departement van Nasionale Opvoeding bepaal word.

(g) 'n Bedrag van R6 is deur 'n vakleerling betaalbaar ten opsigte van die tweede of enige daaropvolgende kwalifiserende ambagstoets wat op 'n vrywillige grondslag ingevolge hierdie klousule ondergaan word.

(h) 'n Vakleerling wat 'n ambagstoets ingevolge hierdie klousule ondergaan, moet ten opsigte van die tydperk wat bestee word in verband met een vrywillige toets en die verpligte toets, sy gewone loon deur sy werkgever betaal word ten opsigte van sodanige tydperk van afwesigheid van werk.

(i) 'n Tydperk van afwesigheid van werk met die doel om 'n ambagstoets ingevolge hierdie klousule te ondergaan, word, vir die toepassing van artikel 26 van die Wet, nie geag afwesigheid van werk te wees nie.

8. Jaarlikse Verlof en Openbare Vakansiedae

(a) 'n Vakleerling is geregtig op en moet minstens twee aaneenlopende weke verlof ten opsigte van elke tydperk van 12 maande diens by sy werkgever toegestaan word en ten opsigte van sodanige verloftyd, moet hy sy volle loon betaal word. Sodanige verlof moet toegestaan word

Educational qualifications attained prior to or during apprenticeship	In trade- electrical wireman	In trades ceiling erecting and resi- lient floor and wall covering	In all other trades
(ii) Matriculation or equivalent certificate with Mathematics as one subject passed..... National Senior Certificate (non-technical) (Matricula- tion Exemption) with Mathe- matics as one subject passed Trade Theory pass at National Technical Certificate, Part II, level.....	after 3½ years	after 2 years	after 3 years
(iii) National Trade School Certifi- cate..... National Junior Certificate (technical) with Workshop Practice as one subject passed..... National Technical Certificate, Part II..... National Intermediate Certifi- cate (Technology) without Workshop Practice as one subject passed.....	after 3 years	after 2 years	after 2½ years
(iv) National Technical Certificate, Part III..... National Intermediate Certifi- cate (Technology) with Workshop Practice as one subject passed..... National Senior Certificate (Technology) without Work- shop Practice as one subject passed.....	after 2½ years	after 1½ years	after 2 years
(v) National Senior Certificate (Technology) with Work- shop Practice as one subject passed.....	after 2 years	after 1 year	after 1½ years

(f) An apprentice who fails a qualifying trade test may undergo a further qualifying test or tests on a date or dates to be determined by the Departments of Labour and of National Education.

(g) A fee of R6 shall be payable by an apprentice in respect of the second or any subsequent qualifying trade test undergone on a voluntary basis in terms of this clause.

(h) An apprentice undergoing a trade test in terms of this clause shall in respect of the period spent in connection with one voluntary test and the compulsory test be paid his ordinary wage by his employer in respect of such period of absence from work.

(i) A period of absence from work for the purpose of undergoing a trade test in terms of this clause shall not be deemed to be absence from work for the purpose of section 26 of the Act.

8. Annual Leave and Public Holidays

(a) An apprentice shall be entitled to and be granted not less than two consecutive weeks' leave in respect of each period of 12 months' employment with his employer and shall in respect of such period of leave be paid his full wage. Such leave shall be granted within two months after

binne twee maande na voltooiing van die tydperk waarop dit betrekking het as dit nie reeds eerder toegestaan is nie: Met dien verstande dat as dit in die betrokke nywerheid en gebied gebruiklik is om alle werknemers in die nywerheid gedurende 'n gespesifiseerde tydperk in elke jaar verlof toe te staan, die vakleerling, ongeag die tydperk van diens voltooi in die jaar wat sodanige gespesifiseerde tydperk voorafgaan, verlof met volle besoldiging toegestaan moet word—

(i) gedurende die hele gespesifiseerde tydperk; of

(ii) vir minstens twee aaneenlopende weke vanaf die datum waarop die gespesifiseerde tydperk 'n aanvang neem, naamlik die langste van die twee tydperke.

(b) 'n Vakleerling is geregtig op verlof met volle besoldiging en moet dit toegestaan word op Nuwejaarsdag, Goeie Vrydag, Republiekdag, Hemelvaartsdag, Geloftedag en Kersdag. As Republiekdag en Hemelvaartsdag op dieselfde dag val, is die vakleerling geregtig op die volgende werkdag as 'n betaalde vakansiedag en moet dit aan hom toegestaan word: Met dien verstande dat in die geval van 'n vakleerling wat 'n vyfdaagse week werk, die bepaling van hierdie subklousule nie van toepassing is wanneer enigeen van die vakansiedae op die sesde dag van die week val nie.

(c) As Nuwejaarsdag, Goeie Vrydag, Republiekdag, Hemelvaartsdag, Geloftedag of Kersdag, binne die verlof-tyd val waarvan in subklousule (a) melding gemaak word, moet sodanige dag by genoemde verlof-tyd gevoeg word as 'n verdere verlof-tyd en die vakleerling moet sy volle loon ten opsigte van sodanige dag betaal word.

(d) Die loon ten opsigte van die verlof-tyd in subklousules (a) en (c) gemeld, moet vooruit betaal word voor of op die laaste werkdag voor die aanvang van die verlof.

(e) 'n Vakleerling wie se leerkontrak eindig in enige kringloop van 12 maande diens by dieselfde werkgewer voordat die verlof wat in subklousule (a) voorgeskryf word, verskuldig geword het of toegestaan is, moet by sodanige beëindiging een dag se loon betaal word vir elke volle maand van leerlingenskap by die werkgewer ná die datum waarop hy laas ingevolge subklousule (a) op verlof geregtig geword het, of in die geval van 'n vakleerling wat minder as 12 maande gedien het, ná die datum van aanvang van sy vakleerlingenskap by sy werkgewer.

(f) Die bepaling van subklousules (a), (b), (c), (d) en (e) is nie van toepassing nie op 'n vakleerling wie se jaarlikse verlof en openbare vakansiedae gereël word deur 'n ooreenkoms, kennisgewing of toekenning wat vir so 'n persoon ingevolge die Wet op Nywerheidsversoenig, 1956, soos gewysig, bindend is: Met dien verstande dat waar daar in so 'n ooreenkoms, kennisgewing of toekenning—

(i) vereis word dat 'n vakleerling op Hemelvaartsdag teen sy gewone skaal van besoldiging moet werk, die vakleerling verlof met volle besoldiging vir daardie dag toegestaan moet word;

(ii) voorsiening gemaak word vir 'n pro rata-betaling ten opsigte van verlof waar alle werknemers verlof gedurende enige gespesifiseerde tydperk in enige jaar toegestaan word, 'n vakleerling wat nog nie 12 maande diens voltooi het teen die tyd waarop die gespesifiseerde tydperk 'n aanvang neem nie, desnieteenstaande sy volle loon betaal moet word ten opsigte van sodanige gespesifiseerde tydperk.

9. Opleidingskursusse

Elke werkgewer moet 'n vakleerling die praktiese opleiding gee soos aangedui in kolom A van die Bylae hieronder teenoor die ambag waarvoor die vakleerling ingeboek is, en moet daarbenewens die vakleerling oplei in die werksaamhede aangedui in kolom B in die mate waarin geriewe in die werkgewer se inrigting bestaan.

expiry of the period to which it relates if it has not been granted earlier: Provided that if it is customary in the industry and area concerned to grant all employees leave during any specified period in any year, the apprentice shall, irrespective of the period of employment completed during the year preceding such specified period, be granted leave on full pay—

(i) during the whole of such specified period, or

(ii) for not less than two consecutive weeks as from the date of commencement of such specified period, whichever may be the longer.

(b) An apprentice shall be entitled to and be granted leave on full pay on New Year's Day, Good Friday, Republic Day, Ascension Day, Day of the Covenant and Christmas Day. If Republic Day and Ascension Day fall on the same day the apprentice shall be entitled to and be granted the following working day as a paid holiday: Provided that in the case of an apprentice who works a five-day week, if any of the aforementioned public holidays falls on the sixth day of the week, the provisions of this subclause shall not apply.

(c) If New Year's Day, Good Friday, Republic Day, Ascension Day, Day of the Covenant or Christmas Day, falls within the period of leave referred to in subclause (a), any such day shall be added to the said period as a further period of leave and the apprentice shall be paid his full wage in respect of such day.

(d) The wage in respect of the period of leave referred to in subclauses (a) and (c) shall be paid in advance not later than the last working day before the date of commencement of such leave.

(e) An apprentice whose contract terminates in any cycle of 12 months' employment with the same employer before the period of leave prescribed in subclause (a) has accrued or been granted, shall upon such termination be paid one day's pay in respect of each completed month of apprenticeship with the employer after the date on which he last became entitled to leave in terms of subclause (a) or in the case of an apprentice who has served less than 12 months, after the date of commencement of his apprenticeship with his employer.

(f) The provisions of subclauses (a), (b), (c), (d) and (e) shall not apply to an apprentice whose annual leave and public holidays are regulated by any agreement, notice or award which is binding on such an apprentice in terms of the Industrial Conciliation Act, 1956, as amended: Provided that where such agreement, notice or award—

(i) requires an apprentice to work on Ascension Day at his ordinary rate of pay, such apprentice shall be granted leave on full pay for that day;

(ii) makes provision for pro rata leave payment where all employees are granted leave during any specified period in any year, an apprentice who has not completed 12 months of service when the specified period commences, shall nevertheless be paid his full wage in respect of such specified period.

9. Courses of Training

Every employer shall give an apprentice the practical training indicated in Column A of the Schedule hereunder opposite the trade in which the apprentice is indentured and shall in addition give the apprentice training in the operations listed in Column B to the extent to which facilities exist in the employer's establishment.

Die praktiese opleiding van 'n vakleerling wie se kontrak voor 2 Augustus 1968 geregistreer of wat in die ambag elektrotegniese draadwerker ingeboek is, moet binne vier jaar voltooi word ten einde die vakleerling in staat te stel om gedurende sy vyfde jaar hersienings- en onafhanklike werk te doen. Vir dieselfde doel moet sodanige opleiding in die geval van 'n vakleerling (uitgesonderd 'n vakleerling in die ambag elektrotegniese draadwerker) wie se kontrak ná die gemelde datum geregistreer is of was, voltooi word voor die laaste ses maande van die voorgeskrewe vakleerlingskaptermyn.

'n Vakleerling moet sover doenlik werk onder die gereelde toesig van 'n vakman wat gekwalifiseer is om hom op te lei in die ambag waarvoor hy ingeboek is.

BYLAE

(Waar enige van die werksaamhede hieronder vermeld normaalweg nie deur 'n vakman verrig word nie, is praktiese opleiding in sodanige werksaamhede verpligtend slegs in dié mate dat 'n vakleerling die vereiste kennis en ondervinding moet opdoen ten einde hom in staat te stel om behoorlike toesig oor die uitvoering van sulke werksaamhede uit te oefen.)

Kolom A	Kolom B
1. AMBAG: AANBRING VAN PLAFONNE (5) <i>Eerste jaar:</i> Veiligheidsmaatreëls en eerstehulp; doel van plafonne soos versiering, hitte-isolering, stofwering, ens.; materiale soos gips, asbes, akoestiekteëls, hout, ens.; eienskappe van materiale; kennis, gebruik, skerpmaak en onderhoud van gereedskap; oprigting van steiers; uitleë van plafonne; bevestiging van kroonlyste; afskuinsing en vassit van plafonbalke. <i>Daarna:</i> Vassit van plate, dekstroke en kroonlyste; vulling van kroonlyste; bevestiging van isolasie- en akoestiek-materiale; vassit van plafonteëls; hang-plafonne	Gepleisterde plafonne; spesiale gipsplafonne en kroonlyste; verwyderbare afskortings.
2. AMBAG: ELASTIESE VLOER- EN MUURBEDEKKINGSWERK (15) <i>Eerste jaar:</i> Veiligheidsmaatreëls en noodhulp; kennis, gebruik, versorging en onderhoud van gereedskap; kennis en gebruik van vloer- en muurbedekkings-materiale; kennis van die voorbereiding, inspeksie en toets van alle soorte oppervlakke wat bedek moet word. <i>Daarna:</i> Finale bereiding, inspeksie en toets van alle soorte vloer- en muuroppervlakke; uitleë opmeet, lê en aanbring van alle soorte elastiese, houtblok- (waar fasiliteite bestaan), vloer- en muurbedekkingsmateriale, met inbegrip van voegwerk, sweiswerk en gevorderde ontwerpe; kennis van afskuurwerk, skoonmaak en politoer van oppervlakke.	
3. AMBAG: ELEKTROTEGNIES DRAADWERKER (6) <i>Eerste jaar:</i> Veiligheidsmaatreëls en noodhulp; kennis van en gebruik en versorging van gereedskap, instrumente, toestelle en materiaal wat in bedradingswerk gebruik word; bedrading van eenvoudige kringe en die kap van groewe in mure; tegniese terme.	

The practical training of an apprentice whose contract was registered prior to 2 August 1968 or who is indentured in the trade electrical wireman shall be completed within four years, to enable the apprentice to do revision and independent work during his fifth year. For the same purpose such training shall in the case of an apprentice (except an apprentice in the trade electrical wireman) whose contract was or is registered after the said date, be completed before the last six months of the prescribed period of apprenticeship.

An apprentice shall as far as practicable work under the regular supervision of a journeyman qualified to train him in the trade in which he is indentured.

SCHEDULE

(Where any of the operations detailed below are not normally performed by a journeyman, practical instruction in such operations shall be obligatory only to the extent necessary to equip the apprentice with the required knowledge and experience to exercise proper supervision over the performance of such operations.)

Column A	Column B
1. TRADE: BRICKLAYING (12) <i>First year:</i> Safety precautions; use, care, maintenance and storage of tools and materials; handling of and properties of materials including cement, lime, sand, aggregates and bricks; preparation of mortar; jointing and pointing of brick-work and the use of various bonds; simple scaffolding; reading drawings; technical terms <i>Thereafter:</i> Setting out from plans; scaffolding; mixing of mortar and concrete for different purposes such as footings, foundations and brick-work; building in of windows and door frames; face-brick work; piers; arch construction; fire-places and flues; coping and sill tiling; new building work and general building repairs; methods of cleaning down face-brick work; placing and curing of concrete to reinforced slabs and beams; grading of concrete and breeze concrete to roof slabs; elementary measurement of brick-work	First-aid to the point where a certificate is obtainable. Specialised brick-work; plastering; wall and floor tiling; underpinning; screeding; granolithic work; bedding and laying of precast units; laying of large diameter pipes and stormwater drains; building of manholes; random stone walling; setting out and placing of hollow blocks for lightweight suspended floor slabs; gypsum or clay wall blocks for partition walls; mixing and application of adhesives; use of power and explosive tools; erection of simple concrete shuttering and propping of slabs.
2. TRADE: BRICKLAYING AND PLASTERING (13) <i>First year:</i> Safety precautions; use, care, maintenance and storage of tools and materials; handling of and properties of materials including cement, lime, sand, aggregates and bricks; preparation of mortars; jointing and pointing of brick-work and the use of various bonds; scaffolding; reading drawings; technical terms <i>Thereafter:</i> Setting out from plans; mixing of mortar and concrete for different purposes such as footings, foundations and brick-work; building in of windows and door frames; face-brick work; piers; arch construction; fireplaces and flues; coping and sill tiling; new building work and general building repairs; methods of cleaning down face-brick work; placing and curing of concrete to reinforced slabs and beams; grading of concrete and breeze concrete to roof slabs; plastering walls, ceilings and	First-aid to the point where a certificate is obtainable. Specialised brick-work; wall and floor tiling; underpinning; bedding and laying of precast units; laying of large diameter pipes and stormwater drains; building of manholes; random stone walling; gypsum or clay wall blocks for partition walls; skimmed wall and ceiling finishes using putty plaster or gypsum compounds; setting out

Kolom A	Kolom B	Column A	Column B
<i>Tweede tot vierde jaar:</i> Kennis van die konstruksieaanwending en stroomdravermoe van die verskillende soorte skakelaars en uit-skakelaars, en verbrekingsduur wat by genoemde toestelle, ens., nodig is; kennis van die konstruksie en aanwending van die verskillende soorte verdeelborde en die verskillende soorte geleiers en isoleermateriaal wat in die vervaardiging van of verdeelborde of verdeelpanele gebruik word; skakeling en beheer van elektriese energie in sy toepassing op verskillende toestelle en toebehore; installering en gebruik van motore, transformators, ammeters, voltmeters, outomatiese uitskakelaars, isolators, plafonrosette, muursokke en -stoppe, verskillende soorte lampe en lamphouers en pype; algemene opleiding in die metodes aangewend in bedrading, elektriese balansering van installasies, begraaftde geleiers en oop en versteekte tipes bedrading; kennis van verskillende soorte kringe bedoel vir verskillende installasies soos vir ligte en motore; kennis van die beginsels van aarding en weerstande toege-laat tussen die aarde en installasies; opleiding in die verskillende metodes om vir defekte te toets, met spesifieke nadruk op aarding; voorsorg teen en behandeling vir elektriese skok; kennis van en praktiese nakoming van standdaardregulasies vir bedrading <i>Vyfde jaar:</i> Hersiening en onafhanklike werk. 4. AMBAG: HOUTMASJIEWERK (23) <i>Eerste jaar:</i> Veiligheidsmaatreëls; gebruik van skerms; hantering, versorging en onderhoud van masjiene en werk-winkeluitrusting; kennis van harde-en sagtehoutsoorte; uitsaak van gedroogde en droë timmerhout; lees van tekenings; gebruik van saaglyste; tegniese terme <i>Daarna:</i> Algemene opleiding in houtmasjienerwerk met inbegrip van die opstel, bediening en onderhoud van sirkel-saagbanke en sae, bandsae, figuursae, skaaf- en vormmasjiene, tap- en tapsnymasjiene, skuurmasjiene, boormasjiene en beitel-slypmasjiene; hout met die minste vermorsing volgens 'n saaglys uitsaak en skaaf; uittêl van werk volgens tekenings en die gebruik van uittêlplanke; sirkelsae skerpmaak en opstel; patrone en setmate maak en gebruik; slyp en skerpmaak van beitels, reguit en geprofileerde snybeitels en messe vir skaaf- en vormmasjiene en en kettings en voorysters vir tap- en boormasjiene	Installering en gebruik van motorgenerators; kennis van die konstruksie van motore, motorgenerators en transformators; konstruksie en installering van verhittings- en ander huis-houdelike elektriese toe-stelle. Noodhulp tot in die stadium waar 'n sertifikaat verkrygbaar is. Sirkelsae hamer en handsae wals; houtdraaiwerk.	skirtings; laying screeding; granolithic floors; elementary measurement of brick-work 3. TRADE: CARPENTRY (20) <i>First year:</i> Safety precautions; knowledge, use, care, sharpening and maintenance of tools; knowledge and use of materials, including various types of timber, ply-woods and composition boards, measuring up timber; making and fixing concrete shuttering; technical terms; reading drawings <i>Thereafter:</i> Reading and setting out from drawings; truing up of timber by hand; laying strip wood floors; fixing door and window frames; hanging doors and window sashes; fixing furniture, fittings and ironmongery; fixing picture rails, skirtings, architraves and mouldings; setting out, constructing and erecting structures and roofs incorporating iron and other materials; further training in the making and fixing of concrete shuttering; carrying out building repairs, renovations and alterations; erecting scaffolding; measuring up for order of materials required 4. TRADE: CARPENTRY AND JOINERY (21) <i>First year:</i> Safety precautions, knowledge, use, care, sharpening and maintenance of tools; knowledge and use of materials, including various types of timber, ply-woods and composition boards; defects in timber; measuring up and truing timber by hand; setting out and making all types of simple joints; gluing, nailing and screwing; sand-papery; making and fixing concrete shuttering; reading drawings; technical terms. <i>Thereafter:</i> Making windows and door frames, doors, sashes and cupboards; paneling and joinery; setting out of work from drawings and the use of setting-out rods; taking off quantities and preparing cutting lists; assembling, fitting and fixing mouldings; executing wood-work for the internal and external finish of buildings; laying strip wood floors; fixing door and window frames; hanging doors and window sashes and fitting furniture; fixing fittings and ironmongery; fitting and fixing picture rails, skirtings and architraves; setting out, constructing and erecting structures and roofs incorporating iron and other materials; carrying out building repairs, renovations and alterations; measuring up for order of materials required 5. TRADE: CEILING ERECTING (1) <i>First year:</i> Safety precautions and first-aid; purpose of ceilings such as decoration, heat insulation, dust control, etc.; materials such as gypsum, asbestos,	and placing of hollow blocks for lightweight suspended floor slabs; mixing and application of adhesives; use of power and explosive tools; erection of simple concrete shuttering and propping of slabs. First-aid to the point where a certificate is obtainable; laying of strip wood floors. Use of power and explosive tools; fixing stair treads; stringers and handrails; knowledge of the fixing of reinforcement; mixing, placing and curing of concrete; erecting ceilings; fixing cornices and spacing and fixing brandering and cover strips; fixing flat sheets; erecting shoring; fixing of sound and acoustic materials; cork and asbestos insulation; metal or wood lathing composition ceiling and wall covering; veneer panelling. First-aid to the point where a certificate is obtainable Use of power and explosive tools; fixing stair treads, stringers and handrails; knowledge of the fixing of reinforcement; mixing; placing and curing of concrete; seasoning and preservation of timber; erecting ceilings; fixing cornices and spacing and fixing brandering and cover strips; fixing flat sheets; fixing of sound and acoustic materials; cork and asbestos insulation; lathing; composition ceiling and wall covering; veneer panelling; erecting shoring.

Kolom A	Kolom B	Column A	Column B
Daarna: Kap, regkap en inbou of vassit (met inbegrip van voegstryking) van die soorte klip wat gewoonlik in die ambag gebruik word; die verskillende vorms van afwerking, soos gekap, gepons, randbekap, gebeitel, randbewerk en gepolcer, met inbegrip van die randbewerking van graniet met die hand; patrone afmerk, uitsny en gebruik; tekenings lees en werksaamheid bereken	Verskillende soorte klipwerk, soos ongelaag, bont- gelaag en gelaag, ongevierkante ruklip en ru-gevierkante, gevierkante en gebeitelde klipmesselwerk; klippe vir klipmesselgewelwe kap en sulke gewelwe bou; kunsklip- en terrazzowerk vassit en voegstryk; verskillende soorte klampe en muur-ankers; letters uitkap.	acoustic tiles, wood, etc.; characteristics of materials; knowledge, use, care, sharpening and maintenance of tools; erection of scaffolding; setting out of ceilings; fixing of brandering; bevelling and fixing of ceiling beams. Thereafter: Fixing of plates; cover strips and cornices; plugging of cornices; fixing of insulation and acoustic materials; glueing of ceiling tiles; suspended ceilings	Plastered ceilings; special gypsum ceilings and cornices; demountable partitioning.
6. AMBAG: KUNSKLIP- EN TERRAZZOWERK (14) Eerste jaar: Veiligheidsmaatreëls en noodhulp; gebruik, onderhoud en versorging van gereedskap en masjinerie; hantering en eienskappe van materiaal, soos gips, sement, oksiedkleure, sand, klip en marmer of ander toeslag; bereiding en meng van verskillende soorte toeslag en sement vir rugkante van blokke en vir afgewerkte voorkante; verskeie teksture van afgewerkte voorkante; tekenings lees; volgens patrone ontwerp, daarvan afmerk en uitkap; tegniese terme Daarna: Modelle tot in fynste besonderhede maak van gips, hout of ander materiaal; versterkte sement of gips gebruik om stukgietsvorms van modelle af te maak ten einde kunsklip- of terrazzoblokke te giet; blokke giet met verskillende afwerkings aan oop fronte; terrazzo ter plaatse aan mure, vloere, trappe, ens., aansit en 'n goeie oppervlak gee, ook verdeelstrok met gidsstrok aansit en klaarmaak; kunsklip- en terrazzoplate of -blokke vassit	Gelatiën- of ander buigbare gietvorms maak.	6. TRADE: ELECTRICAL WIREMAN (3) First year: Safety precautions and first-aid; knowledge, use and care of tools, instruments, apparatus and materials used in wiring work; wiring of simple circuits and chasing of walls; technical terms. Second to fourth years: Knowledge of the construction, application and current carrying capacities of the various types of switches and cut-outs and length of break required on the various applications; knowledge of the construction and application of the various types of distribution boards and the various types of conducting and insulating materials used in the construction of either distribution boards or distribution panels; switching and control of electrical energy in its application to various apparatus and accessories; installation and use of motors, transformers, ammeters, voltmeters, automatic cut-outs, insulators, ceiling roses, wall sockets and plugs, various types of lamps and lampholders and conduits; general training in the methods used in wiring, electrical balancing of installations, buried conductors and open and concealed types of wiring; knowledge of various types of circuits used for various installations such as lighting and motors; knowledge of earthing principles and resistances allowed between earth and installation; training in the various methods of testing for faults with specific emphasis on earthing; precautions against and treatment for electrical shock; knowledge and practical application of standard wiring regulations Fifth year: Revision and independent work.	Installation and use of motor generators; knowledge of the construction of motors, motor generators and transformers; construction and installation of heating and other domestic electrical appliances.
7. AMBAG: LAKPOLITOERWERK (13) Eerste jaar: Veiligheidsmaatreëls en noodhulp; gebruik en versorging van gereedskap, met inbegrip van spuitverfuitrusting; kennis van die eienskappe, hoedanigheid en gebruike van selluloseverf, kleurstowwe, oplosmiddels, olie, spiritus, skellak, lakvernis en ander stowwe wat in lakpolitoerwerk aangewend word; bereiding van harde- en sagte-houtsoorte met skuurpapier en die voorlopige opvulling vir afwerking met selluloseverf Daarna: Olie- en selluloseverf met kwas en sproeispuut aansit; verskillende soorte hout beits om by ander houtsoorte te pas of dit na te maak voordat dit gepolitoer word; lap- en rubberkussinkies maak; volmaak gladde oppervlakke vir politoerwerk opvul en voorberei; blink, dowwe of eierdop-effekte verkry; selluloseverfoppervlakke, deur son en weer opgedop, herstel en weer blink maak; ou gepolitoerde oppervlakke skoonmaak en laat herlewe	Nabootsende verfwerk van marmer- en granietsoorte; gebruik van bronspoeler en aanwending daarvan op bronsmetaalafwerkings; satynafwerking op verskillende oppervlakke met skuurmiddels.	7. TRADE: JOINERY (19) First year: Safety precautions; knowledge, use, care, sharpening and maintenance of tools; knowledge and use of materials including various types of timber, plywood and composition board; defects in timber; truing up timber by hand; setting out and making elementary joints; gluing, nailing and screwing; sandpapering; reading drawings; technical terms Thereafter: Making window and door frames, doors, sashes and cupboards; paneling and all other joinery; setting out of work from drawings and the use of setting-out rods; taking of quantities and preparing cutting lists; assembling, fitting and fixing mouldings; fixing of	First-aid to the point where a certificate is obtainable. Seasoning and preservation of timber.
8. AMBAG: LETTERSKAP- EN KLIPVERSIERWERK (8) Eerste jaar: Veiligheidsmaatreëls en noodhulp; kennis van en versorging van verskillende hand- en lugdrukgereedskap en materiaal wat in die ambag gebruik			

Kolom A	Kolom B	Column A	Column B
word; kennis van die verskillende soorte klip en die doeleindes waarvoor elkeen die geskikste is; eenvoudige kap en regkap van klip; elementêre skets en teken van verskillende soorte letters en versierings; tegniese terme		all ironmongery, hardware and fittings; executing woodwork for the internal and external finishings of buildings; use of portable power tools; working knowledge of wood-working machinery	
<i>Daarna:</i> Verskillende soorte letters en tooisels teken, ontwerp en afmerk; met die hand en lugdrukgereedskap uitkap en uitsny; planne lees	Uitkap en uitsny deur middel van sandstraling.	8. TRADE: LETTER CUTTING AND STONE DECORATING (3) <i>First year:</i> Safety precautions and first-aid; knowledge, use and care of various hand and pneumatic tools and materials used in the trade; knowledge of the various types of stone and the purposes for which each is most suitable; simple cutting and trimming of stone; elementary sketching and drawing of various types of letters and decorations; technical terms. <i>Thereafter:</i> Drawing, designing and setting out various types of letters and enrichments; cutting and carving by hand and pneumatic tools; reading of plans	Cutting and carving by sand blasting.
9. AMBAG: LETTERSKILDERWERK (20) <i>Eerste jaar:</i> Veiligheidsmaatreëls; gebruik en versorging van materiaal en gereedskap met inbegrip van spuitverfuitrusting; bereiding van oppervlakke; gebruik van pigmente, verdunners en droogmiddels; metodes om verf aan te sit; ou verf verwyder; verf meng en pas; tussen buitelyne opvul; eenvoudige afmerkwark en spasiëring van letters; steierwerk; vernis en mat maak; netheid; tegniese terme	Noodhulp tot in die stadium waar 'n sertifikaat verkrygbaar is.	9. TRADE: MARBLE MASONRY (11) <i>First year:</i> Safety precautions and first-aid; knowledge of the use and care of various hand and pneumatic tools and machinery used in the trade; knowledge of the various types of marble and the purposes for which they are most suitable; simple cutting and trimming of marble; technical terms <i>Thereafter:</i> Cutting, trimming and fixing, including pointing of the various types of marble; setting out, cutting out and applying of templates; knowledge of the various surface finishes; knowledge of the various types of cramps used in the trade; cutting of cramp holes; reading of drawings; taking of working quantities	Knowledge of various types of granite and the purposes for which they are most suitable; cutting and trimming of granite.
10. AMBAG: LOODGIETERSWERK (12) <i>Eerste jaar:</i> Veiligheidsmaatreëls; gebruik en versorging van gereedskap, materiaal en masjiene; gebruik van pype, toebehore, wasters en pakings van uiteenlopende aard; uitsny van elementêre patrone; pype sny en skroefdraad insny; van planne af werk; vertin-, solder- en klinkwerk; gebruik van smeltmiddels; tegniese terme	Syskermwerk; gebruike van lang lere en trapplanke, hangstoele en hangsteiers; glasgraveerwerk.	10. TRADE: PAINTING AND DECORATING (18) <i>First year:</i> Safety precautions; use and care of materials and tools; cleaning of old paint and preparation of surfaces; undercoating; mixing and blending of paints and the uses of pigments, thinners and driers; methods of applying paints, lime washes, distempers and emulsions; scaffolding and staging; cleaning up; technical terms <i>Thereafter:</i> General training in the mixing, preparing and applying of paints; cleaning and the various methods of staining off stains; lining, preparation of and painting of all surfaces; varnishing; advanced colour mixing; renovation and painting of buildings internally and externally; knowledge of working quantities and measurements	Cutting, trimming and fixing, including pointing of granite; knowledge of the various granite surface finishes; letter cutting.
<i>Daarna:</i> Pype afsny of afsaag, skroefdraad insny, las, vassit en lê; krane, kleppe, uitsitvoë, koper- en plastiekpype, afvoer- en uitlaatpype, sinkputte, lugpype, geute, geutpype en oorslaglasse inpas en aanbring; warmwaterstelsels installeer; rioolstelsels aanlê; rioolpype aanlê en las; alle sanitêrsware met inbegrip van sinkputte en toebehore installeer; algemene gietysterypwerk; elementêre gebruik van oksiasetleien- en boogswaistoerusting; hardasleien en sweis; volgens planne en spesifikasies uittêl; praktiese toepassing van munisipale regulasies	Meer gevorderde plaatmetaalwerk; meters aanbring; meters lees; laswerk en die aanlê van loodpype en embossering van plaatlood; installering en onderhoud van sepietse tenks; mangate bou; gasinstallasies.	11. TRADE: PLASTERING (16) <i>First year:</i> Safety precautions; use and care of tools; handling of and properties of all plastering materials; knowledge of the preparation of mortars; cleaning and preparing of all types of surfaces; scaffolding; work of an elementary nature; technical terms	First-aid to the point where a certificate is obtainable; use and care of spray-painting equipment; knowledge of glazing.
11. AMBAG: MARMERMESSELWERK (9) <i>Eerste jaar:</i> Veiligheidsmaatreëls en noodhulp; kennis van die gebruik en versorging van verskillende hand- en lugdrukgereedskap en -masjinerie wat in die ambag gebruik word; kennis van die verskillende soorte marmer en die doeleindes waarvoor hulle die geskikste is; eenvoudige kap- en regkapwerk aan marmer; tegniese terme	Kennis van verskillende soorte graniet en die doeleindes waarvoor hulle die geskikste is; kap en regkap van graniet.		Frosting and wood graining; paperhanging; application of plastic wall covering and surfacing materials; stencilling; uses of long and duck ladders, boat-swain's chairs and suspended scaffolding.
			First-aid to the point where a certificate is obtainable; reading of drawings.

Kolom A	Kolom B	Column A	Column B
Daarna: Kap, regkap en aanbring, met inbegrip van voegstryking, van die verskillende soorte marmer; van patrone af afmerk, uitkap en aanbring; kennis van die verskillende afwerkings van oppervlakke; kennis van die verskillende soorte klampe wat in die ambag gebruik word; klampgate uitkap; tekenings lees; werkshoeveelheide bereken	Kap, regkap en aanbring, met inbegrip van voegstryking van graniet; kennis van die verskillende afwerkings van granietvlakke; letters uitkap.	Thereafter: Preparing, applying and finishing to a good surface all plastering required for walls and ceilings, including skirting; running of moulds; screeding and finishing concrete; granolithic floors; mixing of materials including colour mixing; special compo plasters; advanced plaster work; use of Tyrolean or other similar machines; knowledge of plans, specifications and quantities of materials for plaster work	Making of templates and horsing of moulds; applying acoustic materials and fixing mosaic, wall and floor tiles; use of profiles; knowledge of fibrous plaster; use of power tools; elementary brickwork.
12. AMBAG: MESSELWERK (1) Eerste jaar: Veiligheidsmaatreëls; gebruik, versorging, onderhoud en berging van gereedschap en materiaal; hantering en eienskappe van materiaal, met inbegrip van sement, kalk, sand, toeslag en stene; aanmaak van dagha; voegwerk en voegstryking van steenwerk en die gebruik van verskillende verbande; eenvoudige steierwerk; lees van tekenings, tegniese terme Daarna: Van planne af werk; steierwerk; meng van dagha en beton vir verskillende doeleindes soos onderlae, fondamente en steenwerk; inbou van venster- en deurkosyne; siersteenwerk; pylers; boogkonstruksie; vuurherde en skoorstene; afdekking en bekleding van vensterbanke met teëls; nuwe bouwerk en algemene boureparasies; metodes om siersteenwerk skoon te maak; gooi en nabehandeling van beton by gewapende blaaië en balke; hellinggewing van beton en sintelbeton dakblaaië; elementêre afmetings van steenwerk	Noodhulp tot in die stadium waar 'n sertifikaat verkrygbaar is. Gespesialiseerde steenwerk; pleisterwerk; muur- en vloerteëlwerk; ondersteuning; afvlakking; granolitiese werk; inlaat en lê van voorafgegiete eenhede; pype met groot deursnee en waterriole lê; mangate messel; ongelaagde klipmesselwerk; uitleë en plaas van hol blokke vir ligte hangvloerblaaië; gips- of kleimuurblokke vir afskortingsmure; meng en aanwending van kleefmiddels; gebruik van krag- en ploffgereedschap; oprigting van eenvoudige betonbekisting en stutting van blaaië.	12. TRADE: PLUMBING (10) First year: Safety precautions; use and care of tools, materials and machines; uses of pipes, fittings, washers and packings of various kinds; cutting elementary patterns, cutting and treading pipes; working from plans; tinning, soldering and rivetting; uses of fluxes; technical terms Thereafter: Cutting, treading, jointing, fixing and laying of pipes; fitting and fixing stopcocks, valves, expansion joints, copper and plastic piping, waste and outlet pipes, traps, vent pipes, guttering, downpipes and flashings; installation of hot water systems; setting out drainage systems; laying and jointing drain pipes; installation of all sanitary ware including traps and fittings; general cast-iron pipe work; elementary use of oxy-acetylene and arc-welding equipment; brazing and welding; setting out from plans and specifications; practical application of Municipal regulations	First-aid to the point where a certificate is obtainable; elementary sheetmetal work; making gutters and downpipes of sheetmetal. More advanced sheetmetal work; fixing meters; meter reading; jointing and laying of lead piping and bossing up of sheet lead; installation and maintenance of septic tanks; building manholes; gas installations.
13. AMBAG: MESSEL- EN PLEISTERWERK (2) Eerste jaar: Veiligheidsmaatreëls; gebruik, versorging, onderhoud en berging van gereedschap en materiaal, hantering van en eienskappe van materiaal, met inbegrip van sement, kalk, sand, toeslag en stene; aanmaak van dagha; voegwerk en voegstryking van steenwerk en die gebruik van verskillende verbande; steierwerk; lees van tekenings; tegniese terme Daarna: Van planne af werk; meng van dagha en beton vir verskillende doeleindes soos onderlae, fondamente en steenwerk; inbou van venster- en deurkosyne; siersteenwerk; pylers; boogkonstruksie; vuurherde en skoorstene; afdekking en bekleding van vensterbanke met teëls; nuwe bouwerk en algemene boureparasies; metodes om siersteenwerk skoon te maak; gooi en nabehandeling van beton by gewapende blaaië en balke; hellinggewing van beton en sintelbeton by dakblaaië; pleister van mure, plafonne en spatlyste; gidspleister aansit; granolitiese vloere; elementêre afmeting van steenwerk	Noodhulp tot in die stadium waar 'n sertifikaat verkrygbaar is. Gespesialiseerde steenwerk; muur- en vloerteëlwerk; ondersteuning; inlaat en lê van voorafgegiete eenhede; pype met groot deursnee en waterriole lê; mangate messel; ongelaagde klipmesselwerk; gips- of kleimuurblokke vir afskortingsmure; afwerklaag aan mure en plafonne deur gebruikmaking van fynpleister- of gipsamestellings; uitleë en plaas van ligte hol blokke vir hangvloerblaaië; meng en aanwending van kleefmiddels; gebruik van krag- en ploffgereedschap; oprigting van eenvoudige betonbekisting en stutting van blaaië.	13. TRADE: POLISHING (7) First year: Safety precautions and first-aid; use and care of tools including spray-painting equipment; knowledge of properties, characteristics and uses of cellulose paints, colouring, solvents, oils, spirits, shellac, lacquers and other materials used in French polishing; preparation of hardwoods and softwoods by glasspapering and preliminary filling-in for cellulose paint finishes Thereafter: Applying oil and cellulose paints by brush and spray gun; staining various woods to match or imitate other woods before polishing; making of pads and rubbers; filling-in and preparing perfectly smooth surfaces for polishing; producing bright, dull and egg-shell finishes; repairing and bringing up sun-blistered and weathered cellulose paint surfaces; cleaning and freshening up old polished surfaces	Imitative painting of marbles and granites; use of bronzing powder and application thereof on bronze metal finishes; satin finishes on various metal surfaces by abrasives.
		14. TRADE: RECONSTRUCTED STONE AND TERRAZZO WORKING (6) First year: Safety precautions and first-aid; use upkeep and care of tools and machinery; handling and properties of materials, such as plaster of paris, cement, colouring oxides, sand, stone and marble or other aggregates; preparation and mixing of various aggregates	

Kolom A	Kolom B	Column A	Column B
14. AMBAG: MUUR- EN VLOER-TEËLWERK (22) <i>Eerste jaar:</i> Veiligheidsmaatreëls; gebruik en versorging van gereedskap; hantering en versorging van materiaal, met inbegrip van effekteurige, gekleurde en tekstuurteëls en mos leksteentjies; eienskappe en gebruike van sementsoorte en kleefmiddels; spesifikasies soos van toepassing op muur- en vloer-teëlwerk; bereiding van alle dagha-soorte wat in die ambag gebruik word; teëls na grootte kap. <i>Daarna:</i> Alle soorte muurteëls en mosaïek aan muuroppervlakke vassit; ontwerpe volgens tekenings, sketse of prente afmerk en uitvoer; alle soorte vloerteëls insit, met inbegrip van marmer, terrazzo, terracotta, enkoestiek en mosaïek; geronde en oopvoeg-teëlwerk; eienskappe en gebruike van die verskillende gekleurde semente en gebrande gips en die gebruik van pigmente	Noodhulp tot in die stadium waar 'n sertifikaat verkrygbaar is. Gebruik van kraggereedskap.	and cement to backing of blocks and to finished faces; various textures to finished faces; reading of drawings; setting out, cutting and horsing to templates; technical terms <i>Thereafter:</i> Making models to detail with plaster of paris, wood or other materials; making of reinforced cement or plaster of paris piece moulds from models, from which to cast reconstructed stone or terrazzoblocks; casting blocks with various finishes to exposed faces; applying and finishing to a good surface in <i>in situ</i> terrazzo to walls, floors, staircases, etc., including the screeding and fixing of dividing strips; fixing reconstructed stone and terrazzo slabs or blocks	Making of gelatine and other flexible moulds.
15. AMBAG: PLAATMETAALWERK (17) <i>Eerste jaar:</i> Veiligheidsmaatreëls en noodhulp; gebruik van materiaal, gereedskap en masjiene wat in die ambag gebruik word; gebruik van soldeerbout, smeltmiddels en soldeermiddels; klinknaels en hoe hulle gebruik word; eenvoudige werk afmerk; vervaardiging van eenvoudige plaatmetaaldele; werktekenings lees; tegniese terme <i>Daarna:</i> Meer gevorderde plaatmetaaldele (met inbegrip van platpatroonwerk) afmerk, ontwikkel en vervaardig; vervaardiging van plaatmetaaldele van tekenings af; gebruik en versorging van oksiasetileenuitrustings soos op die ambag van toepassing; onderrig oor rek en krimp van materiaal gedurende vervaardiging van plaatmetaaldele; gebruik van kragmasjinerie; vervaardiging van gesoldeerde en geklinkte samestelle van allerlei aard	Bereiding van staal- en al-looiplate vir behandeling teen roes.	15. TRADE RESILIENT FLOOR AND WALL COVERING (2) <i>First year:</i> Safety precautions and first-aid; knowledge, use, care, sharpening and maintenance of tools; knowledge and use of wall and floor covering materials; knowledge of the preparation, inspection and testing of all types of surfaces to be covered <i>Thereafter:</i> Final preparation, inspection and testing of all types of wall and floor surfaces; setting out, measuring up, laying and fixing of all types of resilient, wood block (where facilities exist), wall and floor covering materials, including jointing, welding and advanced designs; knowledge of sanding, cleaning and polishing of surfaces	
16. AMBAG: PLEISTERWERK (11) <i>Eerste jaar:</i> Veiligheidsmaatreëls; gebruik en versorging van gereedskap; hantering en eienskappe van alle pleistermateriaal; kennis van die bereiding van dagha; skoonmaak en bereiding van alle tipes oppervlakke; steierwerk; werk van 'n elementêre aard; tegniese terme <i>Daarna:</i> Bereiding en aansit van alle pleister wat vir mure en plafonne, met inbegrip van vloerlyste, nodig is en dit tot 'n goeie oppervlak afwerk; met gietvorms werk; afvlakking en afwerking van beton; granolitiese vloere; meng van materiale met inbegrip van kleurvermenging; spesiale komppleister-soorte; gevorderde pleisterwerk; gebruik van Tirolese en ander soortgelyke masjiene; kennis van planne, spesifikasies en hoeveelhede materiaal vir pleisterwerk	Noodhulp tot in die stadium waar 'n sertifikaat verkrygbaar is; lees van tekenings. Maak van patrone en profielopbou van gietvorms; aanbring van akoestiek-materiale en insit van mosaïek, muur- en vloer-teëls; gebruik van profiele; kennis van veselpleister; gebruik van kraggereedskap; elementêre baksteenwerk.	16. TRADE: SAW DOCTORING (17) <i>First year:</i> Safety precautions and first-aid; use and care of tools, machines and appliances used in the trade; hammering, gulletting, sharpening and setting of all classes of circular and frame saws <i>Thereafter:</i> Brazing, retoothing, sharpening (by hand or machine), spring-setting, swage-setting and tensioning of band saws of all widths; setting-up and repairing inserted tooth saws; truing-up buckled or twisted band saws or circular saws; use of rolls for truing-up and tensioning band saws of all widths	
		17. TRADE: SHEETMETAL WORKING (15) <i>First year:</i> Safety precautions and first-aid, use of materials, tools and machines applicable to the trade; use of soldering iron, fluxes and solders, rivets and their application; marking out of simple work; manufacture of simple sheetmetal parts; reading of working drawings; technical terms <i>Thereafter:</i> Marking out, developing and manufacture of more advanced sheetmetal parts, including flat pattern work; manufacture of sheetmetal components from drawings; use and care of oxyacetylene equipment as applicable	Preparation of steel and alloy sheet for anti-corrosive treatment.

Kolom A	Kolom B	Column A	Column B
17. AMBAG: SAAGHERSTEL-WERK (16) <i>Eerste jaar:</i> Veiligheidsmaatreëls en noodhulp; gebruik en versorging van gereedschap, masjiene en toestelle wat in die ambag gebruik word; alle soorte sirkel- en raamsae hamer, uithol, skerpmaak en stel <i>Daarna:</i> Bandsae van alle wydtes hardsoldeer, weer van tande voorsien, skerpmaak (met die hand of masjiene), veersetting, tandstelling en verspanning van sae; sae met ingevoegde tande stel en heelmaak; gebuigde of verdraaide bandsae of sirkelsae haaks maak; gebruik van walse om bandsae van alle wydtes haaks te maak en te span		to the trade; instruction in stretching and shrinking of material during manufacture of sheetmetal parts; use of power-driven machinery; manufacture of soldered and rivetted assemblies of various types	
18. AMBAG: SKILDER- EN VER-SIERWERK (10) <i>Eerste jaar:</i> Veiligheidsmaatreëls; gebruik en versorging van gereedschap en materiale; verwydering van ou verf en bereiding van oppervlakke; onderlae aansit; meng van verf en die gebruik van pigmente, verdunners en droogmiddels; metodes om verf, witkalk, distempers en emulsies aan te sit; steierwerk en verdiepingsteiers; agterna skoonmaak; tegniese terme <i>Daarna:</i> Algemene opleiding om verf te meng, te berei en aan te sit; beitswerk en die verskillende metodes om vlekke te verwyder; strepe verf op, bereiding en verf van alle oppervlakke; verniswerk; gevorderde kleurmenging; opknepwerk en geboue binne en buite verf; kennis van werkshoeveelhede en meetwerk	Noodhulp tot in die stadium waar 'n sertifikaat verkrygbaar is; gebruik en versorging van spuitverf-uitrusting; kennis van ruite insit.	18. TRADE: SHOPFITTING (ARCHITECTURAL METAL WORKING) (22) <i>First year:</i> Safety precautions; use and care of tools; use of acetylene torch; elementary operations on centre lathe; elementary bending, marking off and cutting with guillotine; use of standard wire gauge; knowledge and use of non-ferrous metals and stainless steel; elementary use of sheetmetal; knowledge of stock sections, including extrusions and screw, tap and die sizes; soldering, rivetting and the use of files; elementary calculations, using British and metric systems of measurement <i>Thereafter:</i> Sharpening of bits and lathe tools; use of guillotine, fly press and wiring and swaging machines; brazing with acetylene torch; use of arc, carbon arc and spot welders; cleaning of welded joints; bending metals and tubes; welding of mild steel sheet up to 1/4 inch thick and mild steel bars; scoring and folding of metals (mild steel or non-ferrous) for door frames, doors and shopfronts; mitring and welding shopfront frames; the use of all welding fluxes; screw cutting; light smith work; development of patterns in forming metal letters and other architectural shapes; manufacture and fixing of grills, balustrades and metal doors; interpretation of working drawings and setting out of scale drawings to full size; care, protection and types of anodising; fixing and use of ironmongery; use and care of hand and power tools.	First-aid to the point where a certificate is obtainable. Die-making; use of draw bench and shaper; operation of flash butt welding machine.
19. AMBAG: SKRYNWERK (7) <i>Eerste jaar:</i> Veiligheidsmaatreëls; kennis van, gebruik, versorging, skerpmaak en onderhoud van gereedschap; kennis van en gebruik van materiale, met inbegrip van timmerhout, laaghout en komposisiebord; defekte in timmerhout; timmerhout met die hand haaks maak; eenvoudige lasse afmerk en maak; vaslym, vasspyker en vasskroef; skuurpapierwerk; lees van tekenings, tegniese terme <i>Daarna:</i> Venster- en deurkosyne, deure, vensterrame en rakkaste maak; paneelwerk en alle ander soorte skrynwerk; werk van tekenings af afmerk en meetlatte gebruik; hoeveelhede bereken en saaglyste saamstel; profiellyste saamvoeg, inpas en aanbring; alle ysterware, hardeware en toebehore insit; houtwerk vir binne- en buitewerk aan geboue uitvoer; gebruik van draagbare kraggereedschap; gangbare kennis van houtwerkmasjinerie	Noodhulp tot in die stadium waar 'n sertifikaat verkrygbaar is.	19. TRADE: SHOPFITTING (WOOD) (23) <i>First year:</i> Safety precautions; knowledge, use, sharpening and maintenance of all hand tools applicable to the trade; knowledge of all hardwoods, softwoods, laminated boards, composition boards, plywood, plastic sheeting and fibre boards used in the trade; defects in timber; setting out and making of all types of simple joints; manufacture of simple fittings and fixtures in wood; preparation of materials; assembling and finishing upper lights, window enclosures, counters, fitments, doors, frames, office screening, etc., to receive finishes such as French polish, lacquer and duco; technical terms <i>Thereafter:</i> General training in joinery; setting out of jobs; reading scale drawings and working from full-size set-outs; making of store, shop, office and bank fittings, including the manufacture of shop fronts, window enclosures, show	First-aid to the point where a certificate is obtainable.
20. AMBAG: TIMMERWERK (3) <i>Eerste jaar:</i> Veiligheidsmaatreëls; kennis van, gebruik, versorging, skerpmaak en onderhoud van gereedschap, kennis van en gebruik van materiale, met inbegrip van verskillende soorte timmerhout, laaghout en komposisiebord, timmerhout opmeet; betonbekisting maak en oprig; tegniese terme; lees van tekenings	Noodhulp tot in die stadium waar 'n sertifikaat verkrygbaar is; lê van vloere van vloerstrook.		

Kolom A	Kolom B	Column A	Column B
Daarna: Tekeninge lees en volgens tekenings afmerk; timmerhout met handgereedskap haaks maak; strookvloere lê; vensters en deurkosyne insit; deure en vensterrame hang; aanbring van meubels, toebehore en ysterware; prentelyste, vloerlyste, argitrawe en profiellyste pas en insit; uitleë, konstruksie en oprigting van strukture en dakke van yster en ander materiale; verdere onderrig in die maak en oprigting van betonbekisting; reparasies, opknappwerk en veranderings aan geboue uitvoer; oprigting van steiers; vir bestellings van nodige materiaal opmeet	Gebruik van krag- en plofgereedskap; aansit van traplooppvlakke, langslere en handrelings; kennis van die insit van wapening; meng, gooi en nabehandeling van beton; plafonne aanbring; insit van kroonlyste en spasiëring van en insit van latwerk en dekstroke; insit van fynplaat; muurstutte oprig; klank- en akoestiek materiaal insit; kurk- en asbesisolering; metaal- of houtlatwerk; komposisieplafon en muurbedekking; fineerpaneelwerk.	cases, counters, screens and interior fittings and fixtures in wood or metal or both, and installing and fitting all items manufactured as above including mouldings; cutting and assembling drawn and extruded metal sections to setout sizes and angles and bracing together for welding, polishing and fixing; assembling and glazing of glass counters and showcases; handling and installation of all glassware used in shopfitting, such as plain, tinted and brilliant cut-lined mirrors and bent, sandblasted, ground, polished and coloured glass; knowledge of all outside fixing terms such as "building line", "datum line", "plus and minus pavement levels"; use and care of portable power tools	
21. AMBAG: TIMMER- EN SKRYNWERK (4) <i>Eerste jaar:</i> Veiligheidsmaatreëls; kennis van, gebruik, versorging, skerpmaak en onderhoud van gereedskap; kennis van en gebruik van materiale, met inbegrip van timmerhout, laaghout en komposiesbord; defekte in timmerhout; timmerhout opmeet en met die hand haaks maak; alle soorte eenvoudige lasse afmerk en maak; vaslym, vasspyker en vasskroef; met skuurpapier skuur; maak en oprigting van betonbekisting; lees van tekenings; tegniese terme <i>Daarna:</i> Venster- en deurkosyne, deure vensterrame en rakkaste maak; paneelwerk en skrynwerk; werk van tekenings af afmerk en meetlatte gebruik; hoeveelhede bereken en saaglyste saamstel; profiellyste saamvoeg, inpas en aanbring; houtwerk vir binne- en buitewerk aan geboue uitvoer; strookvloere lê; deur- en vensterrame insit; deure en vensterkosyne hang en meubels insit; toebehore en ysterware aanbring; prentelyste, vloerlyste, argitrawe en profiellyste pas en insit; uitleë, konstruksie en oprigting van strukture en dakke van yster en ander materiale; reparasies, opknappwerk en veranderings aan geboue uitvoer; vir bestellings van nodige materiaal opmeet	Noodhulp tot in die stadium waar 'n sertifikaat verkrygbaar is.	20. TRADE: SIGNWRITING (9) <i>First year:</i> Safety precautions; use and care of materials and tools, including spray-painting equipment; preparation of surfaces; use of pigments, thinners and driers; methods of applying paints; cleaning off old paint; mixing and blending of paints; filling in between outlines; elementary setting-out and spacing of letters; scaffolding; varnishing and frosting; neatness; technical terms <i>Thereafter:</i> Colour mixing, matching and blending; laying out signs; painting backgrounds; executing and finishing signs consisting of lettering, gilding, heraldry; use of gold leaf; use of plastic materials; shaded lettering; executing comprehensive designs and layouts; glass embossing; sandblasting design; names of the various types of lettering; spraypainting	First-aid to the point where a certificate is obtainable.
22. AMBAG: WINKELUITRUSTING (BOUKUNDIGE METAALWERK) (13) <i>Eerste jaar:</i> Veiligheidsmaatreëls; gebruik en versorging van gereedskap; gebruik van asetileen- en elementêre buigwerk, afmerkwerk en afsny met valmes; gebruik van standaard-draadgroottes; kennis en gebruik van nie-ysterhoudende en vlek-vrye staal; elementêre gebruik van plaatmetaal; kennis van normale profiele, met inbegrip van uitgedrukte stukke en skroef-, sny- tap- en snymerg-groottes; sodeer, klink en die gebruik van vyle; elementêre berekenings met gebruikmaking van Britse en metrieke meetstelsels <i>Daarna:</i> Skerpmaak van boorysters en draai-bankgereedskap; gebruik van valmes, skroefpers, draad- en saalsmeemasjiene; hardsoldeerwerk met asetileen- en puntsweistoestelle; sweislasse	Gebruik van krag- en plofgereedskap; aansit van traplooppvlakke, langslere en handrelings; kennis van die insit van wapening; meng, gooi en nabehandeling van beton; droogmaak en bewaring van timmerhout; plafonne aanbring; insit van kroonlyste en spasiëring van en insit van latwerk en dekstroke; van fynplaat; klank- en akoestiek materiaal insit; kurk- en asbesisolering; fineerpaneelwerk; muurstutte oprig.	21. TRADE: STONE MASONRY (5) <i>First year:</i> Safety precautions and first-aid; knowledge, use and care of various hand and pneumatic tools and materials used in the trade; knowledge of the various types of stone and the purposes for which each is most suitable; knowledge of heavy stone working tools and machinery; simple cutting and trimming of stone; technical terms <i>Thereafter:</i> Cutting, trimming and building in or fixing (including pointing) of types of stone commonly used in the trade; the various surface finishes, such as axed, punched, rockfaced, chiselled, margin drafted and polished, including the hand drafting of granite; setting out, cutting and applying templates; reading of drawings and taking of working quantities	Silk screening; uses of long and duck ladders, boat-swain's chair and suspended scaffolding; glass engraving.
Stempels maak; trekbank en sterkarmmasjiene gebruik; bediening van flitsstoot-sweismasjiene.			Various classes of stone work such as "uncoursed", "random coursed", "unsquared rubble" and "roughly squared", "squared" and "cut" masonry; cutting stones for and building of masonry arches; fixing and pointing reconstructed stone and terrazzo work; various types of cramping and dowelling; letter cutting.

Kolom A	Kolom B	Column A	Column B
skoonmaak; metaal en pype buig; sagte staalplaat tot $\frac{1}{4}$ dm dik en sagte staalstawe sweis; inkerf en vou van metaal (sagte staal of nie-ysterhoudend) vir deurkosyne, deure en winkelfronte; winkelfrontrame verstek en sweis; gebruik van alle sweissmeltmiddels; skroefdraad sny; ligte smidswerk; ontwikkeling van patrone om metaalletters en ander boukundige vorms te maak; vervaardiging en aanbring van traliewerk, balustrades en metaaldeure; vertolking van werktekenings en uitbreiding van skaaltekenings tot volle grootte, versorging van, beskerming van en tipes anodisering; insit en gebruik van ysterware; gebruik en versorging van hand- en kraggereedskap 23. AMBAG: WINKELUITRUSTING (HOUTWERK) (19) <i>Eerste jaar:</i> Veiligheidsmaatreëls; kennis, gebruik, skerpmaak en onderhoud van alle handgereedskap wat in die ambag gebruik word; kennis van alle harde- en sagtehoutsoorte, lamelbord, komposisiebord, laaghout, plastiekplaatbekleding en veselbord wat in die ambag gebruik word; defekte in timmerhout; alle soorte eenvoudige lasse afmerk en maak; vervaardiging van eenvoudige los en vaste toebehore van hout; bereiding van materiaal; inmeekaarsit en afwerk van boligte, vensterkaste, toonbanke, muurmeublement, deure, kosyne, kantoorafskortings, ens., vir afwerkings soos met lakpolitoer, lakvernis en duco; tegniese terme <i>Daarna:</i> Algemene opleiding in skryfwerk; werk afmerk; skaaltekenings lees en van volgroottekenings af werk; stoor-, winkel-, kantoor- en banktoebehore maak met inbegrip van die vervaardiging van winkelfronte, vensteromhullings, vertoonkaste, toonbanke, afskortings en binnetoebehore en los en vaste toebehore van hout of metaal of albei en installering en bevestiging van alle items wat soos hierbo aangedui, vervaardig is, met inbegrip van lyste; getrokke metaalprofile volgens afgemerkte groottes en hoeke afsny en inmeekaarsit en dit aanmekeer om gesweis, gepoleer en bevestig te word; glastoonbanke en -vertoonkaste inmeekaarsit en glas insit; hantering en installering van alle glasware wat in winkeluitrusting gebruik word soos effekleurige, getinte en briljantkristal-spieëls en gebuigde, sandbestraalde, geskuurde, gepoleerde en gekleurde glas; kennis van alle buitewinkelbouterme soos "boullyn", "uitgangsllyn" en "plus-en-minus-voetganghoogtes"; gebruik en versorging van draagbare kraggereedskap	Noodhulp tot in die stadium waar 'n sertifikaat verkrygbaar is.	22. TRADE: WALL AND FLOOR TILING (14) <i>First year:</i> Safety precautions; use and care of tools; handling and care of materials including plain, coloured and textured tiles and mosaics; properties and uses of cements and adhesives; specifications as applied to wall and floor tiling; preparation of all mortars applicable to the trade; sizing and cutting tiles <i>Thereafter:</i> Fixing all classes of wall tiles and mosaics to wall surfaces; laying out and executing designs in accordance with drawings, sketches or pictures; laying all types of floor tiles including marble, terrazzo, terracotta, encaustic and mosaics; curved and open joint tiling; properties and uses of the various coloured cements and plaster of paris and the use of pigments	First-aid to the point where a certificate is obtainable. Use of power tools.
		23. TRADE: WOODMACHINING (4) <i>First year:</i> Safety precautions; use of guards; handling, care and maintenance of machines and shop equipment; knowledge of hardwoods and softwoods; selection of seasoned and dry timber; reading drawings; use of cutting lists; technical terms <i>Thereafter:</i> General training in woodmachining, which includes setting up, operating and maintaining circular saw benches and saws, band saws, jig saws, planing, moulding, morticing, tenoning, sanding, boring, and cutter grinding machines; sawing out and planing up timber from a cutting list with a minimum of wastage; setting out of work from drawings and the use of setting out rods; sharpening and setting up circular saws; making and using templates and jigs; grinding and sharpening chisels, straight and shaped cutters and knives for planing and moulding machines, and chains and bits for morticing and boring machines	First-aid to the point where a certificate is obtainable. Hammering of circular saws and rolling of hand saws; wood turning.

Let wel.—Die Werwings- en Opleidingsfonds vir die Bounywerheid het onderneem om werkgewers te vergoed vir enige uitgawes aangegaan ingevolge klousule 5 en om die hostel- of ander akkommodasie-gelde van die betrokke vakleerlinge te betaal of terug te betaal.

Alle belanghebbende persone wat beswaar teen bogenoemde voorneme het, word aangesê om binne 30 dae vanaf die datum van publikasie van hierdie kennisgewing sodanige besware skriftelik in te dien by die Sekretaris, Nasionale Vakleerlingskapkomitee vir die Bounywerheid, Privaatsak X117, Pretoria.

M. VILJOEN, Minister van Arbeid.

Note.—The Building Industry Recruitment and Training Fund has undertaken to reimburse employers with any expenditure incurred under clause 5 and to pay or refund the hostel or other accommodation fees of the apprentices concerned.

All interested persons who have any objections to the above proposals are called upon to lodge such objections, in writing, with the Secretary, National Apprenticeship Committee for the Building Industry, Private Bag X117, Pretoria, within 30 days from the date of publication of this notice.

M. VILJOEN, Minister of Labour.

DEPARTEMENT VAN BANTOE-ADMINISTRASIE EN -ONTWIKKELING

No. R. 343

10 Maart 1972

REGULASIES TEN OPSIGTE VAN DIE BANTOE- SAKEKOMMISSIE.—WYSIGING

Dit het die Staatspresident behaag om kragtens die bevoegdheid hom verleen by artikel 15 (a) van die Wet op Bantoesake, 1959 (Wet 55 van 1959), die regulasies afgekondig by Goewermentskennisgewing R. 1635 van 1971 ooreenkomstig bygaande Bylae te wysig.

BYLAE

In regulasie 7 (3) vervang die woorde “'n lid bedoel in subregulasie (2) (a)” deur die woorde “een van die lede”.

DEPARTMENT OF BANTU ADMINISTRATION AND DEVELOPMENT

No. R. 343

10 March 1972

REGULATIONS IN RESPECT OF THE BANTU AFFAIRS COMMISSION.—AMENDMENT

The State President has been pleased, under and by virtue of the powers vested in him by section 15 (a) of the Bantu Affairs Act, 1959 (Act 55 of 1959), to amend the regulations published under Government Notice R. 1635 of 1971 in accordance with the accompanying Schedule.

SCHEDULE

In regulation 7 (3) substitute the words “one of the members” for the words “a member referred to in subregulation (2) (a)”.

DEPARTEMENT VAN DOEANE EN AKSYNS

No. R. 344

10 Maart 1972

DOEANE- EN AKSYNSWET, 1964.—WYSIGING VAN BYLAE 1 (No. 1/1/107)

Ek, Nicolaas Diederichs, Minister van Finansies, handelende kragtens die bevoegdheid my verleen by artikel 48 van die Doeane- en Aksynswet, 1964, wysig hierby Bylae 1 van genoemde Wet in die mate in die Bylae hiervan aangetoon.

N. DIEDERICHS, Minister van Finansies.

DEPARTMENT OF CUSTOMS AND EXCISE

No. R. 344

10 March 1972

CUSTOMS AND EXCISE ACT, 1964.—AMENDMENT OF SCHEDULE 1 (No. 1/1/107)

I, Nicolaas Diederichs, Minister of Finance, acting in terms of the powers vested in me by section 48 of the Customs and Excise Act, 1964, hereby amend Schedule 1 to the said Act to the extent set out in the Schedule hereto.

N. DIEDERICHS, Minister of Finance.

BYLAE

I Tariefpos	II Statistiese Eenheid	III IV V Skaal van Reg		
		Algemeen	M.B.N.	Voorkeur
41.08 Deur subpos No. 41.08.20 deur die volgende te vervang: „41.08.20 Nagemaakte lakleer en dergelike bedekte of beskrykte leer	m ²	255c per m ² min 50% met 'n maksimum van 20%”		

OPMERKING.—Die reg op nagemaakte lakleer en dergelike bedekte of bestrykte leer word verhoog van vry na 255c per m² min 50% met 'n maksimum van 20%.

SCHEDULE

I Tariff Heading	II Statistical Unit	III IV V Rate of Duty		
		General	M.F.N.	Preferential
41.08 By the substitution for subheading No. 41.08.20 of the following: “41.08.20 Imitation patent leather and similar covered or coated leather	m ²	255c per m ² less 50% with a maximum of 20%”		

NOTE.—The duty on imitation patent leather and similar covered or coated leather is increased from free to 255c per m² less 50% with a maximum of 20%.

No. R. 345

10 Maart 1972

DOEANE- EN AKSYNSWET, 1964.—WYSIGING
VAN BYLAE 1 (No. 1/1/108)

Ek, Nicolaas Diederichs, Minister van Finansies, handelende kragtens die bevoegdheid my verleen by artikel 48 van die Doeane- en Aksynswet, 1964, wysig hierby Bylae 1 van genoemde Wet in die mate in die Bylae hiervan aangetoon.

N. DIEDERICHS, Minister van Finansies.

No. R. 345

10 March 1972

CUSTOMS AND EXCISE ACT, 1964.—AMENDMENT
OF SCHEDULE 1 (No. 1/1/108)

I, Nicolaas Diederichs, Minister of Finance, acting in terms of the powers vested in me by section 48 of the Customs and Excise Act, 1964, hereby amend Schedule 1 to the said Act to the extent set out in the Schedule hereto.

N. DIEDERICHS, Minister of Finance.

BYLAE

I Tariefpos	II Statistiese Eenheid	III IV V Skaal van Reg		
		Algemeen	M.B.N.	Voorkeur
48.15 Deur na subpos No. 48.15.60 die volgende in te voeg: „48.15.70 Indikateur-, reageer- en toetspapier, bedruk of onbedruk, hetsy in boekies, voorraadhouers of soortgelyke houers bemark al dan nie	kg	20%		

OPMERKING.—Spesifieke voorsiening, teen 'n skaal van reg van 20%, word gemaak vir indikateur-, reageer- en toetspapier, bedruk of onbedruk, hetsy in boekies, voorraadhouers of soortgelyke houers bemark al dan nie.

SCHEDULE

I Tariff Heading	II Statistical Unit	III IV V Rate of Duty		
		General	M.F.N.	Preferential
48.15 By the insertion after subheading No. 48.15.60 of the following: “48.15.70 Indicator papers, reagent papers and test papers, printed or unprinted, whether or not put up in booklets, dispensers or the like	kg	20%		

NOTE.—Specific provision, at a rate of duty of 20%, is made for indicator papers, reagent papers and test papers, printed or unprinted, whether or not put up in booklets, dispensers or the like.

No. R. 346

10 Maart 1972

DOEANE- EN AKSYNSWET, 1964.—WYSIGING
VAN BYLAE 1 (No. 1/1/109)

Ek, Nicolaas Diederichs, Minister van Finansies, handelende kragtens die bevoegdheid my verleen by artikel 48 van die Doeane- en Aksynswet, 1964, wysig hierby Bylae 1 van genoemde Wet in die mate in die Bylae hiervan aangetoon.

N. DIEDERICHS, Minister van Finansies.

No. R. 346

10 March 1972

CUSTOMS AND EXCISE ACT, 1964.—AMENDMENT
OF SCHEDULE 1 (No. 1/1/109)

I, Nicolaas Diederichs, Minister of Finance, acting in terms of the powers vested in me by section 48 of the Customs and Excise Act, 1964, hereby amend Schedule 1 to the said Act to the extent set out in the Schedule hereto.

N. DIEDERICHS, Minister of Finance.

BYLAE

I Tariefpos	II Statistiese Eenheid	III IV V Skaal van Reg		
		Algemeen	M.B.N.	Voorkeur
84.59 Deur na subpos No. 84.59.20 die volgende in te voeg: „84.59.25 Stofsuikers, elektries, nie-huishoudelik	getal	5%		vry (V.K.; Kanada)“

OPMERKING.—Spesifieke voorsiening, teen 'n skaal van reg van 5% (Algemeen) en vry (Voorkeur), word gemaak vir elektriese stofsuikers, nie-huishoudelik.

SCHEDULE

I Tariff Heading	II Statistical Unit	Rate of Duty		
		III General	IV M.F.N.	V Preferential
84.59 By the insertion after subheading No. 84.59.20 of the following: "84.59.25 Vacuum cleaners, electric, non-domestic"	no.	5%		free (U.K.; Canada)"

NOTE.—Specific provision, at a rate of duty of 5% (General) and free (Preferential), is made for electric vacuum cleaners, non-domestic.

No. R. 347

10 Maart 1972

DOEANE- EN AKSYNSWET, 1964.—WYSIGING
VAN BYLAE 4 (No. 4/96)

Ek, Nicolaas Diederichs, Minister van Finansies, handelende kragtens die bevoegdheid my verleen by artikel 75 van die Doeane- en Aksynswet, 1964, wysig hierby Bylae 4 van genoemde Wet in die mate in die Bylae hiervan aangetoon.

N. DIEDERICH, Minister van Finansies.

No. R. 347

10 March 1972

CUSTOMS AND EXCISE ACT, 1964.—AMENDMENT
OF SCHEDULE 4 (No. 4/96)

I, Nicolaas Diederichs, Minister of Finance, acting in terms of the powers vested in me by section 75 of the Customs and Excise Act, 1964, hereby amend Schedule 4 to the said Act to the extent set out in the Schedule hereto.

N. DIEDERICH, Minister of Finance.

BYLAE

I Item	II Tariefpos en Beskrywing	III Mate van Korting
411.00	Deur tariefpos No. 85.06 deur die volgende te vervang: „85.06 Vrugesapuitdrukervoetstukke wat uit elektriese motor, ratte, skakelaar en omhulsel bestaan, met 'n prys v.a.b. van hoogstens R5,00, ingevoer deur of ten behoeve van die Suid-Afrikaanse Koöperatiewe Sitrusbeurs Beperk	Volle k

OPMERKING.—Voorsiening word gemaak vir 'n volle korting op reg op vrugesapuitdrukervoetstukke wat uit elektriese motor, ratte, skakelaar en omhulsel bestaan, met 'n prys v.a.b. van hoogstens R5,00, ingevoer deur of ten behoeve van die Suid-Afrikaanse Koöperatiewe Sitrusbeurs Beperk.

SCHEDULE

I Item	II Tariff Heading and Description	III Extent of Rebate
411.00	By the substitution for tariff heading No. 85.06 of the following: "85.06 Fruit juice extractor bases consisting of electric motor, gears, switch and housing, of a f.o.b. price not exceeding R5,00, imported by or on behalf of the South African African Co-operative Citrus Exchange Limited	Full duty"

NOTE.—Provision is made for a rebate of the full duty on fruit juice extractor bases consisting of electric motor, gears, switch and housing, of a f.o.b. price not exceeding R5,00 imported by or on behalf of the South African Co-operative Citrus Exchange Limited.

DEPARTEMENT VAN GESONDHEID

No. R. 363

10 Maart 1972

VERBETERING VAN GOEWERMENSKENNIS-
GEWINGS

Alle kommas en punte moet weggelaat word uit die afkortings van kwalifikasies vir registrasie wat in die volgende Goewermenskennisgewings verskyn:

R. 1676 van 29 September 1971: Regulasies betreffende die grade, diplomas of sertifikate wat geneeshere en tandartse reg op registrasie gee.

R. 1678: Reëls betreffende die registrasie van addisionele kwalifikasies.

DEPARTMENT OF HEALTH

No. R. 363

10 March 1972

CORRECTION NOTICE

All commas and fullstops should be omitted from the abbreviations of qualifications for registration which appear in the following Government Notices:

R. 1676 of 29 September 1971: Regulations regarding the degrees, diplomas or certificates entitling medical practitioners and dentists to registration.

R. 1678 of 29 September 1971: Rules regarding the registration of additional qualifications.

DEPARTEMENT VAN LANDBOU-EKONOMIE EN -BEMARKING

No. R. 364

10 Maart 1972

SYBOKHAARSKEMA

OPLEGGING VAN HEFFING EN SPESIALE HEFFING OP SYBOKHAAR

Kragtens artikel 79 (a) van die Bemarkingswet, 1968 (No. 59 van 1968), maak ek, Dirk Cornelis Hermanus Uys, Minister van Landbou, hierby bekend dat die Sybokhaar-raad vermeld in artikel 6 van die Sybokhaarskema, afgekondig by Proklamasie R. 281 van 1971, kragtens artikels 23 en 24 van daardie Skema, met my goedkeuring en met ingang van die datum van publikasie hiervan, die heffing en spesiale heffing in die Bylae hiervan uiteengesit, opgelê het ter vervanging van die heffing en spesiale heffing afgekondig by Goewermentskennisgewing R. 902 van 12 Junie 1970, wat hierby herroep word.

D. C. H. UYS, Minister van Landbou.

BYLAE

1. In hierdie kennisgewing, tensy uit die samehang anders blyk, het 'n woord of uitdrukking waaraan in die Sybokhaarskema, afgekondig by Proklamasie R. 281 van 1971, 'n betekenis geheg is, 'n ooreenstemmende betekenis.

2. 'n Heffing van 1,5c per kg en 'n spesiale heffing van 4c per kg word hierby opgelê op alle sybokhaar wat deur bemiddeling van die Raad verkoop word.

No. R. 365

10 Maart 1972

PIESANGBEHEERRAAD.—WEIERING OR SEKERE GRADE PIESANGS VIR VERKOOP IN ONTVANGS TE NEEM

Kragtens die bevoegdheid my verleen by artikel 64 (4) van die Bemarkingswet, 1968 (No. 59 van 1968), magtig ek, Dirk Cornelis Hermanus Uys, Minister van Landbou, die Piesangbeheerraad, vermeld in artikel 3 van die Piesangskema, afgekondig by Proklamasie R. 254 van 1962, soos gewysig, hierby om te eniger tyd gedurende die tydperk wat eindig op 30 September 1972, te weier om Graad 2 of Ondergraad piesangs vir verkoop in ontvangs te neem.

In hierdie kennisgewing beteken "graad", die graad piesangs wat bepaal is op die wyse kragtens artikel 89 van genoemde Wet voorgeskryf.

Goewermentskennisgewing R. 1420 van 20 Augustus 1971 word hierby herroep.

D. C. H. UYS, Minister van Landbou.

DEPARTEMENT VAN NASIONALE OPVOEDING

No. R. 360

10 Maart 1972

WET OP UNIVERSITEITE, 1955

UNIVERSITEIT VAN PRETORIA.—WYSIGING VAN REGULASIES

Kragtens die bevoegdheid hom verleen by artikel 17 (5) van die Wet op Universiteite, 1955 (Wet 61 van 1955), het die Minister van Nasionale Opvoeding onderstaande wysiging van die regulasies van die Universiteit van Pretoria afgekondig by Goewermentskennisgewing R. 1932

DEPARTMENT OF AGRICULTURAL ECONOMICS AND MARKETING

No. R. 364

10 March 1972

MOHAIR SCHEME

IMPOSITION OF LEVY AND SPECIAL LEVY ON MOHAIR

In terms of section 79 (a) of the Marketing Act, 1968 (No. 59 of 1968), I, Dirk Cornelis Hermanus Uys, Minister of Agriculture, hereby make known that the Mohair Board, referred to in section 6 of the Mohair Scheme, published by Proclamation R. 281 of 1971, has in terms of sections 23 and 24 of that Scheme, with my approval and with effect from the date of publication hereof, imposed the levy and special levy set out in the Schedule hereto, in substitution for the levy and special levy published by Government Notice R. 902 of 12 June 1970, which is hereby repealed.

D. C. H. UYS, Minister of Agriculture.

SCHEDULE

1. In this notice, unless inconsistent with the context, any word or expression to which a meaning has been assigned in the Mohair Scheme, published by Proclamation R. 281 of 1971, shall have a corresponding meaning.

2. A levy of 1,5c per kg and a special levy of 4c per kg are hereby imposed on all mohair sold through the Board.

No. R. 365

10 March 1972

BANANA CONTROL BOARD.—REFUSAL TO TAKE DELIVERY OF CERTAIN GRADES OF BANANAS

In terms of the powers vested in me by section 64 (4) of the Marketing Act, 1968 (No. 59 of 1968), I, Dirk Cornelis Hermanus Uys, Minister of Agriculture, hereby authorise the Banana Control Board, referred to in section 3 of the Banana Scheme, published by Proclamation R. 254 of 1962, as amended, to refuse at any time during the period which expires on 30 September 1972, to take delivery for sale of Grade 2 or Undergrade bananas.

In this notice "grade" means the grade of bananas as determined in the manner prescribed by regulation under section 89 of the said Act.

Government Notice R. 1420 of 20 August 1971 is hereby repealed.

D. C. H. UYS, Minister of Agriculture.

DEPARTMENT OF NATIONAL EDUCATION

No. R. 360

10 March 1972

UNIVERSITIES ACT, 1955

UNIVERSITY OF PRETORIA.—AMENDMENT OF REGULATIONS

The Minister of National Education has, under and by virtue of the powers vested in him by section 17 (5) of the Universities Act, 1955 (Act 61 of 1955), approved the following amendments to the regulations of the University of Pretoria, published under Government Notice R. 1932

van 13 Desember 1963, soos gewysig by Goewermentskennisgewings R. 802 van 4 Junie 1965, R. 725 van 19 Mei 1967, R. 2372 van 27 Desember 1968 en R. 463 van 26 Maart 1971, goedgekeur:

1. Regulasie 3 word deur onderstaande regulasie vervang:

"Hernuwing van Inskrywing.—Algemeen

3. Behoudens 'n andersluidende bepaling in 'n regulasie, mag—

(a) 'n heelttydse student wat na 'n eerste herhaling van 'n studiejaar; en

(b) 'n buitemuurse student en 'n na-uurse student wat na 'n tweede herhaling van 'n studiejaar;

nog nie in voldoende kursusse geslaag het om te kwalifiseer vir toelating tot die daaropvolgende studiejaar of vir toekenning van 'n graad nie, nie weer as student ingeskryf word nie: Met dien verstande dat hertoelating as student op versoek na verloop van een akademiese jaar kan geskied en wel op die voorwaardes wat die Universiteit bepaal."

2. Regulasie 4 word deur onderstaande regulasie vervang:

"Hernuwing van Inskrywing.—Spesifieke Fakulteite

4. (a) 'n Student vir die graad B.V.Sc. wat na 'n eerste herhaling van die derde, vierde of vyfde studiejaar; en

(b) 'n student vir die graad M.B., Ch.B. wat na 'n eerste herhaling van die derde, vierde of vyfde studiejaar; en

(c) 'n student vir die graad B.Ch.D. wat na 'n eerste herhaling van die derde of vierde studiejaar; en

(d) 'n student vir die graad B.Cur. wat na 'n eerste herhaling van die derde of vierde studiejaar; en

(e) 'n student vir die graad B.Sc.(Ing.) wat na 'n eerste herhaling van die derde of vierde studiejaar;

nog nie in voldoende kursusse geslaag het om vir toelating tot die daaropvolgende studiejaar of vir toekenning van die graad te kwalifiseer nie, mag nie weer as student ingeskryf word nie, behalwe op die voorwaardes wat die Universiteit bepaal."

DEPARTEMENT VAN NYWERHEIDSWESE

No. R. 357

10 Maart 1972

WET OP STANDAARDE, 1962

WYSIGING VAN VERPLIGTE STANDAARDSPESIFIKASIE VIR DIE VERVAARDIGING, PRODUKSIE, BEWERKING OF BEHANDELING VAN INGE-MAAKTE SKAALDIERE

Ek, Abraham Hermanus du Plessis, Adjunk-minister van Ekonomiese Sake, vervang hierby, op aanbeveling van die Raad van die Suid-Afrikaanse Buro vir Standaarde en kragtens artikel 15 van die Wet op Standaarde, 1962 (Wet 33 van 1962), met ingang van die datum twee maande na publikasie van hierdie kennisgewing die verpligte standaardspesifikasie vir die vervaardiging, produksie, bewerking of behandeling van ingemaakte skaal-diere gepubliseer by Goewermentskennisgewing 491 van 28 Maart 1969 deur die gewysigde verpligte standaardspesifikasie in die Bylae vervat.

A. H. DU PLESSIS, Adjunk-minister van Ekonomiese Sake.

of 13 Desember 1963, as amended by Government Notices R. 802 of 4 June 1965, R. 725 of 19 May 1967, R. 2372 of 27 December 1968 and R. 463 of 26 March 1971:

1. The following regulation is substituted for regulation 3:

"Renewal of Registration.—General

3. Save as is otherwise provided by regulation—

(a) a full-time student who, after once repeating a year of study; and

(b) an extra-mural student and a student attending late afternoon or evening classes who, after twice repeating a year of study;

has not passed in sufficient courses to qualify for admission to the subsequent year of study or for the award of a degree, shall not again be registered as a student: Provided that re-admission as a student or request and subject to conditions prescribed by the University may be granted after the expiry of one academic year."

2. The following regulation is substituted for regulation 4:

"Renewal of Registration.—Specific Faculties

4. (a) A student for the B.V.Sc. degree who, after once repeating the third, fourth and fifth year of study; and

(b) a student for the M.B., Ch.B. degree who, after once repeating the third, fourth and fifth year of study; and

(c) a student for the B.Cur. degree who, after once repeating the third or fourth year of study; and

(d) a student for the B.Ch.D. degree who, after once repeating the third or fourth year of study; and

(e) a student for the B.Sc.(Eng.) degree who, after once repeating the third or fourth year of study;

has not passed in sufficient courses to qualify for admission to the subsequent year of study or for the award of a degree, shall not again be registered as a student, except on conditions prescribed by the University."

DEPARTMENT OF INDUSTRIES

No. R. 357

10 March 1972

STANDARDS ACT, 1962

AMENDMENT OF COMPULSORY STANDARD SPECIFICATION FOR THE MANUFACTURE, PRODUCTION, PROCESSING OR TREATMENT OF CANNED CRUSTACEANS

I, Abraham Hermanus du Plessis, Deputy Minister of Economic Affairs, hereby substitute, on the recommendation of the Council of the South African Bureau of Standards and in terms of section 15 of the Standards Act, 1962 (Act 33 of 1962), with effect from the date two months after publication of this notice the amended compulsory standard specification contained in the Schedule for the compulsory standard specification for the manufacture, production, processing or treatment of canned crustaceans published by Government Notice 491 of 28 March 1969.

A. H. DU PLESSIS, Deputy Minister of Economic Affairs.

BYLAE

VERPLIGTE STANDAARDSPESIFIKASIE VIR DIE VERVAARDIGING, PRODUKSIE, BEWERKING OF BEHANDELING VAN INGEMAAKTE SKAALDIERE

(Metrieke Eenhede)

AFDELING 1.—BESTEK

1.1 Hierdie spesifikasie dek die vervaardiging, produksie, bewerking of behandeling van ingemaakte skaaldiere.

AFDELING 2.—WOORDBEPALING

2.1 Die volgende woordbepalings geld vir die doel van hierdie spesifikasie:

Aanneemlik.—Aanneemlik vir die owerheid wat hierdie spesifikasie toepas.

Deelsgepreserveerde produk.—'n Produk waarby verkoeling vir langdurige preserving vereis word.

Gedreineerde massa.—Die massa van die houer se inhoud wat op 'n metaalgaassif met 'n nominale opening-groote van 2 mm agterbly nadat sous of toedraaimateriaal verwyder is en die produk twee minute lank gedreineer is.

Houer.—'n Houer vervaardig van metaal, glas, stywe of halfstywe plastiek of enige samestelling daarvan.

Ingemaakte skaaldiere.—Die voedsel vir menslike gebruik wat verkry word deur skoon, gesonde, eetbare vleis van skaaldiere met of sonder toevoeging van kruie en geurmiddels, water, meelstof en ander bestanddele deur hierdie spesifikasie toegelaat, in lugdig verseëlde houe te verpak en dit deur 'n preservingproses in 'n gesonde, eetbare toestand te behou.

Opmerking.—Hierdie omskrywing sluit nie skaaldier-smear of vloeibare skaaldierpreparate in nie.

Luguitdrywing.—Die verwydering van lug uit die houer en die inhoud daarvan.

Preserveer.—Bewaar in ongeskonde, eetbare toestand deur voorkoming van agteruitgang, ontbinding of verrotting.

Produk.—Skaaldiere, ingemaak of in voorbereiding om ingemaak te word, soos blyk uit die sinsverband.

Skaaldier.—'n Ongewerweld dier wat deur kieu asemhaal en wat geledpotig is en 'n harde gesegmenteerde huidskelet of dop het.

Tyd-temperatuurproses.—Die deurlopende hittebehandeling, in tyd en temperatuur uitgedruk, wat by verwerking van produkte wat deur hitte gepreserveer word, toegepas word nadat die houer verseël is.

Vleisverpakking.—'n Verpakking wat uit die spierweefsels van skaaldiere bestaan.

AFDELING 3.—ALGEMENE VEREISTES VIR DIE FABRIEK EN WERKNEMERS

3.1 ALGEMENE VEREISTES VIR DIE FABRIEK.—Daar moet voldoen word aan die vereistes van die geldende Wet op Fabriek, Masjinerie en Bouwerk. Daarbenewens moet die fabriek, uitrusting en water wat by die bereiding van die produk gebruik word, aan die volgende vereistes voldoen:

3.1.1 *Konstruksie van en toestande in die fabriek.*

3.1.1.1 Die dak moet weerbestand wees.

3.1.1.2 Die vloer moet van materiaal gemaak wees wat ondeurdringbaar is vir water. Die oppervlakafwerking daarvan moet behoorlik skoongemaak kan word. Die vloer moet 'n val hê vir behoorlike dreinerings en moet verbind wees met buiteafvoerslootjies, -rioolpype of afvoerkanale. Gedurende produksietye moet die vloer en afvoerkanale skoon gehou word deur dit gereeld te vee en met water af te spoel. Na afloop van produksiewerksaamhede moet die vloer en afvoerkanale deeglik skoongemaak word. Waar nodig, moet staanplank vir werkers voorsien word.

SCHEDULE

COMPULSORY STANDARD SPECIFICATION FOR THE MANUFACTURE, PRODUCTION, PROCESSING, OR TREATMENT OF CANNED CRUSTACEANS

(Metric Units)

SECTION 1.—SCOPE

1.1 This specification covers the manufacture, production, processing, or treatment of canned crustaceans.

SECTION 2.—DEFINITIONS

2.1 For the purposes of this specification the following definitions shall apply:

Acceptable.—Acceptable to the authority administering this specification.

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

Note.—This definition does not include pastes and liquid crustacean preparations.

Container.—A container made of metal, glass, rigid plastic, or semi-rigid plastic, or any combination of these.

Crustacean.—Any invertebrate animal breathing by gills and having jointed limbs and a hard segmented exoskeleton or outer shell.

Drained mass.—The mass of the contents of a container after removing sauce or wrapping material and after draining for two minutes on a wirecloth sieve of nominal aperture size 2 mm.

Exhausting.—The removal of air from a container and its contents.

Flesh pack.—A pack consisting of the musculature tissues of crustaceans.

Preserve.—Maintain in sound edible condition by the prevention of deterioration, decomposition, or putrefaction.

Product.—Crustacean, canned or in course of preparation for canning, as indicated by the context.

Semi-preserve.—A product requiring refrigeration for continued preservation.

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

SECTION 3.—GENERAL REQUIREMENTS FOR THE FACTORY AND FOR EMPLOYEES

3.1 GENERAL REQUIREMENTS FOR THE FACTORY.—The requirements of the current Factories, Machinery and Building Work Act shall be complied with. In addition the factory, equipment, and water used in the preparation of the product shall comply with the following requirements:

3.1.1 *Construction of and conditions in the factory.*

3.1.1.1 The roof shall be weatherproof.

3.1.1.2 The floor shall be constructed of material impervious to water. Its surface finish shall permit proper cleaning. The floor shall be graded for proper drainage and shall be connected to external gullies, sewers or drains. During production periods the floor and drainage channels shall be kept clean by regular sweeping and flushing with water. At the close of production, thorough cleaning of the floor and drainage channels shall take place. Where necessary, duck-boards shall be provided for workers.

3.1.1.3 Die binnevlakke van die mure van verwerkingskamers moet ondeurdringbaar wees vir water en moet tot 'n hoogte van minstens 1,8 m bokant die vloer 'n gladde, ligkleurige, wasbare afwerking hê. Waar nodig, moet hulle onmiddellik na elke dag se werksaamhede deeglik afgewas word.

3.1.1.4 Rommel, afval en oorloop moet vinnig, doeltreffend en op 'n higiëniese manier, by voorkeur met meganiese middels, weggeruim word.

3.1.1.5 Die algemene verligting in die fabriek moet toereikend wees vir doeltreffende verwerking en skoonmaak.

3.1.1.6 Die ventilasie in die fabriek moet oormagtige stoom verwyder en skimmelgroei en die vorming van kondensaasie verhoed wat in die grondstowwe of die produk of op uitrusting wat daarmee in aanraking kom, kan drup. Indien nodig, moet natuurlike ventilasie op meganiese wyse aangevul word.

3.1.1.7 Doeltreffende maatreëls moet getref word om skimmelgroei te verminder en om stof, afskilferende verf en ander los materiaal wat van bostrukture in verwerkings- en bewaarkamers op die produk kan val, te verwyder.

3.1.1.8 Doeltreffende maatreëls moet getref word om vlieë en ander insekte uit die fabriek te hou.

3.1.1.9 Alle geboue waarin grondstowwe en bestanddele bewaar word, of waarin die produk vervaardig word, moet knaagdierdig gemaak wees en vry van knaagdiere gehou word.

3.1.1.10 Insek- en knaagdierdoders mag nie gebruik word terwyl vervaardiging aan die gang is nie. Werkvlakke moet vry van insek- en knaagdierdoderende residue gehou word. Insek- en knaagdierdoders mag nooit met houters, grondstowwe of die produk in aanraking kom nie.

3.1.1.11 Die hele aflaai- en vervoerstelsel, sowel by die kaai as na die inmakery, met inbegrip van weegtoestelle en hystoestelle, moet voor gebruik skoongemaak word en staande water en ou materiaal moet verwyder word.

3.1.1.12 Geen fabriekskoorsteen, berokingskamer, of masjienuitlaatpyp mag rook of dampe afgee in hoeveelhede of op 'n wyse wat aanstootlik of skadelik of gevaarlik vir die gesondheid is of wat besoedeling in enige stadium van die voorbereiding van die produk veroorsaak nie.

3.1.1.13 Verwerkingsinstallasies vir die vervaardiging van nuwe produkte moet behoorlik van die inmakery afgesonderd wees.

3.1.1.14 By elke werknemersingang tot die voorbereidings- of verwerkingsafdelings van die fabriek moet 'n toereikende aantal wasbakke met kiemdoderende seep en voldoende skoon warm en koue lopende water voorsien wees.

3.1.1.15 Fabriekstoestande en -aktiwiteite moet te alle tye higiënies wees. Geen diere mag in enige deel van die werklike fabriek toegelaat word nie.

3.1.1.16 In die inmaakfabriek en die onmiddellike omgewing daarvan mag geen handelinge deur die fabriek uitgevoer word en mag geen toestand heers as gevolg van die werksaamhede van die fabriek wat op enige wyse vir die vervaardiging, verwerking of behandeling van ingemaakte skaaldië nadelig is nie.

3.1.2 Uitrusting.

3.1.2.1 Alle installasies, uitrusting en gereedskap wat met die produk in aanraking kom, moet van korrosiebestande materiaal met 'n gladde oppervlak, verkieslik vlek-vrye metaal, gemaak wees en moet 'n naatlose, higiëniese ontwerp hê. Weektenks of -trôe moet van korrosiebestande, waterdigte materiaal gemaak wees. Roerders moet van vlek-vrye metaal gemaak wees en maassiwwe van vlek-vrye metaal of plastiek. Gereedskap om blikke mee op te vul, moet van vlek-vrye metaal of plastiek wees en moet van aanneemlike handvatsels voorsien wees. Lood en loodlegerings, uitgesonderd soldeersels, mag nie gebruik word vir

3.1.1.3 The inside surfaces of the walls of processing rooms shall be impervious to water and shall have a smooth, light-coloured, washable finish to a minimum height of 1,8 m above floor level. They shall, where necessary, be thoroughly washed immediately after each day's operations.

3.1.1.4 Litter, waste and overflow shall be disposed of promptly and efficiently and in a sanitary manner, where possible by mechanical means.

3.1.1.5 General illumination in the factory shall be adequate for effective processing and cleaning.

3.1.1.6 Ventilation in the factory shall effect the removal of excess steam, and shall prevent mould growth and the formation of condensate which may fall into raw materials or the product or on equipment coming into contact with them. If necessary, natural ventilation shall be augmented by mechanical means.

3.1.1.7 Effective measures shall be taken to inhibit mould growth and to remove dust, flaking paint, and other loose or detachable material liable to fall on the product from overhead structures in processing and storage rooms.

3.1.1.8 Effective measures shall be taken to keep the factory free from flies and other insects.

3.1.1.9 All buildings in which raw materials and ingredients are stored or in which the product is manufactured shall be made rodent-proof, and shall be kept free from rodents.

3.1.1.10 Insecticides and rodenticides shall not be used while manufacturing operations are in progress. Working surfaces shall be kept free from insecticidal and rodenticidal residues. Insecticides and rodenticides shall at no time come into contact with containers, raw materials, or the product.

3.1.1.11 The entire discharge and conveyance systems both at the jetty and to the cannery, including weighing devices and elevators, shall be cleared of stagnant water and stale material and shall be cleaned before use.

3.1.1.12 No factory chimney, smoke-room, or motor exhaust shall emit smoke or fumes in a quantity or in a manner which is offensive or injurious or dangerous to health, or causes contamination at any stage in the preparation of the product.

3.1.1.13 Processing plants for the manufacture of by-products shall be effectively separated from the cannery.

3.1.1.14 An adequate number of washbasins with germicidal soap and an adequate supply of clean hot and cold running water shall be provided at every employees' entrance to the preparation or processing areas of the factory.

3.1.1.15 Factory conditions and operations shall at all times be hygienic. Animals shall not be allowed in any part of the factory proper.

3.1.1.16 In the canning factory and its immediate surroundings no operation shall be performed by the factory and no condition shall be present as a result of the activities of the factory that is in any way detrimental to the manufacture, processing, or treatment of canned crustaceans.

3.1.2 Equipment.

3.1.2.1 All plant, equipment, and utensils coming into contact with the product shall be made of smooth-surfaced, corrosion-resistant material, preferably stainless metal, and they shall be of seamless, sanitary design. Soaking tanks or troughs shall be constructed of corrosion-resistant material impervious to water. Stirrers shall be made of stainless metal and mesh screens of stainless metal or plastic. Utensils used to top up cans shall be of stainless metal or plastic, and shall be provided with acceptable handles. Lead and lead alloys other than solder shall not be used in the construction of equipment

die konstruksie van uitrusting wat in enige stadium tydens die vervaardigingsproses met grondstowwe of die onbeskermde produk in aanraking kom nie. Die tafels waarop die serte gebreek en die ingewande verwyder word, mag nie van hout wees nie, maar verwyderbare snyplanke van hardhout is toelaatbaar. Die blaie van voorbereidings- en verpakkingstafels moet gemaak wees van of bedek wees met naatlose vlekvryste metaal of ander naatlose korrosiebestande waterdigte materiaal wat soortgelyke oppervlakte-eienskappe as vlekvryste metaal besit. Die blaie van tafels moet vinnige en effektiewe dreineringsmoontlik maak en moet sonder krake en barste wees. Rietmandjies kan gebruik word wanneer kreef van die visvaartuig afgelaai word.

3.1.2.2 Alle installasies, uitrusting en gereedskap moet skoon en in 'n goeie toestand gehou word. Skoonmaak- en ontsmettingsmiddels, warm en koue lopende water of nat stoom, waterslange, borsels en ander benodighede vir die skoonmaak van installasies, uitrusting en gereedskap moet beskikbaar wees. Die installasies, uitrusting en gereedskap kan ontsmet word met hipochloriet of 'n ander geskikte ontsmettingsoplossing. Die hele verwerkingstelsel moet aan die einde van elke skof deeglik skoongemaak word en na afloop van die werksaamhede moet die hele verwerkingstelsel deeglik skoongemaak en ontsmet word en daar moet toegesien word dat die ontsmettingsoplossing lank genoeg met die oppervlakte in aanraking bly. Die hele verwerkingstelsel moet dan afgespoel word met water wat aan die vereistes van 3.1.3 voldoen en moet skoon wees onmiddellik voordat dit verder gebruik word.

3.1.2.3 Houers wat heeltemal of gedeeltelik met voedselstowwe gevul is, mag nie so gevul of opgestapel word dat die voedselstowwe in een houer deur die boom van die houers wat daarop gestapel is, besoedel kan word nie. Houers wat voedselstowwe bevat, mag nie regstreeks op die vloer staan nie.

3.1.2.4 Gereedskap wat by die voorbereiding van die produk gebruik word, mag nie deur werknemers uit die fabriek verwyder word nie, behalwe as dit herstel of vervang moet word.

3.1.2.5 Toedraaimateriaal moet uit korrosiebestande houers van higiëniese ontwerp geneem word.

3.1.2.6 Stoomretorte moet voorsien wees van die volgende toebehore, wat in 'n werkende toestand gehou moet word:

(a) 'n Reguleerder, hetsy meganies of met die hand beheer, waarmee die verwerkingstemperatuur akkuraat beheer kan word. Hierdie vereiste is nie vir die eerste kookproses verpligtend nie.

(b) Minstens een akkuraat gekalibreerde kwik-in-glas-thermometer.

(c) 'n Registreertermometer met tyd-temperatuurkaarte, wat na gebruik minstens twee jaar lank gehou moet word.

(d) 'n Drukmeter.

(e) 'n Lugklep of lugkleppe met 'n kraan of krane bo in die retort.

(f) 'n Uitlaatklep in elke termometerhouer.

(g) Minstens een uitlaatklep bo in die retort.

(h) Waar 'n outomatiese reguleerder gebruik word, 'n stoomomloopleiding rondom die reguleerder om 'n vinnige styging tot die verwerkingstemperatuur moontlik te maak.

(i) 'n Doeltreffende veiligheidsklep.

3.1.2.7 Voorrade wat die produk moontlik kan besoedel en masjienonderdele moet uit die verwerkingsafdeling gehou word. Behalwe as dit voorberei en netjies verpak is, moet eetbare grondstowwe, uitgesonderd skaalidre, in skoon, toe houers in 'n afsonderlike pakkamer gehou word.

coming into contact with raw materials or the unprotected product at any stage in its manufacture. Except that the use of removable hardwood cutting blocks is permissible, wood shall not be used for tail-breaking and gut-removal tables. The tops of all preparation and packing tables shall be made of or be covered with seamless, stainless metal or other seamless, corrosion-resistant material with surface characteristics similar to stainless metal and impervious to water. The tops of tables shall allow rapid and effective drainage and shall be free from cracks and crevices. Wicker baskets may be used in unloading lobster from the fishing vessel.

3.1.2.2 All plant, equipment, and utensils shall be kept clean and in good repair. Cleaning and disinfecting materials, hot and cold running water or saturated steam, hose piping, brushes, and other requisites necessary for the cleaning of plant, equipment, and utensils shall be available. Plant, equipment, and utensils may be disinfected by the application of hypochlorite or other suitable disinfecting solution. The entire processing system shall be thoroughly cleaned at the end of each shift, and at the end of operations the entire processing system shall be thoroughly cleaned and disinfected; care being taken to ensure that the disinfectant solution is allowed an adequate period of contact with the surfaces. The entire processing system shall then be flushed with water complying with the requirements of 3.1.3 and shall be clean immediately before further use.

3.1.2.3 Containers, when filled or partially filled with food materials, shall not be filled or stacked in a manner which allows contamination of the food materials in one container from the bottoms of the containers stacked above it. Containers holding food materials shall not rest directly on the floor.

3.1.2.4 Utensils used in the preparation of the product shall not be removed from the factory by employees except for repair or replacement.

3.1.2.5 Wrapping material shall be dispensed from corrosion-resistant containers of hygienic design.

3.1.2.6 Steam retorts shall be equipped with the following fittings, which shall be maintained in good working order:

(a) A controller, either manually or mechanically operated, to maintain the processing temperature accurately. This requirement is not compulsory for the first cook.

(b) At least one accurately calibrated indicating mercury-in-glass thermometer.

(c) A recording thermometer with time-temperature charts, which after use shall be kept for a period of at least two years.

(d) A pressure gauge.

(e) A vent or vents with a tap or taps in the top of the retort.

(f) A bleeder in each thermometer pocket.

(g) At least one bleeder in the top of the retort.

(h) Where an automatic controller is used, a steam-bypass around the controller to make a rapid rise to the processing temperature possible.

(i) An effective safety valve.

3.1.2.7 Stores capable of contaminating the product and spare parts for machinery shall be kept away from the processing area. Except when in a prepared and neatly packaged form edible raw materials other than crustaceans shall be kept in clean closed containers in a separate store.

3.1.2.8 Waar koelkamers gebruik word, moet hulle doeltreffend en higiënies wees. Maatreëls moet getref word om die afskilfering van verf aan plafonne en mure te voorkom. Produkte mag nie regstreeks op die vloere gepak word nie.

3.1.2.9 Die etiketteerafdeling moet te alle tye netjies en aan die kant wees en die werkwyse wat gevolg word, moet van so 'n aard wees dat dit die moontlikheid van verwarring tussen verskillende produkte uitsluit.

3.1.3 *Water vir verwerkings-, was- en installatieskoonmaakdoeleindes.*

3.1.3.1 *Algemeen.*—Elke fabriek moet 'n voorraad skoon drinkbare water hê wat vry is van stowwe in suspensie en stowwe wat skadelik is vir die produk en nadelig is vir die gesondheid. Alle water wat in aanraking kom met die produk (waar toepaslik, na verwydering daarvan uit die skulp) moet deur middel van uitvloeking, filtrering, chlorering of 'n ander proses behandel word om die afwesigheid van *E. Coli* I te verseker. Om aan hierdie vereistes te voldoen, moet die water waar dit nodig is voor gebruik aanhoudend volgens 3.1.3.2 gechlloreer word.

3.1.3.2 *Chlorering.*

(a) *Water vir verwerking.*—Benewens die voldoening aan die vereistes van 3.1.3.1 moet water wat vir die vervaardiging van die produk gebruik word en water (uitgesonderd water vir houerverkoeling) wat gebruik word om die uitrusting en installasie waarmee die produk tydens verwerking en vervaardiging in aanraking kom te was, tensy dit reeds minstens twee dele per miljoen vry oorblywende chloor bevat deurlopend gechlloreer word sodat dit 'n minimum van twee dele per miljoen vry oorblywende chloor by die gebruikspunt bevat.

Indien water wat aldus behandel is, die produk op enige manier benadeel, moet die water onmiddellik voor gebruik onthloer word. In die geval van pekeloplossings wat voor vulling aanhoudend by 'n temperatuur van minstens 75° C gehou word, is die gebruik van gechlloreerde water vir die bereiding van die pekel nie noodsaaklik nie.

(b) *Water vir skoonmaak.*—Water wat gebruik word om die installasie en uitrusting na verwerking skoon te maak, moet deurlopend gechlloreer word sodat dit 'n minimum van twee dele per miljoen vry oorblywende chloor bevat; so nie moet dit sodanige kiemdodende stowwe bevat dat daar verseker word dat die installasie en uitrusting in 'n higiëniese toestand is.

(c) *Water vir verkoeling van houers.*—Benewens die voldoening aan die vereistes van 3.1.3.1, moet water wat vir die verkoeling van houers gebruik word en wat nie hersirkuleer word nie, deurlopend gechlloreer word sodat dit 'n minimum van twee dele per miljoen vry oorblywende chloor, by die retortinlaat gemeet, bevat. Indien water vir die verkoeling van die houers hersirkuleer word moet dit, voor hersirkulasie, behandel word om vaste stowwe te verwyder en moet dit dan gechlloreer word om te verseker dat dit na 'n kontakperiode van minstens 20 minute, 'n minimum van twee dele per miljoen vry oorblywende chloor, by die retortinlaat gemeet, bevat.

In alle gevalle moet die konsentrasie van vry oorblywende chloor met behulp van die ortotolidienflitstoets (vyf sekondes) of 'n ander ewe gevoelige toets bepaal word.

3.1.4 *Geriewe.*—Toereikende kleedkamers, stortbadens, wasbakke en sanitêre geriewe moet verskaf wees. Genoeg warm en koue vrylopende water, skoon papierhanddoeke, naelborsels, toiletpapier en kiemdodende seep moet beskikbaar wees vir werknemers.

3.1.2.8 Where used, cold storage facilities shall operate effectively and shall be hygienic. Measures shall be taken to prevent the flaking of paint on ceilings and walls. Products shall not be stacked directly on the floors.

3.1.2.9 The labelling section shall at all times be neat and tidy and the procedures followed shall be such as to preclude the possibility of confusion between different products.

3.1.3 *Water for processing, washing and plant cleaning purposes.*

3.1.3.1 *General.*—Every factory shall have a supply of clean potable water free from suspended matter and substances that are deleterious to the product or injurious to health. All water coming into contact with the product (where appropriate, after its removal from the shell) shall have been treated by flocculation, filtration, chlorination, or other process to ensure the absence of *E. Coli* I. To comply with these requirements the water shall, if necessary, be continuously chlorinated before use in accordance with 3.1.3.2.

3.1.3.2 *Chlorination.*

(a) *Water for processing.*—In addition to complying with the requirements of 3.1.3.1, 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 residual chlorine, be continuously chlorinated to contain a minimum of two parts per million of free residual 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.

(b) *Water for cleaning.*—Water used for the cleaning of plant and equipment after processing shall be continuously chlorinated to contain a minimum of two parts per million of free residual chlorine or alternatively, it shall contain such germicidal substances as will ensure sanitation of plant and equipment.

(c) *Water for container cooling.*—In addition to complying with 3.1.3.1, water used for container cooling and which is not recirculated shall be continuously chlorinated to contain a minimum of two parts per million of free residual chlorine measured at the retort inlet. Where water for container cooling is recirculated it shall, before recirculation, be treated to remove solids and then chlorinated to ensure after a contact period of at least 20 minutes a minimum free residual chlorine content of two parts per million at the retort inlet.

In all cases free residual chlorine concentration shall be determined by the orthotolidine flash test (five seconds) or other test of equivalent sensitivity.

3.1.4 *Comfort features.*—Adequate dressing rooms, shower baths, wash-basins, and sanitary facilities shall be provided. Ample hot and cold fresh running water, clean disposable towels, nail brushes, toilet tissue and germicidal soap shall be available to employees.

3.2 VEREISTES VIR WERKNEMERS BETROKKE BY DIE VOORBEREIDING EN VERWERKING VAN DIE PRODUK.

3.2.1 Geen persoon—

(a) wat geweier het om hom aan 'n mediese ondersoek te onderwerp nadat hy aangesê is om dit te doen, of

(b) wat nie na indiensneming of na afwesigheid van 10 dae of langer as gevolg van siekte 'n bevredigende mediese sertifikaat ingedien het of in 'n mediese ondersoek geslaag het nie, of

(c) waarvan daar gesertifiseer is dat hy aan 'n aansteeklike of besmetlike siekte ly of dat hy 'n draer van 'n siekte is, of

(d) wat ly of vermoedelik ly aan 'n siekte, besmetting of besering wat grondstowwe of die produk moontlik kan besoedel, mag toegelaat word om grondstowwe of die produk gedurende die voorbereiding daarvan te hanteer nie.

3.2.2 Geen werknemer wat aan 'n hand- of gesigbesering, 'n etterende velinfeksie of 'n klinies herkenbare aansteeklike siekte ly, of wat 'n verband, pleister of ander beskermende bedekking oor 'n hand- of armsbesering of 'n etterende velinfeksie dra, mag toegelaat word om grondstowwe of die produk te hanteer nie. Die gebruik van 'n waterdigte, styfpassende handskoen wat 'n geringe hand- of vingerbesering volkome bedek, is egter toelaatbaar.

3.2.3 Nóg die werknemers se persoonlike besittings nóg hul voedsel mag in die voorbereidings-, verwerkings- of verpakingsafdelings van die fabriek gehou word. Geen voedsel mag in hierdie afdelings deur die personeel voorberei of genuttig word nie.

3.2.4 Spoeg en die gebruik van tabak, in watter vorm ook al, binne die voorbereidings-, verwerkings- en verpakingsafdelings van die fabriek is verbode. Kennisgewings te dien effekte moet opvallend vertoon wees. Houers wat by die voorbereiding of die inmaak van die produk gebruik word, mag nie gebruik word om uit te drink nie.

3.2.5 Alle werknemers wat in die voorbereidings- en verwerkingsafdelings van die fabriek werksaam is, moet skoon ligkleurige beskermende klere en waterdigte voorskote en skoon ligkleurige wasbare pette dra om hul hare te bedek. Waterdigte beskermende klere moet van plastiek of rubber gemaak wees. Oorklere moet die werknemers se persoonlike klere heeltemal bedek. Moue mag nie tot onderkant die elmboog reik nie, behalwe waar dit op aanneemlike wyse met plastiekoortrekmoue bedek is. Alle beskermende klere moet heel gehou word en mag nie in werkvertrekkie bewaar word nie; wanneer dit nie in gebruik is nie, moet dit in kleedkamers gehou word en nie van die perseel verwyder word nie, behalwe om gewas te word. Waterdigte beskermende klere moet gedurende werkpouses en besoeke aan toiletgeriewe uitgetrek en aan hake by werkvertrekkuitgange gehang word.

3.2.6 Werknemers moet hul vingernaels kort en skoon hou en moet, voordat hulle begin werk en na elke afwesigheid uit die verwerkingsafdeling van die fabriek, hul hande met water en kiemdodende seep of in 'n detergentoplossing was. Naelverniss of -lak mag nie op vingernaels gebruik word nie. Polshorlosies en juweliersware mag nie gedra word nie.

AFDELING 4.—VEREISTES VIR DIE BESTANDDELE

4.1 TOESTAND VAN BESTANDDELE.—Skaaldiëre en ander bestanddele moet altyd skoon en gesond, van goeie gehalte en voorkoms, en in elke opsig geskik vir menslike verbruik wees. Alle bestanddele moet so bewaar word dat dit behoorlik teen insekte en knaagdiere beskerm is.

3.2 REQUIREMENTS FOR EMPLOYEES ENGAGED IN THE PREPARATION AND PROCESSING OF THE PRODUCT.

3.2.1 No person who—

(a) after having been called upon to submit to a medical examination has refused to do so, or

(b) has not on engagement or after an absence of 10 days or more due to illness submitted a satisfactory medical certificate of health, or passed a medical examination, or

(c) has been certified as suffering from any infectious or contagious disease or as being a carrier of disease, or

(d) is suffering or is suspected of suffering from any illness, infection or injury capable of contaminating raw materials or the product, shall be allowed to handle raw materials or the product in the course of preparation.

3.2.2 No employee who is suffering from a hand or a face injury, a suppurating skin infection, or a clinically recognizable infectious disease, or who is wearing a bandage, plaster, or other protective covering for a hand or arm injury or a suppurating skin infection, shall be allowed to handle raw materials or the product, except that a minor hand or finger injury completely protected by a waterproof, well-secured glove may be tolerated.

3.2.3 Neither workers' personal effects nor their food shall be present in the preparation, processing, and packing areas of the factory. No food shall be prepared or consumed by personnel in these areas.

3.2.4 Spitting and the use of tobacco in any form shall be prohibited within the preparation, processing and packing areas of the factory. Notices to this effect shall be prominently displayed. Containers used either in the preparation or in the canning of the product shall not be used for drinking purposes.

3.2.5 All employees engaged in the preparation and processing areas of the factory shall wear clean light-coloured protective clothing and waterproof aprons and clean light-coloured washable caps to cover their hair. Waterproof protective clothing shall be of plastic or rubber. Overalls shall completely cover the personal clothing of employees. Sleeves shall not extend below the elbow except where acceptably covered by plastic sleevelets. All protective clothing shall be in good repair. Protective clothing shall not be stored in workrooms; when not in use it shall be kept in change-rooms and shall not be removed from the premises except for laundering. Waterproof protective clothing shall be taken off and suspended from hooks at plant exits during work intervals and visits to sanitary conveniences.

3.2.6 Employees shall keep their fingernails short and clean, and shall wash their hands with water and germicidal soap or in a detergent solution before commencing work and after each absence from the factory processing area. Varnish or lacquer shall not be used on fingernails. Wristlet watches and jewellery shall not be worn.

SECTION 4.—INGREDIENT REQUIREMENTS

4.1 CONDITION OF INGREDIENTS.—All crustaceans and other ingredients shall be clean and sound, of good quality and appearance, and in every way fit for human consumption. All ingredients shall be stored well protected against insects and rodents.

4.2 VOORBEREIDING VAN DIE VLEIS.—Die vleis moet netjies reggesny wees en vry wees van stukkie dop, swempootjies, eendemosselskulp en alle ander stowwe wat nie vleis is nie. Ingewande, met inbegrip van die anale kanaal, moet, waar moontlik, heeltemal verwyder wees. Soveel moontlik van die natuurlike pigment moet aan die vleis behoue bly. By die behandeling van die vleis voor inmaak, moet voorsorgmaatreëls getref wees om, waar moontlik, die ontwikkeling van bruin- of ander verkleuring en die vorming van groen, geel of ander vlekke uit te skakel.

4.3 SOUT.—Sout wat by die produk gevoeg word of by die bereiding van pekkel vir inmaakdoeleindes gebruik word, moet eetbaar wees en geen bitter smaak hê wat deur kalsium, magnesium, sulfaat of iets anders veroorsaak word nie.

4.4 BYVOEGINGS, KRUIE EN GEURMIDDELS.—Onskadelike byvoegings, kruie en geurmiddels wat vir gebruik in voedsel toegelaat word deur die regulasies ingevolge die geldende Wet op Voedingsmiddels, Medisyne en Ontsmettingsmiddels, kan by die bereiding van die produk gebruik wees. Dit moet vry wees van vreemde stowwe en vervalsingsmiddels.

4.5 GELATIEN.—Gelatin moet voldoen aan die vereistes van die regulasies ingevolge die geldende Wet op Voedingsmiddels, Medisyne en Ontsmettingsmiddels.

4.6 AGAR-AGAR.—Die agar-agar wat gebruik word, moet spesiaal vir gebruik in voedselstowwe berei wees.

4.7 STYSELAGTIGE MATERIAAL (MEELSTOF).—Slegs graan of 'n ander voedsame, eetbare stylselmeel mag as bindmiddels by die bereiding van sous gebruik wees.

4.8 MELKPOEIER.—Melkpoeier moet suiwer, vars en soet wees en 'n totale bakterietelling van hoogstens 50 000 organismes per gram hê. By ondersoek moet 1 kg van die poeier geen *E. Coli* I bevat nie.

4.9 VERSOETMIDDELS.—Sukrose, dekstrose en vloeibare glukose kan as versoetmiddels gebruik wees. Hierdie bestanddele moet voldoen aan die regulasies ingevolge die geldende Wet op Voedingsmiddels, Medisyne en Ontsmettingsmiddels.

4.10 PRESERVEERMIDDELS.—Preserveermiddels moet spesiaal vir gebruik in voedsel berei wees.

4.11 ALGEMEEN.—Die bestanddele wat gebruik word, moet binne die bestek val en aan die vereistes voldoen van die geldende Wet op Voedingsmiddels, Medisyne en Ontsmettingsmiddels en enige regulasies ingevolge daarvan afgekondig.

AFDELING 5.—VEREISTES VIR DIE PRODUK

5.1 ALGEMENE VEREISTES.

5.1.1 Kleur en voorkoms van verpakte produk.—Die produk moet aantreklik lyk en die kleur en voorkoms moet kenmerkend wees. Behalwe op dele waar pigment voorkom, moet die vleis (na verwydering van die sous, indien van toepassing) wit of amper wit wees en moet vars lyk. Die pigment van die vleis moet redelik helder en natuurlik wees. Sover moontlik moet die vleis nie doodswit wees nie en vry wees van verkleuring, met inbegrip van blouverkleuring en vlekke. In die geval van skaaldiëre wat as 'n natuurlike produk verpak is, moet die vloeistof redelik helder en kleurloos, of, op sy ergste, nie donkerder as ligroos wees nie.

5.1.2 Reuk en smaak.—Die reuk van die produk moet vars en aangenaam en die smaak kenmerkend wees. Die produk moet nie smaakloos wees nie. Sout wat tydens inmaak by die produk gevoeg word, moet net die natuurlike smaak na vore bring en nie 'n soutsmaak nalaat nie. Geen bysmake en vreemde reuke mag aanwesig wees nie.

5.1.3 Tekstuur.—Die vleis moet kenmerkend stewig dog sag wees; dit mag nie pap of waterig wees nie.

4.2 PREPARATION OF FLESH.—The flesh shall be neatly trimmed and free from pieces of shell, swimmeret, barnacle shell, and all other matter that is not flesh. Viscera, including the anal canal, shall be entirely removed where practicable. As much as possible of the natural pigment shall be retained on the flesh. In the treatment of the flesh before canning, precautions shall be taken to avoid where possible the development of brown or other discoloration and of green, yellow, or other staining.

4.3 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, sulphate, or other cause.

4.4 ADDITIVES AND SEASONING AND FLAVOURING SUBSTANCES.—Harmless additives and seasoning and flavouring substances permitted for use in foods in accordance with the regulations under the current Food, Drugs and Disinfectants Act, may be used in the preparation of the product. Such additives and substances shall be free from foreign matter and adulterants.

4.5 GELATINE.—Gelatin shall comply with the requirements of the regulations under the current Food, Drugs and Disinfectants Act.

4.6 AGAR-AGAR.—The agar-agar used shall be specially prepared for use in foodstuffs.

4.7 STARCHY (FARINACEOUS) MATERIALS.—Thickeners used in the preparation of sauce shall be cereal or other wholesome edible starchy flour.

4.8 MILK POWDER.—Milk powder shall be pure, fresh, and sweet and shall not have a total bacterial count in excess of 50 000 organisms per gram. When examined, 1 gram of the powder shall not contain *E. Coli* I.

4.9 SWEETENING INGREDIENTS.—Sucrose, dextrose and liquid glucose may be used as sweetening ingredients. These ingredients shall comply with the regulations under the current Food, Drugs and Disinfectants Act.

4.10 PRESERVATIVES.—Preservatives shall be specially prepared for use in foodstuffs.

4.11 GENERAL.—All ingredients used shall fall within the scope of and shall comply with the requirements of the current Food, Drugs and Disinfectants Act and any regulations promulgated thereunder.

SECTION 5.—REQUIREMENTS FOR THE PRODUCT

5.1 GENERAL REQUIREMENTS.

5.1.1 Colour and appearance of pack.—The product shall be attractive and characteristic in colour and appearance. Apart from pigmented areas flesh shall (after removal of sauce, where applicable) be white or just off-white, and shall have a fresh bloom. The pigment of flesh shall be reasonably bright and natural. As far as possible the product shall be free from livid whiteness, and discoloration including blueing and staining. In plain packs the liquid shall be reasonably clear and colourless or at the most not darker than pale pink.

5.1.2 Odour and flavour.—The odour of the pack shall be fresh and sweet and the flavour characteristic. The product shall not be insipid. Salt added to the product in canning shall only accentuate the natural flavour and not give a salty taste. Off-flavours and off-odours shall not be present.

5.1.3 Texture.—The flesh shall be characteristically firm yet tender; it shall not be soft or soggy.

5.1.4 *Afwesigheid van gebreke.*—Die produk moet vry wees van oneetbare gedeeltes, stukke dop, swempootjies, eendemosselskulp, seewier, vuiligheid, grint en ander vreemde stowwe. Daar mag hoogstens spore van bloed aanwesig wees.

5.1.5 *Sintetiese kleurstowwe.*—Geen sintetiese kleurstowwe mag in die produk aanwesig wees nie.

5.1.6 *Anti-oksideermiddels.*—Die produk moet vry wees van anti-oksideermiddels, uitgesonderd sitroen- en askorbiensuur, wat alleen of gesamentlik gebruik mag word.

5.1.7 *Preserveermiddels.*—Behalwe in die geval van halfgepreserveerde produkte, mag geen preserveermiddels in die produk aanwesig wees nie. Die gebruik van preserveermiddels by halfgepreserveerde produkte is onderworpe aan die vereistes van die regulasies ingevolge die geldende Wet op Voedingsmiddels, Medisyne en Ontsmettingsmiddels.

5.1.8 *Volheid van houers.*—Houers moet so vol as prakties moontlik wees maar nie oorvol wees nie.

5.1.9 *Algemeen.*—Daar moet gehou word aan beperkings wat deur die regulasies kragtens die geldende Wet op Voedingsmiddels, Medisyne en Ontsmettingsmiddels op die gebruik van bestanddele, gestel is.

5.2 VERPAKKINGSVEREISTES.

5.2.1 *Vleisverpakkinge.*

5.2.1.1 *Verpakkingsmedia.*—Die produk kan droog verpak wees of in 'n medium wat uit pekel, helder vloeibare boeljon, agar-agar- of gelatienjellie bestaan of in 'n geskikte sous.

5.2.1.2 *Verpakkingswyse.*

(a) *Algemeen.*—Die produk kan in skoon perkamentpapier, sellulosefilm of 'n ewe geskikte materiaal toege draai word.

(b) *Kreefsterte.*—By die verpakking van kreefsterte mag 'n klein bykomende stukkie stertvleis bygevoeg word om die houer vol te maak. Heel of halwe sterte moet netjies gevou word of só gerangskik wees dat soveel moontlik van die rooi pigment van die opperhuid van die vleis aan die buitekant sigbaar is.

(c) *Kreefsterte met ander vleis.*—Die inhoud van die houer moet netjies en eenvormig gerangskik wees. Die sterte moet gevou en om die ander vleis gepak word met laasgenoemde sover moontlik in die middel van die houer. Soveel moontlik van die pigment van die sterte en die ander vleis moet sigbaar wees.

(d) *Dwerggarnale en garnale.*—Indien dwerggarnale en garnale as sodanig verpak word, moet hulle in die vorm van betreklik heel rompe, na verwydering van die kop, stertvin en dop, verpak wees. Verpakking moet netjies wees.

(e) *Poot- en rompvleis van kreef en krap.*—Die vleis moet, indien dit as stukke verpak is wat in 'n groot mate die oorspronklike vorm en grootte behou, netjies in die houer gerangskik wees met soveel van die pigmentoppervlakke as moontlik na bo. Indien die produk slegs as "vleis" beskryf word is hierdie vereiste nie van toepassing nie.

5.2.1.3 *Gedreineerde massa.*

(a) *Verpakkings in die natuurlike toestand.*—Behoudens 5.1.8 moet die gedreineerde massa van die produk minstens 75 persent van die verklaarde netto massa van die inhoud van die houer wees. (In verpakkinge wat 'n gestolde verpakkingmedium bevat, moet die verpakkingmedium eers deur verhitting vloeibaar gemaak word voordat die gedreineerde massa bepaal word.)

(b) *Verpakkings in sous.*—Behoudens 5.1.8 moet die gedreineerde massa minstens 70 persent van die verklaarde netto massa van die inhoud van die houer wees.

5.1.4 *Freedom from defects.*—The product shall be free from inedible parts, shell, swimmeret, barnacle shell, seaweed, dirt, grit, and other extraneous material. Not more than traces of blood may be present.

5.1.5 *Artificial colouring matter.*—No artificial colouring matter shall be present in the product.

5.1.6 *Anti-oxidants.*—The product shall be free from anti-oxidants other than citric and ascorbic acids, which may be used either singly or together.

5.1.7 *Preservatives.*—Except in the case of semi-preserves, preservatives shall not be present in the product. The use of preservatives in semi-preserves shall be subject to the requirements of the regulations under the current Food, Drugs and Disinfectants Act.

5.1.8 *Fill of container.*—Containers shall be filled to practical capacity, overfilling being avoided.

5.1.9 *General.*—Limits set for the use of ingredients by the regulations under the current Food, Drugs and Disinfectants Act shall be adhered to.

5.2 PACKING REQUIREMENTS.

5.2.1 *Flesh packs.*

5.2.1.1 *Packing media.*—The product may be packed dry, or in a medium consisting of brine, clear liquid bouillon, agar-agar or gelatine jelly, or in suitable sauce.

5.2.1.2 *Mode of packing.*

(a) *General.*—The product may be wrapped in clean parchment paper, cellulose film or similar suitable liner.

(b) *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.

(c) *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.

(d) *Shrimps and prawns.*—Shrimps and prawns, where packed as such, shall be the relatively intact bodies of these crustaceans after removal of the head, tailfin, and shell. They shall be neatly packed.

(e) *Limb and body meat of lobster, rock lobster and crab.*—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.

5.2.1.3 *Drained mass.*

(a) *Plain packs.*—Subject to 5.1.8, the drained mass of the product shall be not less than 75 per cent of the declared net mass of the contents of the container. (In packs containing a gelled packing medium the packing medium shall be liquefied by warming before the drained mass is assessed.)

(b) *Packs in sauce medium.*—Subject to 5.1.8, the drained mass shall be not less than 70 per cent of the declared net mass of the contents of the container.

5.2.2 Tomalley (Kreeflewier).

5.2.2.1 *Bereiding*.—Die lewer (groen), eiers, vleis van die pote en romp, en ander eetbare dele van die kreef mag gebruik word. Geen kieuë, ingewande, maag, stukkie dop, kraakbeen en ander ongeskikte en ongesonde dele mag gebruik word nie. Geen vulstof of ander vreemde bestanddele mag gebruik word nie.

5.2.3 Ongespesifiseerde verpakkings.

5.2.3.1 *Algemeen*.—Enige ingemaakte skaaldiere wat binne die bestek van dié spesifikasie val maar waarvoor geen spesifieke vereistes voorgeskryf word nie, moet voldoen aan die bepalings van afdeling 2; 3, 4, 6, 7 en 8 en onderafdeling 5.1 en 5.3.

5.2.3.2 *Gedreineerde massa*.—Behoudens 5.1.8 moet die gedreineerde massa van ongespesifiseerde verpakkings minstens 70 persent van die verklaarde netto massa van die inhoud van die houer wees.

5.2.4 Halfgepreserveerde produkte.

5.2.4.1 *Algemeen*.—Skaaldiere wat deur hierdie spesifikasie gedek word, kan as halfgepreserveerde produkte ingemaak wees. Die vereistes van onderafdeling 5.1 en 5.2 is van toepassing.

5.2.4.2 *Preservering*.—Skaaldiere wat as halfgepreserveerde produkte ingemaak is, moet deur middel van insouting of pekeling, suurpekeling, beroking of enige kombinasie van hierdie prosesse gepreserveer wees en kan verder ook gepasteuriseer wees. Preserveermiddels kan gebruik word (sien 5.1.7). Sintetiese asynsuur en anorganiese sure mag nie gebruik word nie.

5.3 MIKROBIOLOGIESE VEREISTES.

5.3.1 *Produkte ten volle deur hittebehandeling gepreserveer*.

5.3.1.1 *Mikrobiologiese bederf*.—Daar word geag dat 'n produk in sy houer, na inkubering by 37° C of nadat dit by omgewingstemperatuur gehou is, mikrobiologiese bederf ondergaan het indien daar—

- (a) tekens van positiewe druk by die houer is;
- (b) tekens is dat die houer lek; of
- (c) ongeag of daar positiewe druk by die houer is of nie, daar in vergelyking met ongeïnkubeerde monsters tekens is van bakterievermeerdering (soos blyk uit 'n betekenisvolle verandering in die pH-waarde of uit disintegrasie of uit ontbinding of uit 'n betekenisvolle verkleuring van die produk).

Opmerking.—Tekens van bakterievermeerdering moet bevestig word deur mikroskopiese of kultuurondersoek, of albei.

5.3.1.2 *Vereiste*.—Produkte in houters wat ondersoek of getoets of ondersoek en getoets word, mag geen teken van mikrobiologiese bederf of van die aanwesigheid van lewensvatbare patogeen organismes of organismes wat moontlik kan veroorsaak dat die produk tydens bewaring kan bederf, toon nie.

5.3.2 *Deelsgepreserveerde en soutgepreserveerde produkte*.

5.3.2.1 *Mikrobiologiese bederf*.—Daar word geag dat 'n produk in sy houer mikrobiologiese bederf ondergaan het indien daar—

- (a) tekens van positiewe druk by die houer is;
- (b) tekens is dat die houer lek; of
- (c) ongeag of daar positiewe druk by die houer is of nie, daar in vergelyking met gesonde monsters tekens is van bakterievermeerdering (soos blyk uit 'n betekenisvolle verandering in die pH-waarde of uit disintegrasie of uit ontbinding of uit 'n betekenisvolle verkleuring van die produk).

Opmerking.—Tekens van bakterievermeerdering moet bevestig word deur mikroskopiese of kultuurondersoek, of albei.

5.2.2 Tomalley.

5.2.2.1 *Preparation*.—The liver (green), 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 not be used. Filler or other extraneous ingredients shall not be used.

5.2.3 Unspecified packs.

5.2.3.1 *General*.—Any canned crustacean pack falling within the scope of this specification but for which requirements are not specifically stated shall comply with the requirements of sections 2, 3, 4, 6, 7 and 8 and subsections 5.1 and 5.3.

5.2.3.2 *Drained mass*.—Subject to 5.1.8, the drained mass of unspecified packs shall be not less than 70 per cent of the declared net mass of the contents of the container.

5.2.4 Semi-preserves.

5.2.4.1 *General*.—Crustaceans covered by this specification may be packed as semi-preserves. The requirements of subsections 5.1 and 5.2 shall apply.

5.2.4.2 *Preservation*.—Crustaceans canned as semi-preserves shall be preserved by salting or brining, pickling, smoking, or any combination of these and may in addition be pasteurized. Preservatives may be used (see 5.1.7). Synthetic acetic acid and inorganic acids shall not be used.

5.3 MICROBIOLOGICAL REQUIREMENTS.

5.3.1 *Products fully preserved by heat-treatment*.

5.3.1.1 *Microbiological spoilage*.—A product in its container after incubation at 37° C or after having 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 (as indicated, when compared with unincubated samples, by a significant change in the pH value or by disintegration, decomposition or significant discoloration of the product.)

Note.—Evidence of bacterial proliferation shall be confirmed by microscopical or cultural examination or both.

5.3.1.2 *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 organisms liable to cause spoilage of the product during storage.

5.3.2 *Semi-preserves and salt-preserved products*.

5.3.2.1 *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 (as indicated when compared with sound samples, by a significant change in the pH value or by disintegration, decomposition or significant discoloration of the product.)

Note.—Evidence of bacterial proliferation shall be confirmed by microscopical or cultural examination or both.

5.3.2.2 *Vereiste*.—Produkte in houters wat ondersoek of getoets of ondersoek en getoets word, mag geen tekens van mikrobiologiese bederf of van die aanwesigheid van lewensvatbare patogene organismes of organismes wat moontlik kan veroorsaak dat die produk bederf tydens bewaring by die temperatuur wat deur die inmaker gespesifiseer is, toon nie.

AFDELING 6.—HOUERS

6.1 *HOUTERTIPES*.—Die produk moet verpak word in houters wat in staat is om die inhoud daarvan in 'n gesonde, eetbare toestand te bewaar.

6.2 *TOESTAND VAN HOUERS*.—Die binnevlakke van alle houters en sluitings moet tydens die gebruik daarvan skoon wees en moet in die geval van blikke vry wees van korrosie en van tekens dat die tin- of vernislaag afkom en van ernstige bespatting met soldeersel en die oormatige gebruik van soldeersel. Indien verniste blikke of blikdeksels of albei of verniste flesdeksels gebruik word, moet die vernislaag vry wees van opvallende skrape en ander gebreke en mag die vernis geen nadelige uitwerking op die produk hê nie. Die vernislaag mag nie tydens die verwerking en bewaring van die produk van die blik, blikdeksel of flesdeksel afdop nie. Die deksels van blikke en flesse moet skoon wees wanneer die houters gesluit word.

AFDELING 7.—VERPAKKINGS- EN VERWERKINGSVEREISTES

7.1 *HIGIËNIESE TOESTANDE BY VULLING*.—Die produk moet in streng higiëniese toestande voorberei en in skoon, gawe houters ingemaak word. Die houters moet stewig en noukeurig gesluit word.

7.2 VERWERKING.

7.2.1 In die geval van produkte in blikke, uitgesonderd deelsgepreserveerde en soutgepreserveerde produkte, moet die gevulde houters lugleeg gemaak, lugdig verseël en ten volle met hitte behandel word; houters met deelsgepreserveerde en soutgepreserveerde produkte moet lugdig verseël word. Gevulde flesse moet lugdig verseël en, behalwe in die geval van deelsgepreserveerde en soutgepreserveerde produkte, ten volle met hitte behandel word.

7.2.2 In die geval van blikke en flesse moet die luguitdruwing, verseëling en verwerking so uitgevoer word dat die ente van die houters in normale vervoer- en bewaringstoestande nie uitbol nie.

7.2.3 In die geval van produkte wat met hitte gepreserveer is, moet die tyd-temperatuurproses verseker dat—

- (a) patogene organismes vernietig word, en
- (b) geen mikrobiologiese bederf sal plaasvind nie.

7.3 *BUITEKANT VAN HOUERS*.—Houters moet skoon wees, moet normaal van vorm en vry van korrosie wees en mag geen opvallende uitwendige tekens van naatgebreke toon nie.

7.4 *HANTERING EN OPSTAPELING VAN VERSEËLDE HOUERS*.—Houters moet op aanneemlike wyse hanteer word. Na hittebehandeling mag houters, hetsy warm of koud, nie onmiddellik met die hand aangeraak of individueel hanteer word terwyl hulle nog nat is nie. Selfs wanneer hulle droog is, mag warm houters waarvan deksels as gevolg van interne druk nog uitbol, nie met die hand aangeraak word nie. Houters mag nie in massa opgestapel word voordat hulle tot 'n binne-temperatuur van hoogstens 50° C afgekoel het nie.

7.5 BEWARING.

7.5.1 Produkte wat nie verkoeling vereis nie, moet (sowel voor as na verpakking) op ordelike wyse in koel, goed geventileerde, skoon vertrekke bewaar word wat uitsluitlik vir dié doel gebruik word.

5.3.2.2 *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 organisms liable to cause spoilage of the product during storage at the temperature specified by the canner.

SECTION 6.—CONTAINERS

6.1 *TYPES OF CONTAINERS*.—The product shall be packed in containers capable of preserving their contents in sound, wholesome condition.

6.2 *CONDITION OF CONTAINERS*.—The internal surfaces of all containers and closures shall at the time of use be clean and, in the case of cans, free from corrosion and evidence of detinning, delacquering, serious solder splashing and excess application of solder. If lacquered cans or lids or both or lacquered caps are used the lacquer shall be free from significant scratches and other imperfections, and it shall have no detrimental effect on the product. It shall not peel off the can, lid or cap during processing and storage of the product. Lids and caps shall be clean at the time of seaming or capping.

SECTION 7.—PACKING AND PROCESSING REQUIREMENTS

7.1 *FILLING UNDER HYGIENIC CONDITIONS*.—The product shall be prepared and filled into clean, sound containers under strictly hygienic conditions. All container closures shall be strongly and accurately made.

7.2 PROCESSING.

7.2.1 In the case of products in cans other than semi-preserves and salt-preserved products, the filled containers shall be exhausted, hermetically sealed, and fully heat-processed; the containers of semi-preserves and salt-preserved products shall be hermetically sealed. Filled jars shall be hermetically sealed and shall, except in the case of semi-preserves and salt-preserved products, be fully heat-processed.

7.2.2 In the case of cans and jars the exhausting, sealing, and processing shall be done in such a manner that the ends of the container are not convex under normal transport and storage conditions.

7.2.3 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.

7.3 *EXTERIOR OF CONTAINERS*.—Containers shall be clean, have normal contours, be free from corrosion and show no significant outward signs of seam defects.

7.4 *HANDLING AND STACKING OF SEALED CONTAINERS*.—Containers shall be handled in an acceptable manner. Whether hot or cold, containers immediately after heat processing shall not be touched by hand or handled individually while still wet. Even when dry, hot containers of which the lids are still domed due to internal pressure shall not be touched by hand. Containers shall not be bulk-stacked before being cooled to an internal temperature not in excess of 50° C.

7.5 STORAGE.

7.5.1 Products not requiring refrigeration shall be stored (both before and after packaging) in an orderly manner in cool, well-ventilated, clean rooms used solely for this purpose.

7.5.2 Indien produkte onder verkoeling bewaar moet word, mag die bewaringstemperatuur nie 5,5° C oorskry nie. Koelkamers moet skoon en higiënies wees.

AFDELING 8.—ETIKETTEER EN MERK VAN HOERS

8.1 BESONDERHEDE OP ELKE HOER OF ETIKET VEREIS.

8.1.1 Die volgende besonderhede moet leesbaar en onuitwisbaar op elke houer of etiket aangebring word in letters van sodanige grootte en opvallendheid as wat by regulasie voorgeskryf word kragtens die geldende Wet op Mate en Gewigte en die geldende Wet op Voedingsmiddels, Medisyne en Ontsmettingsmiddels:

(a) Die naam en volledige besigheidsadres van die fabrikant, produsent, eienaar of beherende maatskappy, of, in die geval van houer wat vir iemand anders verpak word, die naam en volledige besigheidsadres van daardie persoon.

(b) Met inagneming van die bepalinge van die geldende Handelswaremerkewet, 'n juiste beskrywing van die inhoud, met inbegrip van die verpakkingsmedium wat gebruik is, indien enige. As produkte in agar-agar verpak is, mag die beskrywing nie meld dat dit in vleisjellie verpak is nie.

(c) Tensy die naam van die produk die bestanddele aandui, 'n verklaring in gewone letters van minstens 6-puntmaat, van die bestanddele (volgens massa) in volgorde van afnemende hoeveelhede wat aanwesig is.

(d) In die geval van deelsgepreserveerde produkte 'n verklaring, afgesien van die lys bestanddele, van die aard en omvang van enige preserveermiddel wat gebruik is, in gewone letters van minstens 6-puntmaat.

(e) Waar die produk onder verkoeling bewaar moet word, die woorde: "Bewaar by 'n temperatuur van hoogstens 5,5° C", in 'n opvallende plek in gewone letters minstens die helfte van die grootte van dié wat vir die naam van die produk gebruik is.

(f) Die netto massa van die inhoud.

(g) In die geval van produkte wat in Suid-Afrika en Suidwes-Afrika vervaardig is, die inmaakdatum die produksielotnommer (indien gebruik) en die fabrieksidentifikasie wat op die houer of, in die geval van flesse, op die deksel of etiket gebosselaar of andersins onuitwisbaar aangebring is. Indien 'n merk of kode vir die datum gebruik word, moet die sleutel tot sodanige merk of kode aan die owerheid wat belas is met die toepassing van hierdie spesifikasie bekend gemaak word.

(h) Woorde wat die land van herkoms aandui.

8.1.2 *Juiste beskrywing van skaaldiere.*—Skaaldiere moet korrek beskryf word met die naam van die produk wat op die etiket verskyn. Ondergenoemde gewone name kan gebruik word soos aangedui:

Gewone naam	Wetenskaplike naam
(a) Weskuskreef, Kaapse kreef.....	<i>Jasus lalandii</i> .
(b) Vemakreef, Tristankreef.....	<i>Jasus tristani</i> .
(c) Natalse kreef.....	<i>Palinurus gilchristi</i> , <i>Panulirus homarus</i> .
(d) Port Elizabethse modderkreef	<i>Scyllarus elizabethae</i> .
(e) Koningsgarnaal, langoustine...	<i>Nephrops andamanica</i> .
(f) Rooigarnaal.....	<i>Penaeus japonicus</i> .
(g) Bruingarnaal.....	<i>Penaeus latissulcatus</i> .
(h) Streepgarnaal.....	<i>Penaeus canaliculatus</i> .
(i) Groengarnaal.....	<i>Penaeus semisulcatus</i> .
(j) Tiergarnaal.....	<i>Penaeus monodon</i> .
(k) Witgarnaal.....	<i>Penaeus indicus</i> .
(l) Knipmesgarnaal.....	<i>Hymenopenaeus triarthrus</i> .
(m) Spikkelgarnaal.....	<i>Metapenaeus monoceros</i> .
(n) Knysnaskrap.....	<i>Scylla serrata</i> .
(o) Rooivlekwemkrap.....	<i>Ovalipes punctatus</i> .
(p) Rotskrap.....	<i>Neolithodes capensis</i> .

7.5.2 Where products are required to be stored under refrigeration, the storage temperature shall not exceed 5,5° C. Refrigeration rooms shall be clean and hygienic.

SECTION 8.—LABELLING AND MARKING OF CONTAINERS

8.1 DETAILS REQUIRED ON EACH CONTAINER OR LABEL.

8.1.1 The following information shall appear legibly and indelibly on each container or label in type of the size and prominence prescribed by regulation under the current Weights and Measures Act and the current Food, Drugs and Disinfectants Act:

(a) The name and full business address of the manufacturer, producer, proprietor, or controlling company, or in the case of containers packed on behalf of any other person, the name and full business address of that person.

(b) Taking cognizance of the provisions of the current Merchandise Marks Act, a true description of the contents, including the kind of packing medium used, if any. Products packed in agar-agar may not be described as packed in aspic.

(c) Unless the title of the product discloses the ingredients, a declaration of ingredients in decreasing order of amounts (by mass) present, in plain type of not less than 6 point face measurement.

(d) In the case of semi-preserves a declaration, separate from the list of ingredients, of the presence and nature of preservative, if any, in plain type of not less than 6 point face measurement.

(e) Where the product is required to be stored under refrigeration the words "Keep at a temperature not exceeding 5,5° C" in a prominent position in plain type of not less than half the size of that used for the name of the product.

(f) The net mass of the contents.

(g) In the case of products manufactured in South Africa and South-West Africa, 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. If a mark or code is used for the date the key to such mark or code shall be disclosed to the authority administering this specification.

(h) Words indicating the country of origin.

8.1.2 *True description of crustaceans.*—Crustaceans shall be correctly described in the name of the product appearing on the label. The undermentioned common names may be used as indicated:

Common name	Scientific name
(a) West coast rock lobster, Cape rock lobster, kreef	<i>Jasus lalandii</i> .
(b) Vema rock lobster, Tristan rock lobster	<i>Jasus tristani</i> .
(c) Natal rock lobster.....	<i>Palinurus gilchristi</i> , <i>Panulirus homarus</i> .
(d) Port Elizabeth mud crayfish.....	<i>Scyllarus elizabethae</i> .
(e) King prawn, langoustine.....	<i>Nephrops andamanica</i> .
(f) Ginger prawn.....	<i>Penaeus japonicus</i> .
(g) Brown prawn.....	<i>Penaeus latissulcatus</i> .
(h) Striped prawn.....	<i>Penaeus canaliculatus</i> .
(i) Green prawn.....	<i>Penaeus semisulcatus</i> .
(j) Tiger prawn.....	<i>Penaeus monodon</i> .
(k) White prawn.....	<i>Penaeus indicus</i> .
(l) Knife prawn.....	<i>Hymenopenaeus triarthrus</i> .
(m) Speckled prawn.....	<i>Metapenaeus monoceros</i> .
(n) Knysna crab.....	<i>Scylla serrata</i> .
(o) Red spot swimming crab.....	<i>Ovalipes punctatus</i> .
(p) Stone crab.....	<i>Neolithodes capensis</i> .

8.2 AANBRING VAN ETIKETTE.—Etikette op houters moet skoon en netjies en stewig aangeheg word. Hulle mag nie oor ander etikette of oor drukwerk wat regstreeks op die houer gedruk is, aangebring word nie. Hulle mag deur niemand anders as die fabrikant of sy gemagtigde agent aangebring word nie. Geen etiketgom wat moontlik in klam opbergtoestande kan verswak, mag gebruik word nie.

8.3 MERK VAN PAKKETTE.—As die houters in pakkette verpak word, moet die pakkette skoon, netjies en heel wees en moet die getal en grootte of netto massa van die houters, benewens die besonderhede vereis in 8.1.1 (a), (b) en (h), op elke pakket gedruk of gesjabloon word, behalwe dat die fabrikant se besigheidsadres nie die volledige besigheidsadres hoef te wees nie, maar voldoende moet wees vir identifikasiedoeleindes.

8.4 HOUERS VIR UITVOER.—Ongeag die bepalings van afdeling 8, kan produkte vir uitvoer na ander lande sonder etikette, of anders geëtiketteer as in hierdie spesifikasie vereis, uitgevoer word, mits daar nie gepoog word om die produk vals voor te stel nie. Daar moet aan die vereistes van 8.3 voldoen word, maar 'n kodemerk kan in plaas van die fabrikant se naam gebruik word.

AFDELING 9.—METODES VIR FISIESE ONDER- SOEK EN CHEMIESE ONTLEDING

9.1 BEPALING VAN NETTO MASSA VAN INHOUD.

9.1.1 Bepaal die bruto massa deur die onoopgemaakte houer te weeg. Dan in die geval van—

(a) 'n houer met 'n deksel wat met dubbele naat bevestig is, sny die deksel gedeeltelik uit sonder om die dubbele naat te verwyder of die hoogte daarvan te verander;

(b) 'n ander tipe van houer, verwyder die deksel.

9.1.2 Bepaal die gemiddelde vertikale afstand in millimeter van die boonste oppervlak van die houer af tot op die boonste oppervlak van die inhoud deur afmetings oor die oppervlak van die inhoud te neem.

9.1.3 Plaas die inhoud van die houer oor op 'n sif met 'n nominale openinggrootte van 2,00 mm en nadat dit toegelaat is om vir twee minute lank te dreineer, bepaal die gedreineerde massa.

9.1.4 Was, droog, en weeg die houer met deksel en al; behou dit vir gebruik in die bepaling van die volheid van die houer. Die verskil tussen die bruto massa (9.1.1) en die massa van die houer en deksel is die netto massa van die inhoud.

9.2 BEPALING VAN VOLHEID VAN HOUER.

9.2.1 Vul, in die geval van 'n houer met 'n deksel wat met 'n dubbele naat bevestig is, die houer met water by kamertemperatuur tot 'n vertikale afstand van 5 mm onderkant die bovlak van die houer. Weeg die houer wat aldus gevul is en bepaal die massa van die water deur die massa van die houer daarvan af te trek.

9.2.2 Trek water uit die vol houer tot op die hoogte van die inhoud (9.1.2), weeg die houer met die oorblywende water, en bepaal die massa van die oorblywende water deur die massa van die houer daarvan af te trek.

9.2.3 Deel die massa van die oorblywende water deur die massa van die water (9.2.1) en vermenigvuldig met 100. Die resultaat is die persentasie van die totale volume van die houer wat deur die inhoud in beslag geneem is.

9.2.4 Verwyder die deksel in die geval van 'n houer met deksel wat anders as met 'n dubbele naat bevestig is, en gaan te werk volgens 9.2.1 tot 9.2.3, maar maak die houer heeltemal vol in plaas van tot 5 mm onderkant die bovlak (kyk 9.2.1).

8.2 ATTACHING OF LABELS.—Labels on containers shall be clean and neat, and securely attached. They shall not be superimposed on other labels or on matter printed directly on the containers. They shall not be applied by any person other than the manufacturer or his authorised agent. Label glue that is liable to deteriorate under humid storage conditions shall not be used.

8.3 MARKING OF PACKAGES.—If the containers are packaged, the packages shall be clean, neat, and unbroken, and on every package shall be printed or stencilled the number and size or net mass of the containers and the information required by 8.1.1 (a), (b) and (h), except that the business address of the manufacturer need not be the full business address but must be sufficient for identification purposes.

8.4 CONTAINERS FOR EXPORT.—Notwithstanding the provisions of section 8, products for export to other countries may be either unlabelled or labelled differently to the requirements of this specification, provided there is no attempt to misrepresent the product. The requirements of 8.3 shall be met except that a code mark may be used in lieu of the name of the manufacturer.

SECTION 9.—METHODS OF PHYSICAL EXAMINATION AND CHEMICAL ANALYSIS

9.1 DETERMINATION OF NET MASS OF CONTENTS.

9.1.1 Determine the gross mass by weighing the unopened container. Then in the case of—

(a) a container with a lid attached by a double seam, partially cut out the lid without removing or altering the height of the double seam;

(b) another type of container, remove the lid.

9.1.2 Determine the average vertical distance, in millimetres, from the top level of the container to the top level of the contents by taking measurements over the surface of the contents.

9.1.3 Transfer the contents of the container to a sieve with a nominal aperture size of 2,00 mm and after allowing it to drain for two minutes determine the drained mass.

9.1.4 Wash, dry, and weigh the container complete with lid, and retain it for use in the determination of the fill of the container. The difference between the gross mass (9.1.1) and the mass of the container and lid gives the net mass of the contents.

9.2 DETERMINATION OF FILL OF CONTAINER.

9.2.1 In the case of containers with tops 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.

9.2.2 Draw off water from the filled container to the level of the contents (9.1.2), weigh the container with the remaining water and determine the mass of the remaining water by subtracting the mass of the container.

9.2.3 Divide the mass of the remaining water by the mass of the water (9.2.1) and multiply by 100. The result is the percentage of the total volume capacity of the container occupied by the contents.

9.2.4 In the case of a container with a lid attached otherwise than by a double seam, remove the lid and proceed in accordance with 9.2.1 to 9.2.3, but fill the container to the top instead of to 5 mm below the top (see 9.2.1).

9.3 VOORBEREIDING VAN MONSTER VIR CHEMIESE ONTLEDING.—Maal die gedreineerde monster (9.1.3) twee keer in 'n vleismeul en meng deeglik. Bêre die voorbereide monster in 'n goed toegemaakte houër binne-in 'n yskas totdat dit nodig is vir gebruik.

9.4 BEPALING VAN BENSOËSUURGEHALTE.

9.4.1 Apparaat.—'n Geskikte spektrofotometer voorsien van selle met 'n 10-mm-ligbaan en wat optiese digtheid kan meet by 267,5 nm, 272,0 nm en 276,5 nm.

9.4.2 Reagense.

- (a) *Soutsuur.*—Gekonsentreer, analitiese reagensgraad.
- (b) *Natriumchloriedoplossing.*—'n Versagdigde wateroplossing van chemies-suiwer natriumchloried.
- (c) *Diëtleter.*
- (d) *Ammoniumhidroksiedoplossing.*—0,1 persent (m/v).

9.4.3 Teken van standaardgrafiek.—Berei oplossings van bensoësuur in diëtleter voor wat onderskeidelik 20, 40, 60, 80, 100 en 120 mg per liter bevat. Meet die optiese digtheid van die oplossings in die spektrofotometer by 267,5 nm (punt A), 272,0 nm (punt B) en 276,5 nm (punt C). Neem die gemiddelde optiese digtheid van die minima by punte A en C en trek hierdie waarde van die maksimum optiese digtheid by punt B af. Teken 'n grafiek van hierdie verskil teen die ooreenstemmende konsentrasie.

9.4.4 Werkwyse.—Weeg ongeveer 10 g van die voorbereide monster noukeurig in 'n skeitregter af en voeg 200 ml van die versadigde natriumchloried oplossing by. Suur die oplossing met soutsuur aan totdat dit suur is teenoor lakmoes.

Ekstraheer die suspensie agtereenvolgens met hoeveelhede van 70, 50, 40 en 30 ml diëtleter en skud dit goed om volledige ekstraksie te verseker. Indien nodig, moet emulsies opgebreek word deur dit te sentrifugeer of te roer. Gooi die waterige fase af en was die saamgestelde eterekstrakte met hoeveelhede van 80, 40 en 30 ml verdunde soutsuur (1:1 000). Gooi die soutsuurwasoplossings weg. Ekstraheer die eterekstrakte agtereenvolgens met hoeveelhede van 50, 40, 30 en 20 ml van die ammoniumhidroksiedoplossing. Neutraliseer die saamgevoegde ekstrakte met soutsuur en voeg 1 ml in oormaat by. Ekstraheer agtereenvolgens met hoeveelhede van 70, 50, 30 en 20 ml diëtleter. Verdun die saamgevoegde ekstrakte met diëtleter tot 200 ml (of 'n ander geskikte volume). Meet die optiese digtheid van die oplossing by die punte A, B en C soos in 9.4.3 beskryf. Bepaal die gemiddelde van die lesings verkry by punt A en C en trek dit van die lesing by punt B af. Gebruik hierdie waarde om die konsentrasie van die bensoësuur in die toetsmonster van die grafiek af te lees.

AFDELING 10.—INKUBASIE EN METODES VIR MIKROBIOLOGIESE ONDERSOEK

10.1 INKUBASIE EN ONDERSOEK VAN HOÛERS.—Inkubeer op een na al die houers wat vir mikrobiologiese ondersoek geneem is, 14 dae lank by 'n temperatuur van 37° C. Ondersoek hierdie houers uitwendig vir tekens van mikrobiologiese bederf en gaan dan volgens 10.2 te werk.

10.2 MIKROBIOLOGIESE ONDERSOEK.

10.2.1 Glasware.—Al die glasware wat by die mikrobiologiese ondersoek van die produk gebruik word, moet steriel wees. Nadat hulle skoongemaak is, moet al die flette, proef- en steekproefbuisse met watterproppe of ander geskikte proppe verseël word. In plaas van proefbuisse kan 30-ml-flesse met metaalskroefdroppe gebruik word. Steri-

9.3 PREPARATION OF TEST SAMPLE FOR CHEMICAL ANALYSIS.—Pass the drained sample (9.1.3) twice through a meat grinder and mix thoroughly. Store the prepared sample in a well-closed container in a refrigerator until required for use.

9.4 DETERMINATION OF BENZOIC ACID CONTENT.

9.4.1 Apparatus.—A suitable spectrophotometer having cells with a 10 mm light-path and capable of measuring optical density at wavelengths of 267,5 nm, 272,0 nm and 276,5 nm.

9.4.2 Reagents.

(a) *Hydrochloric acid.*—Concentrated, analytical reagent grade.

(b) *Sodium chloride solution.*—A saturated aqueous solution of chemically pure sodium chloride.

(c) *Diethyl ether.*

(d) *Ammonium hydroxide solution.*—0,1 per cent (m/v).

9.4.3 Preparation of standard curve.—Prepare solutions of benzoic acid in diethyl ether containing respectively 20, 40, 60, 80, 100 and 120 mg per litre. Measure the optical density of these solutions in the spectrophotometer at 267,5 nm (point A), 272,0 nm (point B) and 276,5 nm (point C). Take the average optical density of the minima at points A and C and subtract this value from the maximum optical density at B. Plot a graph of this difference against concentration.

9.4.4 Procedure.—Weigh out accurately approximately 10 g of the prepared sample into a separating funnel and add 200 ml of the saturated sodium chloride solution. Make acid to litmus with hydrochloric acid.

Extract the suspension successively with 70, 50, 40 and 30 ml portions of diethyl ether, shaking well to ensure complete extraction. If necessary, break emulsions by centrifuging or stirring. Discard the aqueous phase and wash the combined ether extracts with 80, 40 and 30 ml portions of dilute hydrochloric acid (1:1 000) and discard the hydrochloric acid washings. Extract the ether extracts successively with 50, 40, 30 and 20 ml portions of the ammonium hydroxide solution. Neutralize the combined extracts with the hydrochloric acid, add 1 ml in excess, and extract successively with 70, 50, 30 and 20 ml portions of the diethyl ether. Dilute the combined extracts to 200 ml (or other suitable volume) with diethyl ether and measure the optical density at points A, B and C as described in 9.4.3. Average the readings obtained at points A and C and subtract the mean from the reading at B. From the result determine from the graph the concentration of benzoic acid in the test sample.

SECTION 10.—INCUBATION AND METHODS OF MICROBIOLOGICAL EXAMINATION

10.1 INCUBATION AND INSPECTION OF CONTAINERS.—Incubate for 14 days at a temperature of 37° C all but one of the containers taken for microbiological examination. Examine these containers externally for evidence of microbiological spoilage and then proceed in accordance with 10.2.

10.2 MICROBIOLOGICAL EXAMINATION.

10.2.1 Glassware.—All glassware used in the microbiological examination of the product shall be sterile. After cleaning, plug all test and sampling tubes and flasks with cotton wool or seal them with other suitable closures. Bottles of 30 ml capacity with metal screw caps may be used instead of test tubes. Sterilize all glassware, prefer-

liseer alle glasware, by voorkeur deur die aanwending van droë hitte, een uur lank by 'n temperatuur van 170° C. Waar dit nie uitvoerbaar is nie, byvoorbeeld waar rubberproppe gebruik word, kan die glasware 20 minute lank by 'n temperatuur van 121° C in 'n outoklaaf gesteriliseer word.

10.2.2 *Kweekbodem*.—Die volgende getal buise of flesses met kweekbodem is nodig vir die kultuurondersoek van elke houer wat ondersoek moet word.

<i>Kweekbodem</i>	<i>Getal</i>
Voedende glukoseboeljon.....	2
Versterkte clostridium-kweekbodem.....	2

10.2.3 *Voorbereiding van kweekbodems.*

10.2.3.1 *Voedende glukoseboeljon*.—Meng 3 g beesvleisekstrak, 5 g pepton, 10 g dekstrose en 1 000 ml gedistilleerde water. Verwarm totdat die mengsel opgelos is en reël die pH-waarde van die kweekbodem om te verseker dat dit na sterilisering $7,1 \pm 0,1$ sal wees. Plaas dan hoeveelhede van 10 ml elk in buise of flesses oor (10.2.1) en steriliseer 15 minute lank in 'n outoklaaf by 'n temperatuur van 121° C.

10.2.3.2 *Versterkte clostridium-kweekbodem*.—Los 3 g gisekstrak, 10 g pepton, 10 g vleisekstrak, 5 g dekstrose, 5 g natriumasetaat (gehidrateer), 0,5 g l-sisteïen, 1 g oplosbare stysel en 2 g agar in 1 000 ml gedistilleerde water op deur dit te stoom. Filtreer die oplossing deur papierpap en suiwer die pH-waarde tot 7,4 aan. Plaas hoeveelhede van 10 ml elk in buise of flesses oor (10.2.1) en steriliseer 15 minute lank in 'n outoklaaf by 'n temperatuur van 121° C. Sorg dat die pH-waarde na sterilisering $7,1 \pm 0,1$ is.

10.2.3.3 *Peptonwaterverdunder*.—Los 1 g pepton in 1 000 ml gedistilleerde water op deur dit te stoom. Meet hoeveelhede van 100 ml uit in flesses (10.2.1) en steriliseer 15 minute lank in 'n outoklaaf by 'n temperatuur van 121° C. Sorg dat die pH na sterilisering $7,1 \pm 0,1$ is.

10.2.4 *Fisiese ondersoek en voorbereiding van houer.*

10.2.4.1 Teken alle identifikasiemerke aan wat op die houer of etiket voorkom.

10.2.4.2 Verwyder die etiket. Teken fisiese gebreke soos korrosie, speldegaatjies, duike, onvoldoende sluiting en defekte synate aan. Maak 'n duidelike merk vir latere ondersoek, by alle twyfelagtige punte wat aan 'n verdere fisiese ondersoek onderwerp moet word nadat die houer opgemaak is.

10.2.4.3 Maak die buitekant van die houer deeglik skoon met water en seep. Gebruik 'n oplosmiddel soos petroleum-eter in die geval van vetterige houders.

10.2.4.4 Steriliseer die bo-ent van die houer deur, op die wyse hieronder uiteengesit, 'n steriliseeroplossing met die volgende samestelling te gebruik:

Etanol, 90 persent (v/v).....	1 600 ml.
Asetoon.....	120 ml.
Diëtleter.....	150 ml.
Etielasetaat.....	25 ml.

Giet die steriliseeroplossing tot oorlopens toe oor die bo-ent van die houer, laat dit 'n minuut lank staan en steek dan die oorblywende oplossing op die houer aan die brand. Houders wat opgeblaas het, moet na die skoonmaakproses volgens 10.2.4.3 deeglik met die steriliseeroplossing gereinig word, maar die oplossing moet nie aan die brand gestee word nie.

10.2.5 *Monsterneming van inhoud.*

10.2.5.1 *Aanteken van vakuum of druk*.—Deurboor na sterilisering die bo-ent van die houer in kiemvrye toestand met die punt van 'n gesteriliseerde vakuum- of drukmeter en teken die meteraflesing aan. Spesiale voorsorgmaatreëls moet getref word om slegs steriele lug in

ably by the application of dry heat, at a temperature of 170° C for one hour. Where this is not feasible, e.g. when rubber closures have been used, sterilization may be achieved by autoclaving at a temperature of 121° C for 20 minutes.

10.2.2 *Media*.—The following quantities of tubed or bottled media are required for the cultural examination of each container to be examined:

<i>Medium</i>	<i>Quantity</i>
Glucose nutrient broth.....	2
Reinforced clostridial medium.....	2

10.2.3 *Preparation of media.*

10.2.3.1 *Glucose nutrient broth*.—Mix 3 g of beef extract, 5 g of peptone, 10 g of dextrose and 1 000 ml of distilled water. Warm to dissolve, adjust the pH value of the medium to ensure that after sterilization it will be $7,1 \pm 0,1$, and then dispense 10 ml quantities into tubes or bottles (10.2.1) and sterilize in an autoclave at a temperature of 121° C for 15 minutes.

10.2.3.2 *Reinforced clostridial medium*.—Dissolve by steaming 3 g of yeast extract, 10 g of peptone, 10 g of meat extract, 5 g of dextrose, 5 g of sodium acetate (hydrated), 0,5 g of l-cysteine, 1 g of soluble starch, and 2 g of agar in 1 000 ml of distilled water. Filter through paper pulp and adjust the pH value to 7,4. Dispense 10 ml quantities into tubes or bottles (10.2.1) and sterilize in an autoclave at a temperature of 121° C for 15 minutes. After sterilization check that the pH value is $7,1 \pm 0,1$.

10.2.3.3 *Peptone water diluent*.—Dissolve by steaming 1 g of peptone in 1 000 ml of distilled water. Dispense 100 ml quantities into flasks (10.2.1) and sterilize in an autoclave at a temperature of 121° C for 15 minutes. After sterilization check that the pH value is $7,1 \pm 0,1$.

10.2.4 *Physical examination and preparation of container.*

10.2.4.1 Note and record all identification marks appearing on the container or label.

10.2.4.2 Remove the label. Record any physical defects such as corrosion, pinholing, dents, imperfect closure, and defective seams. Clearly mark, for subsequent inspection, doubtful points to be given further physical examination after the container has been opened.

10.2.4.3 Clean the outside of the container thoroughly with soap and water. If it is greasy, use a solvent such as petroleum ether.

10.2.4.4 Sterilize the top of the container by using, as described below, a sterilizing solution of the following composition:

Ethanol, 90 per cent (v/v)....	1 600 ml.
Acetone.....	120 ml.
Diethyl ether.....	150 ml.
Ethyl acetate.....	25 ml.

Flood the top of the container with the sterilizing solution, allow to stand for one minute, and then ignite the solution remaining on the container. Blown containers should, after cleaning as in 10.2.4.3, be thoroughly cleaned with the sterilizing solution, but the solution must not be ignited.

10.2.5 *Sampling of contents.*

10.2.5.1 *Recording of vacuum or pressure*.—After sterilizing the top of the container, pierce the point of opening by means of a sterile vacuum or pressure gauge tip under aseptic conditions and record the reading shown on the gauge. Special precautions shall be taken to admit

die houer in te laat wanneer die meter uitgetrek word. Bedek die openingspunt van die houer dadelik met 'n geskikte steriele deksel nadat die meter weggeneem is.

10.2.5.2 *Oopmaak van houer.*—Vergroot die gaatjie wat deur die meter gemaak is met 'n geskikte tipe gesteriliseerde instrument, by voorkeur die tipe wat 'n ronde skyf met die gaatjie as middelpunt kan uitsny of een wat die gaatjie se diameter na tussen 15 en 25 mm kan vergroot.

10.2.5.3 *Oorplasing van inokulum.*—Neem minstens 15 g van die produk uit die houer met behulp van 'n gesteriliseerde lepel, gesteriliseerde kurkboorder of gesteriliseerde monsternemingsbuisie van glas. Plaas die monster van die produk wat van die lepel, monsternemingsbuis of kurkboorder geneem is, oor in 'n fles met peptonwaterverdunder (10.2.3.3) waarby gesteriliseerde glaskrale gevoeg is. Meng die materiaal deeglik met die water deur dit te skud sodat die krale die materiaal laat opbreek. So nie kan die monster van die produk in 'n gesteriliseerde masereerfles met 100 ml peptonwaterverdunder (10.2.3.3) oorgeplaas en hoogstens twee minute lank gemasereer word. Bring dan hoeveelhede van 2 ml van die mengsel met behulp van gesteriliseerde pipette in elke buisie oor wat voedende glukoseboeljon of versterkte clostridium-kweekbodem bevat.

10.2.6 *Inkubasie van die kweekbuisies.*—Inkubeer die kweekbuisies of -flesse soos volg:

Voedende glukoseboeljon: Een buisie of fles vyf dae lank by 'n temperatuur van 32° C en een vyf dae lank by 'n temperatuur van 37° C.

Versterkte clostridium-kweekbodem: Een buisie of fles vyf dae lank by 'n temperatuur van 32° C en een vyf dae lank by 'n temperatuur van 37° C.

10.2.7 *Onderzoek.*

10.2.7.1 *Onderzoek die kweekbuisies of -flesse na afloop van die inkubasietydperk en stel vas of die organismes wat geïsoleer is, patogeen of bederwend is of dié soort organisme is wat die produk gedurende opberging kan laat bederf.*

10.2.7.2 *Voer onderstaande ondersoek op sowel die oorblywende inhoud as die houer uit, nadat monsters van die houer se inhoud vir kultuurkweeking geneem is, en teken die bevindings aan:*

- (a) Maak 'n direkte smeer van die inhoud, kleur dit volgens Gram se metode en ondersoek dit mikroskopies;
- (b) bepaal die pH-waarde;
- (c) ondersoek die inhoud vir verslegting, verandering van kleur, ens.;
- (d) ondersoek die binnekant van die houer vir vlekke, vernisfoute, korrosie, ens.; en
- (e) ondersoek en meet die houernate met die oog op onreëlmatighede.

only sterile air on removal of the gauge from the container. Immediately after removal of the gauge, cover the top of the container with a suitable sterile cover.

10.2.5.2 *Opening of container.*—Enlarge the gauge puncture by means of a sterile instrument, preferably one of the type that will cut a circular disc around the central puncture, or one that will enlarge the puncture to a diameter of 15 to 25 mm.

10.2.5.3 *Removal of inoculum.*—Remove at least 15 g of the product from the container by means of a sterile spoon, sterile cork borer, or sterile glass sampling tube. Transfer the portion of product taken from the spoon, sampling tube or cork borer to a flask of peptone water diluent (10.2.3.3) to which sterile glass beads have been added. Thoroughly mix the material and water by shaking, thus allowing the beads to break up the material. Alternatively transfer the portion of product to a sterile macerator jar containing 100 ml of peptone water diluent (10.2.3.3) and macerate for not longer than two minutes. By means of sterile pipettes, introduce 2 ml quantities of the mixture into each of the glucose nutrient broth and reinforced clostridial medium tubes.

10.2.6 *Incubation of the culture tubes.*—Incubate the culture tubes or bottles as follows:

Glucose nutrient broth: One tube or bottle at a temperature of 32° C for five days and one at a temperature of 37° C for five days.

Reinforced clostridial medium: One tube or bottle at a temperature of 32° C for five days and one at a temperature of 37° C for five days.

10.2.7 *Examination.*

10.2.7.1 After incubation examine the culture tubes or bottles and determine whether the organisms isolated are pathogenic types, spoilage types, or organisms liable to cause spoilage of the product during storage.

10.2.7.2 After the contents of the container have been sampled for culturing, make the following examination of the residual contents and of the container and record the findings:

- (a) Make a direct smear of the contents, stain it by Gram's method, and examine it microscopically.
- (b) Determine the pH value.
- (c) Examine the contents for deterioration, discoloration, etc.
- (d) Examine the interior of the container for stain, lacquer imperfections, corrosion, etc.
- (e) Examine and measure the seams of the container for abnormalities.

No. R. 358

10 Maart 1972

WET OP STANDAARDE, 1962

WYSIGING VAN VERPLIGTE STANDAARDSPE-SIFIKASIE VIR DIE VERVAARDIGING, PRODUK-SIE, BEWERKING OF BEHANDELING VAN INGEMAATKE VIS, INGEMAAKTE VISPRODUKTE EN INGEMAAKTE SEESKULPDIERE

Ek, Abraham Hermanus du Plessis, Adjunk-minister van Ekonomiese Sake, vervang hierby, op aanbeveling van die Raad van die Suid-Afrikaanse Buro vir Standaarde en kragtens artikel 15 van die Wet op Standaarde 1962 (Wet 33 van 1962), met ingang van die datum twee

No. R. 358

10 March 1972

STANDARDS ACT, 1962

AMENDMENT OF COMPULSORY STANDARD SPECIFICATION FOR THE MANUFACTURE, PRODUCTION, PROCESSING OR TREATMENT OF CANNED FISH, CANNED FISH PRODUCTS AND CANNED MARINE MOLLUSCS

I, Abraham Hermanus du Plessis, Deputy Minister of Economic Affairs, hereby substitute, on the recommendation of the Council of the South African Bureau of Standards and in terms of section 15 of the Standards Act 1962 (Act 33 of 1962), with effect from the date two

maande na publikasie van hierdie kennisgewing die verpligte standaardspesifikasie vir die vervaardiging, produksie, bewerking of behandeling van ingemaakte vis, ingemaakte visprodukte en ingemaakte seeskulpdiere gepubliseer by Goewermentskennisgewing 490 van 28 Maart 1969 deur die gewysigde verpligte standaardspesifikasie in die Bylae vervat.

A. H. DU PLESSIS, Adjunk-minister van Ekonomiese Sake.

BYLAE

VERPLIGTE STANDAARDSPESIFIKASIE VIR DIE VERVAARDIGING, PRODUKSIE, BEWERKING OF BEHANDELING VAN INGEMAAKTE VIS, INGEMAAKTE VISPRODUKTE EN INGEMAAKTE SEESKULPDIERE

(Metricke Eenhede)

AFDELING 1.—BESTEK

1.1 Hierdie spesifikasie dek die vervaardiging, produksie, bewerking of behandeling van ingemaakte vis, ingemaakte visprodukte en ingemaakte seeskulpdiere.

AFDELING 2.—WOORDBEPALING

2.1 Die volgende woordbepalings geld vir die doel van hierdie spesifikasie:

Aanneemlik.—Aanneemlik vir die owerheid wat hierdie spesifikasie toepas.

Deelsgepreserveerde produk.—'n Produk waarby verkoeling vir langdurige preserving vereis word.

Dwarsvulling.—Die verpakking van viseenhede in posisies waarvan die rigting aanmerklik verskil van die algemene rigting waarin die eenhede in die houer lê.

Gedreineerde massa.—Die massa van die houer se inhoud wat op 'n metaalgaassif met 'n nominale opening-grootte van 2,00 mm agterbly na twee minute se dreineringsproses op die sif.

Gewone verpakking (natuurlike verpakking).—Vis wat in sy eie afgeskeide olie sonder enige bygevoegde bestanddele behalwe sout of in pekel ingemaak is.

Houer.—'n Houer vervaardig van metaal, glas, stywe of halfstywe plastiek of enige samestelling daarvan, en daarbenewens, in die geval van vissmeer en viskuitpreparate, ook 'n uitdrukbuise.

Ingemaakte seeskulpdiere (Mollusca).—Die voedsel vir menslike verbruik wat verkry word deur skoon, gesonde, eetbare seeskulpdiere met of sonder die toevoeging van kruie en geurmiddels en ander voedsame bestanddele in lugdig verseelde houe te verpak en dit deur 'n preservingproses in 'n gesonde, eetbare toestand te behou.

Ingemaakte vis.—Die voedsel vir menslike verbruik wat verkry word deur skoon, gesonde, eetbare vis of mootjies van sodanige vis of vleis van sodanige vis met of sonder toevoeging van kruie en geurmiddels, water, olie, meelstof en ander bestanddele deur hierdie spesifikasie toegelaat, in lugdig verseelde houe te verpak en dit deur 'n preservingproses in 'n gesonde, eetbare toestand te behou.

Ingemaakte visproduk.—Die voedsel vir menslike verbruik wat berei word deur skoon, gesonde, eetbare vis of stukke van sodanige vis met of sonder toevoeging van kruie en geurmiddels, water, vet, olie, meelstof, groente en ander voedsame bestanddele in lugdig verseelde houe te verpak en deur 'n preservingproses in 'n gesonde, eetbare toestand te behou. Hierdie omskrywing sluit nie vloeibare vispreparate in nie.

Lospakking.—Oormatige sydelingse oop ruimtes tussen afsonderlike viseenhede of -mootjies, of tussen viseenhede of -mootjies en die wand van die houer, of tussen albei.

Luguitdrywing.—Die verwydering van lug uit 'n houer en die inhoud daarvan.

months after publication of this notice the amended compulsory standard specification contained in the Schedule for the compulsory standard specification for the manufacture, production, processing or treatment of canned fish, canned fish products and canned marine molluscs published by Government Notice 490 of 28 March 1969.

A. H. DU PLESSIS, Deputy Minister of Economic Affairs.

SCHEDULE

COMPULSORY STANDARD SPECIFICATION FOR THE MANUFACTURE, PRODUCTION, PROCESSING, OR TREATMENT OF CANNED FISH, CANNED FISH PRODUCTS AND CANNED MARINE MOLLUSCS

(Metric Units)

SECTION 1.—SCOPE

1.1 This specification covers the manufacture, production, processing, or treatment of canned fish, canned fish products, and canned marine molluscs.

SECTION 2.—DEFINITIONS

2.1 For purposes of this specification the following definitions shall apply:

Acceptable.—Acceptable to the authority administering this specification.

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

Canned fish product.—The 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, oil, farinaceous material, vegetables and other wholesome ingredients, packed in hermetically sealed containers and maintained in sound edible condition by a process of preservation. This definition does not include liquid fish preparations.

Canned marine mollusc.—The article of food for human consumption obtained by packing clean, sound, edible marine mollusc with or without the addition of seasoning and flavouring materials and other wholesome ingredients, in hermetically sealed containers and maintaining it in sound edible condition by a process of preservation.

Container.—A container made of metal, glass, rigid plastic, or semi-rigid plastic, or any combination of these, and additionally, in the case of fish paste and fish roe preparations, a collapsible tube.

Count.—The number of units of fish or cuts of fish present in the container.

Cross filling.—The packing of units of fish in positions markedly divergent in direction from that of the general direction of the units in the container.

Drained mass.—The mass of the contents of a container, after draining for 2 minutes on a wirecloth sieve of nominal aperture size 2,00 mm.

Exhausting.—The removal of air from a container and its contents.

Fish.—Any vertebrate cold-blooded marine or freshwater animal having gills throughout life, and limbs, if any, modified into fins.

Net headspace.—The vertical distance between the underside of a container top and the mean upper level of its contents.

Netto boruimte.—Die vertikale afstand tussen die onderkant van die houer se deksel en die gemiddelde bovlak van die inhoud daarvan.

Preserveer.—Bewaar in ongeskonde, eetbare toestand deur voorkoming van agteruitgang, ontbinding of verrotting.

Produk.—Enige vis of visprodukt of seeskulpdier, ingemaak of in voorbereiding om ingemaak te word, soos blyk uit die sinsverband.

Telling.—Die getal viseenhede of -mootjies in die houer aanwesig.

Tyd-temperatuurproses.—Die deurlopende hittebehandeling, in tyd en temperatuur uitgedruk, wat by verwerking van produkte wat deur hitte gepreserveer word, toegepas word nadat die houer verseël is.

Vis.—'n Gewerwelde, koudbloedige see- of varswaterdier met kieuë dwarsdeur sy hele lewensduur en met ledemate, indien daar is, wat tot vinne ontwikkel is.

AFDELING 3.—ALGEMENE VEREISTES VIR DIE FABRIEK EN WERKNEMERS

3.1 ALGEMENE VEREISTES VIR DIE FABRIEK.—Daar moet voldoen word aan die vereistes van die geldende Wet op Fabriek, Masjinerie en Bouwerk. Daarbenewens moet die fabriek, uitrusting en water wat by die bereiding van die produk gebruik word, aan die volgende vereistes voldoen:

3.1.1 *Konstruksie van en toestande in die fabriek.*

3.1.1.1 Die dak moet weerbestand wees.

3.1.1.2 Die vloer moet van materiaal gemaak wees wat ondeurdringbaar is vir water. Die oppervlakafwerking daarvan moet behoorlik skoongemaak kan word. Die vloer moet 'n val hê vir behoorlike dreinerings en moet verbind wees met buiteafvoerslootjies, -rioolpype of afvoerkanale. Gedurende produksietye moet die vloer en afvoerkanale skoon gehou word deur dit gereeld te vee en met water af te spoel. Na afloop van produksiewerksaamhede moet die vloer en afvoerkanale deeglik skoongemaak word. Waar nodig, moet staanplanke vir werkers voorsien word.

3.1.1.3 Die binnevlakke van die mure van verwerkingskamers moet ondeurdringbaar wees vir water en moet tot 'n hoogte van minstens 1,8 m bokant die vloer 'n gladde, ligkleurige, wasbare afwerking hê. Waar nodig, moet hulle onmiddellik na elke dag se werksaamhede deeglik afgewas word.

3.1.1.4 Rommel, afval en oorloop moet vinnig, doeltreffend en op 'n higiëniese manier, by voorkeur met meganiese middels, weggeëm word.

3.1.1.5 Die algemene verligting in die fabriek moet toereikend wees vir doeltreffende verwerking en skoonmaak.

3.1.1.6 Die ventilasie in die fabriek moet oormatige stoom verwyder en skimmelgroei en die vorming van kondensaat verhoed wat in die grondstowwe of die produk of op uitrusting wat daarmee in aanraking kom, kan drup. Indien nodig, moet natuurlike ventilasie op meganiese wyse aangevul word.

3.1.1.7 Doeltreffende maatreëls moet getref word om skimmelgroei te verhinder en om stof, afskilferende verf en ander los materiaal wat van bostrukture in verwerkings- en bewaarkamers op die produk kan val, te verwyder.

3.1.1.8 Doeltreffende maatreëls moet getref word om vlieë en ander insekte uit die fabriek te hou.

3.1.1.9 Alle geboue waarin grondstowwe en bestanddele bewaar word, of waarin die produk vervaardig word, moet knaagdierdig gemaak wees en vry van knaagdiere gehou word.

Plain pack (natural pack).—Fish packed either in its own exuded oil without any additional ingredient other than salt, or in brine.

Preserve.—Maintain in sound edible condition by the prevention of deterioration, decomposition, or putrefaction.

Product.—Either fish or fish product or marine mollusc, canned or in course of preparation for canning, as indicated by the context.

Semi-preserve.—A product requiring refrigeration for continued preservation.

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.

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

SECTION 3.—GENERAL REQUIREMENTS FOR THE FACTORY AND FOR EMPLOYEES

3.1 GENERAL REQUIREMENTS FOR THE FACTORY.—The requirements of the current Factories, Machinery and Building Work Act shall be complied with. In addition the factory, equipment and water used in the preparation of the product shall comply with the following requirements:

3.1.1 *Construction of and conditions in the factory.*

3.1.1.1 The roof shall be weatherproof.

3.1.1.2 The floor shall be constructed of material impervious to water. Its surface finish shall permit proper cleaning. The floor shall be graded for proper drainage and shall be connected to external gullies, sewers, or drains. During production periods the floor and rainage channels shall be kept clean by regular sweeping and flushing with water. At the close of production, thorough cleaning of the floor and drainage channels shall take place. Where necessary, duck-boards shall be provided for workers.

3.1.1.3 The inside surfaces of the walls of processing rooms shall be impervious to water and shall have a smooth, light-coloured washable finish to a minimum height of 1,8 m above floor level. They shall, where necessary, be thoroughly washed immediately after each day's operations.

3.1.1.4 Litter, waste, and overflow shall be disposed of promptly and efficiently and in a sanitary manner, where possible by mechanical means.

3.1.1.5 General illumination in the factory shall be adequate for effective processing and cleaning.

3.1.1.6 Ventilation in the factory shall effect the removal of excess steam, and shall prevent mould growth and the formation of condensate which may fall into raw materials or the product or on equipment coming into contact with them. If necessary, natural ventilation shall be augmented by mechanical means.

3.1.1.7 Effective measures shall be taken to inhibit mould growth and to remove dust, flaking paint, and other loose or detachable material liable to fall on the product from overhead structures in processing and storage rooms.

3.1.1.8 Effective measures shall be taken to keep the factory free from flies and other insects.

3.1.1.9 All buildings in which raw materials and ingredients are stored or in which the product is manufactured shall be made rodent-proof, and shall be kept free from rodents.

3.1.1.10 Insek- en knaagdierdoders mag nie gebruik word terwyl vervaardiging aan die gang is nie. Werkvlakke moet vry van insek- en knaagdierdoderende residue gehou word. Insek- en knaagdierdoders mag nooit met houters, grondstowwe of die produk in aanraking kom nie.

3.1.1.11 Die hele aflaai- en vervoerstelsel vir vis, sowel by die kaai as na die inmakery, met inbegrip van weegtoestelle, hystoestelle en ontskubbers, moet voor gebruik skoongemaak word en staande water en bederwende vis moet verwyder word. Voorraadtenks moet op soortgelyke wyse behandel word.

3.1.1.12 Geen fabriekskoorsteen, berokingskamer of masjienuitlaatpyp mag rook of dampe afgee in hoeveelhede of op 'n wyse wat aanstootlik of skadelik of gevaarlik vir die gesondheid is of wat besoedeling in enige stadium van die voorbereiding van die produk veroorsaak nie.

3.1.1.13 Verwerkingsinstallasies vir die vervaardiging van nuwe produkte soos vismeel, visolie, stikwaterkonsentrate en dergelike produkte van vis, visoorblyfsels en visafval, moet behoorlik van die inmakery afgesonderd wees.

3.1.1.14 By elke werknemersingang tot die voorbereidings- en verwerkingsafdelings van die fabriek moet 'n toereikende aantal wasbakke met kiemdoderende seep en voldoende skoon warm en koue lopende water voorsien wees.

3.1.1.15 Fabriekstoestande en -aktiwiteite moet te alle tye higiënies wees. Geen diere mag in enige deel van die werklike fabriek toegelaat word nie.

3.1.1.16 In die inmaakfabriek en die onmiddellike omgewing daarvan mag geen handeling deur die fabriek uitgevoer word en mag geen toestand heers as gevolg van die werksaamhede van die fabriek wat op enige wyse vir die vervaardiging, verwerking of behandeling van ingemaakte vis, ingemaakte visprodukte of ingemaakte seeskulpdiere nadelig is nie.

3.1.2 Uitrusting.

3.1.2.1 Alle installasies, uitrusting en gereedskap wat met die produk in aanraking kom, moet van korrosiebestande materiaal met 'n gladde oppervlak, verkieslik vlek-vrye metaal, gemaak wees en moet 'n naatlose higiëniese ontwerp hê. Leigute vir die vloeiervoer van vis kan van sagtestaal wees. Roerders moet van vlek-vrye metaal gemaak wees en maassiwwe van vlek-vrye metaal of plastiek. Gereedskap om blikke mee op te vul, moet van vlek-vrye metaal of plastiek wees en moet van aanneemlike handvatsels voorsien, wees. Lood en loodlegerings, uitgesonderd soldeer, mag nie gebruik word vir die konstruksie van uitrusting wat in enige stadium tydens die vervaardigingsproses met grondstowwe of die onbeskermde produk in aanraking kom nie. Snyplanke en -blokke moet higiënies wees, moet van soliede snybestande materiaal wees, moet in 'n goeie toestand wees en moet maklik verwyder kan word vir skoonmaakdoeleindes. Die blaie van sny-, voorbereidings- en verpakkingstafels moet gemaak wees van of bedek wees met naatlose vlek-vrye metaal of ander naatlose korrosiebestande waterdigte materiaal wat soortgelyke oppervlakeienskappe as vlek-vrye metaal besit. Die blaie van tafels moet vinnige en effektiewe dreineringsmoontlik maak en moet sonder krake en barste wees.

3.1.2.2 Alle installasies, uitrusting en gereedskap moet skoon en in 'n goeie toestand gehou word. Skoonmaak- en ontsmettingsmiddels, warm en koue lopende water of nat stoom, waterslange, borsels en ander benodigdhede vir die skoonmaak van installasies, uitrusting en gereedskap moet beskikbaar wees. Die installasies, uitrusting en gereedskap kan ontsmet word met hipochloriet of 'n ander geskikte ontsmettingsoplossing. Die hele verwerkingsstelsel moet aan die einde van elke skof deeglik skoongemaak word en na affoop van die werksaamhede. Die hele verwerkingsstelsel moet deeglik skoongemaak en ontsmet

3.1.1.10 Insecticides and rodenticides shall not be used while manufacturing operations are in progress. Working surfaces shall be kept free from insecticidal and rodenticidal residues. Insecticides and rodenticides shall at no time come into contact with containers, raw materials, or the product.

3.1.1.11 The entire fish discharge and conveyance system both at the jetty and to the cannery, including weighing devices, elevators, and descalers, shall be cleared of stagnant water and stale fish and shall be cleaned before use. Holding tanks shall be similarly treated.

3.1.1.12 No factory chimney, smoke-room, or motor exhaust shall emit smoke or fumes in a quantity or in a manner which is offensive or injurious or dangerous to health, or causes contamination at any stage in the preparation of the product.

3.1.1.13 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.

3.1.1.14 An adequate number of wash-basins with germicidal soap and an adequate supply of clean hot and cold running water shall be provided at every employees' entrance to the preparation or processing areas of the factory.

3.1.1.15 Factory conditions and operations shall at all times be hygienic. Animals shall not be allowed in any part of the factory proper.

3.1.1.16 In the canning factory and its immediate surroundings no operation shall be performed by the factory and no condition shall be present as a result of the activities of the factory that is in any way detrimental to the manufacture, processing, or treatment of canned fish, canned fish products or canned marine molluscs.

3.1.2 Equipment.

3.1.2.1 All plant, equipment, and utensils coming into contact with the product shall be made of smooth-surfaced, corrosion-resistant material, preferably stainless metal, and they shall be of seamless, sanitary design. Flume for the flow-conveyance of fish may be of mild steel. Stirrers shall be made of stainless metal and mesh screens of stainless metal or plastic. Utensils used to top up cans shall be of stainless metal or plastic, and shall be provided with acceptable handles. Lead and lead alloys other than solder shall not be used in the construction of equipment coming into contact with raw materials or the unprotected product at any stage in its manufacture. Cutting boards or blocks shall be hygienic, of solid, cut-resistant material in good condition, and readily removable for cleaning. The tops of all cutting, preparation, and packing tables shall be made of or be covered with seamless, stainless metal, or other seamless, corrosion-resistant material with surface characteristics similar to stainless metal and impervious to water. The tops of tables shall allow rapid and effective drainage and shall be free from cracks and crevices.

3.1.2.2 All plant, equipment, and utensils shall be kept clean and in good repair. Cleaning and disinfecting materials, hot and cold running water or saturated steam, hose piping, brushes, and other requisites necessary for the cleaning of plant, equipment and utensils shall be available. Plant, equipment, and utensils may be disinfected by the application of hypochlorite or other suitable disinfecting solution. The entire processing system shall be thoroughly cleaned at the end of each shift and at the end of operations. The entire processing system shall be thoroughly cleaned and disinfected, care being taken to ensure that

word en daar moet toegesien word dat die ontsmettings-oplossing lank genoeg met die oppervlakke in aanraking bly. Die hele verwerkingstelsel moet dan afgespoel word met water wat aan die vereistes van 3.1.3 voldoen en moet skoon wees onmiddellik voordat dit verder gebruik word.

3.1.2.3 Houders wat heeltemal of gedeeltelik met voedselstowwe gevul is, mag nie so gevul of opgestapel word dat die voedselstowwe in een houer deur die boom van die houders wat daarop gestapel is, besoedel kan word nie. Houders wat voedselstowwe bevat, mag nie regstreeks op die vloer staan nie.

3.1.2.4 Gereedskap wat by die voorbereiding van die produk gebruik word, mag nie deur werknemers uit die fabriek verwyder word nie, behalwe as dit herstel of vervang moet word.

3.1.2.5 Stoomretorte moet voorsien wees van die volgende toebehore, wat in 'n werkende toestand gehou moet word:

(a) 'n Reguleerder, hetsy meganies of met die hand beheer, waarmee die verwerkingstemperatuur akkuraat beheer kan word. Hierdie vereiste is nie vir die eerste kookproses verpligtend nie.

(b) Minstens een akkuraat gekalibreerde kwik-in-glas-temperatuurmeter.

(c) 'n Registreertermometer met tyd-temperatuurkaarte wat na gebruik minstens twee jaar lank gehou moet word.

(d) 'n Drukmeter.

(e) 'n Lugklep of lugkleppe met 'n kraan of krane bo in die retort.

(f) 'n Uitlaatklep in elke termometerhouer.

(g) Minstens een uitlaatklep bo in die retort.

(h) Waar 'n outomatiese reguleerder gebruik word, 'n stoomomloopleiding rondom die reguleerder om 'n vinnige styging tot die verwerkingstemperatuur moontlik te maak.

(i) 'n Doeltreffende veiligheidsklep.

3.1.2.6 Voorrade wat die produk moontlik kan besoedel en masjienonderdele moet uit die verwerkingsafdeling gehou word. Behalwe as dit voorberei en netjies verpak is, moet eetbare grondstowwe, uitgesonderd vis, in skoon, toe houders in 'n afsonderlike pakkamer gehou word.

3.1.2.7 Waar koelkamers gebruik word, moet hulle doeltreffend en higiënies wees. Maatreëls moet getref word om die afskilfering van verf aan plafonne en mure te voorkom. Produkte mag nie regstreeks op die vloere gepak word nie.

3.1.2.8 Die etiketteerafdeling moet te alle tye netjies en aan die kant wees en die werkwysse wat gevolg word, moet van so 'n aard wees dat dit die moontlikheid van verwarring tussen verskillende produkte uitsluit.

3.1.3 *Water vir verwerkings-, was- en installasieskoonmaakdoeleindes.*

3.1.3.1 *Algemeen.*—Elke fabriek moet 'n voorraad skoon drinkbare water hê wat vry is van stowwe in suspensie en stowwe wat skadelik is vir die produk en nadelig is vir die gesondheid. Alle water wat in aanraking kom met die produk na ontskubbing of verwydering daarvan uit die skulp, moet deur middel van uitvlokkings, filtrering, chlorering of 'n ander proses behandel word om die afwesigheid van *E. Coli* I te verseker. Om aan hierdie vereistes te voldoen, moet die water waar dit nodig is voor gebruik aanhoudend volgens 3.1.3.2 gechlloreer word.

3.1.3.2 *Chlorering.*

(a) *Water vir verwerking.*—Benewens voldoening aan die vereistes van 3.1.3.1 moet water wat vir die vervaardiging van die produk gebruik word en water (uitgesonderd water vir houerverkoeling) wat gebruik word om die uitrusting en installasie waarmee die produk tydens

the disinfectant solution is allowed and adequate period of contact with the surfaces. The entire processing system shall then be flushed with water complying with the requirements of 3.1.3 and shall be clean immediately before further use.

3.1.2.3 Containers, when filled or partially filled with food materials, shall not be filled or stacked in a manner which allows contamination of the food materials in one container from the bottoms of the containers stacked above it. Containers holding food materials shall not rest directly on the floor.

3.1.2.4 Utensils used in the preparation of the product shall not be removed from the factory by employees except for repair or replacement.

3.1.2.5 Steam retorts shall be equipped with the following fittings, which shall be maintained in good working order:

(a) A controller, either manually or mechanically operated, to maintain the processing temperature accurately. This requirement is not compulsory for the first cook.

(b) At least one accurately calibrated indicating mercury-in-glass thermometer.

(c) A recording thermometer with time-temperature charts, which after use shall be kept for a period of at least two years.

(d) A pressure gauge.

(e) A vent or vents with a tap or taps in the top of the retort.

(f) A bleeder in each thermometer pocket.

(g) At least one bleeder in the top of the retort.

(h) Where an automatic controller is used, a steam bypass around the controller to make a rapid rise to the processing temperature possible.

(i) An effective safety valve.

3.1.2.6 Stores capable of contaminating the product and spare parts for machinery shall be kept away from the processing area. Except when in a prepared and neatly packaged form, edible raw materials other than fish shall be kept in clean, closed containers in a separate store.

3.1.2.7 Where used, cold storage facilities shall operate effectively and shall be hygienic. Measures shall be taken to prevent the flaking of paint on ceilings and walls. Products shall not be stacked directly on the floors.

3.1.2.8 The labelling section shall at all times be neat and tidy and the procedures followed shall be such as to preclude the possibility of confusion between different products.

3.1.3 *Water for processing, washing and plant cleaning purposes.*

3.1.3.1 *General.*—Every factory shall have a supply of clean potable water free from suspended matter and substances that are deleterious to the product or injurious to health. All water coming into contact with the product after descaling or shucking shall have been treated by flocculation, filtration, chlorination, or other process to ensure the absence of *E. Coli* I.

To comply with these requirements the water shall, if necessary, be continuously chlorinated before use in accordance with 3.1.3.2.

3.1.3.2 *Chlorination.*

(a) *Water for processing.*—In addition to complying with the requirements of 3.1.3.1, 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

verwerking en vervaardiging in aanraking kom te was, tensy sodanige water reeds minstens twee dele per miljoen vry oorblywende chloor bevat, deurlopend gechloreer word sodat dit 'n minimum van twee dele per miljoen vry oorblywende chloor by die gebruikspunt bevat. Indien water wat aldus behandel is die produk op enige manier benadeel, moet die water onmiddellik voor gebruik ontchloor word. In die geval van pekeloplossings wat voor vulling aanhoudend by 'n temperatuur van minstens 75° C gehou word, is die gebruik van gechloreerde water vir die bereiding van die pekel nie noodsaaklik nie.

(b) *Water vir skoonmaak.*—Water wat gebruik word om die installasie en uitrusting na verwerking skoon te maak, moet deurlopend gechloreer word sodat dit 'n minimum van twee dele per miljoen vry oorblywende chloor bevat; so nie moet dit sodanige kiemdodende stowwe bevat dat daar verseker word dat die installasie en uitrusting in 'n higiëniese toestand is.

(c) *Water vir verkoeling van houers.*—Benewens voldoening aan die vereistes van 3.1.3.1, moet water wat vir die verkoeling van die houers gebruik word en wat nie hersirkuleer word nie, deurlopend gechloreer word sodat dit 'n minimum van twee dele per miljoen vry oorblywende chloor, by die retortinlaat gemeet, bevat. Indien water vir die verkoeling van die houers hersirkuleer word, moet dit voor hersirkulasie behandel word om vaste stowwe te verwyder en moet dit dan gechloreer word om te verseker dat dit na 'n kontakperiode van minstens 20 minute, 'n minimum van twee dele per miljoen vry oorblywende chloor, by die retortinlaat gemeet, bevat.

In alle gevalle moet die konsentrasie van vry oorblywende chloor met behulp van die ortotolidienflitstoets (vyf sekondes) of 'n ander ewe gevoelige toets bepaal word.

3.1.4 *Geriewe.*—Toereikende kleedkamers, stortbadens, wasbakke en sanitêre geriewe moet verskaf wees. Genoeg warm en koue vars lopende water, skoon papierhanddoeke, naelborsels, toiletpapier en kiemdodende seep moet beskikbaar wees vir werknemers.

3.2 VEREISTES VIR WERKNEMERS BETROKKE BY DIE VOORBEREIDING EN VERWERKING VAN DIE PRODUK.

3.2.1 Geen persoon—

(a) wat geweier het om hom aan 'n mediese ondersoek te onderwerp nadat hy aangesê is om dit te doen, of

(b) wat nie na indiensneming of na afwesigheid van 10 dae of langer as gevolg van siekte 'n bevredigende mediese sertifikaat ingedien het of in 'n mediese ondersoek geslaag het nie, of

(c) waarvan daar gesertifiseer is dat hy aan 'n aansteeklike of besmetlike siekte ly of dat hy 'n draer van 'n siekte is, of

(d) wat ly of vermoedelik ly aan 'n siekte, besmetting of besering wat grondstowwe of die produk moontlik kan besoedel,

mag toegelaat word om grondstowwe of die produk te hanteer in die voorbereidingsproses nie.

3.2.2 Geen werknemer wat aan 'n hand- of gesigbesering, 'n etterende velinfeksie of 'n klinies herkenbare aansteeklike siekte ly, of wat 'n verband, pleister of ander beskermende bedekking oor 'n hand- of armbesering of 'n etterende velinfeksie dra, mag toegelaat word om grondstowwe of die produk te hanteer nie. Die gebruik van 'n waterdigte, styfpassende handskoen wat 'n geringe hand- of vingerbesering volkome bedek, is egter toelaatbaar.

3.2.3 Nóg die werknemers se persoonlike besittings nóg hul voedsel mag in die voorbereidings-, verwerkings- en verpakkingsafdelings van die fabriek gehou word. Geen voedsel mag in hierdie afdelings deur die personeel voorberei of genuttig word nie.

and manufacture shall, unless it already contains at least two parts per million of free residual chlorine, be continuously chlorinated to contain a minimum of two parts per million of free residual 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.

(b) *Water for cleaning.*—Water used for the cleaning of plant and equipment after processing shall be continuously chlorinated to contain a minimum of two parts per million of free residual chlorine or, alternatively, it shall contain such germicidal substances as will ensure sanitation of plant and equipment.

(c) *Water for container cooling.*—In addition to complying with 3.1.3.1, water used for container cooling and which is not recirculated shall be continuously chlorinated to contain a minimum of two parts per million of free residual chlorine measured at the retort inlet. Where water for container cooling is recirculated it shall, before recirculation, be treated to remove solids and then chlorinated to ensure after a contact period of at least 20 minutes a minimum free residual chlorine content of two parts per million at the retort inlet.

In all cases the free residual chlorine concentration shall be determined by the orthotolidine flash test (5 seconds) or other test of equivalent sensitivity.

3.1.4 *Comfort features.*—Adequate dressing rooms, shower baths, washbasins, and sanitary facilities shall be provided. Ample hot and cold fresh running water, clean disposable towels, nail brushes, toilet tissue, and germicidal soap shall be available to employees.

3.2 REQUIREMENTS FOR EMPLOYEES ENGAGED IN THE PREPARATION AND PROCESSING OF THE PRODUCT.

3.2.1 No person who—

(a) after having been called upon to submit to a medical examination, has refused to do so, or

(b) has not on engagement or after an absence of 10 days or more due to illness submitted a satisfactory medical certificate of health, or passed a medical examination, or

(c) has been certified as suffering from any infectious or contagious disease or as being a carrier of disease, or

(d) is suffering or is suspected of suffering from any illness, infection or injury capable of contaminating raw materials or the product,

shall be allowed to handle raw materials or the product in the course of preparation.

3.2.2 No employee who is suffering from a hand or a face injury, a suppurating skin infection, or a clinically recognisable infectious disease, or who is wearing a bandage, plaster or other protective covering for a hand or arm injury or a suppurating skin infection, shall be allowed to handle raw materials or the product, except that a minor hand or finger injury completely protected by a waterproof, well-secured glove may be tolerated.

3.2.3 Neither workers' personal effects nor their food shall be present in the preparation, processing and packing areas of the factory. No food shall be prepared or consumed by personnel in these areas.

3.2.4 Spoege en die gebruik van tabak, in watter vorm ook al, binne die voorbereidings-, verwerkings- en verpakingsafdelings van die fabriek is verbode. Kennisgewings te dien effekte moet opvallend vertoon wees. Houers wat by die voorbereiding of die inmaak van die produk gebruik word, mag nie gebruik word om uit te drink nie.

3.2.5 Alle werknemers wat in die voorbereidings- en verwerkingsafdelings van die fabriek werksaam is, moet skoon ligkleurige beskermende kleren en waterdigte voorskote en skoon ligkleurige wasbare pette dra om hul hare te bedek. Waterdigte beskermende kleren moet van plastiek of rubber gemaak wees. Oorkleren moet die werknemers se persoonlike kleren heeltemal bedek. Moue mag nie tot onderkant die elmboog reik nie, behalwe waar dit op aanneemlike wyse met plastiekoortrekmoue bedek is. Alle beskermende kleren moet heel gehou word en mag nie in werkvertreke bewaar word nie; wanneer dit nie in gebruik is nie, moet dit in kleedkamers gehou word en nie van die perseel verwyder word nie, behalwe om gewas te word. Waterdigte beskermende kleren moet gedurende werkpouses en besoeke aan toiletgeriewe uitgetrek en aan hake by werkvertrekuittange gehang word.

3.2.6 Werknemers moet hul vingernaels kort en skoon hou en moet, voordat hulle begin werk en na elke afwesigheid uit die verwerkingsafdeling van die fabriek, hul hande met water en kiemdodende seep of in 'n detergentoplossing was. Naelverniss of -lak mag nie op vingernaels gebruik word nie. Polshorlosies en juweliersware mag nie gedra word nie.

AFDELING 4.—VEREISTES VIR DIE BESTANDELE

4.1 TOESTAND VAN BESTANDELE.—Vis en seeskulpe en ander bestanddele moet, ongeag of dit vars, verkoel, gevries, ingemaak of andersins gepreserveer is, altyd skoon, gesond, van goeie gehalte en voorkoms en in elke opsig geskik vir menslike verbruik wees. Alle bestanddele moet so bewaar word dat dit behoorlik teen insekte en knaagdiers beskerm is.

4.2 VOORBEREIDING VAN VIS EN SEESKULPE.

4.2.1 Vis.

4.2.1.1 Die volgende algemene vereistes geld:

(a) Alle vis moet deeglik en higiënies skoongemaak word in toestand wat vryheid van besoedeling verseker.

(b) Behalwe waar vrystelling van die volgende vereistes vir spesifieke produkte verleen word, moet—

(i) alle vis in aanneemlike mate ontskub wees;

(ii) die koppe, sterte en vinne van alle vis verwyder word, tensy die vis heel verpak word of tensy vinne of sterte of albei vanweë die aard van die verpakking nie normaalweg verwyder word nie; en

(iii) die binnegoed, behalwe die kuit en die entgeelte van die anale kanaal, verwyder word.

(c) Behalwe wanneer die vis in die vorm van mootjies verpak word, moet die ruggraat van groot vissoorte verwyder word.

(d) By groot vissoorte moet die bloedkolomme, waar moontlik, verwyder word.

4.2.1.2 Die volgende bykomende vereistes is by die inmaak van vis van toepassing:

(a) Alle vis moet behoorlik onder lopende water gewas word voordat dit opgesny of ingemaak word.

(b) Snitte moet netjies en skoon gesny word.

(c) Groot grate mag nie opvallend uit snitte of mootjies steek nie.

(d) Toingrige stukke vleis en vel moet verwyder word.

3.2.4 Spitting and the use of tobacco in any form shall be prohibited within the preparation, processing, and packing areas of the factory. Notices to this effect shall be prominently displayed. Containers used either in the preparation or in the canning of the product shall not be used for drinking purposes.

3.2.5 All employees engaged in the preparation and processing areas of the factory shall wear clean light-coloured protective clothing and waterproof aprons and clean light-coloured washable caps to cover their hair. Waterproof protective clothing shall be of plastic or rubber. Overalls shall completely cover the personal clothing of employees. Sleeves shall not extend below the elbow except when acceptably covered by plastic sleevelets. All protective clothing shall be in good repair. Protective clothing shall not be stored in workrooms; when not in use it shall be kept in changerooms and shall not be removed from the premises except for laundering. Waterproof protective clothing shall be taken off and suspended from hooks at plant exits during work intervals and visits to sanitary conveniences.

3.2.6 Employees shall keep their fingernails short and clean, and shall wash their hands with water and germicidal soap or in a detergent solution before commencing work and after each absence from the factory processing area. Varnish or lacquer shall not be used on fingernails. Wristlet watches and jewellery shall not be worn.

SECTION 4.—INGREDIENT REQUIREMENTS

4.1 CONDITION OF INGREDIENTS.—All fish, marine molluscs and other ingredients whether fresh, chilled, frozen, canned or otherwise preserved shall at all times be clean, sound, of good quality and appearance, and in every way fit for human consumption. All ingredients shall be stored well protected against insects and rodents.

4.2 PREPARATION OF FISH AND MARINE MOLLUSCS.

4.2.1 Fish.

4.2.1.1 The following general requirements shall apply:

(a) All fish shall be thoroughly and hygienically cleaned under conditions that ensure freedom from contamination.

(b) Except where exempted in the requirements for specific products—

(i) all fish shall be acceptably descaled;

(ii) the heads, tails, and fins of all fish shall be removed unless the fish is packed as whole units or unless, because of the nature of the pack, fins or tails or both are not normally removed; and

(iii) the viscera, except for roes and the extremity of the anal canal, shall be removed.

(c) Except when packed in the form of cutlets, the backbone of large species of fish shall be removed.

(d) In large species of fish the blood columns shall be removed where practicable.

4.2.1.2 The following additional requirements shall apply to canned fish:

(a) Before slicing or packing, all fish shall be thoroughly washed in running water.

(b) Slices shall be neat and clean-cut.

(c) Large bones shall not protrude conspicuously from slices or cuts of fish.

(d) Ragged pieces of flesh and skin shall be removed.

4.2.2 *Seeskulpdiere.*

(a) Indien seeskulpdiere uit die skulp verwyder word, mag daar geen oorblywende skulp aan die dier kleef nie. Die vleis moet in toestand wat vryheid van besoeiding verseker, skoongemaak word. Na skoonmaak, wat in die geval van perlmoen die verwydering van die mond insluit, moet die vleis deeglik in lopende water gewas word. Vleis met lelike vukmerke of ander beskadiging mag nie gebruik word nie. Seeskulpdiere moet so bewaar word dat besmetting uit enige bron verhoed word.

(b) In die geval van perlmoen moet die vleis glad reggesny wees. Baardrande hoef nie afgesny te wees nie.

4.3 INGEMAAKTE TAMATIEPASTA.

4.3.1 *Algemeen.*—Behalwe waar anders aangedui, is die vereistes hierin gespesifiseer dié vir tamatiepasta met 'n totale oplosbarevastestofgehalte van 28 persent, uitgedruk op soutvrye grondslag, en met 'n refraktometer by 20° C bepaal.

4.3.2 *Grondstof en bereiding.*—Tamatiepasta mag alleen van gesonde, skoon, heeltemal ryp, rooi tamaties gemaak wees wat goed gewas en waar nodig reggesny is. Geen sintetiese bindmiddels, sout, suiker, preserveermiddels of enige ander stof mag bygevoeg wees nie. Die grondstof moet deur 'n sif gedruk wees met 'n nominale opening-grootte van hoogstens 1,0 mm.

4.3.3 *Tekstuur.*—Soveel moontlik van die tamatievastestowwe moet behou wees in die pasta wat van 'n goeie diktegraad, glad en fyn van tekstuur, en sonder skille, pitte en kern moet wees.

4.3.4 *Smaak.*—Die tamatiepasta moet 'n goeie, natuurlike geur hê, kenmerkend van vars, gesonde, ryp tamaties. Dit mag nie bitter wees nie en moet vry wees van vreemde of onaangename smake, bysmake en onaangename reuke van water aard ook al.

4.3.5 *Spikkels.*—Die pasta mag hoogstens 15 waarneembare swart, bruin of anderskleurige spikkels toon wanneer 55 g egalig op 'n skoon wit teël wat 150 × 150 mm groot is, uitgesprei word.

4.3.6 *Sand.*—Die sandinhoud van die pasta mag hoogstens 0,004 massapersent wees.

4.3.7 *Spoorelemente.*—Die konsentrasies koper, yster, lood en arseen mag onderskeidelik, op 'n vogvrye grondslag, hoogstens 40, 100, 5, en 1 dele per miljoen wees.

4.3.8 *Skimmeltelling.*—In die geval van tamatiepasta vir gebruik by die verpakking van ingemaakte vis of ingemaakte visprodukte wat bestem is vir verkoop in lande waar 'n skimmeltellingvereiste geld, mag die getal positiewe velde, volgens 11.3 op die ongeïnkubeerde pasta bepaal, hoogstens 20 persent van die totale aantal velde uitmaak.

4.3.9 *Kleur.*—Die pasta moet 'n diep rooi kleur hê, kenmerkend van tamaties wat heeltemal ryp en dwarsdeur die vleis en die vel diep rooi is. By 'n konsentrasie van 28 persent totale oplosbare vaste stowwe moet die kleur van die pasta net so veel of meer rooi bevat as wat verkry word wanneer die aangeduide Munsell-kleurskywe in onderstaande kombinasies gedraai word:

Rooi (5R 2.6/13) blink afwerking	60 persent.
Geel (2.5YR 5/12) blink afwerking	24 persent.
Swart (N1) blink afwerking, en	16 persent.
Grys (N4) mat afwerking	

Geskroeide pasta of pasta wat tekens toon dat onryp tamaties by die bereiding daarvan gebruik is of wat sintetiese kleurstowwe bevat, mag nie gebruik word nie.

4.3.10 *Diktegraad: Diameter van bobbel*4.3.10.1 *Vereistes by 25° C.*

(a) Wanneer tamaties met water verdun word tot 'n diktegraad wat ooreenstem met 'n bobbeldiameter van 58 mm, mag die totale oplosbarevastestof-gehalte

4.2.2 *Marine molluscs.*

(a) If shucking is performed it shall be complete. The flesh shall be cleaned under conditions that ensure freedom from contamination. The cleaning operation, which in the case of abalone shall include the removal of the mouth, shall be followed by thorough washing in running water. Flesh showing unsightly fork marks or other damage shall not be used. Shell stock shall be held in a manner which prevents its contamination from any source.

(b) The flesh in the case of abalone shall be trimmed smooth. Fringes need not be removed.

4.3 CANNED TOMATO PASTE.

4.3.1 *General.*—Except where otherwise indicated the requirements specified are for tomato paste of 28 per cent total soluble solids, expressed on a salt-free basis and measured by refractometer at 20° C.

4.3.2 *Material and preparation.*—Tomato paste shall be made only from sound, clean, fully ripe, red tomatoes which have been well washed and trimmed where necessary. Artificial thickening agent, salt, sugar, preservative or any other material shall not be added. The raw material shall be passed through a screen or sieve of nominal aperture size not greater than 1,0 mm.

4.3.3 *Texture.*—As much as possible of the tomato matter shall be incorporated in the paste which shall be well-bodied, smooth and fine in texture, and free from skin, seeds, and core.

4.3.4 *Flavour.*—The tomato paste shall have a good, normal flavour characteristic of fresh, sound, ripe tomatoes. It shall be free from bitterness, foreign or objectionable flavour, off-flavour, and objectionable odours of any kind.

4.3.5 *Specks.*—The paste shall not contain more than 15 noticeable black, brown or off-coloured specks when 55 g is spread evenly on a clean white tile of size 150 × 150 mm.

4.3.6 *Sand.*—The sand content of the paste shall not exceed 0,004 per cent by mass.

4.3.7 *Trace elements.*—On a moisture-free basis, the concentrations of copper, iron, lead and arsenic shall not exceed 40, 100, 5 and 1 parts per million respectively.

4.3.8 *Mould count.*—The number of positive fields in tomato paste for use in canned fish or canned fish products intended for sale in countries which have a mould count requirement shall, when determined on the unincubated paste in accordance with 11.3, not exceed 20 per cent of the total number of fields examined.

4.3.9 *Colour.*—The paste shall have a deep red colour, characteristic of fully ripe tomatoes which are deep red throughout the flesh as well as the skin. At a concentration of 28 per cent total soluble solids the colour of the paste shall contain as much as or more red than that produced by spinning the specified Munsell colour discs in the following combination:

Red (5R 2.6/13) glossy finish.....	60 per cent.
Yellow (2.5YR 5/12) glossy finish	24 per cent.
Black (N1) glossy finish, and Grey (N4) matt finish	16 per cent.

Scorched paste, or paste showing evidence of the use of immature tomatoes, or paste containing artificial colouring matter, shall not be used.

4.3.10 *Consistency: Blob diameter.*4.3.10.1 *Requirements at 25° C.*

(a) When tomato paste is diluted with water to a consistency corresponding to a blob diameter of 58 mm, the total soluble solids content shall not be greater

daarvan nie meer as 14,5 persent wees nie. Puree met 'n oplosbarevastestof-gehalte van 14,5 persent, moet nadat dit 70 minute lank by 115,5° C in 66×44-mm-houers behandel en daarna afgekoel is, 'n bobbeldiameter van hoogstens 59,5 mm hê.

(b) Tamatiepasta bestem vir verdikking deur homogenisering voordat dit by die inmaak van vis gebruik word, moet, nadat dit verdun is tot 'n totale oplosbarevastestof-gehalte van 9,5 persent en een maal deur 'n veergelaaide spuitkop by 'n druk van 138 bar geforseer is, 'n bobbeldiameter van hoogstens 58,0 mm hê.

Die pasta, verdun tot 'n totale oplosbarevastestof-gehalte van 9,5 persent, moet, na homogenisering en hittebehandeling volgens 4.3.10.1 (a), 'n bobbeldiameter van hoogstens 59,5 mm hê.

4.3.11 *Houers*.—Die pasta mag nie deur die houer besoedel word nie en die oppervlakke wat met die houer in aanraking is, mag nie swart gevlek word nie. Inligting wat die naam van die produk, die datum van vervaardiging en die naam van die fabrikant aandui, moet onuitwisbaar op die houer gemerk of gebosselleer word. Hierdie inligting kan in kodevorm wees.

4.4 GROENTE.—Groente wat by die vervaardiging van die produk gebruik word, moet op geskikte wyse voorberei wees uit vars, jong, sappige groente met 'n goeie tekstuur, wat nie deur insekte besmet en nie besoedel is nie en wat geen skadelike spuitmiddelresidue bevat nie. Ingemaakte, ontwaterde en bevrore groente kan gebruik word.

4.5 VERPAKKINGSOLIES.—Eetbare plantolie wat nie afbreuk doen aan die produk nie en geraffineerde visolie mag by die inmaak van vis gebruik word. Die olie mag nie galsterig wees of 'n vreemde reuk of bysmaak hê nie. Die olie moet sag en by 15,5° C helder wees en dit moet, waar toepaslik, aan die vereistes van die *Britse Farmakopee* of die *Britse Farmaseutiese Kodeks* voldoen. Mineraalolie mag nie gebruik wees nie.

4.6 VERDIKMIDDELS.—Verdikmiddels wat spesiaal vir gebruik in voedsel berei is en van goeie gehalte is, kan by die bereiding van die verpakkingsmedium gebruik word.

4.7 SOUT.—Sout wat by die produk gevoeg of by die bereiding van pekel vir inmaakdoeleindes gebruik word, moet eetbaar wees en geen bitter smaak hê wat deur kalsium, magnesium, sulfaat of iets anders veroorsaak word nie.

4.8 BYVOEGINGS, KRUIE EN GEURMIDDELS.—Onskadelike byvoegings, kruie en geurmiddels wat vir gebruik in voedsel toegelaat word deur die regulasies ingevolge die geldende Wet op Voedingsmiddels, Medisyne en Ontsmettingsmiddels, kan by die bereiding van die produk gebruik word. Dit moet vry wees van vreemde stowwe en vervalsingsmiddels.

4.9 VERSOETMIDDELS.—Sukrose, dekstrose en vloeibare glukose kan as versoetmiddels gebruik word. Hierdie bestanddele moet voldoen aan die regulasies ingevolge die geldende Wet op Voedingsmiddels, Medisyne en Ontsmettingsmiddels.

4.10 VULMIDDELS.—Die vulmiddels wat in vissmeer en ander visprodukte gebruik word, moet graanstof-, growwebeskuit-, beskuit- of aartappelmeel of 'n ander gesonde, eetbare, nie-proteïenbevattende, plantaardige materiaal wees.

4.11 PLANTAARDIGE VETTE.—Eetbare plantaardige vette vir gebruik in vissmeer en ander visprodukte, moet sag en vry van vreemde reuke, bysmake en galsterigheid wees.

than 14,5 per cent. Puree with a total soluble solids content of 14,5 per cent shall, after treatment in 66×44 mm cans for 70 minutes at 115,5° C and after cooling, have a blob diameter not greater than 59,5 mm.

(b) Tomato paste intended for thickening by homogenizer before use in fish canning, shall after being diluted to a total soluble solids content of 9,5 per cent and being forced once through a spring-loaded nozzle operating at a pressure of 138 bar have a blob diameter not greater than 58,0 mm.

The paste diluted to 9,5 per cent total soluble solids shall, after homogenization and heat processing on accordance with 4.3.10.1 (a), have a blob diameter not greater than 59,5 mm.

4.3.11 *Containers*.—The paste shall not be contaminated by the container, and there shall be no black staining of the surfaces in contact with the container.

Information giving the name of the product, the date of manufacture and the name of the manufacturer shall be indelibly marked or embossed on the container. This information may be in code.

4.4 *VEGETABLES*.—Vegetables used in the manufacture of the product shall be suitably prepared from fresh, young, succulent vegetables of good texture which are free from insect infestation and contamination and from harmful spray residues. Canned, dehydrated and frozen vegetables may be used.

4.5 *PACKING OILS*.—Edible vegetable oils which will not affect the product adversely and refined fish oil may be used in the canning of fish. The oils shall be free from rancidity, off-odour, and off-flavour. They shall be clean at 15,5° C and bland and, where applicable, shall comply with the requirements of the *British Pharmacopoeia* or the *British Pharmaceutical Codex*. The use of mineral oils is not permitted.

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

4.7 *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, sulphate, or other cause.

4.8 *ADDITIVES AND SEASONING AND FLAVOURING SUBSTANCES*.—Harmless additives and seasoning and flavouring substances permitted for use in foods in accordance with the Regulations under the current Food, Drugs and Disinfectants Act may be used in the preparation of the product. Such additives and substances shall be free from foreign matter and adulterants.

4.9 *SWEETENING INGREDIENTS*.—Sucrose, dextrose, and liquid glucose may be used as sweetening ingredients. These ingredients shall comply with the regulations under the current Food, Drugs and Disinfectants Act.

4.10 *FILLERS*.—The fillers allowed for use in fish paste and other fish products shall be cereal, rusk, biscuit meal, potato flour, or other wholesome, edible, non-proteinaceous vegetable material.

4.11 *VEGETABLE FATS*.—Edible vegetable fats for use in fish paste and other fish products shall be bland and free from off-odours, off-flavours, and rancidity.

4.12 MELKPOEIER.—Melkpoeier wat by die bereiding van vissmeer en ander produkte gebruik word, moet suiwer, vars en soet wees en 'n totale bakterietelling van hoogstens 50 000 organismes per gram hê. By ondersoek moet 1 g van die poeier geen *E. Coli* I bevat nie.

4.13 GEPRESERVEERDE VIS VIR DIE VERVAARDIGING VAN VISSMEER.—Gepreserveerde vis wat by die vervaardiging van vissmeer gebruik word, moet skoon, gesond, en vry van besoedeling wees.

4.14 INGEMAAKTE VIS VIR DIE VERVAARDIGING VAN VISSMEER.—Geen ingemaakte vis wat nie aan die vereistes van hierdie spesifikasie voldoen nie, mag by die vervaardiging van vissmeer gebruik word nie, behalwe kragtens 'n permit uitgereik ingevolge artikel 15 (7) van die geldende Wet op Standaarde.

4.15 KLEURSTOF.—Kleurstof moet aan die regulasies ingevolge die geldende Wet op Voedingsmiddels, Medisyne en Ontsmettingsmiddels voldoen.

4.16 PRESERVEERMIDDELS.—Preserveermiddels moet spesiaal vir gebruik in voedsel berei wees.

4.17 ALGEMEEN.—Alle bestanddele wat gebruik word, moet binne die bestek val en aan die vereistes voldoen van die geldende Wet op Voedingsmiddels, Medisyne en Ontsmettingsmiddels en enige regulasies ingevolge daarvan afgekondig.

AFDELING 5.—ALGEMENE VEREISTES VIR DIE PRODUK

5.1 ALGEMENE VEREISTES VIR INGEMAAKTE VIS.

5.1.1 *Verpakkingsmediums*.—Die produk kan as 'n natuurlike produk verpak word of in agar-agar of met tamatie as 'n bestanddeel of in bygevoegde olie of in sous of in 'n ander geskikte medium.

5.1.2 *Verpakking van die produk*.

5.1.2.1 *Algemeen*.—Die vis moet netjies verpak word. Daar mag geen dwarsvulling of lospakkings wees nie. Slegs wanneer dit nodig is om die houer vol te maak, mag 'n klein stukkie vis bygevoeg word. Perkamentpapier of soortgelyke veringmateriaal mag gebruik word om oppervlakverkleuring of vasklewing van die vis aan die houer te voorkom. Slegs eenhede wat feitlik dieselfde kleur het, mag in dieselfde houer verpak wees. Behalwe in die geval van vis wat as 'n natuurlike produk verpak is, moet die vis vooraf gekook en goed gedreineer word voordat die verpakkingsmedium bygevoeg word. Die visenhede in enige houer moet taamlik eenvormig van grootte wees.

5.1.2.2 *Plat mootjies*.—Waar vis as mootjies verpak is, moet die mootjies min of meer ewe groot wees. 'n Klein stukkie kan ekstra bygevoeg word vir massaregstelling.

5.1.3 *Kleur en voorkoms*.—Die produk moet 'n aantreklike voorkoms en 'n kenmerkende en redelik eenvormige kleur hê. In die geval van vis wat as 'n natuurlike produk verpak is, moet die vleis aan die oppervlak redelik vry van verkleuring wees. Die vleis aan die oppervlak mag nie swart verkleur wees nie. Die vloeistof in natuurlike verpakkings moet, waar moontlik, vry van troebelheid wees. Waar die produk in tamatiepuree of tamatiesous verpak is, moet die verpakkingsmedium 'n kenmerkende tamatiekleur hê. Die gehalte aan soutvrye oplosbare vaste stowwe in die tamatiepuree of -sous wat bygevoeg word, mag nie minder as 9,5 massapersent wees nie. Daar mag geen onooglike swart verkleuring van die vleis aan die oppervlak wees nie. Waar olie die verklaarde enigste verpakkingsmedium is, mag daar nie 'n oormaat van ander vloeistof aanwesig wees nie. Die produk moet, waar moontlik, vry wees van toingrige stukkie vleis en vel en van uitstekende grate. Daar mag geen oorblywende gestolde bloed aanwesig wees nie.

4.12 MILK POWDER.—Milk powder used in the preparation of fish paste and other products shall be pure fresh, and sweet and shall not have a total bacterial count in excess of 50 000 organisms per gram. When examined, 1 g of the powder shall not contain *E. Coli* I.

4.13 PRESERVED FISH FOR FISH PASTE MANUFACTURE.—Preserved fish used in the manufacture of fish paste shall be clean, sound, and free from contamination.

4.14 CANNED FISH FOR FISH 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 on the authority of a permit issued in terms of section 15 (7) of the current Standards Act.

4.15 COLOURING MATTER.—Colouring matter shall be in accordance with the Regulations under the current Food, Drugs and Disinfectants Act.

4.16 PRESERVATIVES.—Preservatives shall be specially prepared for use in foodstuffs.

4.17 GENERAL.—All ingredients used shall fall within the scope of and shall comply with the requirements of the current Food, Drugs and Disinfectants Act and any regulations promulgated thereunder.

SECTION 5.—GENERAL REQUIREMENTS FOR THE PRODUCT

5.1 GENERAL REQUIREMENTS FOR CANNED FISH.

5.1.1 *Packing media*.—The product may be packed plain or in agar-agar or with tomato as an ingredient or in added oil or in sauce or other suitable medium.

5.1.2 *Packing of the product*.

5.1.2.1 *General*.—The fish shall be neatly packed. Cross-filling and slack-filling shall not be present. Only where necessary to adjust the fill of the container may a small piece of flesh be present. Parchment paper or similar lining material may be used to prevent surface discoloration and adhesion of the fish to the can. Only units that are practically uniform in colour shall be packed in any one container. In packs other than plain packs, the fish shall be pre-cooked and well drained before addition of the packing medium. Units of fish in any one container shall be reasonably uniform in size.

5.1.2.2 *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.

5.1.3 *Colour and appearance*.—The product shall be attractive in appearance, and characteristic and reasonably uniform in colour. In plain packs the surface flesh shall be reasonably free from discoloration. There shall be no blackening of the surface flesh. Where possible the liquid in plain packs shall be free from turbidity. Where the product is packed in tomato puree or tomato sauce the resultant packing medium shall have a characteristic tomato colour. The salt-free soluble solids content of the ingoing tomato puree or sauce shall not be less than 9,5 per cent by mass. There shall be no unsightly blackening of the surface flesh. Where oil is declared as the sole packing medium there shall be no excess of other liquid present. Where possible the product shall be free from ragged pieces of flesh and skin and from protruding bones. Residual clotted blood shall not be present.

5.1.4 Smaak en reuk.—Die produk moet smaaklik wees met 'n kenmerkende vars geur. Dit moet aanneemlik gesout en, waar toepaslik, aanneemlik gekrui wees. Die reuk van die produk moet vars en kenmerkend wees; geen vreemde reuke en bysmake mag aanwesig wees nie.

5.1.5 Tekstuur.—Die tekstuur moet stewig dog sag en kenmerkend van die produk wees. Die produk mag nie pap wees nie. Waar die produk met hitte verwerk is, moet die grate van klein visse sag wees; waar mootjies van groter vis egter met maklik verwyderbare grate verpak word, hoef sodanige grate nie sag te wees nie.

5.1.6 Afwesigheid van gebreke.—Die produk moet vry wees van onooglike afsakels van vismateriaal, vesel, sand, grint, vuiligheid, roet, tekens van parasitiese besmetting en ander vreemde besoedelende stowwe. Oorblywende skubbe mag nie hard wees nie. Uitgestorte rooi en groen voer mag nie aanwesig wees in hoeveelhede wat aan die voorkoms van die produk afbreuk doen nie.

5.1.7 Volheid van houers en netto boruimte.—Houers moet so vol as wat prakties moontlik is, maar nie oorvol wees nie. Die netto boruimte in silindriese houers mag hoogstens 13 mm wees.

5.1.8 Anti-oksideermiddels.—Geen ander anti-oksideermiddels as sitroen- en askorbiensuur mag gebruik word nie. Behoudens die regulasies kragtens die geldende Wet op Voedingsmiddels, Medisyne en Ontsmettingsmiddels egter, mag die olie-verpakkingsmedium van ingemaakte vis in bygevoegde olie anti-oksideermiddels bevat.

5.1.9 Kleurstowwe en preserveermiddels.—Behalwe waar spesifiek toegelaat, mag daar geen preserveermiddels en kunsmatige kleurstowwe in die produk aanwesig wees nie.

5.1.10 Preservering.—Behalwe waar 'n ander vorm van preservering spesifiek toegelaat word, moet alle ingemaakte vis ten volle met hitte behandel wees om preservering te verseker.

5.2 ALGEMENE VEREISTES VIR INGEMAAKTE VISPRODUKTE.

5.2.1 Smaak, reuk en voorkoms.—Die produk moet smaaklik wees en 'n aantreklike voorkoms en 'n aangename, kenmerkende smaak en reuk hê. Daar mag geen vreemde geure en bysmake aanwesig wees nie.

5.2.2 Tekstuur.—Die produk moet 'n goeie, kenmerkende tekstuur hê.

5.2.3 Afwesigheid van gebreke.—Die produk moet vry wees van groot graatstukkies, skubbe, pantserskubbe, vesel, sand, grint, vuiligheid en ander vreemde stowwe. Uitgestorte rooi en groen voer mag nie aanwesig wees in hoeveelhede wat aan die voorkoms van die produk afbreuk doen nie. Groentestukkies waarop tekens van letsels, dopluise, insek- of knaagdierbeskadiging of -besmetting voorkom, mag nie aanwesig wees nie.

5.2.4 Volheid van houer.—Die produk moet minstens 90 persent van die houer se totale inhoudsmaat in beslag neem.

5.2.5 Kleurstowwe en preserveermiddels.—Behalwe waar spesifiek toegelaat, mag daar geen preserveermiddels en kunsmatige kleurstowwe in die produk aanwesig wees nie.

5.2.6 Preservering.—Behalwe waar 'n ander vorm van preservering spesifiek toegelaat word, moet alle ingemaakte visprodukte ten volle met hitte behandel word om preservering te verseker.

5.3 ALGEMENE VEREISTES VIR INGEMAAKTE SEESKULPDIERE.

5.3.1 Verpakkingsmedium.—Die produk kan in helder pekel, water of sous verpak word.

5.3.2 Verpakking van die produk.—Die produk moet netjies verpak word.

5.1.4 Flavour and odour.—The product shall be palatable, with a characteristic, fresh flavour. It shall be acceptably salted and, where appropriate, acceptably spiced. The odour of the product shall be fresh and characteristic; off-odours and off-flavours shall not be present.

5.1.5 Texture.—The texture shall be firm yet tender and shall be characteristic of the product. The product shall not be mushy. Where the product is heat-processed the bones of small fish shall be soft; where cutlets of larger fish are packed with readily removable bones, these bones need not be soft.

5.1.6 Freedom from defects.—The product shall be free from unsightly deposits of fish material, fibre, sand, grit, dirt, soot, evidence of parasitic infestation, and other extraneous contaminants. Residual scales shall not be tough. Spilt red and green feed in quantities detracting from the appearance of the product shall not be present.

5.1.7 Fill of containers and net headspace.—Containers shall be filled to practical capacity, overfilling being avoided. The net headspace in cylindrical containers shall not be more than 13 mm.

5.1.8 Anti-oxidants.—The product shall be free from anti-oxidants other than citric and ascorbic acids, provided that in the case of fish packed in added oil the oil used may contain anti-oxidants subject to the Regulations under the current Food, Drugs and Disinfectants Act.

5.1.9 Colouring matter and preservatives.—Except where specifically permitted, preservatives and artificial colouring matter shall not be present in the product.

5.1.10 Preservation.—Except where another form of preservation is specifically allowed, all canned fish shall be fully heat-processed to ensure preservation.

5.3 GENERAL REQUIREMENTS FOR CANNED FISH PRODUCTS.

5.2.1 Flavour, odour and appearance.—The product shall be palatable and attractive in appearance, and shall have a pleasant characteristic flavour and odour. Off-flavours and off-odours shall not be present.

5.2.2 Texture.—The product shall have a good, characteristic texture.

5.2.3 Freedom from defects.—The product shall be free from gross particles of bone, and from scales, scutes, fibre, sand, grit, dirt, and other extraneous matter. Spilt red and green feed in quantities detracting from the appearance of the product shall not be present. Vegetable units showing blemishes, scale, and evidence of insect or rodent damage or infestation shall not be present.

5.2.4 Fill of container.—The product shall occupy not less than 90 per cent of the total volume capacity of the container.

5.2.5 Colouring matter and preservatives.—Except where specifically permitted, preservatives and artificial colouring matter shall not be present in the product.

5.2.6 Preservation.—Except where another form of preservation is specifically allowed, all canned fish products shall be fully heat-processed to ensure preservation.

5.3 GENERAL REQUIREMENTS FOR CANNED MARINE MOLLUSCS.

5.3.1 Packing medium.—The product may be packed in clear brine, water, or sauce.

5.3.2 Packing of the product.—The product shall be neatly packed.

5.3.3 *Kleur en voorkoms*.—Die voorkoms van die produk moet aantreklik wees en die kleur kenmerkend. Die stukke in elke houer moet redelik egalig van kleur wees.

5.3.4 *Smaak en reuk*.—Die smaak en reuk van die produk moet vars en kenmerkend wees. Daar mag geen bysmake en vreemde reuke aanwesig wees nie.

5.3.5 *Tekstuur*.—Die produk moet 'n kenmerkende tekstuur hê.

5.3.6 *Afwesigheid van gebreke*.—Die produk moet vry wees van sand, grint, stukkie skulp (uitgesonderd skulpe van produkte wat met skulp en al ingemaak word), vuilheid en ander vreemde besoedelende stowwe.

5.3.7 *Volheid van houer*.—Houers moet so vol as wat prakties moontlik is maar nie oorvol wees nie. Die netto boruimte in silindriese houers mag hoogstens 13 mm wees.

5.3.8 *Anti-oksideermiddels*.—Die produk moet vry wees van anti-oksideermiddels, uitgesonderd sitroensuur en askorbiensuur.

5.3.9 *Kleurstowwe en preserveermiddels*.—Kunsmatige kleurstowwe en preserveermiddels mag nie in die produk aanwesig wees nie.

5.3.10 *Preservering*.—Alle ingemaakte seeskulpdiere moet ten volle met hitte behandel word om preservering te verseker.

5.4 MIKROBIOLOGIESE VEREISTES.

5.4.1 *Produkte ten volle deur hittebehandeling gepreserveer*.

5.4.1.1 *Mikrobiologiese bederf*.—Daar word geag dat 'n produk in sy houer, na inkubering by 37° C of nadat dit by omgewingstemperatuur gehou is, mikrobiologiese bederf ondergaan het indien daar—

(a) tekens van positiewe druk by die houer is;

(b) tekens is dat die houer lek; of

(c) ongeag of daar positiewe druk by die houer is of nie, daar in vergelyking met ongeinkubeerde monsters tekens is van bakterievermeerdering (soos blyk uit 'n betekenisvolle verandering in die pH-waarde of uit disintegrasie of uit ontbinding of uit 'n betekenisvolle verkleuring van die produk).

Opmerking.—Tekens van bakterievermeerdering moet bevestig word deur mikroskopiese of kultuurondersoek, of albei.

5.4.1.2 *Vereiste*.—Produkte in houers wat ondersoek of getoets of ondersoek en getoets word, mag geen teken toon van mikrobiologiese bederf of van die aanwesigheid van lewensvatbare patogene organismes of organismes wat wat moontlik kan veroorsaak dat die produk tydens bewaring kan bederf nie.

5.4.1.3 *Skimmeltelling vir produkte wat tamatie bevat*.—In die geval van produkte wat tamatie as bestanddeel bevat en wat na lande met skimmeltellingvereistes uitgevoer word, mag hoogstens 40 persent van die mikroskopiese velde wat ondersoek is, positief wees as die ongeinkubeerde produk volgens 11.4 getoets word.

5.4.2 *Deelsgepreserveerde en soutgepreserveerde produkte*.

5.4.2.1 *Mikrobiologiese bederf*.—Daar word geag dat 'n produk in sy houer mikrobiologiese bederf ondergaan het indien daar—

(a) tekens van positiewe druk by die houer is;

(b) tekens is dat die houer lek; of

(c) ongeag of daar positiewe druk by die houer is of nie, daar in vergelyking met gesonde monsters tekens is van bakterievermeerdering (soos blyk uit 'n betekenisvolle verandering in die pH-waarde of uit disintegrasie of uit ontbinding of uit 'n betekenisvolle verkleuring van die produk).

Opmerking.—Tekens van bakterievermeerdering moet bevestig word deur mikroskopiese of kultuurondersoek, of albei.

5.3.3 *Colour and appearance*.—The product shall be attractive in appearance and characteristic in colour. In any one container the units shall be reasonably uniform in colour.

5.3.4 *Flavour and odour*.—The flavour and odour of the product shall be fresh and characteristic. Off-flavours and off-odours shall not be present.

5.3.5 *Texture*.—The product shall be characteristic in texture.

5.3.6 *Freedom from defects*.—The product shall be free from sand, grit, pieces of shell (except that of products canned unshelled), dirt and other extraneous contaminants.

5.3.7 *Fill of container*.—The containers shall be filled to practical capacity, over-filling being avoided. The net headspace in cylindrical containers shall not be more than 13 mm.

5.3.8 *Anti-oxidants*.—The product shall be free from anti-oxidants other than citric and ascorbic acids.

5.3.9 *Colouring matter and preservatives*.—Artificial colouring matter and preservatives shall not be present in the product.

5.3.10 *Preservation*.—All canned marine molluscs shall be fully heatprocessed to ensure preservation.

5.4 MICROBIOLOGICAL REQUIREMENTS.

5.4.1 *Products fully preserved by heat treatment*.

5.4.1.1 *Microbiological spoilage*.—A product in its container after incubation at 37° C or after having 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 (as indicated, when compared with uninoculated samples by a significant change in the pH value or by disintegration, decomposition or significant discoloration of the product).

Note.—Evidence of bacterial proliferation shall be confirmed by microscopical or cultural examination or both.

5.4.1.2 *Requirement*.—Products in container examined or tested or both shall show no evidence of microbiological spoilage or of the presence of viable pathogenic organisms or organisms liable to cause spoilage of the product during storage.

5.4.1.3 *Mould count for products containing tomato*.—In the case of products containing tomato as an ingredient which are exported to countries having mould count requirements, not more than 40 per cent of the microscopic fields examined shall be positive when the uninoculated product is tested in accordance with 11.4.

5.4.2 *Semi-preserved and salt-preserved products*.

5.4.2.1 *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 (as indicated, when compared with sound samples, by a significant change in the pH value or by disintegration, decomposition or significant discoloration of the product).

Note.—Evidence of bacterial proliferation shall be confirmed by microscopical or cultural examination or both.

5.4.2.2 *Vereiste*.—Produkte in houters wat ondersoek of getoets of ondersoek en getoets word, mag geen teken toon van mikrobiologiese bederf of van die aanwesigheid van lewensvatbare patogene organismes of organismes wat moontlik kan veroorsaak dat die produk tydens bewaring bederf by die temperatuur wat deur die inmaker gespesifiseer is nie.

5.5 ALGEMEEN.—Daar moet gehou word aan besprekings wat deur die regulasies kragtens die geldende Wet op Voedingsmiddels, Medisyne en Ontsmettingsmiddels, op die gebruik van bestanddele, gestel is.

AFDELING 6.—SPESIFIEKE VEREISTES VIR BEPAALDE PRODUKTE

6.1 INGEMAAKTE VIS.

6.1.1 *Ingemaakte stokvis, ingemaakte cod en dergelike tipes ingemaakte vis.*

6.1.1.1 *Gedreineerde massa*.—Behoudens 5.1.7 moet die gedreineerde massa van sowel gerookte as ongerookte produkte minstens 75 persent van die verklaarde netto massa van die inhoud van die houer wees.

6.1.1.2 *Kleurstowwe*.—Gerookte stokvismootjies mag met annatto of kunsmatige kleurstowwe gekleur word.

6.1.2 *Ingemaakte sardyne, ingemaakte harders, ingemaakte harings, ingemaakte sauries en dergelike tipes ingemaakte vis.*

6.1.2.1 *Bereiding van sardyne en sauries*.—Die vinne hoef nie verwyder te word nie.

6.1.2.2 *Gedreineerde massa*.—Behoudens 5.1.7 moet die gedreineerde massa van sardyne, harders, harings, sauries en dergelike vissoorte wat in tamatie, tamatiesous of ander dik sous verpak is, minstens 75 persent van die verklaarde netto massa van die houer se inhoud wees. In die geval van sardyne, harders, harings, sauries en dergelike vissoorte wat as natuurlike produkte of in dun sous verpak is, moet die gedreineerde massa minstens 70 persent van die verklaarde netto massa wees.

6.1.3 *Ingemaakte maasbanker, ingemaakte makriel, ingemaakte tuna, ingemaakte kabeljou, ingemaakte halfkoord en dergelike tipes ingemaakte vis.*

6.1.3.1 *Voorbereiding van maasbanker*.—Die vinne hoef nie verwyder te word nie en, waar die vis horisontaal in die houer verpak word, die sterte ook nie.

6.1.3.2 *Gedreineerde massa*.—Behoudens 5.1.7 moet die gedreineerde massa minstens 75 persent van die verklaarde netto massa van die houer se inhoud wees.

6.1.3.3 *Kleur van ingemaakte tuna*.—Die kleur van ingemaakte wit en ligte tuna moet kenmerkend wees en verdonkering of verbleiking moet sover moontlik afwesig wees. Ingemaakte tuna moet vir die doel van etikettering onder een van die volgende kleurgroeperings ingedeel word:

(a) *Wit*.—Die kleur van die tuna mag nie donkerder as Munsell-waarde 6,3 wees nie en slegs die wit vleis van Langvin-tuna, apart verpak, mag as "Wit tuna" geëtiketteer word.

(b) *Lig*.—Die kleur van die tuna mag nie donkerder as Munsell-waarde 5,3 wees nie.

(c) *Donker*.—Enige tuna wat donkerder as Munsell-waarde 5,3 is, ressorteer onder hierdie groep.

6.1.3.4 *Smaak, reuk en tekstuur van ingemaakte tuna*.—Ingemaakte tuna moet vry wees van duidelike vissmake of -reuke, galsterige smake en ander smake of reuke wat die kenmerkende smaak van die produk bederf. Die tekstuur van die vleis moet sag en ietwat sappig en nie taai of droog wees nie.

6.1.4 *Ingemaakte gerookte, oopgeklepte bakkems, ingemaakte gerookte heel bakkems en dergelike tipes ingemaakte verduursaamde vis.*

5.4.2.2 *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 organisms liable to cause spoilage of the product during storage at the temperature specified by the canner.

5.5 GENERAL.—Where limits are set for the use of ingredients by the regulations under the current Food, Drugs and Disinfectants Act, such limits shall be adhered to.

SECTION 6.—SPECIFIC REQUIREMENTS FOR PARTICULAR PRODUCTS

6.1 CANNED FISH.

6.1.1 *Canned hake, canned cod, and similar types of canned fish.*

6.1.1.1 *Drained mass*.—Subject to 5.1.7, the drained mass shall be not less than 75 per cent of the declared net mass of the contents of the container for both smoked and unsmoked products.

6.1.1.2 *Colouring matter*.—Smoked fillets of hake may be coloured with annatto or artificial colouring matter.

6.1.2 *Canned pilchards, canned mullet, canned herring, canned sauries, and similar types of canned fish.*

6.1.2.1 *Preparation of pilchards and sauries*.—Fins need not be removed.

6.1.2.2 *Drained mass*.—Subject to 5.1.7 the drained mass for pilchards, mullet, herring, sauries, and similar types of fish packed in tomato, tomato sauce or other thick sauce shall be not less than 75 per cent of the declared net mass of the contents of the container. In the case of pilchards, mullet, herring, sauries, and similar types of fish packed plain or in thin sauce, the drained mass shall be not less than 70 per cent of the declared net mass.

6.1.3 *Canned maasbanker, canned mackerel, canned tuna (Tunny), canned kabeljou, canned albacore, and similar types of canned fish.*

6.1.3.1 *Preparation of maasbanker*.—Fins and, where fish are packed horizontally in the can, tails need not be removed.

6.1.3.2 *Drained mass*.—Subject to 5.1.7 the drained mass shall be not less than 75 per cent of the declared net mass of the contents of the container.

6.1.3.3 *Colour of canned tuna (tunny)*.—The colour of canned white and light tuna shall be characteristic, and darkening of fading shall be absent where possible. For purposes of labelling, canned tuna shall fall within one of the following colour designations:

(a) *White*.—The colour of the tuna shall not be darker than Munsell value 6,3, and only the white flesh of Longfin Tuna when packed alone may be labelled as "White Tuna" or "White Tunny".

(b) *Light*.—The colour of the tuna shall not be darker than Munsell value 5,3.

(c) *Dark*.—This colour designation shall include any tuna darker than Munsell value 5,3.

6.1.3.4 *Flavour, odour and texture of canned tuna*.—Canned tuna shall be free from obvious fish flavours or odours, rancidity, and other flavours or odours that spoil the characteristic flavour of the product. The texture of the flesh shall be tender and somewhat juicy, and not tough or dry.

6.1.4 *Canned kippers, canned bloaters, and similar types of canned cured fish.*

6.1.4.1 *Koppe, sterte en vinne*.—Tensy bulle as mootjies verpak word, kan gerookte, oopgevelekte bokkems, gerookte heel bokkems en dergelike tipes verduursaamde vis met die koppe, sterte en vinne verpak word.

6.1.4.2 *Gedreineerde massa*.—Behoudens 5.1.7 moet die gedreineerde massa minstens 75 persent van die verklaarde netto massa van die houer se inhoud wees.

6.1.5 *Ingemaakte salm*.

6.1.5.1 *Gedreineerde massa*.—Behoudens 5.1.7 moet die gedreineerde massa minstens 75 persent van die verklaarde netto massa van die houer se inhoud wees.

6.1.6 *Kerrievis en ingelegde vis*.

6.1.6.1 *Gedreineerde massa*.—Behoudens 5.1.7 moet die gedreineerde massa minstens 65 persent van die verklaarde netto massa van die houer se inhoud wees. Waar daar uie in die produk aanwesig is, moet die visgehalte op die gedreineerde basis, minstens 50 persent van die verklaarde netto massa van die houer se inhoud wees.

6.1.7 *Ingemaakte sardiens in olie of sous, of met bygevoegde olie (naamlik verduursaamde sild, verduursaamde brisling, verduursaamde sardyne en dergelike tipes vis wat soos sardiens in olie ingemaak is)*

6.1.7.1 *Voorbereiding*.—Die vinne hoof nie verwyder te word nie. Waar daar vyf of minder eenhede in 'n 106-g-Dingleyhouer verpak word, moet hul binnegoed verwyder word. Waar daar meer as vyf eenhede in 'n 106-g-Dingleyhouer verpak word, moet die binnegoed nie verwyder te word nie. Daar mag geen maaginhoud aanwesig wees nie. Kieubene, indien aanwesig, moet sag wees. Koppe en sterte moet glad en netjies en loodreg op die lengtelyn afgesny word. Sterte moet afgesny word waar die stertvin by die romp aansluit. In die geval van houters met 'n ander grootte moet die tellings waarvolgens bepaal word of die eenhede se binne goed uitgehaal moet word proporsioneel wees tot die verhouding tussen die netto massa van die houer se inhoud (in g) en 106 g.

6.1.7.2 *Verpakking*.—In die verpakingsproses moet die sardiens so verpak word dat koppe en sterte mekaar aan weerskante van die houer afwissel. Waar die vis klein genoeg is om dit moontlik te maak, moet die verpakking van die eenhede so gedoen word dat die sterte onder die kopente versteek word. Indien die vis groot is, moet die sterte sover moontlik versteek word sonder beskadiging van die vis. Kopente van die eenhede moet binne 13 mm van die houer se wand wees. Oorvulling wat meganiese beskadiging van die vis by sluiting van die houer kan veroorsaak, moet vermy word.

6.1.7.3 *Gebreke*.—Die produk moet sover moontlik vry van onderstaande gebreke wees:

- (a) Los materiaal, insluitende kieue, kieubene, oë, borsvinne, vel en skubbe.
- (b) Duidelike dwars- of oorlangse barsies in die vleis.
- (c) Ernstig beskadigde vel.
- (d) Onooglike buikskeure.
- (e) Onooglik uitstekende binnegoed, in verpakking waarin binnegoed volgens 6.1.7.1 aanwesig mag wees.
- (f) Onooglik uitstekende ruggrate.
- (g) Oorskuiwing, d.w.s. die oormatige skuiwing van die vismassa op 'n wyse wat 'n groot skeiding tussen die vis-eenhede en enige wand van die houer veroorsaak.

6.1.7.4 *Gedreineerde massa*.—Behoudens 5.1.7 moet die gedreineerde massa minstens 80 persent van die verklaarde netto massa van die houer se inhoud wees. Hierdie vereiste geld nie vir onverduursaamde sardyne wat as "sardines" geëtiketteer word vir spesiale uitvoermarkte nie (kyk 9.4), in welke geval die gedreineerde massa moet wees soos in 6.1.2.2 gespesifiseer.

6.1.7.5 *Soutgehalte*.—Die produk mag hoogstens 3,0 massapersent gewone sout bevat.

6.1.8 *Ingemaakte ansjovis*.

6.1.4.1 *Heads, tails and fins*.—Kippers, bloaters, and similar types of cured fish may, except when packed as fillets, be packed with heads, tails and fins.

6.1.4.2 *Drained mass*.—Subject to 5.1.7 the drained mass shall be not less than 75 per cent of the declared net mass of the contents of the container.

6.1.5 *Canned salmon*.

6.1.5.1 *Drained mass*.—Subject to 5.1.7 the drained mass for canned salmon shall be not less than 75 per cent of the declared net mass of the contents of the container.

6.1.6 *Curried fish and pickled fish*.

6.1.6.1 *Drained mass*.—Subject to 5.1.7 the drained mass shall be not less than 65 per cent of the declared net mass of the contents of the container. Where onion is present in the product, the fish content on the drained basis shall be not less than 50 per cent of the declared net mass of the contents of the container.

6.1.7 *Canned sardines in oil or sauce, or with oil added (i.e. cured sild, cured brisling, cured pilchards, and similar types of fish canned sardine-style)*.

6.1.7.1 *Preparation*.—Fins need not be removed. Where there are five or less units in a 106 g Dingley container, the units shall be degutted. Where more than five units are present in a 106 g Dingley container they need not be degutted. Feed shall not be present. Where present, gill bones shall be soft. Head and tail cuts shall be sharp and clean, and perpendicular to the lateral line. Tail cuts shall be made at the juncture of the body and the tail fin. For other sizes of container the counts calling for the degutting of units shall be proportionate to the ratio between the net mass of the container (in grams) and 106 g.

6.1.7.2 *Packing*.—In the process of packing, the sardines shall be so packed that head and tail of adjacent units alternate at each end of the container. On fish small enough to permit it, the tails shall be depressed below the top surface and hidden. If the fish are large the tails shall be hidden as far as possible without injury to the fish. The head ends of the units shall be located within 13 mm of the container wall. Overfilling likely to cause mechanical damage to the fish when the container is closed shall be avoided.

6.1.7.3 *Defects*.—Where possible the product shall be free from the following defects:

- (a) Detached material including gills, gillbones, eyes, pectoral fins, skin, and scales.
- (b) Well-defined lateral or longitudinal flesh cracks.
- (c) Mutilated skin.
- (d) Unsightly ventral breaks.
- (e) Unsightly protruding viscera, in packs in which viscera may be present in terms of 6.1.7.1.
- (f) Unsightly protruding backbones.
- (g) Telescoping, i.e. the excessive shifting of the mass of the fish resulting in a large separation of the fish from any wall of the container.

6.1.7.4 *Drained mass*.—Subject to 5.1.7 the drained mass shall be not less than 80 per cent of the declared net mass of the contents of the container. This requirement shall not apply to uncured pilchards labelled as "Sardines" for special export markets (see 9.4), in which case the drained mass shall be as specified in 6.1.2.2.

6.1.7.5 *Salt content*.—The drained product shall contain not more than 3,0 per cent by mass of common salt.

6.1.8 *Canned anchovies*.

6.1.8.1 *Preservering*.—Ingemaakte ansjovis kan met sout of deur middel van hittebehandeling gepreserveer word.

6.1.8.2 *Verpakking*.—Ansjovis kan as heel vis of as plat of opgerolde mootjies verpak word. Garneersel mag gebruik word.

6.1.8.3 *Gedreineerde massa*.—Behoudens 5.1.7 moet die gedreineerde massa van die ansjovis en enige garneersel wat aanwesig is, minstens 75 persent van die verklaarde netto massa van die houer se inhoud wees.

6.1.9 *Ingemaakte vis vir massaprovianderings- en vervaardigingsdoeleindes*.—Behalwe wat tekstuur, die eenvormigheid van die grootte van eenhede en die toelaatbare aanwesigheid van dwarsge vulde eenhede en troebel pekel of ander verpakkingsmiddel betref, moet vis vir massaprovianderings- en vervaardigingsdoeleindes aan die vereistes van hierdie spesifikasie voldoen. Eenhede kan met stert en al verpak wees; die koppe moet egter verwyder wees. Dit kan solied verpak wees of dit kan 'n verpakkingsmiddel bevat. 'n Etiket wat die ware aard van die inhoud, met die naam van die vis wat gebruik is, aandui, moet op die houer aangebring wees.

6.1.9.1 *Gedreineerde massa*.—Behoudens 5.1.7 moet die gedreineerde massa van verpakkings met 'n verpakkingsmedium minstens 75 persent van die verklaarde netto massa van die inhoud van die houer wees.

6.1.10 *Ingemaakte gemaalde vis*.—Behalwe wat vereistes wat ontoepaslik is weens die aard van die verpakking, betref, moet ingemaakte gemaalde vis aan die vereistes van hierdie spesifikasie voldoen. Dit mag nie waterig wees nie. 'n Etiket wat die ware aard van die inhoud, met die naam van die vis wat gebruik is, aandui, moet op die houer aangebring wees.

6.1.11 *Ingemaakte visvleis*.

6.1.11.1 *Voorbereiding en juiste beskrywing*.—Die produk moet voorberei wees van vissoorte waarvan die vleis vir die doel geskik is. Slegs ligkleurige vleis mag gebruik wees. Die reggesnyde en skoongemaakte vis moet vooraf gekook wees voordat dit in stukkies opgebreek word. Dit kan in olie of pekel of albei of solied verpak wees. 'n Juiste beskrywing van die produk en sy verpakkingsmedium moet op die etiket verskyn.

6.1.11.2 *Gedreineerde massa*.—Behoudens 5.1.7 moet die gedreineerde massa minstens 80 persent van die verklaarde netto massa van die houer se inhoud wees.

6.1.12 *Ongespesifiseerde ingemaakte vis*.

6.1.12.1 *Algemeen*.—Enige ingemaakte vis waarvoor daar nie spesifieke vereistes in hierdie spesifikasie voorgeskrif word nie, maar wat binne die bestek daarvan val, moet voldoen aan die vereistes van afdeling 2, 3, 4, 7, 8 en 9 en onderafdeling 5.1 en 5.4.

6.1.12.2 *Gedreineerde massa*.—Behoudens 5.1.7 moet die gedreineerde massa uitgedruk as persentasie van die verklaarde netto massa van die houer se inhoud—

(a) minstens 70 persent in die geval van vis wat as natuurlike produkte verpak is; en

(b) minstens 75 persent in die geval van vis wat in sous verpak is, wees.

6.2 INGEMAAKTE VISPRODUKTE.

6.2.1 *Ingemaakte kedgereë en ingemaakte gesmoorde vis*.

6.2.1.1 *Voorbereiding*.—Kedgereë moet minstens 50 massapersent visvleis bevat en mag graan, ander stysel-materiaal, eier, ander bestanddele en garneersel bevat. Gesmoorde vis moet minstens 55 massapersent verduur-saamde visvleis bevat benewens groente of graan of albei, of ander bestanddele. In die geval van albei produkte moet grate sover moontlik verwyder word. Geen harde grate mag aanwesig wees nie.

6.1.8.1 *Preservation*.—Canned anchovies may be preserved by salt or heat-processing.

6.1.8.2 *Packing*.—Anchovies may be packed as whole fish or as flat or rolled fillets. Garnish may be used.

6.1.8.3 *Drained mass*.—Subject to 5.1.7 the drained mass of anchovies and any garnish present shall be not less than 75 per cent of the declared net mass of the contents of the container.

6.1.9 *Canned fish for bulk catering and manufacturing purposes*.—Except for texture, uniformity of size of units, and the permissible presence of cross-filled units and turbid brine or other packing medium, fish for bulk catering and manufacturing purposes shall comply with the requirements of this specification. Units may be packed with the tails intact; the heads however shall be removed. It may be a solid pack or contain packing medium. It shall be labelled to disclose its true nature, the name of the fish used being declared.

6.1.9.1 *Drained mass*.—Subject to 5.1.7 the drained mass in packs with packing medium shall be not less than 75 per cent of the declared net mass of the contents of the container.

6.1.10 *Canned minced fish*.—Except for requirements rendered inapplicable by the nature of the pack, canned minced fish shall comply with the requirements of this specification. It shall not be watery. It shall be labelled to disclose its true nature, the name of the fish used being declared.

6.1.11 *Canned fish flesh*.

6.1.11.1 *Preparation and true description*.—The product shall be prepared from varieties of fish suitable for the purpose. Only light-coloured flesh shall be used. The trimmed and cleaned fish shall be pre-cooked before flaking. It may be packed either in oil or brine or both, or as a solid pack. A true description of the product and its packing medium shall appear on the label.

6.1.11.2 *Drained mass*.—Subject to 5.1.7 the drained mass shall be not less than 80 per cent of the declared net mass.

6.1.12 *Unspecified canned fish*.

6.1.12.1 *General*.—Any canned fish falling within the scope of this specification but for which requirements are not specifically stated shall comply with the requirements of sections 2, 3, 4, 7, 8, and 9 and subsections 5.1 and 5.4.

6.1.12.2 *Drained mass*.—Subject to 5.1.7 the drained mass, expressed as a percentage of the declared net mass, shall be not less than—

(a) 70 per cent in the case of plain packs; and

(b) 75 per cent in the case of packs in sauce.

6.2 CANNED FISH PRODUCTS.

6.2.1 *Canned kedgereë and canned smoorfish ("gesmoorde vis")*.

6.2.1.1 *Preparation*.—Kedgereë shall contain not less than 50 per cent by mass of fish flesh, and may contain cereal, other starchy material, egg, other ingredients and garnish. Smoorfish shall contain not less than 55 per cent by mass of cured fish flesh, the remainder consisting of vegetables or cereals or both, or other ingredients. In the case of both products, bones shall be removed where practicable. No hard bones shall be present.

6.2.2 Ingemaakte viskoekies en ingemaakte visfrikkadelle.

6.2.2.1 *Voorbereiding*.—Viskoekies en visfrikkadelle moet berei word uit opgebreekte, gesnipperde of fyn-gemaalde visvleis met of sonder die byvoeging van geurmiddels, eetbare stysel materiaal, eier en ander bestanddele. Grate moet sover moontlik verwyder word. Daar mag geen harde grate aanwesig wees nie.

6.2.2.2 *Proteïenstikstof*.—Die proteïenstikstofinhoud van die produk moet minstens 1,0 massapersent wees.

6.2.2.3 *Gedreineerde massa*.—Die gedreineerde massa moet minstens 70 persent van die verklaarde netto massa van die houer se inhoud wees, met die voorbehoud dat die houer so vol as prakties moontlik met vaste stowwe gevul moet wees.

6.2.3 Viskuit en kaviaar.

6.2.3.1 *Viskuit*.—Die produk moet berei word van viskuit waarin membrane en bindweefsel aanwesig kan wees en waarvan bloed en vasklewende stukkie binnegevoerd verwyder is. Dit moet in pekel verpak word. Die houer moet goed gevul word.

6.2.3.2 *Kaviaar*.—Kaviaar moet berei word uit verduur-saamde viskuit wat vry is van membraan en bindweefsel. Dit kan in pekel verpak word en kan kunsmatige kleurstof bevat. Preserveermiddels kan gebruik word, behoudens die vereistes van die regulasies kragtens die geldende Wet op Voedingsmiddels, Medisyne en Ontsmettingsmiddels.

6.2.4 *Vissmeer*.—Daar word geag dat vissmeer, vir die doel van hierdie spesifikasie, smeer insluit wat die eetbare vleis van skaaldiere of as hoofbestanddeel of as minder belangrike bestanddeel bevat.

6.2.4.1 *Voorbereiding*.—Die produk moet berei word uit skoon, gesonde vis, vrs of gepreserveer, wat fyn-gemaak is sodat dit 'n gladde pasta vorm. Dit kan tamatie, voorbereide groentebestanddele, styselmateriaal, sout, speserye, melkpoeier, vet, kunsmatige kleurstowwe, en ander bestanddele bevat.

6.2.4.2 *Preservering*.—Tensy die soutkonsentrasie voldoende is om die produk te preserveer, moet dit met hitte behandel word om preservering te verseker.

6.2.4.3 *Tekstuur*.—Die tekstuur van die produk moet so wees dat dit maklik kan smeer, en dit moet vry van sandrigheid en korrelrigheid wees.

6.2.4.4 *Eenvormigheid van samestelling*.—Die inhoud van elke houer moet deurgaans eenvormig wees en dit moet redelik vry van lugborrels wees.

6.2.4.5 *Samestelling*.—Behoudens die bepalinge van die regulasies opgestel ingevolge die geldende Wet op Voedingsmiddels, Medisyne en Ontsmettingsmiddels moet die produk minstens 75 massapersent vis bevat, d.w.s. die proteïenstikstofpersentasie $\times 37,5$ moet minstens 75 wees. Dit mag hoogstens 5 massapersent stysel bevat.

6.2.5 Viswors.

6.2.5.1 *Voorbereiding*.—Die produk moet berei word uit skoon, gesonde, gemaalde of fyngekapte visvleis, ongeag of sodanige visvleis vars, verduursaam of ingemaak is. Dit kan styselmateriaal, sout, speserye en vet of plant- of visolie bevat, asook kunsmatige kleurstowwe en ander bestanddele wat kragtens die regulasies ingevolge die geldende Wet op Voedingsmiddels, Medisyne en Ontsmettingsmiddels toelaatbaar is. Dit moet of in natuurlike worsderm gestop word, of in kunsderm (wat indien dit nie eetbaar is nie, heeltemal verwyder moet word voordat die produk in houe verpak word).

6.2.5.2 *Samestelling*.—Die produk moet na dreinerings en verwydering van die verpakkingsmedium minstens 75 massapersent visvleis bevat, dit wil se die proteïenstikstofpersentasie $\times 37,5$ moet minstens 75 wees. Dit mag na dreinerings hoogstens ses massapersent stysel bevat.

6.2.2 Canned fish cakes and canned fish balls.

6.2.2.1 *Preparation*.—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 hard bones shall be present.

6.2.2.2 *Protein nitrogen*.—The protein nitrogen content of the product shall be not less than 1,0 per cent by mass.

6.2.2.3 *Drained mass*.—Subject to the container having been filled to practical capacity with solid material, the drained mass of the product shall be not less than 70 per cent of the declared net mass.

6.2.3 Fish roe and caviar.

6.2.3.1 *Fish roe*.—The product shall be prepared from roes in which membranes and connective tissue may be present and from which blood and adhering particles of entrails have been removed. It shall be packed in brine. The container shall be well-filled.

6.2.3.2 *Caviar*.—Caviar shall be prepared from cured roe free from membrane and connective tissue. It may be packed in brine and may contain artificial colouring matter. Preservatives may be used subject to the requirements of the regulations under the current Food, Drugs and Disinfectants Act.

6.2.4 *Fish paste (fish spread)*.—For purposes of this specification fish paste shall be deemed to include paste containing the edible flesh of crustaceans either as main or minor flesh ingredient.

6.2.4.1 *Preparation*.—The product shall be prepared from clean, sound fish, fresh or preserved, which has been comminuted to form a smooth paste. It may contain tomato, prepared vegetable material, starchy material, salt, spices, milk powder, fat, artificial colouring matter, and other ingredients.

6.2.4.2 *Preservation*.—Unless the salt concentration is adequate to preserve it, the product shall be heat-processed to ensure preservation.

6.2.4.3 *Texture*.—The texture of the product shall be such that it may readily be spread. It shall be free from sandiness and grittiness.

6.2.4.4 *Uniformity of composition*.—The contents of any one container shall be uniform throughout and shall be reasonably free from air bubbles.

6.2.4.5 *Composition*.—Subject to the requirements of the regulations under the current Food, Drugs and Disinfectants Act, the product shall contain not less than 75 per cent by mass of fish, i.e. the protein nitrogen percentage $\times 37,5$ shall be not less than 75. It shall not contain more than five per cent by mass of starch.

6.2.5 Fish sausage.

6.2.5.1 *Preparation*.—The product shall be prepared from clean and sound minced or finely chopped fish flesh, either fresh, cured or canned. It may contain starchy material, salt, spices, fat or oil of vegetable or fish origin, artificial colouring matter and other permissible ingredients in accordance with the regulations under the current Food, Drugs and Disinfectants Act. The product shall be formed either in artificial casings (which, if not edible, shall be completely stripped before the product is packed into containers) or in natural casings.

6.2.5.2 *Composition*.—The product, after draining and removal of packing medium, shall contain not less than 75 per cent by mass of fish flesh, i.e. the protein nitrogen percentage $\times 37,5$ shall be not less than 75. It shall not contain more than six per cent by mass of starch on the drained basis.

6.2.5.3 *Gedreineerde massa*.—Die gedreineerde massa van die produk moet minstens 75 persent van die verklaarde netto massa van die houer se inhoud wees, met die voorbehoud dat die houer so vol as prakties moontlik met wors gevul moet wees.

6.2.5.4 *Algemeen*.—Die wors moet eenvormig van grootte en fatsoen wees en mag nie verkleuring toon of onegalige of skeef gesnyde ente hê nie. Speserye wat gebruik word, mag nie die voorkoms van die produk benadeel nie. Afvalstukke en gebarste, verwronge eenhede of eenhede met snymerke mag nie verpak word nie. Stukkies visgraat mag nie aanwesig wees nie.

6.2.6 *Ingemaakte vis en groente of graan of albei*.

6.2.6.1 *Vorbereiding*.—Die produk moet voorberei word uit vis of vismootjies wat saam met groente of graan of albei, tesame met kruimiddels, speserye of ander toepaslike bestanddele verpak word.

6.2.6.2 *Gedreineerde massa*.—Die gedreineerde massa, uitgedruk as persentasie van die verklaarde netto massa, moet minstens 60 persent wees, met die voorbehoud dat die houer so vol as prakties moontlik met vaste stowwe gevul moet wees. Die massa van die visinhoud moet minstens 35 persent van die verklaarde netto massa wees.

6.2.7 *Ongespesifiseerde ingemaakte visprodukte*.

6.2.7.1 *Algemeen*.—Enige ingemaakte visproduk waarvoor geen vereistes spesifiek in hierdie spesifikasie voorgeskryf word nie, maar wat wel binne die bestek daarvan val, moet aan die vereistes van afdelings 2, 3, 4, 7, 8 en 9 en onderafdeling 5.2 en 5.4 voldoen.

6.2.7.2 *Gedreineerde massa*.—Die gedreineerde massa moet minstens 70 persent van die verklaarde netto massa van die houer se inhoud wees, met die voorbehoud dat die houer so vol as prakties moontlik met vaste stowwe gevul moet wees.

6.3 INGEMAAKTE SEESKULPDIERE.

6.3.1 *Ingemaakte perlemoen*.

6.3.1.1 *Verpakking*.—Perlemoen moet heel of in halwes verpak word. 'n Klein stukkie kan bygevoeg word om die houer behoorlik te vul.

6.3.1.2 *Voorkoms*.—Die produk mag geen oppervlakbarsies toon nie en die stukke moet sonder aanstootlike oppervlakverkleuring wees. As meer as twee stukke in 'n houer verpak is, moet hulle naastenby dieselfde grootte hê.

6.3.1.3 *Tekstuur*.—Ingemaakte perlemoen moet 'n stewige, elastiese tekstuur hê. Dit moet nie sag of bros wees nie.

6.3.1.4 *Gedreineerde massa*.—Behoudens 5.3.7 moet die gedreineerde massa minstens 60 persent van die verklaarde netto massa van die inhoud van die houer wees.

6.3.2 *Ongespesifiseerde ingemaakte seeskulpdier*.

6.3.2.1 *Algemeen*.—Enige ingemaakte seeskulpdier wat binne die bestek van hierdie spesifikasie val, maar waarvoor daar nie spesifieke vereistes gestel word nie, moet aan die vereistes van afdelings 2, 3, 4, 7, 8 en 9 en onderafdeling 5.3 en 5.4 voldoen.

6.3.2.2 *Gedreineerde massa*.—Behoudens 5.3.7 moet die gedreineerde massa minstens 60 persent van die verklaarde netto massa van die inhoud van die houer wees.

6.4 DEELSGEPRESERVEERDE PRODUKTE.

6.4.1 *Algemeen*.—Vis en visprodukte wat deur hierdie spesifikasie gedek word, kan as deelsgepreserveerde produkte verpak word. Die algemene vereistes en die spesifieke vereistes vir die bepaalde vis of visproduk geld.

6.2.5.3 *Drained mass*.—Subject to the container having been filled with sausages to practical capacity, the drained mass of the product shall be not less than 75 per cent of the declared net mass.

6.2.5.4 *General*.—The sausage units shall be uniform in size and shape and shall be free from discoloration and ragged or irregularly cut ends. The spices present shall not adversely affect the appearance of the product. Off-cuts and burst, distorted and cut-marked units shall not be present. Pieces of fish bone shall not be present.

6.2.6 *Canned fish and vegetables or cereals or both*.

6.2.6.1 *Preparation*.—The product shall be prepared from fish or cuts of fish packed with vegetables or cereals or both, together with seasoning materials, spices or other appropriate ingredients.

6.2.6.2 *Drained mass*.—Subject to the container having been filled to practical capacity with solid material the drained mass, expressed as a percentage of the declared net mass, shall be not less than 60 per cent. The mass of fish present shall not be less than 35 per cent of the declared net mass.

6.2.7 *Unspecified canned fish products*.

6.2.7.1 *General*.—Any canned fish product falling within the scope of this specification but for which requirements are not specifically stated shall comply with the requirements of sections 2, 3, 4, 7, 8 and 9, and subsections 5.2 and 5.4.

6.2.7.2 *Drained mass*.—Subject to the container having been filled with solid material to practical capacity the drained mass shall be not less than 70 per cent of the declared net mass of the contents of the container.

6.3 CANNED MARINE MOLLUSCS.

6.3.1 *Canned abalone*.

6.3.1.1 *Packing*.—Abalone shall be packed as wholes or halves. A small outlet may be added to adjust the fill of the container.

6.3.1.2 *Appearance*.—The product shall show no surface cracks and the units shall be free from objectionable surface discoloration. When more than two units are packed in any one container they shall be reasonably uniform in size.

6.3.1.3 *Texture*.—Canned abalone shall have a firm, springy texture. It shall not be soft or brittle.

6.3.1.4 *Drained mass*.—Subject to 5.3.7 the drained mass shall be not less than 60 per cent of the declared net mass of the contents of the container.

6.3.2 *Unspecified canned marine molluscs*.

6.3.2.1 *General*.—Any canned marine mollusc falling within the scope of this specification but for which requirements are not specifically stated shall comply with the requirements of sections 2, 3, 4, 7, 8 and 9, and subsections 5.3 and 5.4.

6.3.2.2 *Drained mass*.—Subject to 5.3.7 the drained mass shall be not less than 60 per cent of the declared net mass of the contents of the container.

6.4 SEMI-PRESERVES.

6.4.1 *General*.—Fish and fish products covered by this specification may be packed as semi-preserves. The general requirements and the specific requirements for the particular fish or fish product shall apply.

6.4.2 *Preserving*.—Vis of visprodukte wat as deelsgepreserveerde produkte ingemaak is, moet deur insouting, inpekeling, suurpekeling of beroking of enige kombinasie van hierdie prosesse gepreserveer word en kan daarbenevens gepasteuriseer word. Behoudens die bepaling van die regulasies kragtens die geldende Wet op Voedingsmiddels, Medisyne en Ontsmettingsmiddels, kan preserveermiddels gebruik word. Sintetiese asynsuur en anorganiese sure mag nie gebruik word nie.

6.4.3 *Kleurstowwe*.—Kunsmatige kleurstowwe kan by die voorbereiding van deelsgepreserveerde nagemaakte salm gebruik word.

AFDELING 7.—HOUERS

7.1 *HOUERTIPES*.—Die produk moet verpak word in houters wat in staat is om die inhoud daarvan in 'n gesonde, eetbare toestand te bewaar. Uitdrukbuissies wat ongeskik vir hittesterilisering is, kan slegs vir vissmeer met 'n hoë soutgehalte, en viskuitprodukte waarvoor hittesterilisering nie verpligtend is nie, gebruik word.

7.2 *TOESTAND VAN HOUERS*.—Die binnevlakke van alle houters en sluitings moet tydens die gebruik daarvan skoon wees en moet in die geval van blikke vry wees van korrosie en van tekens dat die tin- of vernislaag afkom en van ernstige bespating met soldeersel en die oormatige gebruik van soldeersel. Indien verniste blikke of blikdeksels of albei of verniste flesdeksels gebruik word, moet die vernislaag vry wees van opvallende skrape en ander gebreke en mag die vernis geen nadelige uitwerking op die produk hê nie. Die vernislaag mag nie tydens die verwerking en bewaring van die produk van die blik, blikdeksel of flesdeksel afdop nie. Die deksels van blikke en flesse moet skoon wees wanneer die houters gesluit word.

AFDELING 8.—VERPAKKINGS- EN VERWERKINGSVEREISTES

8.1 *HIGIËNIESE TOESTANDE BY VULLING*.—Die produk moet in streng higiëniese toestande voorberei en in skoon, gawe houters ingemaak word. Alle houters moet stewig en noukeurig gesluit word.

8.2 VERWERKING.

8.2.1 In die geval van produkte in blikke, uitgesonderd deelsgepreserveerde en soutgepreserveerde produkte, moet die gevulde houters lugleeg gemaak, lugdig verseël en ten volle met hitte behandel word; houters met deelsgepreserveerde en soutgepreserveerde produkte moet lugdig verseël word. Gevulde flesse moet lugdig verseël en, behalwe in die geval van deelsgepreserveerde en soutgepreserveerde produkte, ten volle met hitte behandel word.

8.2.2 In die geval van blikke en flesse moet die luguitdruwing, verseëling en verwerking so uitgevoer word dat die ente van die houters in normale vervoer- en bewaringstoestande nie uitbol nie.

8.2.3 In die geval van produkte wat met hitte gepreserveer is, moet die tydtemperatuurproses verseker dat—

- (a) patogene organismes vernietig word; en
- (b) geen mikrobiologiese bederf sal plaasvind nie.

8.3 *HANTERING EN OPSTAPELING VAN VERSEËLDE HOUERS*.—Houters moet op aanneemlike wyse hanteer word. Na hittebehandeling mag houters, hetsy warm of koud, nie onmiddellik met die hand aangeraak of individueel hanteer word terwyl hulle nog nat is nie. Selfs wanneer hulle droog is, mag warm houters waarvan deksels as gevolg van interne druk nog uitbol, nie met die hand aangeraak word nie. Houters mag nie in massa opgestapel word voordat hulle tot 'n binnettemperatuur van hoogstens 50° C afgekoel het nie.

6.4.2 *Preservation*.—Fish or fish products canned as semi-preserves shall be preserved by salting or brining, pickling, or smoking, or any combination of these, and may in addition be pasteurized. Preservatives may be used subject to the requirements of the regulations under the current Food, Drugs and Disinfectants Act. Synthetic acetic acid and inorganic acids shall not be used.

6.4.3 *Colouring matter*.—Artificial colouring matter may be used in the preparation of imitation salmon semi-preserves.

SECTION 7.—CONTAINERS

7.1 *TYPES OF CONTAINERS*.—The product shall be packed in containers capable of preserving their contents in sound, wholesome condition. Collapsible tubes, if unsuitable for heat sterilization, shall be used only for fish pastes of high salt content and fish roe products where heat sterilization is not obligatory.

7.2 *CONDITION OF CONTAINERS*.—The internal surfaces of all containers and closures shall at the time of use be clean and, in the case of cans, free from corrosion and evidence of detinning, delacquering, serious solder splashing and excess application of solder. If lacquered cans or lids or both or lacquered caps are used, the lacquer shall be free from significant scratches and other imperfections, and it shall have no detrimental effect on the product. It shall not peel off the can, lid or cap during processing and storage of the product. Lids and caps shall be clean at the time of seaming or capping.

SECTION 8.—PACKING AND PROCESSING REQUIREMENTS

8.1 *FILLING UNDER HYGIENIC CONDITIONS*.—The product shall be prepared and filled into clean sound containers under strictly hygienic conditions. All container closures shall be strongly and accurately made.

8.2 PROCESSING.

8.2.1 In the case of products in cans other than semi-preserves and salt-preserved products, the filled containers shall be exhausted, hermetically sealed, and fully heat-processed; the containers of semi-preserves and salt-preserved products shall be hermetically sealed. Filled jars shall be hermetically sealed and shall, except in the case of semi-preserves and salt-preserved products, be fully heat-processed.

8.2.2 In the case of cans and jars the exhausting, sealing, and processing shall be done in such a manner that the ends of the container are not convex under normal transport and storage conditions.

8.2.3 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.

8.3 *HANDLING AND STACKING OF SEALED CONTAINERS*.—Containers shall be handled in an acceptable manner. Whether hot or cold, containers immediately after heat processing shall not be touched by hand or handled individually while still wet. Even when dry, hot containers of which the lids are still domed due to internal pressure shall not be touched by hand. Containers shall not be bulk-stacked before being cooled to an internal temperature not in excess of 50° C.

8.4 BUITEKANT VAN HOUERS.—Houers moet skoon, normaal van vorm en vry van korrosie wees en mag geen opvallende uitwendige tekens van naatgebreke toon nie.

8.5 BEWARING.

8.5.1 Produkte wat nie verkoeling vereis nie, moet (sowel voor as na verpakking) op ordelike wyse in koel, goed geventileerde, skoon vertrekke bewaar word wat uit-sluitlik vir die doel gebruik word.

8.5.2 Indien produkte onder verkoeling bewaar moet word, mag die bewaringstemperatuur nie 5,5° C oorskry nie. Koelkamers moet skoon en higiënies wees.

AFDELING 9.—ETIKETTEER EN MERK VAN HOUERS

9.1 BESONDERHEDE OP ELKE HOUER OF ETIKET VEREIS.

9.1.1 Die volgende besonderhede moet leesbaar en onuitwisbaar op elke houer of etiket aangebring wees in letters van sodanige grootte en opvallendheid as wat by regulasie voorgeskryf word kragtens die geldende Wet op Mate en Gewigte en die geldende Wet op Voedingsmiddels, Medisyne en Ontsmettingsmiddels:

(a) Die naam en volledige besigheidsadres van die fabrikant, produsent, eienaar of beherende maatskappy of, in die geval van houers wat vir iemand anders verpak word, die naam en volledige besigheidsadres van daardie persoon.

(b) Met inagneming van die bepalinge van die geldende Handelswaremerkewet, 'n juiste beskrywing van die inhoud en, in die geval van ingemaakte vis—

(i) die beskrywing van vis wat as natuurlike produkte verpak is, as "natuurlik" of "in pekel"; die beskrywing "in natuurlike olie verpak" word nie toegelaat nie;

(ii) die soort sous wat gebruik is, indien enige; en

(iii) waar die vis in olie verpak is, die naam van of die soort olie.

(c) Tensy die naam van die produk die bestanddele aandui, 'n verklaring in gewone letters van minstens 6-puntmaat, van die bestanddele, met uitsondering van die kleurstowwe maar met inbegrip van die naam van die vis indien dit nie in die produknaam op die etiket vervat is nie, in volgorde van afnemende hoeveelhede volgens massa wat aanwesig is.

(d) Indien toepaslik, 'n verklaring, afsonderlik van die lys van bestanddele, van die aard en aanwesigheid van preserveermiddel, indien enige, in gewone letters van minstens 6-puntmaat.

(e) Waar die produk onder verkoeling bewaar moet word, die woorde:

"Bewaar by 'n temperatuur van hoogstens 5,5 C" in 'n opvallende plek in gewone letters minstens die helfte van die grootte van dié wat vir die naam van die produk gebruik is.

(f) Die netto massa van die inhoud.

(g) In die geval van produkte wat in Suid-Afrika en Suidwes-Afrika vervaardig is, die inmaakdatum, produk-sielotnommer (indien gebruik) en die fabrieksidentifikasie wat op die houer of, in die geval van flesse, op die deksel of etiket gebosseleer of andersins onuitwisbaar aangebring is. Indien 'n merk of kode vir die datum gebruik word, moet die sleutel tot sodanige merk of kode aan die owerheid wat belas is met die toepassing, van hierdie spesifikasie bekend gemaak word.

(h) Woorde wat die land van herkoms aandui.

8.4 EXTERIOR OF CONTAINERS.—Containers shall be clean, have normal contours, be free from corrosion, and show no significant outward signs of seam defects.

8.5 STORAGE.

8.5.1 Products not requiring refrigeration shall be stored (both before and after packaging) in an orderly manner in cool, well-ventilated, clean rooms used solely for this purpose.

8.5.2 Where products are required to be stored under refrigeration, the storage temperature shall not exceed 5,5° C. Refrigeration rooms shall be clean and hygienic.

SECTION 9.—LABELLING AND MARKING OF CONTAINERS

9.1 DETAILS REQUIRED ON EACH CONTAINER OR LABEL.

9.1.1 The following information shall appear legibly and indelibly on each container or label in type of the size and prominence prescribed by regulation under the current Weights and Measures Act and the current Food, Drugs and Disinfectants Act:

(a) The name and full business address of the manufacturer, producer, proprietor, or controlling company, or in the case of containers packed on behalf of any other person, the name and full business address of that person.

(b) Taking cognizance of the provisions of the current Merchandise Marks Act, a true description of the contents, including in the case of canned fish—

(i) the description of plain packs (natural packs) as "plain" or "natural" or as "in brine"; the description "packed in natural oil" is not permitted,

(ii) the kind of sauce used, if any, and

(iii) where the fish is packed in oil, the name or type of the oil.

(c) Unless the title of the product discloses the ingredients, a declaration of ingredients other than colouring matter, including the name of the fish where it does not appear in the title, in decreasing order of amounts (by mass) present, in plain type of not less than six point face measurement.

(d) When relevant, a declaration, separate from the list of ingredients, of the presence and nature of preservative, if any, in plain type of not less than six point face measurement.

(e) Where the product is required to be stored under refrigeration, the words:

"Keep at a temperature not exceeding 5,5° C" in a prominent position in plain type of not less than half the size of that used for the name of the product.

(f) The net mass of the contents.

(g) In the case of products manufactured in South Africa and South-West Africa, 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. If a mark or code is used for the date the key to such mark or code shall be disclosed to the authority administering this specification.

(h) Words indicating the country of origin.

9.1.2 Juiste beskrywing van vis.

(a) Geen vis mag geëtiketteer word met 'n naam of aanduiding wat misleidend is nie. Waar die woorde "uitgesoekte vis" of dergelike woorde gebruik word om die produk te beskrywe, moet die naam van die vis wat ingemaak is in gewone letters met dieselfde grootte en kleur as dié van die naam van die produk verskyn.

(b) Waar stokvis gebruik is vir die voorbereiding van produkte wat as "kerrievis", "gebakte vis" of "ingelegde vis" aangedui word, hoef die naam "stokvis" nie in die naam te verskyn nie; in gevalle waar ander vis vir die voorbereiding van hierdie tipes produkte gebruik is, moet die naam van die vis saam met die beskrywing in die naam van die produk verskyn.

(c) Harders mag slegs as "Mullet" of "Haarders"/"Harders" beskrywe word.

(d) Maasbankers mag slegs as "Maasbankers", "Kaapse Vis"/"Cape Fish" of "Jack Mackerel" beskrywe word. Die term "Kaapse Vis"/"Cape Fish" mag vir geen ander vis as die maasbanker gebruik word nie.

(e) Makriel in enige vorm mag slegs as "Makriel"/"Mackerel" of "Middlecut" beskrywe word.

(f) Die beskrywing "middelstuk"/"middle cut" mag slegs gebruik word as dit aan die naam van die vis gekoppel word en wanneer dit werklik middelstukke is wat verpak is; die beskrywing "middelstuk"/"middle cut" moet dan in letters wat net so groot en net so opvallend as die naam van die vis is, verskyn.

(g) Behalwe wanneer hulle volgens 6.1.7 en 6.2.4 verpak is, mag sardyne, in watter vorm ook al, slegs as "Sardientjies"/"Sardyntjies"/"Pilchards" beskrywe word. Wanneer sardyne volgens 6.1.7 en 6.2.4 verpak is, mag hulle as "Sardines" beskrywe word.

(h) Snoek in enige vorm mag slegs as "Snoek", "Barracouta", of "Atun" beskrywe word.

(i) Behoudens die bepalinge van 9.1.2 (b), mag stokvis slegs as "Hake" of "Stokvis"/"Stockfish" of as "Wit Stokvismootjies"/"White Fillets" of, indien dit gerook is, as "Gerookte Stokvismootjies"/"Smoked Cape Cod Fillets" of "Gerookte Skelvis"/"Smoked Haddock" beskrywe word.

(j) Geelstert mag alleen beskrywe word as "Geelstert"/"Yellow-tail", "Halfkoord", "Amberjack" of, vir doeleindes van plaaslike verkoop, as "Albacore" en in dié geval moet die woord "Yellow-tail" of "Amberjack" ewe opvallend in die opskrif voorkom. Laasgenoemde woorde mag egter tussen hakies staan. Geen aanspraak mag gemaak word ten opsigte van die kleur van die vleis nie.

(k) Tuna moet aan die vereistes van 6.1.3.3 (a) voldoen om as "Wit Tuna" geëtiketteer te word. Tuna met 'n kleurbeskrywing wat ooreenstem met "Lig" soos in 6.1.3.3 (b) uiteengesit, moet as "Ligte Tuna" geëtiketteer word en dié wat met 'n kleurbeskrywing van "Donker" soos in 6.1.3.3 (c) uiteengesit, ooreenstem, moet as "Donker Tuna" geëtiketteer word. Mengsels van tuna van verskillende kleurbeskrywings moet spesifiek as sodanig in die naam van die produk beskryf word. Alle kleurbeskrywings wat op die woord "Tuna" betrekking het, moet van dieselfde lettergrootte en net so opvallend soos die woord "Tuna" wees. Die naam "Albacore" wanneer dit gebruik word by die etikettering van tuna, mag slegs in die geval van Langvin-tuna gebruik word en moet saam met die woord "Tuna" in letters met dieselfde grootte en opvallendheid verskyn.

(l) Ingemaakte Bonito (*Sarda sarda*) mag nie op die etiket as "Tuna" beskryf wees nie.

(m) Kabeljou mag slegs as "Kabeljou" of "Cape Cob" beskrywe wees.

9.1.2 True description of fish.

(a) No fish shall be labelled under a name or designation which is misleading. Where the words "selected fish" or similar words are used to describe the pack, the name of the fish canned shall appear in plain type of the same face measurement and colour as the title.

(b) Where stockfish is used in the preparation of products labelled "curried fish", "fried fish", or "pickled fish" the name "stockfish" need not 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.

(c) Mullet shall be described only as "Mullet" or "Haarders"/"Harders".

(d) Maasbanker shall be described only as "Maasbanker" or "Cape Fish"/"Kaapse vis" or "Jack Mackerel". The term "Cape Fish"/"Kaapse vis" shall not be used to describe any fish other than the maasbanker.

(e) Mackerel in any form shall be described only as "Mackerel"/"Makriel" or "Middlecut".

(f) 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.

(g) except when packed in accordance with 6.1.7 and 6.2.4, pilchards in any form shall be described only as "Pilchards"/"Sardientjies"/"Sardyntjies". When packed in accordance with 6.1.7 and 6.2.4, pilchards may be described as "Sardines".

(h) Snoek in any form shall be described only as "Snoek", "Barracouta", or "Atun".

(i) Subject to 9.1.2 (b), stockfish shall be described only as "Hake" or "Stockfish"/"Stokvis" or as "White Fillets"/"Wit Stokvismootjies" or, when smoked, as "Smoked Cape Cod Fillets"/"Gerookte Stokvismootjies" or "Smoked Haddock"/"Gerookte Skelvis".

(j) Yellow-tail shall be described only as "Yellow-tail"/"Geelstert", "Halfkoord", "Amberjack" or, for purposes of sale locally, as "Albacore" in which case the words "Yellow-tail" or "Amberjack" shall appear in the title in equal prominence. The latter words may be in brackets. No claim regarding the colour of the meat may be made.

(k) To be labelled as "White Tuna" or "White Tunny" eg, tuna shall comply with the requirements of 6.1.3.3 (a). Tuna which corresponds to the colour designation "light" as set out in 6.1.3.3 (b) shall be labelled "Light Tuna" or "Light Tunny", and tuna which corresponds to a colour designation "dark" as set out in 6.1.3.3 (c) shall be labelled as "Dark Tuna" or "Dark Tunny". Blends of tuna of different colour designations shall be specifically described in the title of the product. All colour designation terms qualifying "Tuna" or "Tunny" shall be in type of at least the same size and prominence as "Tuna" or "Tunny". The name "Albacore" when used for the labelling of tuna shall be reserved for Longfin Tuna and shall be coupled with "Tuna" or "Tunny" in letters of the same size and prominence.

(l) Canned Bonito (*Sarda sarda*) shall not be labelled as "Tuna".

(m) Kabeljou shall be described only as "Kabeljou" or "Cape Cob".

(n) Salm-entstukke en -sterkte, fyngemaalde salm en dergelike vorms van ingemaakte salm moet so geëtiketteer word dat die werklike aard van die produk aangedui word en alle woorde wat die woord "Salm" beskryf moet in letters wat net so groot en opvallend as "Salm" is, verskyn.

(o) Vis wat solied of as stukke verpak is of wat fyn-gemaak, gerasper, gesnipper of op soortgelyke wyse behandel is, moet in die hoofpaneel van die etiket deur die toepaslike woord of woorde beskrywe word in letters met dieselfde grootte en net so opvallend as die produk-naam, wat die naam van die vis moet insluit.

(p) Enige vis of vissnit wat op die etiket of houer afgebeeld is, moet in redelike mate met die soort vis of vissnit in die houer ooreenstem.

9.1.3 Juiste beskrywing van seeskulpdier.—Seeskulpdier moet korrek beskryf word met die naam van die produk wat op die etiket verskyn. Ondergenoemde gewone name kan gebruik word soos aangedui:

Gewone naam	Wetenskaplike naam
Perlemoen.....	<i>Haliotis midae</i> .
Witmossel.....	<i>Donax serra</i> .
Swartmossel.....	<i>Chloromytilus meridionalis</i> .
Knysna-oester.....	<i>Crassostrea margaritacea</i> .
Snyskulpagpermossel.....	<i>Solen capensis</i> .
Seekat.....	<i>Octopus sp.</i>
Inkvis.....	<i>Sepia capensis</i> .
Tjokka (Squid).....	<i>Loligo reynaudi</i> .

Daarbenewens moet die beskrywing van die produk, in die geval van seeskulpdier wat nie ontskulp is nie, in die hoofpaneel van die etiket aandui dat die produk skulpe bevat.

9.1.4 Vissmeer: Juiste beskrywing van inhoud.—Enige vis wat in die beskrywing van 'n vissmeer genoem word, moet in genoegsame hoeveelheid gebruik word om die gebruik van die naam te regverdig. As slegs een vissoort genoem word, moet die smeer (behalwe in die geval van ansjovis) minstens 60 massapersent van sodanige vis bevat. Waar twee of meer soorte genoem word, behalwe waar die een soort ansjovis is, moet die totale hoeveelheid van die vis wat genoem is minstens 60 massapersent wees en moet die hoeveelheid van enige bepaalde vissoort wat genoem is, minstens 15 massapersent wees. In die geval van vissmeer wat as ansjovissmeer geëtiketteer is, moet die ansjovisinhoud minstens 30 massapersent wees. Waar ansjovis in die naam van die produk as 'n bestanddeel van 'n vissmeer aangedui word, moet die ansjovisgehalte minstens 10 massapersent wees en die totale hoeveelheid van die vissoorte in die naam van die produk genoem, moet minstens 50 massapersent wees. In die geval van vissmeer wat van meer as een vissoort gemaak word, moet die naam van die vissoort wat in die naam van die produk voorkom, in die volgorde van afnemende hoeveelhede wat aanwesig is, in die benaming van die produk verskyn.

Daar word geag dat die term "Vis" vir die doel van hierdie onderafdeling skaaldiere insluit, met dien verstande dat die aanwesigheid van skaaldiere as vissmeerbestanddeel spesifiek op die etiket gemeld moet word.

9.2 AANBRING VAN ETIKETTE.—Etiket op houters moet skoon en netjies en stewig aangeheg word. Hulle mag nie oor ander etikette of oor drukwerk wat regstreeks op die houer gedruk is, aangebring word nie. Hulle mag deur niemand anders as die fabrikant of sy gemagtigde agent aangebring word nie. Geen etiketgom wat moontlik in klam opbergtogestande kan verswak mag gebruik word nie.

9.3 MERK VAN PAKKETTE.—As die houters in pakkette verpak word, moet die pakkette skoon, netjies en heel wees en moet die getal en grootte of netto massa van die houters, benewens die besonderhede vereis in 9.1.1 (a),

(n) 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".

(o) Fish packed as solid pack or chunks or which has been flaked, grated, shredded, or similarly prepared, shall be described by the appropriate word or words in the main panel of the label in letters of the same size and prominence as the name of the product, which shall include the name of the fish.

(p) Any fish or cut of fish depicted on the container or label shall bear a reasonable likeness to the type of fish or cut of fish in the container.

9.1.3 True description of molluscs.—Molluscs shall be correctly described in the name of the product appearing on the label. The undermentioned common names may be used as indicated:

Common name	Scientific name
Abalone/Perlemoen.....	<i>Haliotis midae</i> .
White mussel.....	<i>Donax serra</i> .
Black mussel.....	<i>Chloromytilus meridionalis</i> .
Knysna oyster.....	<i>Crassostrea margaritacea</i> .
Razor shell.....	<i>Solen capensis</i> .
Seacat.....	<i>Octopus sp.</i>
Cuttlefish.....	<i>Sepia capensis</i> .
Squid.....	<i>Loligo reynaudi</i> .

In addition, where molluscs are not shucked, the presence of shells shall be reflected in the description of the product in the main panel of the label.

9.1.4 Fish Paste: True description of contents.—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 per cent 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 per cent by mass and the quantity of any one particular variety of fish named shall be not less than 15 per cent by mass. In the case of fish paste labelled as anchovy, the anchovy content shall be not less than 30 per cent by mass. Where anchovy enters into the name of the product, the anchovy content shall be not less than 10 per cent by mass and the total quantities of the varieties of fish indicated in the name of the product shall be not less than 50 per cent 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 present.

For the purposes of this subsection the term "fish" shall be deemed to include crustacea, provided that the presence of crustacea as a fish paste ingredient shall be specifically stated on the label.

9.2 ATTACHING OF LABELS.—Labels on containers shall be clean and neat, and securely attached. They shall not be superimposed on other labels or on matter printed directly on the containers. They shall not be applied by any person other than the manufacturer or his authorised agent. Label glue that is liable to deteriorate under humid storage conditions shall not be used.

9.3 MARKING OF PACKAGES.—If the containers are packaged, the packages shall be clean, neat, and unbroken, and on every package shall be printed or stencilled the number and size or net mass of the containers and the information required by 9.1.1 (a), (b) (c), where

(b), (c), waar dit van toepassing is, en (h), op elke pakket gedruk of gesjabloon word, behalwe dat die fabrikant se besigheidsadres nie die volledige besigheidsadres hoef te wees nie maar slegs voldoende moet wees vir identifikasiedoeleindes.

9.4 HOUERS VIR UITVOER.—Ongeag die bepalings van afdeling 9, kan produkte vir uitvoer na ander lande sonder etikette, of anders geëtiketteer as in hierdie spesifikasie vereis, uitgevoer word, mits daar nie gepoog word om die produk vals voor te stel nie. Daar moet aan die vereistes van 9.3 voldoen word, maar 'n kodemerk kan in plaas van die fabrikant se naam gebruik word.

AFDELING 10.—METODES VIR FISIESE ONDER- SOEK EN CHEMIESE ONTLEDING

10.1 BEPALING VAN NETTO MASSA VAN INHOUD.

10.1.1 Bepaal die bruto massa deur die onoorgemaakte houer te weeg. Dan in die geval van—

(a) 'n houer met 'n deksel wat met dubbele naat bevestig is, sny die deksel gedeeltelik uit sonder om die dubbele naat te verwyder of die hoogte daarvan te verander;

(b) 'n ander tipe houer, verwyder die deksel.

10.1.2 Bepaal die gemiddelde vertikale afstand, in millimeter, van die boonste oppervlak van die houer af tot op die boonste oppervlak van die inhoud deur afmetings oor die oppervlak van die inhoud te neem.

10.1.3 Plaas die inhoud van die houer oor 'n sif met 'n nominale openinggrootte van 2 mm en nadat dit toegelaat is om vir twee minute lank te dreineer, bepaal die gedreineerde massa.

10.1.4 Was, droog en weeg die houer met deksel en al en behou dit vir gebruik in die bepaling van die volheid van die houer. Die verskil tussen die bruto massa (10.1.1) en die massa van die houer en deksel is die netto massa van die inhoud.

10.2 BEPALING VAN VOLHEID VAN HOUSER.

10.2.1 Vul, in die geval van 'n houer met 'n deksel wat met 'n dubbele naat bevestig is, die houer met water by kamertemperatuur tot 'n vertikale afstand van 5 mm onderkant die bovlak van die houer. Weeg die houer wat aldus gevul is en bepaal die massa van die water deur die massa van die houer daarvan af te trek.

10.2.2 Trek water uit die vol houer tot op die hoogte van die inhoud (10.1.2), weeg die houer met die oorblywende water en bepaal die massa van die oorblywende water deur die massa van die houer daarvan af te trek.

10.2.3 Deel die massa van die oorblywende water deur die massa van die water (10.2.1) en vermenigvuldig met 100. Die resultaat is die persentasie van die totale volume van die houer wat deur die inhoud in beslag geneem is.

10.2.4 Verwyder die deksel, in die geval van 'n houer met deksel wat anders as met 'n dubbele naat bevestig is, en gaan te werk volgens 10.2.1 tot 10.2.3, maar maak die houer heeltemal vol in plaas van tot 5 mm onderkant die bovlak (kyk 10.2.1).

10.3 BEPALING VAN DIE BOBBELDIAMETER VAN TAMATIEPASTA.—Meet die bobbeldiameter by 25° C deur 'n silindriese verchromde koperbuis met 'n lengte van 60 mm en 'n binnediameter van 19 mm, op 'n horisontale glasplaat te plaas en dit tot by die boonste rand met die pasta wat getoets word te vul en die buis versigtig van die plaat af te lig teen 'n stadige en egalige tempo sodat dit vier sekondes duur om die silinder leeg te maak. Meet onmiddellik die lengte, in millimeter, van twee diameters (reghoekig op mekaar geneem) van die pastabobbel met inbegrip van enige uitgeskeide vloeistof en teken die gemiddelde van hierdie waardes aan. Herhaal die bepaling twee keer en teken die gemiddelde waarde as die bobbeldiameter aan.

applicable, and (h), except that the business address of the manufacturer need not be the full business address but must be sufficient for identification purposes.

9.4 CONTAINERS FOR EXPORT.—Notwithstanding the provisions of section 9, products for export to other countries may be either unlabelled or labelled differently to the requirements of this specification, provided there is no attempt to misrepresent the product. The requirements of 9.3 shall be met except that a code mark may be used in lieu of the name of the manufacturer.

SECTION 10.—METHODS OF PHYSICAL EXAMINATION AND CHEMICAL ANALYSIS

10.1 DETERMINATION OF NET MASS OF CONTENTS.

10.1.1 Determined the gross mass by weighing the unopened container. Then in the case of—

(a) a container with a lid attached by a double seam, partially cut out the lid without removing or altering the height of the double seam;

(b) another type of container, remove the lid.

10.1.2 Determine the average vertical distance, in millimetres, from the top level of the container to the top level of the contents by taking measurements over the surface of the contents.

10.1.3 Transfer the contents of the container to a sieve with a nominal aperture size of 2 mm and after allowing it to drain for two minutes determine the drained mass.

10.1.4 Wash, dry, and weigh the container complete with lid, and retain it for use in the determination of fill of container. The difference between the gross mass (10.1.1) and the mass of the container and lid gives the net mass of the contents.

10.2 DETERMINATION OF FILL OF CONTAINER.

10.2.1 In the case of containers with tops 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.

10.2.2 Draw off water from the filled container to the level of the contents (10.1.2), weigh the container with the remaining water and determine the mass of the remaining water by subtracting the mass of the container.

10.2.3 Divide the mass of the remaining water by the mass of the water (10.2.1) and multiply by 100. The result is the percentage of the total volume capacity of the container occupied by the contents.

10.2.4 In the case of a container with a lid attached otherwise than by a double seam, remove the lid and proceed in accordance with 10.2.1 to 10.2.3, but fill the container to the top instead of to 5 mm below the top (see 10.2.1).

10.3 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 four seconds. Then immediately measure the lengths, in millimetres, of two diameters (at right angles to each other) of the paste blob, including in the measurements any exuded liquor, and record the mean of these values. Perform this determination twice and record the overall mean value as the blob diameter.

10.4 BEPALING VAN DIE MUNSELLWAARDE VAN INGEMAAKTE TUNA.

10.4.1 Apparaat.

(a) 'n Apparaat om die weerkaatsing van die tuna-monster en die neutrale Munsellskywe te vergelyk.

(b) 'n Ligbron, geskik om die monster en die Munsellskyf te verlig en wat lig van 'n golflengte van 555 nm (450-570 nm) uitstraal of 'n vergelykingsapparaat wat van 'n filter (in die oogstuk) voorsien is en lig van bogemelde golflengte deurlaat.

(c) Munsellskywe met waardes van 6,3 en 5,3.

10.4.2 *Voorbereiding van monster.*—Vryf die inhoud van die houer deur 'n sif met 'n nominale openinggrootte van 6,7 mm. Meng die gesifte materiaal en plaas dit in 'n 84x46-mm-wyebekinnmaakblik met 'n vals boom 13 mm diep en wat binne en buite 'n mat swart kleur gevef is. Die materiaal moet 3 tot 6 mm onder die boonste rand van die blik lê. In die geval van gemengde tuna, skei die twee kleure vis en gaan met elke kleur voort soos hierbo aangedui.

10.4.3 *Werkwyse.*—Bepaal die Munsellwaarde soos volg binne 10 minute nadat die monster gesif is. Gebruik twee Munsellskywe van gelyke waarde, elk 8 mm onder die borand van 'n 84x46-mm-wyebekinnmaakblik (gevef soos in 10.4.2 beskryf) gemonteer en reguleer die ligbron so dat die twee skywe ewe helder lyk wanneer daarna gekyk word. Sonder om die ligbronninstelling te verander, verwyder een blik en vervang dit deur die voorbereide monster en stel vas of die monster ligter of donkerder as die standaard voorkom. In die geval van tuna wat as "Wit" en "Lig" beskryf word, word die vergelyking gedoen met Munsellskywe met waardes van onderskeidelik 6,3 en 5,3.

10.5 *VOORBEREIDING VAN MONSTER VIR CHEMIESE ONTLEDING.*—Maal die gedreineerde monster (10.1.3) twee keer in 'n vleismeul en meng deeglik. Meng, in die geval van vissmeer, die produk deeglik met behulp van 'n stamper en vysel. Bêre die voorbereide monster in 'n goed toegemaakte houer binne-in 'n yskas totdat dit nodig is vir gebruik.

10.6 BEPALING VAN CHLORIEDGEHALTE (AS NATRIUMCHLORIED).

10.6.1 Reagense.

(a) *Silwernitraatoplossing*, 0,1N.—Noukeurig gestandaardiseer.

(b) *Kaliumtiosianaatoplossing*, 0,1N.

(c) *Ferri-aluiniindikator*.—'n Koue, versadigde ferriammoniumsulfaatoplossing waarby 'n paar druppels 6N salpetersuur gevoeg is.

(d) *Natriumkarbonaatoplossing*.—'n Versadigde oplossing.

(e) *Nitrobenseen*.

10.6.2 *Werkwyse.*—Weeg 'n geskikte hoeveelheid van die voorbereide monster noukeurig uit in 'n verdampingsbakkie of kroesie, maak dit met 'n bietjie natriumkarbonaatoplossing nat, en droog op 'n waterbad. Verkool die droë monster en veras dit daarna in 'n oond by 'n temperatuur van hoogstens 500° C. Ekstraheer die residu met verdunde salpetersuur (ongeveer 6N) en filtreer in 'n 100-ml-volumetriese fles. Herhaal die ekstraksie en filtrasie een keer. Vul die volume met die verdunde salpetersuur aan.

Voeg by 'n geskikte deelvolumen van die oplossing in 'n 250-ml-Erlenmeyerfles 25 ml silwernitraat, 5 ml nitrobenseen en 1 ml ferri-aluiniindikator. Titreer met 0,1N kaliumtiosianaat. Voer 'n kontrolebepaling uit sonder die monster.

10.4 DETERMINATION OF MUNSELL VALUE OF CANNED TUNA.

10.4.1 Apparatus.

(a) An apparatus for comparing the reflectance of the tuna sample and the neutral Munsell discs.

(b) A light source suitable for illuminating the sample and the Munsell disc and radiating light at a wavelength centering at 555 nm (540-570 nm), or a comparator device fitted with a filter (on the eyepiece) that transmits light centering at the above wavelength.

(c) Munsell discs of values 6,3 and 5,3.

10.4.2 *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 84x46 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 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.

10.4.3 *Procedure.*—Within 10 minutes 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 84x46 mm open-top can (painted as in 10.4.2), 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.

10.5 *PREPARATION OF TEST SAMPLE FOR CHEMICAL ANALYSIS.*—Pass the drained sample (10.1.3) twice through a meat grinder and mix thoroughly. In the case of fish paste mix the product thoroughly using a pestle and mortar. Store the prepared sample in a well-closed container in a refrigerator until required for use.

10.6 DETERMINATION OF CHLORIDE CONTENT (AS SODIUM CHLORIDE).

10.6.1 Reagents.

(a) *Silver nitrate solution* 0,1N.—Accurately standardized.

(b) *Potassium thiocyanate solution* 0,1N.

(c) *Ferric alum indicator*.—A cold saturated solution of ferric ammonium sulphate to which a few drops of 6N nitric acid have been added.

(d) *Sodium carbonate solution*.—A saturated solution.

(e) *Nitrobenzene*.

10.6.2 *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 water bath. Char the dried sample and ash it at a temperature not exceeding 500° C. Extract the residue with dilute nitric acid (about 6N) and filter into a 100 ml volumetric flask. Repeat the extraction and filtration once. 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, 5 ml nitrobenzene, and 1 ml ferric alum indicator. Titrate with 0,1N potassium thiocyanate. Carry out a blank determination omitting the sample.

Bepaal volgens die kontroletitrasie en die toetsitrasie die hoeveelheid (A) silwernitraat wat in die toets gebruik is. Bereken die resultaat soos volg:

$$\text{Chloried as natriumchloried, persent} = \frac{A \times 5,845 \times N}{W}$$

waar

- A = hoeveelheid silwernitraatoplossing wat deur die deelvolum gebruik is, ml.
 N = normaliteit van die gebruikte silwernitraat.
 W = massa van oorspronklike monster wat deur die deelvolum wat by die titrering gebruik is, verteenwoordig is, g.

10.7 BEPALING VAN STIKSTOFGEHALTE EN BEREKENING VAN DIE TOTALE VISINHOUD.

10.7.1 Apparaat.

- (a) Kjeldahlfles met 'n inhoudsvermoë van 500 ml.
 (b) Kjeldahldistilleerapparaat.

10.7.2 Reagense.

(a) Kaliumsulfaat of watervrye natriumsulfaat.—Chemies suiwer en stikstofvry.

(b) Swawelsuur, gekonsentreer.—Chemies suiwer en stikstofvry.

(c) Merkuri-oksied (HgO).—Chemies suiwer en stikstofvry.

(d) Kaliumwaterstofftalaat.—Analitiese reagensgraad.

(e) Gemaskeerde metielrooi-indikator.—Los 0,125 g metielrooi en 0,083 g metileenblou in 100 ml etanol (96 persent) op en filtreer.

(f) Fenolftaleïenindikator.—'n Een persent oplossing van etanol (96 persent).

(g) Natriumhidroksiedoplossing, 0,5N.—Los ongeveer 20 g karbonaatvrye natriumhidroksied (analitiese reagensgraad) op in 1 liter gedistilleerde water wat vry is van koolstofdiksied. Standaardiseer die oplossing teenoor kaliumwaterstofftalaat deur die fenolftaleïenindikator te gebruik.

(h) Swawelsuur, 0,5N.—Verduun ongeveer 14,2 ml van die gekonsentreerde swawelsuur met gedistilleerde water tot een liter. Standaardiseer die oplossing teenoor die 0,5N-natriumhidroksiedoplossing deur die gemaskeerde metielrooi-indikator te gebruik.

(i) Natriumhidroksiedoplossing, 45 massapersent.—Los ongeveer 450 g natriumhidroksied (chemies suiwer) in 550 ml gedistilleerde water op. Koel af en filtreer deur glaswol indien nodig.

(j) Natriumtiosulfaatoplossing.—Los 500 g natriumtiosulfaat ($\text{Na}_2\text{S}_2\text{O}_3 \cdot 5\text{H}_2\text{O}$) in water op en vul aan tot 1 000 ml.

10.7.3 Werkwyse.—Weeg 2 g van die voorbereide monster noukeurig af en plaas dit in 'n 500-ml-Kjeldahl-verteringsfles oor. Voeg 15 g kaliumsulfaat (of anhidriese natriumsulfaat), 0,1 - 0,3 g merkuri-oksied en 25 ml van die gekonsentreerde swawelsuur by. Verhit stadig totdat skuinvorming ophou. Verhit dat sterker totdat die oplossing helder word en hou nog minstens 30 minute lank aan met die vertering (die volkome vertering neem ongeveer twee uur). Koel af, en verdun die verteerde monster met ongeveer 250 ml gedistilleerde water. Koel af tot kamertemperatuur en laat 50 ml van die 45 persent natriumhidroksiedoplossing en 10 ml van die natriumtiosulfaatoplossings langs die fles se nek afloop sodat dit 'n aparte laag vorm en nie dadelik met die suuroplossing meng nie. Voeg 'n paar korrels sink by. Verbind die fles met die Kjeldahldistilleerapparaat, meng die inhoud deur die fles versigtig te werwel en distilleer die ammoniak in 'n distillaat van ongeveer 250 ml dan in 'n Erlenmeyerfles af wat 'n oormaat standaard-0,5N-swawelsuur (van

From the blank titration and the test titration determine the amount (A) of silver nitrate used in the test. Calculate the result as follows:

$$\text{Chloride as sodium chloride, per cent} = \frac{A \times 5,845 \times N}{W}$$

where

A = amount of silver nitrate solution used by the aliquot, ml.

N = normality of silver nitrate used.

W = mass of original sample represented by the aliquot used in the titration, g.

10.7 DETERMINATION OF NITROGEN CONTENT AND CALCULATION OF TOTAL FISH CONTENT.

10.7.1 Apparatus.

- (a) Kjeldahl flask of 500 ml capacity.
 (b) Kjeldahl distillation apparatus.

10.7.2 Reagents.

(a) Potassium sulphate or anhydrous sodium sulphate.—Chemically pure and nitrogen-free.

(b) Sulphuric acid, concentrated.—Chemically pure and nitrogen-free.

(c) Mercuric oxide (HgO).—Chemically pure and nitrogen-free.

(d) Potassium hydrogen phthalate.—Analytical reagent grade.

(e) Screened methyl red indicator.—Dissolve 0,125 g of methyl red and 0,083 g of methylene blue in 100 ml ethanol (96 per cent) and filter.

(f) Phenolphthalein indicator.—One per cent solution in ethanol (96 per cent).

(g) Sodium hydroxide solution, 0,5N.—Dissolve approximately 20 g of carbonate-free sodium hydroxide (analytical reagent grade) in 1 litre of distilled water that is free from carbon dioxide. Standardize against the potassium hydrogen phthalate using the phenolphthalein indicator.

(h) Sulphuric acid, 0,5N.—Dilute approximately 14,2 ml of the concentrated sulphuric acid to one litre with distilled water. Standardize against the 0,5N sodium hydroxide solution using the screened methyl red indicator.

(i) Sodium hydroxide solution, 45 per cent by mass.—Dissolve approximately 450 g sodium hydroxide (chemically pure) in 550 ml distilled water. Cool and filter through glass wool if necessary.

(j) Sodium thiosulphate solution.—Dissolve 500 g of sodium thiosulphate ($\text{Na}_2\text{S}_2\text{O}_3 \cdot 5\text{H}_2\text{O}$) in water and make up to 1 000 ml.

10.7.3 Procedure.—Accurately weigh out 2 g of the prepared sample and transfer in to the 500 ml Kjeldahl digestion flask. Add 15 g potassium sulphate (or anhydrous sodium sulphate), 0,1 to 0,3 g mercuric oxide, and 25 ml of the concentrated sulphuric acid. Heat gently until frothing ceases, then heat strongly until the solution becomes clear, and continue the digestion for at least 30 minutes longer (about two hours are required for complete digestion). Cool, and dilute with about 250 ml distilled water. Cool to room temperature and run 50 ml of the 45 per cent sodium hydroxide solution and 10 ml of the sodium thiosulphate solution down the side of the flask so that it form a separate layer and does not mix with the acid solution at once. Add a few granules or pellets of zinc.

Connect the flask to the Kjeldahl distillation unit, mix the contents of the flask by gentle swirling, and then distil off the ammonia in about 250 ml of distillate into an Erlenmeyer flask containing an excess (of known volume) of the standard 0,5N sulphuric acid. Titrate the

bekende volume) bevat. Titreer die oormaat suur in die Erlenmeyerfles met standaard-0,5N-natriumhidroksiedoplossing (gebruik drie tot vier druppels van die gemaakte metielrooi-indikator). Voer 'n kontrolebepaling uit op dieselfde wyse maar sonder die monster.

10.7.4 Berekening.

$$(a) \text{ Stikstofgehalte, persent} = \frac{(x - y) \times N \times 1,4}{C}$$

waar

x = volume swawelsuur wat deur die ammoniak van die monster geneutraliseer is, ml.

y = volume swawelsuur wat deur die ammoniak van die kontrolebepaling geneutraliseer is, ml.

N = normaliteit van die swawelsuur.

C = massa van die monster gebruik, g.

$$(b) \text{ Totale visgehalte, persent} = \text{stikstofgehalte, persent} \times 37,5.$$

10.8 BEPALING VAN RU-STYSELGEHALTE.

10.8.1 Reagense.

(a) *Alkoholiese kaliumhidroksiedoplossing*.—Agt persent (m/v).

(b) *Etanol*.—96 persent.

(c) *Asynsuuroplossing*.—Vyf persent (v/v).

10.8.2 *Werkwyse*.—Weeg noukeurig 20-30 g van die voorbereide monster in 'n 250-ml-beker af, voeg 100 ml alkoholiese kaliumhidroksiedoplossing by en verteer een tot twee uur lank op 'n waterbad totdat die vet verseep en die proteïene gehidroliseer het. Filtreer deur 'n mediumspoedfilterpapier onder suiging. Was die residu met etanol totdat die alkohol kleurloos bly. Plaas die residu oor in 'n 100-ml-maatfles met warm vyf-persent-asynsuuroplossing. Koel af, vul tot die regte volume met die asynsuuroplossing aan en skud deeglik om die residu in suspensie te hou.

Pipetteer 'n 25-ml-deelvolum van die suspensie in 100 ml etanol oor in 'n 250-ml-beker. Laat staan totdat die residu afgesak het. Filtreer deur 'n vooraf voorbereide en uitgegloeide Gooch-kroesie en droog totdat die massa konstant bly in 'n oond by $105 \pm 2^\circ \text{C}$. Laat die residu in 'n oond by $700-800^\circ \text{C}$ uitgloeï. Koel af en weeg.

10.8.3 Berekening.

$$\text{Ru-styselgehalte, persent} = \frac{4(A - B) \times 100}{C} \text{ waar}$$

A = massa van die Gooch-kroesie plus gedroogde residu, g.

B = massa van die Gooch-kroesie plus uitgegloeide residu, g.

C = massa van die monster gebruik, g.

10.9 BEPALING VAN BENSOËSUURGEHALTE.

10.9.1 *Apparaat*.—'n Geskikte spektrofotometer voorsien van selle met 'n 10-mm-ligbaan en wat optiese digtheid kan meet by golflengtes van 267,5 nm, 272,0 nm en 276,5 nm.

10.9.2 Reagense.

(a) *Soutsuur*.—Gekonsentreer, analitiese reagensgraad.

(b) *Natriumchloriedoplossing*.—'n Versadigde wateroplossing van chemiesuiwer natriumchloried.

(c) *Diëtleter*.

(d) *Ammoniumhidroksiedoplossing*.—0,1 persent (m/v).

10.9.3 *Teken van standaardgrafiek*.—Berei oplossings van bensoësuur in diëtleter voor wat onderskeidelik 20, 40, 60, 80, 100 en 120 mg per liter bevat. Meet die optiese

excess acid in the Erlenmeyer flask with the standard 0,5N sodium hydroxide solution, using three to four drops of the screened methyl red indicator. Carry out a blank determination, following the same procedure but omitting the sample.

10.7.4 Calculation.

$$(a) \text{ Nitrogen content per cent} = \frac{(x - y) \times N \times 1,4}{C}$$

where

x = volume of sulphuric acid neutralized by the ammonia distilled from the sample, ml.

y = volume of sulphuric acid neutralized by the ammonia distilled from the blank, ml.

N = normality of the sulphuric acid.

C = mass of sample taken, g.

$$(b) \text{ Total fish content, per cent} = \text{nitrogen content, per cent} \times 37,5.$$

10.8 DETERMINATION OF CRUDE STARCH CONTENT.

10.8.1 Reagents.

(a) *Alcoholic potassium hydroxide solution*.—Eight per cent (m/v).

(b) *Ethanol*.—96 per cent.

(c) *Acetic acid solution*.—Five per cent (v/v).

10.8.2 *Procedure*.—Weight out accurately 20 to 30 g of the prepared sample into a 250 ml beaker, add 100 ml alcoholic potassium hydroxide solution, and digest on a waterbath for one to two hours until all the fat has been saponified and the protein hydrolyzed. Filter through a medium-speed filter paper under suction. Wash the residue with ethanol until the washings are colourless. Use warm five per cent acetic acid solution to transfer the residue to a 100 ml volumetric flask. Cool, make up to volume with the acetic acid solution, and shake thoroughly to suspend the residue.

Pipette a 25 ml aliquot of the suspension into 100 ml of ethanol contained in a 250 ml beaker. Allow to stand until all the residue has settled. Filter through a prepared and ignited Gooch crucible, and dry to constant mass in an oven at a temperature of $105 \pm 2^\circ \text{C}$. Ignite the residue at a temperature of $700-800^\circ \text{C}$. Cool and weigh.

10.8.3 Calculation.

$$\text{Crude starch content, per cent} = \frac{4(A - B) \times 100}{C} \text{ where}$$

A = mass of Gooch crucible plus dried residue, g.

B = mass of Gooch crucible plus ignited residue, g.

C = mass of sample taken, g.

10.9 DETERMINATION OF BENZOIC ACID CONTENT.

10.9.1 *Apparatus*.—A suitable spectrophotometer having cells with a 10 mm light-path and capable of measuring optical density at wavelengths of 267,5 nm, 272,0 nm and 276,5 nm.

10.9.2 Reagents.

(a) *Hydrochloric acid*.—Concentrated, analytical reagent grade.

(b) *Sodium chloride solution*.—A saturated aqueous solution of chemically pure sodium chloride.

(c) *Diethyl ether*.

(d) *Ammonium hydroxide solution*.—0,1 per cent (m/v).

10.9.3 *Preparation of standard curve*.—Prepare solutions of benzoic acid in diethyl ether containing respectively 20, 40, 60, 80, 100 and 120 mg per litre. Measure

digtheid van hierdie oplossings in die spektrofotometer by 267,5 nm (punt A), 272,0 nm (punt B) en 276,5 nm (punt C). Neem die gemiddelde optiese digtheid van die minima by punte A en C en trek hierdie waarde van die maksimum optiese digtheid by punt B af. Teken 'n grafiek van hierdie verskil teen die konsentrasie.

10.9.4 *Werkwyse*.—Weeg ongeveer 10 g van die bereide monster noukeurig in 'n skeitregter af en voeg 200 ml van die versadigde natriumchloriedoplossing by. Suur die oplossing met soutsuur aan totdat dit suur is teenoor lakmoes.

Ekstraheer die suspensie agtereenvolgens met hoeveelhede van 70, 50, 40 en 30 ml diëtleter en skud dit goed om volledige ekstraksie te verseker. Indien nodig, moet emulsies opgebreek word deur dit te sentrifugeer of te roer. Gooi die waterige fase af en was die saamgestelde eterekstrakte met hoeveelhede van 80, 40 en 30 ml verdunde soutsuur (1:1 000). Gooi die soutsuurwasoplossings weg. Ekstraheer die eterekstrakte agtereenvolgens met hoeveelhede van 50, 40, 30 en 20 ml van die ammoniumhidroksiedoplossing. Neutraliseer die saamgevoegde ekstrakte met die soutsuur en voeg 1 ml in oormaat by. Ekstraheer agtereenvolgens met hoeveelhede van 70, 50, 30 en 20 ml van die diëtleter. Verdun die saamgevoegde ekstrakte met diëtleter tot 200 ml (of 'n ander geskikte volume). Meet die optiese digtheid van die oplossing by die punte A, B en C soos in 10.9.3 beskryf. Bepaal die gemiddelde van die aflesings verkry by punte A en C en trek dit van die lesing by punt B af. Gebruik hierdie waarde om die konsentrasie besoësuur in die toetsmonster van die grafiek af te lees.

AFDELING 11.—INKUBASIE EN METODES VIR MIKROBIOLOGIESE ONDERSOEK

11.1 *INKUBASIE EN ONDERSOEK VAN HOUERS*.—Inkubeer op een na al die houters wat vir mikrobiologiese ondersoek geneem is 14 dae lank by 'n temperatuur van 37° C. Ondersoek hierdie houters uitwending vir tekens van mikrobiologiese bederf en gaan dan volgens 11.2 te werk.

11.2 MIKROBIOLOGIESE ONDERSOEK.

11.2.1 *Glasware*.—Al die glasware wat by die mikrobiologiese ondersoek van die produk gebruik word, moet steriel wees. Nadat hulle skoongemaak is, moet al die flesses, proef- en monsternemingsbuisse met watteproppe of ander geskikte proppe verseël word. In plaas van proefbuisse kan 30-ml-flesse met metaalskroefoppe gebruik word. Steriliseer alle glasware, by voorkeur deur die aanwending van droë hitte, een uur lank by 'n temperatuur van 170° C. Waar dit nie uitvoerbaar is nie, byvoorbeeld waar rubberproppe gebruik word, kan die glasware 20 minute lank by 'n temperatuur van 121° C in 'n outoklaaf gesteriliseer word.

11.2.2 *Kweekbodems*.—Die volgende getal buise of flesses met kweekbodem is nodig vir die kultuurondersoek van elke houer wat ondersoek moet word.

Kweekbodem	Getal
Voedende glukoseboeljon.....	2
Versterkte clostridium-kweekbodem.....	2

11.2.3 Voorbereiding van kweekbodems.

11.2.3.1 *Voedende glukoseboeljon*.—Meng 3 g beesvleisekstrak, 5 g pepton, 10 g dekstrose en 1 000 ml gedistilleerde water. Verwarm totdat die mengsel opgelos is en reël die pH-waarde van die kweekbodem om te verseker dat dit na sterilisering $7,1 \pm 0,1$ sal wees. Meet dan hoeveelhede van 10 ml elk in buise of flesses uit (11.2.1) en steriliseer 15 minute lank in 'n outoklaaf by 'n temperatuur van 121° C.

the optical density of these solutions in the spectrophotometer at 267,5 nm (point A), 272,0 (point B) and 276,5 nm (point C). Take the average optical density of the minima at points A and C and subtract this value from the maximum optical density at B. Plot a graph of this difference against concentration.

10.9.4 *Procedure*.—Weigh out accurately approximately 10 g of the prepared sample into a separating funnel and add 200 ml of the saturated sodium chloride solution. Make acid to litmus with hydrochloric acid.

Extract the suspension successively with 70, 50, 40 and 30 ml portions of diethyl ether, shaking well to ensure complete extraction. If necessary, break emulsions by centrifuging or stirring. Discard the aqueous phase and wash the combined ether extracts with 80, 40 and 30 ml portions of dilute hydrochloric acid (1:1 000) and discard the hydrochloric acid washings. Extract to ether extracts successively with 50, 40, 30 and 20 ml portions of the ammonium hydroxide solution. Neutralize the combined extracts with the hydrochloric acid, add 1 ml in excess, and extract successively with 70, 50, 30 and 20 ml portions of the diethyl ether. Dilute the combined extracts to 200 ml (or other suitable volume) with diethyl ether and measure the optical density at points A, B and C as described in 10.9.3. Average the readings obtained at points A and C and subtract the mean from the reading at B. From the result determine from the graph the concentration of benzoic acid in the test sample.

SECTION 11.—INCUBATION AND METHODS OF MICROBIOLOGICAL EXAMINATION

11.1 *INCUBATION AND INSPECTION OF CONTAINERS*.—Incubate for 14 days at a temperature of 37° C all but one of the containers taken for microbiological examination. Examine these containers externally for evidence of microbiological spoilage and then proceed in accordance with 11.2.

11.2 MICROBIOLOGICAL EXAMINATION.

11.2.1 *Glassware*.—All glassware used in the microbiological examination of the product shall be sterile. After cleaning, plug all test and sampling tubes and flasks with cotton wool or seal them with other suitable closures. Bottles of 30 ml capacity with metal screw caps may be used instead of test tubes. Sterilize all glassware, preferably by the application of dry heat, at a temperature of 170° C for one hour. Where this is not feasible, e.g. when rubber closures have been used, sterilization may be achieved by autoclaving at a temperature of 121° C for 20 minutes.

11.2.2 *Media*.—The following quantities of tubed or bottled media are required for the cultural examination of each container to be examined:

Medium	Quantity
Glucose nutrient broth.....	2
Reinforced clostridial medium.....	2

11.2.3 Preparation of media.

11.2.3.1 *Glucose nutrient broth*.—Mix 3 g of beef extract, 5 g of peptone, 10 g of dextrose and 1 000 ml of distilled water. Warm to dissolve, adjust the pH value of the medium to ensure that after sterilization it will be $7,1 \pm 0,1$, and then dispense 10 ml quantities into tubes or bottles (11.2.1) and sterilize in an autoclave at a temperature of 121° C for 15 minutes.

11.2.3.2 Versterkte clostridium-kweekbodem.—Los 3 g gisekstrak, 10 g peptoon, 10 g vleisekstrak, 5 g dekstrose, 5 g natriumasetaat (gehidrateer), 0,5 g l-sisteïen, 1 g oplosbare stysel en 2 g agar in 1 000 ml gedistilleerde water op deur dit te stoom. Filtreer die oplossing deur papierpap en suiwer die pH-waarde tot 7,4 aan. Meet hoeveelhede van 10 ml elk in buise of flesse uit (11.2.1) en steriliseer 15 minute lank in 'n outoklaaf by 'n temperatuur van 121° C. Sorg dat die pH-waarde na sterilisering 7,1±0,1 is.

11.2.3.3 Peptoonwaterverdunner.—Los 1 g peptoon in 1 000 ml gedistilleerde water op deur dit te stoom. Meet hoeveelhede van 100 ml uit in flesse (11.2.1) en steriliseer 15 minute lank in 'n outoklaaf by 'n temperatuur van 121° C. Sorg dat die pH-waarde na sterilisering 7,1±0,1 is.

11.2.4 Fisiese ondersoek en voorbereiding van houer.

11.2.4.1 Teken alle identifikasiemerke aan wat op die houer of etiket voorkom.

11.2.4.2 Verwyder die etiket. Teken fisiese gebreke soos korrosie, speldegatjies, duike, onvoldoende sluiting en defekte synate aan. Maak vir latere ondersoek 'n duidelike merk by alle twyfelagtige punte wat aan 'n verdere fisiese ondersoek onderwerp moet word nadat die houer oopgemaak is.

11.2.4.3 Maak die buitekant van die houer deeglik skoon met water en seep. Gebruik 'n oplosmiddel soos petroleumeter in die geval van vetterige houters.

11.2.4.4 Steriliseer die bo-ent van die houer deur, op die wyse hieronder uiteengesit, 'n steriliseeroplossing met die volgende samestelling te gebruik:

Etanol, 90 persent (v/v).....	1 600 ml.
Asetoon.....	120 ml.
Diëtleter.....	150 ml.
Etielasetaat.....	25 ml.

Giet die steriliseeroplossing tot oorlopens toe oor die bo-ent van die houer, laat dit een minuut lank staan en steek dan die oorblywende oplossing op die houer aan die brand. Houters wat opgeblaas het, moet na die skoonmaakproses volgens 11.2.4.3 deeglik met die steriliseeroplossing gereinig word, maar die oplossing moet nie aan die brand gestek word nie.

11.2.5 Monsterneming van inhoud.

11.2.5.1 Aanteken van vakuum of druk.—Na sterilisering van die bo-ent van die houer, deurboor dit in kiemvrye toestand met die punt van 'n gesteriliseerde vakuum- of drukmeter en teken die meteraffesing aan. Spesiale voorsorgmaatreëls moet getref word om slegs steriele lug in die houer in te laat wanneer die meter uitgetrek word. Bedek die openingspunt van die houer dadelik met 'n geskikte steriele deksel nadat die meter weggehaal is.

11.2.5.2 Oopmaak van houer.—Vergroot die gaatjie wat deur die meter gemaak is met 'n geskikte tipe gesteriliseerde instrument, by voorkeur die tipe wat 'n ronde skyf met die gaatjie as middelpunt kan uitsny of een wat die gaatjie se diameter na tussen 15 en 25 mm kan vergroot.

11.2.5.3 Oorplasing van inokulum.—Neem minstens 15 g van die produk uit die houer met behulp van 'n gesteriliseerde lepel, gesteriliseerde kurkboorder of gesteriliseerde monsternemingsbuisie van glas. Plaas die monster van die produk wat van die lepel, monsternemingsbuis of kurkboorder geneem is, oor in 'n fles met peptoonwaterverdunner (11.2.3.3) waarby gesteriliseerde glaskrale gevoeg is. Meng die materiaal deeglik met die water deur dit te skud sodat die krale die materiaal laat opbreek. So nie kan die monster van die produk in 'n gesteriliseerde masereerfles met 100 ml peptoonwaterverdunner (11.2.3.3) oorgeplaas en hoogstens twee minute lank gemasereer

11.2.3.2 Reinforced clostridial medium.—Dissolve (by steaming) 3 g of yeast extract, 10 g of peptone, 10 g of meat extract, 5 g of dextrose, 5 g of sodium acetate (hydrated), 0,5 g of l-cysteine, 1 g of soluble starch, and 2 g of agar in 1 000 ml of distilled water. Filter through paper pulp and adjust the pH value to 7,4. Dispense 10 ml quantities into tubes or bottles (11.2.1) and sterilize in an autoclave at a temperature of 121° C for 15 minutes. After sterilization check that the pH value is 7,1±0,1.

11.2.3.3 Peptone water diluent.—Dissolve (by steaming) 1 g of peptone in 1 000 ml of distilled water. Dispense 100 ml quantities into flasks (11.2.1) and sterilize in an autoclave at a temperature of 121° C for 15 minutes. After sterilization check that the pH value is 7,1 ± 0,1.

11.2.4 Physical examination and preparation of container.

11.2.4.1 Note and record all identification marks appearing on the container or label.

11.2.4.2 Remove the label. Record any physical defects such as corrosion, pinholing, dents, imperfect closure, and defective seams. Clearly mark, for subsequent inspection, doubtful points to be given further physical examination after the container has been opened.

11.2.4.3 Clean the outside of the container thoroughly with soap and water. If it is greasy, use a solvent such as petroleum ether.

11.2.4.4 Sterilize the top of the container by using, as described below, a sterilizing solution of the following composition:

Ethanol, 90 per cent (v/v).....	1 600 ml.
Acetone.....	120 ml.
Diethyl ether.....	150 ml.
Ethyl acetate.....	25 ml.

Flood the top of the container with the sterilizing solution, allow to stand for one minute, and then ignite the solution remaining on the container. Blown containers should, after cleaning as in 11.2.4.3, be thoroughly cleaned with the sterilizing solution, but the solution must not be ignited.

11.2.5 Sampling of contents.

11.2.5.1 Recording of vacuum or pressure.—After sterilizing the top of the container, pierce the point of opening by means of a sterile vacuum or pressure gauge tip under aseptic conditions and record the reading shown on the gauge. Special precautions shall be taken to admit only sterile air on removal of the gauge from the container. Immediately after removal of the gauge, cover the top of the container with a sterile cover.

11.2.5.2 Opening of container.—Enlarge the gauge puncture by means of a sterile instrument, preferably one that will cut a circular disc around the central puncture, or one that will enlarge the puncture to a diameter of 15 to 25 mm.

11.2.5.3 Removal of inoculum.—Remove at least 15 g of the product from the container by means of a sterile spoon, sterile cork borer, or sterile glass sampling tube. Transfer the portion of product taken from the spoon, sampling tube or cork borer to a flask of peptone water diluent (11.2.3.3) to which sterile glass beads have been added. Thoroughly mix the material and water by shaking, thus allowing the beads to break up the material. Alternatively transfer the portion of product to a sterile mace-rator jar containing 100 ml of peptone water diluent (11.2.3.3) and macerate for not longer than two minutes.

word. Bring dan hoeveelheide van 2 ml van die mengsel met behulp van gesteriliseerde pipette na elke buisie oor wat voedende glukoseboeljon of versterkte clostridium-kweekbodem bevat.

11.2.6 *Inkubasie van die kweekbuisies.*—Inkubeer die kweekbuisies of -flesse soos volg:

Voedende glukoseboeljon: Een buisie of fles vyf dae lank by 'n temperatuur van 32° C en een vyf dae lank by 'n temperatuur van 37° C.

Versterkte clostridiumkweekbodem: Een buisie of fles vyf dae lank by 'n temperatuur van 32° C en een vyf dae lank by 'n temperatuur van 37° C.

11.2.7 *Onderzoek.*

11.2.7.1 Onderzoek die kweekbuisies of -flesse na afloop van die inkubasietydperk en stel vas of die organismes wat geïsoleer is, patogeen of bederwend is of dié soort organisme is wat die produk gedurende opberging kan laat bederf.

11.2.7.2 Voer onderstaande ondersoek op sowel die oorblywende inhoud as die houer uit, nadat monsters van die houer se inhoud vir kultuurkweking geneem is, en teken die bevindings aan:

(a) Maak 'n direkte smeer van die inhoud, kleur dit volgens Gram se metode en ondersoek dit mikroskopies.

(b) Bepaal die pH-waarde.

(c) Onderzoek die inhoud vir verslegting, verandering van kleur, ens.

(d) Onderzoek die binnekant van die houer vir vlekke, vernisfoute, korrosie, ens.

(e) Onderzoek en meet die houernate met die oog op onreëlmatighede.

11.3 BEPALING VAN SKIMMELTELLING VAN TAMATIEPASTA (HOWARD-METODE).

11.3.1 *Apparaat.*

(a) *Saamgestelde mikroskoop.*—'n Mikroskoop wat die volgende minimum eienskappe het: 'n Romp met twee oogstukke, draaineusstuk, achromatiese kondensator, fyn instelling en 'n meganiese voorwerptafel.

Wanneer voorbereide monsters op 'n Howard-sel vir skimmeltelling ondersoek word, moet die gesigsveld by 'n vergroting van tussen 90X en 125X 'n sirkel met 'n oppervlakte van 1,5 vk mm wees. Hierdie oppervlakte, wat van die allergrootste belang is, word verkry deur seker te maak dat die diameter van die veld 1,382 mm is.

(b) *Howard-sel vir skimmeltelling* (kyk Figuur 1).—'n Glasplaatjie bestaande uit een stuk met 'n verheve plat, gelyk, sirkelvormige vlak *A*, met 'n diameter van ongeveer 19 mm (of 'n verheve reghoekige vlak, 20×15 mm groot), omring deur 'n groefie wat ommuur is met skouers *B*, wat 0,1 mm hoër is as die oppervlak van *A*. Die dekglas *C* rus op die skouers *B*, sodat 'n spasie met 'n diepte van 0,1 mm tussen die onderkant van *C* en die oppervlak van *A* gelaat word. Die sentrale vlak *A*, skouers *B* en dekglas *C* het opties bewerkte oppervlakke. Op sommige glasplaatjies is 'n sirkel met 'n diameter van 1,382 mm of twee fyn, parallelle lyne, 1,382 mm van mekaar, gegraveer om die kalibrering van die mikroskoop te vergemaklik.

By means of sterile pipettes, introduce 2 ml quantities of the mixture into each of the glucose nutrient broth and reinforced clostridial medium tubes.

11.2.6 *Incubation of the culture tubes.*—Incubate the culture tubes or bottles as follows:

Glucose nutrient broth: One tube or bottle at a temperature of 32° C for five days and one at a temperature of 37° C for five days.

Reinforced clostridial medium: One tube or bottle at a temperature of 32° C for five days and one at a temperature of 37° C for five days.

11.2.7 *Examination.*

11.2.7.1 After incubation examine the culture tubes or bottles and determine whether the organisms isolated are pathogenic types, spoilage types, or organisms liable to cause spoilage of the product during storage.

11.2.7.2 After the contents of the container have been sampled for culturing, make the following examination of the residual contents and of the container and record the findings:

(a) Make a direct smear of the contents, stain it by Gram's method, and examine it microscopically.

(b) Determine the pH value.

(c) Examine the contents for deterioration, discoloration, etc.

(d) Examine the interior of the container for stain, lacquer imperfections, corrosion, etc.

(e) examine and measure the seams of the container for abnormalities.

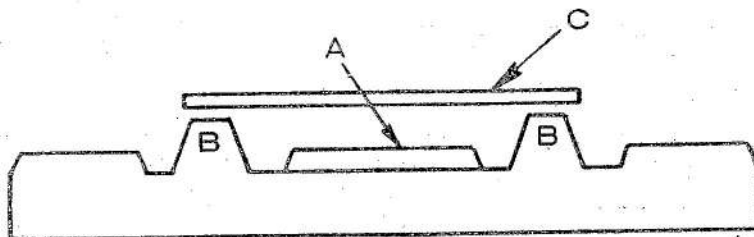
11.3 DETERMINATION OF MOULD COUNT OF TOMATO PASTE (HOWARD METHOD).

11.3.1 *Apparatus.*

(a) *Compound microscope.*—A microscope having the following minimum characteristics: Binocular body, revolving nosepiece, achromatic condenser, fine adjustment, and a mechanical stage.

When preparations are examined on a Howard mould-counting cell, the field of view, at a magnification between 90X and 125X, shall be a circle of area, 1,5 sq mm. This area, which is of vital importance, is obtained by ensuring that the diameter of the field is 1,382 mm.

(b) *Howard mould-counting cell* (see Figure 1). A glass slide of one-piece construction with a raised flat plane circle *A* of a diameter about 19 mm (or a raised rectangle of size 20×15 mm) surrounded by a moat that is walled by shoulders *B* that are raised 0,1 mm above the surface *A*. The cover glass *C* is supported on the shoulders *B* thus leaving a space of depth 0,1 mm between the underside of *C* and the surface of *A*. The central plane *A*, shoulders *B*, and cover glass *C* have optically worked surfaces. To facilitate calibration of the microscope, some slides are engraved with a circle of diameter 1,382 mm or with two fine parallel lines, 1,382 mm apart.



356/1-131

Fig. 1.—Syaansig van Howard-sel vir skimmeltelling. | Fig 1.—Side view of Howard mould-counting cell.

11.3.2 *Fisiese ondersoek van houer.*—Teken identifikasiemerke op die houer of etiket volledig aan.

11.3.3 *Voorbereiding van monster.*—Neem 'n deel van die tamatiepasta (ongeveer 25 ml) uit die ongeïnkubeerde houer, plaas dit oor in 'n skoon houer en verdun dit met water tot 'n mengsel verkry word wat 'n totale vastestofgehalte van tussen 8,3 en 9,3 massapersent het of wat by 20° C 'n brekingsindeks van 1,344 7 tot 1,346 0 het. Meng deeglik onmiddellik voordat 'n druppel na die sel oorgeplaas word.

11.3.4 *Werkwyse.*—Maak die oppervlakke van die Howard-sel deeglik skoon met watte wat in sterk sout-suur gedoop is. Spoel deeglik af met gedistilleerde water, daarna met etanol en ten slotte met aseton. Borsel alle watte- en stofdeeltjies met 'n kameelhaarborsel af. Plaas C in posisie. Newton-ringe moet nou tussen die oppervlakke wat met mekaar in aanraking is, gesien kan word.

Opmerking.—Hierdie gekleurde bande of ringe is die maatstaf vir behoorlike kontak; as hulle nie verkry kan word nie, dui dit daarop dat die kontakoppervlakke nie skoon genoeg gemaak is nie.

Verwyder C, plaas 'n druppeltjie van die goed gemengde monster op die oppervlak van A en stryk die druppeltjies met behulp van 'n skoon meslem of ontleedmes so egalig oor die oppervlak uit dat dit voorkom dat die meer vloeibare gedeeltes om die kant van die skyf uitgedruk word.

Laat C teen die kant van een van die skouers B rus en laat dit versigtig op die vloeistof neersak. Geen vloeistof moet tussen die kontakoppervlakke van die skouers B en die dekglas C indring nie, aangesien dit behoorlike aanraking tussen hierdie oppervlakke belemmer. Moet derhalwe nie te veel van die monster gebruik nie.

Opmerking.—Dit is baie belangrik dat die druppel uit 'n goed gemengde monster geneem en egalig oor die oppervlak van A versprei word, anders sal die onoplosbare materiaal (en gevolglik ook die skimmels) in die middel van die montering ophoop wanneer C in posisie geplaas word.

Gooi monterings weg waarop die materiaal onegalig versprei is of wat geen Newton-ringe toon nie of waarby vloeistof oor die groefie en onder C ingekom het. Plaas die plaatjie onder die mikroskoop en ondersoek dit nadat die mikroskoop so gestel is dat elke gesigsveld 1,5 vk mm beslaan. Die vergroting moet tussen 90X en 125X wees. Ondersoek minstens 25 velde in elk van twee of meer monterings. Maak seker dat die velde verteenwoordigend is van alle dele van die montering. Ondersoek elke veld en let op die aan- of afwesigheid van skimmeldrade en teken die resultate aan as positief of negatief, na gelang van die geval. Moet geen veld as positief beskou nie, tensy die totale lengte van hoogstens drie van die aanwesige drade meer as ongeveer een-sesde van die diameter van die veld is. Gee die positiewe velde as 'n persentasie van die totale getal velde wat ondersoek is, aan. Gebruik 'n vergroting van ongeveer 200X om die identiteit van die skimmeldraad te bevestig, indien die identifiseringskenmerke daarvan nie duidelik onder die vergroting van 90X-125X waarneembaar is nie.

'n Glasskyfie wat in die oogstuk van die mikroskoop pas en wat in vierkante afgemerk is waarvan die kant gelyk is aan een-sesde van die diameter van die veld, kan gebruik word om die lengte van kort drade te bepaal.

11.4 BEPALING VAN SKIMMELTELLING VAN TAMATIESOUSVERPAKKINGSMEDIUM VAN INGEMAAKTE VIS IN TAMATIESOUS.

11.4.1 *Apparaat.*—Soos in 11.3.1 beskryf, asook die volgende:

(a) *Sentrifuge.*—'n Sentrifuge wat groot genoeg is om 50-ml-sentrifugeerbuis te bevat en wat teen 'n snelheid van 1600 o/m kan werk.

11.3.2 *Physical examination of container.*—Record all marks of identification appearing on the container or label.

11.3.3 *Preparation of sample.*—Remove from the unin-cubated container a portion of tomato paste (approximately 25 ml), transfer it to a clean container, and dilute it with water to make a mixture that has a total solids contents of between 8,3 and 9,3 per cent (by mass) or that has a refractive index at 20° C of 1,344 7 to 1,346 0. Mix thoroughly immediately before transference of a drop to the cell.

11.3.4 *Procedure.*—Thoroughly clean the surfaces of the Howard cell with cotton wool dipped in strong hydrochloric acid. Rinse thoroughly with distilled water, then with ethanol, and finally with acetone. Remove all particulars of tint and dust with a camel-hair brush. Place C in position. Newton's rings must now be observed between the surfaces in contact.

Note.—These coloured bands or rings are the criterion of proper contact; inability to obtain them is an indication of insufficient cleaning of the contact surfaces.

Remove C, place a small drop of the well mixed sample on the surface of A, and, using a clean knife blade or scalpel, so spread the drop evenly over the surface as to prevent the more liquid parts from being squeezed out around the edge of the disc. Rest C against the edge of one of the shoulders, B, and lower it gently onto the liquid. No liquid should penetrate between the contact surfaces of shoulders B and cover glass C as this interferes with the proper contact between these surfaces. For this reason avoid the use of an excess of the sample.

Note.—It is of the utmost importance that the drop should be taken from a thoroughly mixed sample and be spread evenly over the surface of A, otherwise when C is put in place the insoluble material (and consequently the moulds) may be more abundant at the centre of the mount.

Discard any mount that shows uneven distribution, absence of Newton's rings, or the presence of liquid that has been drawn across the mount and under C. Place the slide under the microscope and examine it after adjusting it so that each field of view covers 1,5 sq mm. The magnification shall be between 90X and 125X. Examine atleast 25 fields in each of two or more mounts. Ensure that the fields chosen represent all sections of the mount. Observe each field, noting the presence or absence of mould filaments, and record the result as positive or negative as the case may be. Do not consider any field as positive unless the aggregate length of not more than three of the filaments present exceeds approximately one-sixth of the diameter of the field. Report the positive fields as a percentage of the total number of fields examined.

Where the identifying characteristics of any mould filament are not clearly discernible under the 90X to 125X magnification, use a magnification of about 200X to confirm the identity of the filament.

A glass disc which fits into the microscope eyepiece and which is ruled into squares of side equal to one-sixth of the diameter of the field may be used as an aid in the determination of the length of short filaments.

11.4 DETERMINATION OF MOULD COUNT OF TOMATO SAUCE MEDIUM OF FISH CANNED IN TOMATO SAUCE.

11.4.1 *Apparatus.*—As described in 11.3.1 and the following:

(a) *Centrifuge.*—A centrifuge large enough to take 50 ml centrifuge tubes and capable of operating at a speed of 1600 r.p.m.

(b) *Waterbad*.—'n Waterbad of ander geskikte apparaat wat 'n konstante temperatuur van 90-95° C kan handhaaf.

(c) *Sif*.—'n Sif met 'n nominale openingsgrootte van 3,35 mm.

(d) *Sentrifugeerbuis*.—Glas- of plastieksentrifugeerbuis met 'n inhoudsvermoë van 50 ml.

11.4.2 *Fisiese ondersoek van houer*.—Soos in 11.3.2 beskryf.

11.4.3 *Voorbereiding van monster*.—Plaas die ongeopende, ongeinkubeerde houer in die waterbad en verhit totdat die inhoud deeglik warm is; maak dan oop. Gooi die houer se inhoud deur die sif en vang die tamatiesous in 'n houer op. Meng die sous deeglik, plaas hoogstens 50 ml in 'n sentrifugeerbuis en sentrifugeer 10-15 minute lank teen 'n snelheid van 1600 o/m. Merk die hoogte van die onderste olievrye souslaag op die buis. Gooi die olie en 'n deel van die waterige laag af. Vul aan met water tot by die merk en meng deeglik.

11.4.4 *Werkwyse*.—Soos in 11.3.4 beskryf.

(b) *Waterbath*.—A waterbath or other suitable apparatus capable of maintaining a constant temperature of 90-95° C.

(c) *Sieve*.—A sieve of nominal aperture size 3,35 mm.

(d) *Centrifuge tubes*.—Glass or plastic centrifuge tubes of capacity 50 ml.

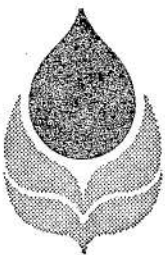
11.4.2 *Physical examination of container*.—As described in 11.3.2.

11.4.3 *Preparation of sample*.—Place the unopened unincubated container in the waterbath and heat until the contents are thoroughly warmed: Then open.

Strain the contents of the container through the sieve, collecting the tomato sauce in a container. Mix the sauce thoroughly, transfer not more than 50 ml into a centrifuge tube, and centrifuge for 10 to 15 minutes at a speed of 1 600 r.p.m. Mark on the tube the level of the lower oil-free sauce layer. Discard the oil and part of the aqueous layer. Add water to the mark and mix thoroughly.

11.4.4 *Procedure*.—As described in 11.3.4.

Werk mooi daarmee.

Ons leef  daarvan

Use it.
Don't abuse  it.
water is for everybody

Koop Nasionale Spaarsertifikate

Buy National Savings Certificates

INHOUD

CONTENTS

No.	BLADSY
GOEWERMENSKENNISGEWINGS	
Arbeid, Departement van	
GOEWERMENSKENNISGEWING	
R. 342. Nasionale Vakleerlingskapkomitee vir die Bounywerheid	1
Bantoe-administrasie en -ontwikkeling, Departement van	
GOEWERMENSKENNISGEWING	
R. 343. Regulasies ten opsigte van die Bantoe-sakekommissie: Wysiging	20
Doeane en Aksyns, Departement van	
GOEWERMENSKENNISGEWINGS	
R. 344. Doeane- en Aksynswet, 1964: Wysiging van Bylae 1 (No. 1/1/107)	20
R. 345. Doeane- en Aksynswet, 1964: Wysiging van Bylae 1 (No. 1/1/108)	21
R. 346. Doeane- en Aksynswet, 1964: Wysiging van Bylae 1 (No. 1/1/109)	21
R. 347. Doeane- en Aksynswet, 1964: Wysiging van Bylae 4 (No. 4/96)	22
Gesondheid, Departement van	
GOEWERMENSKENNISGEWING	
R. 363. Verbetering van Goewermenskennisgewing	22
Landbou-ekonomie en -bemaking, Departement van	
GOEWERMENSKENNISGEWINGS	
R. 364. Oplegging van heffing en spesiale heffing op sybokhaar	23
R. 365. Weiering om sekere grade piesangs vir verkoop in ontvangs te neem	23
Nasionale Opvoeding, Departement van	
GOEWERMENSKENNISGEWING	
R. 360. Wet op Universiteite, 1955: Universiteit van Pretoria: Wysiging van regulasies	23
Nywerheidsweese, Departement van	
GOEWERMENSKENNISGEWINGS	
R. 357. Wysiging van verpligte standaardspesifikasie vir die vervaardiging, produksie, bewerking of behandeling van ingemaakte skaalddiere	24
R. 358. Wysiging van verpligte standaardspesifikasie vir die vervaardiging, produksie, bewerking of behandeling van ingemaakte vis, ingemaakte visprodukte en ingemaakte seeskulpdiere	38

No.	PAGE
GOVERNMENT NOTICES	
Agricultural Economics and Marketing, Department of	
GOVERNMENT NOTICES	
R. 364. Imposition of levy and special levy on mohair	23
R. 365. Refusal to take delivery of certain grades of bananas	23
Bantu Administration and Development, Department of	
GOVERNMENT NOTICE	
R. 343. Regulations in respect of the Bantu Affairs Commission: Amendment	20
Customs and Excise, Department of	
GOVERNMENT NOTICES	
R. 344. Customs and Excise Act, 1964: Amendment of Schedule 1 (No. 1/1/107)	20
R. 345. Customs and Excise Act, 1964: Amendment of Schedule 1 (No. 1/1/108)	21
R. 346. Customs and Excise Act, 1964: Amendment of Schedule 1 (No. 1/1/109)	21
R. 347. Customs and Excise Act, 1964: Amendment of Schedule 4 (No. 4/96)	22
Health, Department of	
GOVERNMENT NOTICE	
R. 363. Correction of Government Notice	22
Industries, Department of	
GOVERNMENT NOTICES	
R. 357. Amendment of compulsory standard specification for the manufacture, production, processing or treatment of canned crustaceans	24
R. 358. Amendment of compulsory standard specification for the manufacture, production, processing or treatment of canned fish, canned fish products and canned marine molluscs	38
Labour, Department of	
GOVERNMENT NOTICE	
R. 342. National Apprenticeship Committee for the Building Industry	1
National Education, Department of	
GOVERNMENT NOTICE	
R. 360. Universities Act, 1955: University of Pretoria: Amendment of regulations	23