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GOVERNMENT NOTICE.

DEPARTMENT OF AGRICULTURAL TECHNICAL SERVICES.

No. 770.] [24 May 1963.

PROPOSED REGULATIONS IN CONNECTION WITH THE REGISTRATION AND SALE OF FERTILIZERS.

In accordance with the provisions of sub-section (4) of section *twenty-three* of the Fertilizers, Farm Feeds and Remedies Act, 1947 (Act No. 36 of 1947), as amended, it is hereby notified that it is intended, within eighteen weeks of the date of publication hereof but at least four weeks after the said date, to promulgate the regulations appearing in the Schedule hereto, in terms of sub-section (1) of section *twenty-three* of the said Act.

Interested persons are invited to submit objections to or representations in respect of the proposed regulations to the Secretary for Agricultural Technical Services, Private Bag 116, Pretoria, within four weeks of the date of publication hereof.

P. M. K. LE ROUX,
Minister of Agricultural Technical Services.

SCHEDULE.

INTERPRETATION.

1. In these regulations, unless inconsistent with the context—

(i) "group 1 fertilizer" means—

(a) any of the substances known as ammonium sulphate, ammonium phosphate, ammonium nitrate, ammonium sulphate-nitrate, sodium nitrate, ammoniated superphosphate, potassium nitrate, calcium nitrate, calcium cyanamide, limestone ammonium nitrate, urea, superphosphate, double superphosphate, metaphosphate, rock phosphate, treated phosphate, basic slag, potassium chloride, potassium sulphate, potash magnesia, monopotassium phosphate, guano, carcase meal, or hoof and horn meal;

(b) any bone, blood, fish or meat product; or

(c) any mixture composed mainly of one or more of the said substances or products: Provided such substance, product or mixture complies with the requirements (if any) prescribed in these regulations in respect of such substance, product or mixture; (ii)

(ii) "group 2 fertilizer" means any substance, product or mixture which is not classified as a group 1 fertilizer but which, in the opinion of the Registering Officer, contains sufficient quantities of one or more of the following elements: Nitrogen, phosphorus, potassium, magnesium, sulphur, iron, zinc, copper, boron, molybdenum and manganese, to make it valuable for purposes of improving or maintaining the growth of plants or the productivity of the soil; (iii)

GOEWERMENTSKENNISGEWING.

DEPARTEMENT VAN LANDBOU-TEGNIËSE DIENSTE.

No. 770.] [24 Mei 1963.

VOORGESTELDE REGULASIES MET BETREKING TOT DIE REGISTRASIE EN VERKOOP VAN MISSTOWWE.

Ooreenkomstig die bepalings van subartikel (4) van artikel *drie-en-twintig* van die Wet op Misstowwe, Veevoedsel en Middels, 1947 (Wet No. 36 van 1947), soos gewysig, word hierby kennis gegee dat dit die voorneme is om binne 18 weke na die datum van publikasie hiervan, maar minstens vier weke na genoemde datum, die regulasies vervat in die Bylae hiervan uit te vaardig kragtens die bepalings van subartikel (1) van artikel *drie-en-twintig* van genoemde Wet.

Belanghebbendes word versoek om besware teen of verhoë aangaande die voorgestelde regulasies aan die Sekretaris van Landbou-tegniese Dienste, Privaatsak 116, Pretoria, voor te lê binne vier weke na die datum van publikasie hiervan.

P. M. K. LE ROUX,
Minister van Landbou-tegniese Dienste.

BYLAE.

VERTOLKING.

1. In hierdie regulasies, tensy uit die samehang anders blyk, beteken—

(i) "die Wet" die Wet op Misstowwe, Veevoedsel en Middels, 1947, soos gewysig; (v)

(ii) "gewaarborgde ontleding" die persentasie primêre en/of sekondêre plantvoedsels soos gewaarborg deur die fabrikant of produsent; (iii)

(iii) "groep 1-misstof"—

(a) enige van die stowwe bekend as ammonium-sulfaat, ammoniumfosfaat, ammoniumnitraat, ammoniumsulfaatnitraat, natriumnitraat, geammonifiseerde superfosfaat, kaliumnitraat, kaliumnitraat, kalsiumsianamied, kalksteen-ammoniumnitraat, ureum, superfosfaat, dubbel-superfosfaat, metafosfaat, rotsfosfaat, behandelde fosfaat, slakmeel, kaliumchloried, kaliumsulfaat, potasmagnesia, monokaliumfosfaat, ghwano, karkasmeel, of hoof- en horingmeel;

(b) enige been-, bloed-, vis- of vleisprodukt; of

(c) 'n mengsel wat hoofsaaklik uit een of meer van genoemde stowwe of produkte bestaan: Met dien verstande dat sodanige stof, produk of mengsel voldoen aan die vereistes (indien daar is) by hierdie regulasies voorgeskryf ten opsigte van sodanige stof, produk of mengsel; (i) .

(iv) "groep 2-misstof" enige stof, produk of mengsel wat nie as 'n groep 1-misstof geklassifiseer word nie, maar wat volgens die oordeel van die Registrasiebeampte genoegsame hoeveelhede van een of meer van die volgende elemente: stikstof,

- (iii) "guaranteed analysis" means the percentage primary and/or secondary plant feeds as guaranteed by the manufacturer or producer;
- (iv) "per cent" or "percentage" means per cent or percentage of weight; (v)
- (v) "the Act" means the Fertilizers, Farm Feeds, and Remedies Act, 1947, as amended. (i)

REGISTRATION.

2. (1) Every application for the registration of a fertilizer shall be submitted, in triplicate, in the case of—

- (a) a group 1 fertilizer, in the form prescribed in the Second Annexure hereto; and
- (b) a group 2 fertilizer, in the form prescribed in the Third Annexure hereto;

to The Registering Officer of Fertilizers, Department of Agricultural Technical Services, Private Bag 116, Pretoria, together with the registration fee specified in the First Annexure hereto.

(2) Before considering an application, the Registering Officer may call upon the applicant to furnish him with such further information (including suitable samples of the fertilizer in question) as he may deem necessary in order to determine whether such fertilizer is suitable and sufficiently effective for the purpose for which it is intended.

(3) Whenever a fertilizer is registered, the Registering Officer shall issue or cause to be issued to the applicant a registration certificate, which shall be valid for a period not exceeding twelve months and which shall in any event expire on the 30th June next following. An applicant shall, when applying for registration, inform the Registering Officer which products he intends to offer for sale during the currency of such registration.

(4) An application for the renewal of an existing registration shall be submitted not later than the date on which it expires, viz., 30th June each year, and shall be in the form prescribed in the Sixth Annexure hereto. An applicant shall, when applying for registration, inform the Registering Officer which products he intends to offer for sale during the currency of such registration.

(5) If any change occurs in the analysis of a registered fertilizer or in the registered name or brand, the fertilizer so affected shall be considered to be a new fertilizer, which shall require registration anew.

(6) Applications for the registration of fertilizers manufactured outside the Republic shall be considered only if submitted through a representative of the manufacturer resident or carrying on business within the Republic.

APPEALS.

3. (1) Whenever an application for registration has been rejected, or where a registration has been made subject to conditions in terms of sub-section (3) of section three of the Act, or has been cancelled in terms of section four of the Act, the applicant may—

- (a) within 14 days of being notified of such rejection, imposition of conditions or cancellation, apply to the Registering Officer in writing for the reasons of such decision, and the Registering Officer shall within 14 days from the date of receipt of such application furnish the applicant in writing with such reasons;
- (b) within 56 days of being notified of such rejection, imposition of condition or cancellation, appeal to the Minister in writing against such decision.

(2) The provisions of paragraph (a) of sub-regulation (1) shall apply *mutatis mutandis* in respect of any decision given by the Minister in connection with an appeal lodged with him in terms of paragraph (b) of the said sub-regulation.

fosfor, kalium, kalsium, magnesium, swawel, yster, sink, koper, boor, molibdeen en mangaan bevat om dit waardevol te maak vir die verbetering of instandhouding van die groei van plante of van die produktiwiteit van die grond; (ii)

- (v) "persent" of "persentasie" persent of persentasie volgens gewig. (iv)

REGISTRASIE.

2. (1) Elke aansoek om die registrasie van 'n misstof moet, in drievoud, gerig word in die geval van—

- (a) 'n groep 1-misstof, in die vorm in die Tweede Aanhangel hiervan voorgeskryf; en
- (b) 'n groep 2-misstof in die vorm in die Derde Aanhangel hiervan voorgeskryf, aan Die Registrasie-beampte van Misstowwe, Departement van Landbou-tegniese Dienste, Privaatsak 116, Pretoria, tesame met die registrasiegeld in die Eerste Bylae hiervan gespesifiseer.

(2) Voordat 'n aansoek oorweeg word, kan die Registrasiebeampte die applikant versoek om hom van die verdere inligting (met inbegrip van geskikte monsters van die betrokke misstof) te voorsien wat hy nodig mag ag ten einde vas te stel of sodanige misstof geskik en doeltreffend genoeg is vir die doel waarvoor dit bestem is.

(3) Wanneer 'n misstof geregistreer word, reik of laat reik die Registrasiebeampte 'n registrasiesertifikaat aan die applikant uit, wat geldig is vir 'n tydperk van hoogstens twaalf maande en wat in elk geval op die eersvolgende 30ste Junie verval. Wanneer 'n applikant om registrasie aansoek doen, moet hy die Registrasiebeampte in kennis stel watter produkte hy van voorneme is om gedurende die geldigheidsduur van sodanige registrasie vir verkoop aan te bied.

(4) 'n Aansoek om die hernuwing van 'n bestaande registrasie moet ingedien word nie later nie as die datum waarop dit verstryk, te wete 30 Junie van elke jaar, en aansoek moet gedoen word in die vorm soos in die Sesde Bylae hiervan voorgeskryf. Wanneer 'n applikant om die hernuwing van registrasie aansoek doen, moet hy die Registrasiebeampte in kennis stel watter produkte hy van voorneme is om gedurende die geldigheidsduur van sodanige registrasie vir verkoop aan te bied.

(5) As daar 'n verandering in die ontleding van 'n geregistreerde misstof of in die geregistreerde handelsnaam of -merk voorkom, word die misstof wat aldus geraak word, as 'n nuwe misstof beskou, wat opnuut geregistreer moet word.

(6) 'n Aansoek om die registrasie van 'n misstof wat buite die Republiek vervaardig word, word slegs oorweeg indien die fabrikant se verteenwoordiger wat binne die Republiek woonagtig is of besigheid dryf, dit ingedien het.

APPEL.

3. (1) Wanneer 'n aansoek om registrasie geweier is, of 'n registrasie kragtens subartikel (3) van artikel drie van die Wet aan voorwaardes onderworpe gemaak of kragtens artikel vier van die Wet ingetrek is, kan die applikant—

- (a) binne 14 dae nadat hy van sodanige weiering, oplegging van voorwaardes of intrekking in kennis gestel is, skriftelik by die Registrasiebeampte verneem na die redes vir sodanige beslissing, en die Registrasiebeampte moet binne 14 dae na die datum van ontvangs van sodanige navraag sodanige redes skriftelik aan die applikant verstrek;
- (b) binne 56 dae nadat hy van sodanige weiering, oplegging van voorwaardes of intrekking in kennis gestel is, skriftelik by die Minister appel aanteken teen sodanige beslissing.

(2) Die bepalinge van paragraaf (a) van subregulasie (1) is *mutatis mutandis* van toepassing ten opsigte van 'n beslissing wat deur die Minister gegee is in verband met 'n appel wat kragtens paragraaf (b) van genoemde sub-regulasie by hom aangeteken is.

MARKING OF CONTAINERS.

4. (1) Subject to the provisions of sub-regulation (6), no person shall sell any fertilizer unless there is clearly and legibly marked on the container in which it is sold—

(a) in the case of a group 1 fertilizer—

- (i) the words "Fertilizer Group 1";
- (ii) the name and brand (if any) of the fertilizer;
- (iii) the guaranteed analysis of the fertilizer;
- (iv) the words "Registered in terms of Act No. 36 of 1947;" and
- (v) such further information as is hereinafter required;

(b) in the case of a group 2 fertilizer—

- (i) the words "Fertilizer Group 2";
- (ii) the name and brand (if any) of the fertilizer;
- (iii) the words "Registered in terms of Act No. 36 of 1947";
- (iv) the guaranteed analysis of the fertilizer; and
- (v) where claims in regard to micro-elements are made in respect of a group 2 fertilizer, the elements in regard to which such claims are made, in the elemental form of such elements.

(2) The name of the fertilizer to be marked in terms of sub-regulation (1) on the container, shall be the name of such fertilizer as it appears in the relevant application for registration.

(3) Directions for use may appear on containers or on labels affixed thereto, only if such containers contain fertilizers for spraying, fertilizers in liquid form, or packings of a weight of less than 50 lb. each (and such directions for use shall be clearly and legibly marked on such container or label, as the case may be).

(4) Save for inscriptions "Registered in terms of Act No. 36 of 1947" and "Directions for use", the markings or inscriptions prescribed by these regulations shall appear on one side of the container containing the fertilizer and shall—

(a) in the case of a container containing not less than 100 lb. thereof and manufactured from paper, be in symbols, letters or numbers at least $\frac{1}{2}$ inch high and in the case of a jute container be in symbols, letters or numbers of at least 1 inch high;

(b) in the case of a container containing less than 100 lb. thereof be in symbols, letters or numbers which are clearly legible.

(5) Save as may be provided by any other law, no markings or inscriptions other than those permitted or prescribed by these regulations, the names and addresses of the consignor and the consignee of the fertilizer and the registered trade mark of the person (firm, company) responsible for the registration of the fertilizer, may appear on any container in which fertilizer is sold.

(6) The requirements prescribed for the marking of containers of fertilizers or labels affixed thereto, shall not apply in the case of the sale of—

(a) a fertilizer—

- (i) in quantities of 50 lb. or less at a time if, the container in which it is sold is at the time of sale filled from another container which is properly marked according to the requirements prescribed; or
- (ii) which is unpacked;

(b) karoo manure, karoo ash, karoo manure-ash mixture, kraal manure, stable manure, farm compost, municipal compost, sewage sludge or seaweed.

MERK VAN HOERS.

4. (1) Behoudens die bepalinge van subregulasie (6), mag niemand 'n misstof verkoop nie tensy op die houer waarin dit verkoop word, duidelik en leesbaar aangebring word—

(a) in die geval van 'n groep 1-misstof—

- (i) die woorde "Misstof Groep 1";
- (ii) die naam en handelsmerk (as daar is) van die misstof;
- (iii) die gewaarborgde ontleding van die misstof;
- (iv) die woorde "Geregistreer ooreenkomstig Wet No. 36 van 1947"; en
- (v) die verdere inligting wat hieronder vereis word;

(b) in die geval van 'n groep 2 misstof—

- (i) die woorde "Misstof Groep 2";
- (ii) die naam en handelsmerk (as daar is) van die misstof;
- (iii) die woorde "Geregistreer ooreenkomstig Wet No. 36 van 1947";
- (iv) die gewaarborgde ontleding van die misstof; en
- (v) waar aanspraak in verband met spoorelemente ten opsigte van 'n groep 2-misstof gemaak word, die elemente ten opsigte waarvan aanspraak gemaak word, in die elementvorm van sodanige elemente.

(2) Die naam wat ooreenkomstig subregulasie (1) op die houer aangebring moet word, moet die naam van sodanige misstof wees soos dit in die betrokke aansoek om registrasie verskyn.

(3) Gebruiksaanwysings kan slegs op houters of op etikette daaraan geheg, verskyn indien sodanige houters misstowwe vir spuitdoeleindes, misstowwe in vloeibare vorm of verpakings wat minder as 50 lb. elk weeg, bevat, en sodanige gebruiksaanwysings moet duidelik en leesbaar op sodanige houer of etiket, na gelang van die geval, aangebring word.

(4) Behoudens die opskrifte "Geregistreer ooreenkomstig Wet No. 36 van 1947" en "Gebruiksaanwysings", moet die merke of opskrifte by hierdie regulasies voorgeskryf op die een kant van die houer wat die misstof bevat verskyn en moet—

(a) in die geval van 'n houer wat minstens 100 lb. daarvan bevat, en van papier vervaardig is, in simbole, letters of syfers van minstens $\frac{1}{2}$ duim hoog, en in die geval van 'n jutehouer, in simbole, letters of syfers van minstens een duim hoog wees;

(b) in die geval van 'n houer wat minder as 100 lb. daarvan bevat, in simbole, letters of syfers wees wat duidelik leesbaar is.

(5) Behoudens die bepalinge van enige ander Wet, mag geen ander merke of opskrifte as dié wat in hierdie regulasies toegelaat of voorgeskryf word, die name en adresse van die afsender en geadresseerde van die misstof en die geregistreerde handelsmerk van die persoon (firma, maatskappy) verantwoordelik vir die registrasie van die misstof, op 'n houer waarin misstof verkoop word, verskyn nie.

(6) Die vereistes voorgeskryf vir die merk van houters van misstowwe of etikette daaraan geheg, is nie van toepassing nie in die geval van die verkoop van—

(a) 'n misstof—

- (i) in hoeveelhede van 50 lb. of minder op 'n slag, as die houer waarin dit verkoop word ten tyde van die verkoop volgemaak word uit 'n ander houer wat behoorlik volgens die voorgeskrewe vereistes gemerk is; of
- (ii) wat nie verpak is nie;

(b) karoomis, karoo-as, karoomis-asmengsel, kraalmis, stalmis, plaaskompos, munisipale kompos, rioolslyk of seegras.

INVOICE.

5. The invoice to be given or sent to a purchaser of a fertilizer as required by section *nine* of the Act, shall indicate—

- (a) the name and address of the person by whom it is sold;
- (b) the name and address of the person to whom it is sold;
- (c) the date of sale;
- (d) whether it is a group 1 fertilizer or a group 2 fertilizer;
- (e) the name and brand (if any) of the fertilizer as registered;
- (f) the net weight sold of the fertilizer, except in the case of a fertilizer referred to in paragraph (g);
- (g) in the case of a fertilizer which is karoo manure, kraal manure, stable manure, farm compost or municipal compost, the cubic measure of the material and whether the material is in the crude form or sifted;
- (h) the guaranteed analysis of the fertilizer, except in the case of a fertilizer referred to in paragraph (b) of sub-regulation (6) of regulation 4.

NITROGENOUS FERTILIZERS.

6. (1) No fertilizer shall be registered or sold under the name—

- (i) ammonium sulphate,
- (ii) ammonium nitrate,
- (iii) sodium nitrate (nitrate of soda),
- (iv) calcium nitrate (nitrate of lime),
- (v) calcium cyanamide,
- (vi) urea,
- (vii) meatmeal;
- (viii) bloodmeal;
- (ix) limestone ammonium nitrate,
- (x) ammonium sulphate-nitrate;

unless it is a fertilizer which contains at least—

- (i) 20 per cent,
- (ii) 30 per cent,
- (iii) 15 per cent,
- (iv) 15 per cent,
- (v) 20 per cent,
- (vi) 45 per cent,
- (vii) 8 per cent,
- (viii) 9 per cent,
- (ix) 20 per cent,
- (x) 25 per cent,

nitrogen (N), respectively,
less than 1.5 per cent biuret.

(2) There shall be clearly and legibly marked on every container in which any of the fertilizers referred to in sub-regulation (1) of regulation 6 is sold, as part of and immediately following the name, a number indicating the percentage (expressed as a whole number) of nitrogen present in the fertilizer.

PHOSPHATIC FERTILIZERS.

7. (1) No fertilizer shall be registered or sold under the name—

- (a) superphosphate (supers) unless it is a fertilizer which contains at least 17 per cent water-soluble phosphoric oxide;
- (b) double superphosphate (double supers) unless it is a fertilizer which contains at least 40 per cent water-soluble phosphoric oxide;
- (c) basic superphosphate (basic supers) unless it is a fertilizer made from mixing lime and superphosphate and contains a minimum of 17 per cent phosphoric oxide soluble in a 2 per cent citric acid solution and a maximum of 3 per cent phosphoric oxide soluble in water;
- (d) super and lime unless it is a fertilizer which consists of a mixture of lime and superphosphate and shall contain at least 17 per cent phosphoric oxide soluble in 2 per cent citric acid solution and a maximum of 10 per cent phosphoric oxide soluble in water;

FAKTUUR.

5. Die faktuur wat aan 'n koper van 'n misstof oorhandig of gestuur word, moet soos deur artikel *nege* van die Wet vereis aandui—

- (a) die naam en adres van die persoon deur wie dit verkoop word;
- (b) die naam en adres van die persoon aan wie dit verkoop word;
- (c) die datum van verkoop;
- (d) of dit 'n groep 1-misstof of groep 2-misstof is;
- (e) die geregistreeerde naam en handelsmerk (as daar is) van die misstof;
- (f) die netto gewig van die misstof wat verkoop word, behalwe in die geval van 'n misstof in paragraaf (g) genoem;
- (g) in die geval van 'n misstof wat karoomis, kraalmis, stalmis, plaaskompos of munisipale kompos is, die kubieke maat van die stof en of sodanige stof ru of gesif is;
- (h) die gewaarborgde ontleding van die misstof, behalwe in die geval van 'n misstof in paragraaf (b) van subregulasie (6) van regulasie 4 genoem.

STIKSTOFMISSTOWWE.

6. (1) Geen misstof word geregistreeer of verkoop onder die naam—

- (i) ammoniumsulfaat,
- (ii) ammoniumnitraat,
- (iii) natriumnitraat (nitraat van soda),
- (iv) kalsiumnitraat (nitraat van kalk),
- (v) kalsiumsianamied,
- (vi) ureum,
- (vii) vleismeal,
- (viii) bloedmeal,
- (ix) kalksteen-ammoniumnitraat,
- (x) ammoniumsulfaat-nitraat,

nie tensy dit 'n misstof is wat onderskeidelik minstens—

- (i) 20 persent,
- (ii) 30 persent,
- (iii) 15 persent,
- (iv) 15 persent,
- (v) 20 persent,
- (vi) 45 persent,
- (vii) 8 persent,
- (viii) 9 persent,
- (ix) 20 persent,
- (x) 25 persent,

stikstof (N) bevat.

(2) Daar moet op elke houer waarin 'n misstof in sub-regulasie (1) van regulasie 6 genoem, verkoop word, as deel van en onmiddellik na die naam, 'n syfer wat die persentasie stikstof (as 'n heelgetal) in die misstof aandui, duidelik en leesbaar aangebring word.

FOSFAATMISSTOWWE.

7. (1) Geen misstof word geregistreeer of verkoop nie onder die naam—

- (a) superfosfaat (supers) tensy dit 'n misstof is wat minstens 17 persent in water oplosbare fosforoksied bevat;
- (b) dubbelsuperfosfaat (dubbelsupers), tensy dit 'n misstof is wat minstens 40 persent in water oplosbare fosforoksied bevat;
- (c) basiese superfosfaat (basiese supers), tensy dit 'n misstof is wat uit 'n mengsel van kalk en superfosfaat bestaan, minstens 17 persent fosforoksied bevat wat in 'n tweepersent-sitroensuuroplossing oplosbaar is, en hoogstens 3 persent fosforoksied bevat wat in water oplosbaar is;
- (d) Super en kalk tensy dit 'n misstof is wat uit 'n mengsel van kalk en superfosfaat bestaan en minstens 17 persent fosforoksied bevat wat in twee persent sitroensuuroplossing oplosbaar is en 'n maksimum van 10 persent fosforoksied wat in water oplosbaar is;

(e) basic slag unless it is—

- (i) a fertilizer which contains at least 14 per cent phosphoric oxide soluble in a 2 per cent citric-acid solution; and
- (ii) of sufficient fineness to permit at least 80 per cent thereof to pass through a standard sieve referred to in regulation 17;

(f) bone phosphate unless it is a fertilizer which contains at least 10 per cent phosphoric oxide soluble in a 2-per cent citric-acid solution and 26 per cent total phosphoric oxide;

(g) raw phosphate unless it is—

- (i) a natural phosphate which consists essentially of tricalcium phosphate and has not been subjected to any processing other than crushing, drying, sifting or mechanical concentration;
- (ii) a fertilizer which shall contain at least 6 per cent phosphoric oxide soluble in a 2-per cent citric-acid solution and 16 per cent total phosphoric oxide; and
- (iii) of sufficient fineness to permit at least 80 per cent thereof to pass through a standard sieve referred to in regulation 17;

(h) treated phosphate unless it is—

- (i) a natural phosphate which has been subjected to fusion with other materials or to other chemical treatment whereby it has become more effective as a fertilizer; and
- (ii) of sufficient fineness to permit at least 80 per cent thereof to pass through a standard sieve referred to in regulation 17.

(2) (a) There shall be marked on every container in which—

- (i) superphosphate (supers) or double superphosphate (double supers) are sold, as part of and immediately following the name, a number indicating the percentage water-soluble phosphoric oxide present in such fertilizer;
- (ii) basic slag or treated phosphate are sold, as part of and immediately following the name, a number indicating the percentage phosphoric oxide soluble in a 2-per cent citric-acid solution, present in such fertilizer;
- (iii) bone phosphate is sold, as part of and immediately following the name, a number indicating the percentage total phosphoric oxide present in such fertilizer;
- (iv) raw phosphate is sold, as part of and immediately following the name, numbers indicating the percentage total phosphoric oxide as well as the percentage phosphoric oxide soluble in a 2-per cent citric-acid solution, present in such fertilizer;

and any percentage which is required to be marked on a container in terms of this sub-regulation shall be expressed as a whole number.

(b) There shall be clearly and legibly marked on every container in which rock phosphate is sold, as part of and immediately preceding the name, the approved name of the place of origin of such phosphate.

POTASSIC FERTILIZERS.

8. (1) No fertilizer shall be registered or sold under the name—

- (a) potassium chloride unless it is a fertilizer which contains at least 50 per cent water-soluble potassium oxide;
- (b) potassium sulphate unless it is a fertilizer which contains at least 40 per cent water-soluble potassium oxide;
- (c) potash magnesia unless it is a fertilizer which contains at least 25 per cent water-soluble potash (K_2O) and 5 per cent magnesium expressed as MgO .

(e) slakmeel, tensy dit—

- (i) 'n misstof is wat minstens 14 persent fosforoksied bevat wat in 'n tweepersent-sitroensuur-oplossing oplosbaar is; en
- (ii) fyn genoeg is dat minstens 80 persent daarvan deur 'n standaardisif in regulasie 17 genoem, kan gaan;

(f) beenfosfaat, tensy dit 'n misstof is wat minstens 10 persent fosforoksied wat in 'n tweepersent-sitroensuurooplossing oplosbaar is en 26 persent totale fosforoksied bevat;

(g) rufosfaat, tensy dit—

- (i) 'n natuurlike fosfaat is wat hoofsaaklik uit trikalsiumfosfaat bestaan en wat aan geen ander verwerking as vergruising, droging, sifting of meganiese konsentrasie onderwerp is nie;
- (ii) 'n misstof is wat minstens 6 persent fosforoksied wat in 'n tweepersent-sitroensuurooplossing oplosbaar is en 16 persent totale fosforoksied bevat; en
- (iii) fyn genoeg is dat minstens 80 persent daarvan deur 'n standaardisif in regulasie 17 genoem, kan gaan;

(h) behandelde fosfaat, tensy dit—

- (i) 'n natuurlike fosfaat is wat met ander stowwe saamgesmelt is of ander chemiese behandeling ondergaan het waardeur dit as 'n misstof doeltreffender geword het; en
- (ii) fyn genoeg is dat 80 persent daarvan deur 'n standaardisif in regulasie 17 genoem, kan gaan.

(2) (a) Daar moet op elke houer aangebring word waarin—

- (i) superfosfaat (supers) en dubbelsuperfosfaat (dubbelsupers) verkoop word, as deel van en onmiddellik na die naam, 'n syfer wat die persentasie in water oplosbare fosforoksied in sodanige misstof aandui;
- (ii) slakmeel en behandelde fosfaat verkoop word, as deel van en onmiddellik na die naam, 'n syfer wat die persentasie fosforoksied wat in 'n tweepersent-sitroensuurooplossing oplosbaar is, in sodanige misstof aandui;
- (iii) beenfosfaat verkoop word, as deel van en onmiddellik na die naam, 'n syfer wat die persentasie totale fosforoksied in sodanige misstof aandui;
- (iv) rufosfaat verkoop word, as deel van en onmiddellik na die naam, syfers wat die persentasie totale fosforoksied sowel as die persentasie fosforoksied wat in 'n tweepersent-sitroensuurooplossing oplosbaar is, in sodanige misstof aandui;

en 'n persentasie wat ingevolge hierdie subregulasie op 'n houer aangebring word moet as 'n heelgetal uitgedruk word.

(b) Op elke houer waarin rotsfosfaat verkoop word, moet, as deel van en onmiddellik voor die naam, die goed-gekeurde naam van die plek van oorsprong van sodanige fosfaat duidelik en leesbaar aangebring word.

KALIUMMISSTOWWE.

8. (1) Geen misstof word geregistreer of verkoop nie onder die naam—

- (a) kaliumchloried, tensy dit 'n misstof is wat minstens 50 persent in water oplosbare kaliumoksied bevat;
- (b) kaliumsulfaat, tensy dit 'n misstof is wat minstens 40 persent in water oplosbare kaliumoksied bevat;
- (c) potasmagnesia, tensy dit 'n misstof is wat minstens 25 persent in water oplosbare potas (K_2O) en minstens 5 persent magnesium, uitgedruk as MgO , bevat.

(2) There shall be clearly and legibly marked on every container in which a fertilizer referred to in sub-regulation (1), is sold, as part of and immediately following the name, a figure indicating the percentage, expressed as a whole number, of water-soluble potassium oxide present in such fertilizer.

COMPOUND FERTILIZERS.

Chemical Compound Substances.

9. (1) No fertilizer shall be registered or sold under the name—

- (a) potassium nitrate unless it is a fertilizer which contains at least 10 per cent nitrogen and 36 per cent water-soluble potassium oxide;
- (b) ammonium phosphate unless it is a fertilizer which contains at least 10 per cent nitrogen and 45 per cent phosphoric oxide soluble in a 2 per cent citric-acid solution;
- (c) ammoniated superphosphate unless it is a fertilizer which contains at least 2 per cent nitrogen and 15 per cent phosphoric oxide soluble in 2 per cent citric-acid solution.

(2) There shall be clearly and legibly marked on every container in which potassium nitrate, di-ammonium phosphate, mono-ammonium phosphate or ammoniated superphosphate is sold, as part of and immediately following the name, three numerals separated by dashes and indicating in the order mentioned the respective percentages, expressed as whole numbers, of nitrogen, phosphoric oxide soluble in a 2-per cent citric-acid solution and potassium oxide soluble in a 2-per cent citric-acid solution, present in such fertilizer.

NATURAL COMPOUND SUBSTANCES.

10. (1) No fertilizer shall be registered or sold under the name—

- (a) guano, unless it is a natural fertilizer composed mainly of the excreta of seabirds and unless it contains at least 7 per cent nitrogen and a total of 18 per cent nitrogen, total phosphoric oxide and total potassium oxide;
- (b) phosphatic guano unless it is a fertilizer which contains at least 3 per cent nitrogen and a total of 16 per cent nitrogen, total phosphoric oxide and total potassium oxide;
- (c) bonemeal (bone dust, bone flour), unless it is—
 - (i) a fertilizer which contains at least 3 per cent nitrogen and a total of 24 per cent nitrogen and total phosphoric oxide; and
 - (ii) in the case of bonemeal or bone dust, of sufficient fineness to permit at least 85 per cent thereof to pass through a sieve having round holes each two millimeters in diameter; or in the case of boneflour, of sufficient fineness to permit at least 100 per cent thereof to pass through a sieve having round holes each one millimeter in diameter, or at least 50 per cent thereof to pass through a sieve having round holes each one-half millimeter in diameter;
- (d) carcase meal, whale meal, fish meal, or hoof and horn meal, unless it is a fertilizer which contains at least 6 per cent nitrogen, and a total of 14 per cent nitrogen, total phosphoric oxide and total potassium oxide.

(2) There shall be clearly and legibly marked on every container in which a fertilizer referred to in sub-regulation (1) is sold, as part of and immediately following the name, three numerals separated by dashes and indicating in the order mentioned the respective percentages, expressed as whole numbers, of nitrogen, total phosphoric oxide and total potassium oxide present in that fertilizer.

(3) In this regulation the expressions "total phosphoric oxide" and "total potassium oxide" shall refer to such quantities of these substances as will dissolve in a strong mineral acid.

(2) Op elke houer waarin 'n misstof in subregulasie (1) genoem, verkoop word, moet, as deel van en onmiddellik na die naam, 'n syfer wat die persentasie, as 'n heelgetal uitgedruk, in water oplosbare kaliumoksied in sodanige misstof aandui, duidelik en leesbaar aangebring word.

SAAMGESTELDE MISSTOWWE.

Chemiese saamgestelde stowwe.

9. (1) Geen misstof word geregistreer of verkoop nie onder die naam—

- (a) kaliumnitraat, tensy dit 'n misstof is wat minstens 10 persent stikstof en 36 persent in water oplosbare kaliumoksied bevat;
- (b) ammoniumfosfaat, tensy dit 'n misstof is wat minstens 10 persent stikstof en 45 persent fosforoksied wat in 'n tweepersent-sitroensuuroplossing oplosbaar is, bevat;
- (c) geammonifiseerde superfosfaat, tensy dit 'n misstof is wat minstens 2 persent stikstof en 15 persent fosforoksied wat in 'n tweepersent-sitroensuuroplossing oplosbaar is, bevat.

(2) Op elke houer waarin kaliumnitraat, di-ammoniumfosfaat, mono-ammoniumfosfaat of geammonifiseerde superfosfaat verkoop word, moet, as deel van en onmiddellik na die naam, drie syfers wat deur strepies van mekaar geskei is en in gemelde volgorde die persentasies in heelgetalle van onderskeidelik die stikstof, fosforoksied wat in 'n tweepersent-sitroensuuroplossing oplosbaar is en kaliumoksied wat in 'n tweepersent-sitroensuuroplossing oplosbaar is, in sodanige misstof aandui, duidelik en leesbaar aangebring word.

NATUURLIKE SAAMGESTELDE STOWWE.

10. (1) Geen misstof word geregistreer of verkoop nie onder die naam—

- (a) ghwano, tensy dit 'n natuurlike misstof is wat hoofsaaklik uit die uitwerpsels van seevoëls bestaan en minstens 7 persent stikstof en altesaam 18 persent stikstof, totale fosforoksied en totale kaliumoksied bevat;
- (b) fosfaatghwano, tensy dit 'n misstof is wat minstens 3 persent stikstof en altesaam 16 persent stikstof, totale fosforoksied en totale kaliumoksied bevat;
- (c) beenmeel (beenstof, fynbeenmeel), tensy dit—
 - (i) 'n misstof is wat minstens 3 persent stikstof en altesaam 24 persent stikstof en totale fosforoksied bevat; en
 - (ii) in die geval van beenmeel of beenstof fyn genoeg is dat minstens 85 persent daarvan deur 'n sif met ronde gaatjies met 'n deursnee van twee millimeter elk kan gaan; of in die geval van fynbeenmeel fyn genoeg dat minstens 100 persent daarvan deur 'n sif met ronde gaatjies met 'n deursnee van een millimeter elk, of minstens 50 persent daarvan deur 'n sif met ronde gaatjies met 'n deursnee van 'n halwe millimeter elk, kan gaan;
- (d) karkasmeel, walvismeel, vismeel of hoef- en horingmeel, tensy dit 'n misstof is wat minstens 6 persent stikstof en altesaam 14 persent stikstof, totale fosforoksied en totale kaliumoksied bevat.

(2) Op elke houer waarin 'n misstof in subregulasie (1) genoem, verkoop word, moet, as deel van en onmiddellik na die naam, drie syfers wat deur strepies van mekaar geskei is en in gemelde volgorde die persentasie in heelgetalle van onderskeidelik die stikstof, totale fosforoksied, totale kaliumoksied in sodanige misstof aandui, duidelik en leesbaar aangebring word.

(3) In hierdie regulasie het die uitdrukkings "totale fosforoksied" en "totale kaliumoksied" betrekking op die hoeveelhede van hierdie stowwe wat in 'n sterk mineraal-suur oplos.

11. (1) No fertilizer shall be registered or sold under the name bat manure unless it contains at least 2 per cent nitrogen and 4 per cent phosphoric oxide soluble in a 2-per cent citric-acid solution, and a total of at least 8 per cent of the two constituents taken together: Provided that, if it contains less than 2 per cent nitrogen but 8 per cent or more nitrogen and phosphoric oxide soluble in a 2-per cent citric-acid solution taken together, it may be registered and sold under the name bat phosphate.

(2) Bat manure and bat phosphate may only be registered and sold as a group 2 fertilizer.

ARTIFICIALLY MIXED FERTILIZERS.

12. (1) No artificially mixed fertilizer containing two or more of the constituents nitrogen, phosphoric oxide soluble in a 2-per cent citric-acid solution and potassium oxide soluble in a 2-per cent citric-acid solution, shall be registered or sold as a fertilizer unless it is a fertilizer—

(a) thoroughly mixed; or

(b) which contains the said constituents in one of the following percentage combinations or in one of the following ratio combinations with minimum total plantfood:—

	Nitrogen.	Phosphoric oxide.	Potassium oxide.	Ratio.	Minimum total plantfood.
(i)	0	18	6	0:3:1	24; or
(ii)	0	15	10	0:3:2	25; or
(iii)	10	10	0	1:1:0	20; or
(iv)	6	18	0	1:3:0	24; or
(v)	5	15	5	1:3:1	25; or
(vi)	5	15	10	1:3:2	30; or
(vii)	15	0	15	1:0:1	30; or
(viii)	10	10	10	1:1:1	30; or
(ix)	10	5	15	2:1:3	30; or
(x)	10	15	5	2:3:1	30; or
(xi)	3	12	4	—	—; or
(xii)	4	10	6	—	—; or
(xiii)	6	10	3	—	—

Provided that mixtures (xi) (xii) and (xiii) shall be offered only in " $\frac{1}{2}$ Org. N" form, while the other mixtures may be offered in " $\frac{1}{2}$ Org. N" form, as well as in organic form; or

(c) which is specially approved by the Registering Officer as a concentrated fertilizer because it contains jointly more than 50 per cent nitrogen, phosphoric oxide and potassium oxide; or

(d) which is recommended as a fertilizer suitable for water or gravel culture, and marketed for that purpose only. Such products shall contain all the macro- and micro-element for this purpose and in proportions as approved by the Registering Officer.

(2) No person shall sell an artificially mixed fertilizer under the description " $\frac{1}{2}$ Org. N" unless—

(a) at least 50 per cent of the nitrogen in such a fertilizer mixture is of animal or plant origin; and

(b) the expression " $\frac{1}{2}$ Org. N" is clearly and legibly marked on the container in which it is sold.

(3) Any mixture having a composition or ratio of plantfood ingredients and minimum total plantfood referred to in paragraph (b) of sub-regulation (1), may only be registered and sold under the composition or ratio of plantfood ingredients and minimum total plantfood concerned and shall have no preceding letter, number of figure on the containers thereof.

(4) In the case of any mixture referred to in paragraph (c) or (d) of sub-regulation (1) only such names, instructions or directions for use as have been approved by the Registering Officer, may appear on a container or a label affixed thereto.

11. (1) Geen misstof mag onder die naam vlermuismis geregistreer of verkoop word nie tensy dit minstens 2 persent stikstof en 4 persent fosforoksied wat in 'n tweepersent-sitroensuuroplossing oplosbaar is, en 'n totaal van minstens 8 persent van die twee bestanddele saam bevat: Met dien verstande dat, as dit minder as 2 persent stikstof maar gesamentlik 8 persent of meer stikstof en fosforoksied wat in 'n tweepersent-sitroensuuroplossing oplosbaar is, bevat, dit onder die naam vlermuismisfosfaat geregistreer en verkoop kan word.

(2) Vlermuismis en vlermuismisfosfaat mag slegs as 'n groep 2-misstof geregistreer en verkoop word.

KUNSMATIG GEMENGDE MISSTOWWE.

12. (1) Geen kunsmatig gemengde misstof wat twee of meer van die bestanddele stikstof, fosforoksied wat in 'n tweepersent-sitroensuuroplossing oplosbaar is en kaliumoksied wat in 'n tweepersent-sitroensuuroplossing oplosbaar is, bevat, mag as 'n misstof geregistreer of verkoop word nie tensy dit 'n misstof is—

(a) wat deeglik gemeng word; of

(b) wat genoemde bestanddele in een van die volgende persentasie-kombinasies of in een van die volgende verhoudingskombinasies met minimum totale plantvoedingstowwe bevat:—

	Stikstof.	Fosforoksied.	Kalsiumoksied.	Verhouding.	Minimum totale plantvoeding.
(i)	0	18	6	0:3:1	24; of
(ii)	0	15	10	0:3:2	25; of
(iii)	10	10	0	1:1:0	20; of
(iv)	6	18	0	1:3:0	24; of
(v)	5	15	5	1:3:1	25; of
(vi)	5	15	10	1:3:2	30; of
(vii)	15	0	15	1:0:1	30; of
(viii)	10	10	10	1:1:1	30; of
(ix)	10	5	15	2:1:3	30; of
(x)	10	15	5	2:3:1	30; of
(xi)	3	12	4	—	—; of
(xii)	4	10	6	—	—; of
(xiii)	6	10	3	—	—

Met dien verstande dat mengsels (xi), (xii) en (xiii) slegs in " $\frac{1}{2}$ Org. N" vorm aangebied mag word, terwyl die ander mengsels in " $\frac{1}{2}$ Org. N" vorm sowel as in anorganiese vorm aangebied mag word; of

(c) wat spesiaal deur die Registrasiebeampte as 'n gekonsentreerde misstof goedgekeur word, omdat dit gesamentlik meer as vyftig persent stikstof, fosforoksied en kaliumoksied bevat; of

(d) wat as 'n misstof geskik vir water- of gruislandbou aanbeveel word en wat alleen vir dié doel bemark word. Sulke produkte moet al die makro- en mikro-elemente vir dié doel en in verhouding soos goedgekeur deur die Registrasiebeampte, bevat.

(2) Niemand mag 'n kunsmatig gemengde misstof onder die beskrywing " $\frac{1}{2}$ Org. N" verkoop nie, tensy—

(a) minstens 50 persent van die stikstof in sodanige misstofmengsel van dierlike of plantaardige oorsprong is; en

(b) die uitdrukking " $\frac{1}{2}$ Org. N" duidelik en leesbaar aangebring word op die houer waarin dit verkoop word.

(3) 'n Mengsel met 'n samestelling of verhouding van plantvoedingstofkomponente en minimum totale plantvoedingstowwe in paragraaf (b) van subregulasie (1) genoem, mag slegs onder die betrokke samestelling of verhouding van plantvoedingstofkomponente en minimum totale plantvoedingstowwe geregistreer en verkoop word, en het geen voorafgaande letter, syfer of teken op die houters daarvan nie.

(4) In die geval van 'n mengsel in paragraaf (c) of (d) van subregulasie (1) genoem, kan slegs die name, voorskrifte of gebruiksaanwysings wat die Registrasiebeampte goedgekeur het, op 'n houer of op 'n etiket daaraan geheg, verskyn.

13. (1) A mixture consisting of supers and raw phosphate shall not be regarded as an artificially mixed fertilizer for the purpose of regulation 12 and such a mixture shall not be registered or sold under the name supers and raw phosphate unless it contains at least 8 per cent water-soluble phosphoric oxide, 13 per cent phosphoric oxide soluble in 2-per cent citric acid and 25 per cent total phosphoric oxide, and in the case of raw phosphate also at least 6 per cent phosphoric oxide soluble in 2-per cent citric acid.

(2) There shall be clearly and legibly marked on every container in which such a mixture is sold, as part of and immediately following the name, the percentage oxide soluble in 2 per cent citric acid.

14. A mixture consisting of karoo manure and karoo ash shall not be regarded as an artificially mixed fertilizer for the purpose of regulation 12, and shall not be registered or sold under the name karoo manure and ash unless it contains from 60 to 70 per cent manure and from 30 to 40 per cent manure ash.

15. (a) A mixture consisting entirely of two or more of the materials karoo manure, kraal manure, stable manure, bat manure, compost, karoo ash, sewage sludge, castor meal, other plant residues, abattoir or fishery waste, lime, inferior natural phosphates and similar substances low in nitrogen content and citric-acid-soluble phosphoric oxide and potassium oxide, shall not be regarded as an artificially mixed fertilizer for the purposes of regulation 12. Such mixtures, as well as all group 2 fertilizers, are subject to registration and shall only be sold under a name approved by the Registering Officer.

(b) No fertilizer containing any ingredient of a nature and in amounts which will cause such an interaction as to lead to the partial or complete loss of one or more constituents in a fertilizer, may be registered or sold as a fertilizer.

(c) No fertilizer shall be registered or sold as agricultural lime unless it contains at least 65 per cent calcium and magnesium carbonate with a maximum of 15 per cent magnesium carbonate.

(d) No fertilizer shall be registered or sold as dolomitic agricultural lime unless it contains at least 65 per cent calcium and magnesium carbonate with a minimum of 15 per cent magnesium carbonate.

(e) No fertilizer shall be registered or sold under the name of agricultural gypsum unless it contains at least 65 per cent calcium sulphate ($\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$) and less than 1 per cent sodium (Na).

(f) No fertilizer shall be registered or sold as an agricultural lime, dolomitic agricultural lime or agricultural gypsum unless at least 30 per cent passes through a 60-mesh Tyler sieve and at least 95 per cent passes through a 10-mesh Tyler sieve.

(g) No fertilizer may be registered or sold as a micro element or mixture of micro elements unless it contains at least 10 per cent of the essential elements in the elemental form.

STERILIZATION OF FERTILIZERS.

16. (1) No persons shall import into the Republic—

- (a) any fertilizer which contains bone or any other substance of animal origin; or
- (b) bones or any other substance of animal origin for the purpose of manufacturing any fertilizer;

unless it has been sterilized—

- (i) by subjection to saturated steam under pressure of not less than 40 lb. per square inch maintained for a period of not less than two hours in a digester of not more than 4 tons capacity; or
- (ii) by treatment of the bones, after being broken up, with the vapour of benzol boiling between 95° C. and 115° C. for not less than four hours, live steam to be thereafter admitted at a pressure of 80 lb. per square inch for two hours; or

13. (1) 'n Mengsel wat bestaan uit superfosfaat en rufosfaat word vir die toepassing van regulasie 12 nie as 'n kunsmatig gemengde misstof beskou nie, en sodanige mengsel mag nie onder die naam supers en rufosfaat geregistreer of verkoop word nie, tensy dit minstens 8 persent in water oplosbare fosforoksied, 13 persent fosforoksied wat in tweepersent-sitroensuur oplosbaar is en 25 persent totale fosforoksied, bevat en in die geval van rufosfaat minstens 6 persent fosforoksied wat in twee persent sitroensuur oplosbaar is, bevat.

(2) Op elke houer waarin so 'n mengsel verkoop word, moet, as deel van en onmiddellik na die naam, die persentasie fosforoksied wat in tweepersent-sitroensuur oplosbaar is, duidelik en leesbaar aangebring word.

14. 'n Mengsel wat bestaan uit karoomis en karoo-as word nie vir die toepassing van regulasie 12 as 'n kunsmatig gemengde misstof beskou nie, en mag nie onder die naam karoomis en -as geregistreer of verkoop word nie, tensy dit van 60 tot 70 persent mis en van 30 tot 40 persent mis-as bevat.

15. (a) 'n Mengsel wat uitsluitlik uit twee of meer van die stowwe karoomis, kraalmis, stalmis, vlermuismis, kompos, karoo-as, rioolslyk, kastermeel, ander plantreste, abattoir- of visseryafval, kalk, minderwaardige natuurlike fosfate en soortgelyke stowwe bestaan wat arm is aan stikstof en aan in sitroensuur oplosbare fosforoksied en kaliumoksied, word vir die toepassing van regulasie 12 nie as 'n kunsmatig gemengde misstof beskou nie. Sulke mengsels sowel as alle groep 2-misstowwe is aan registrasie onderworpe en mag alleen onder 'n naam deur die Registrasiebeampte goedgekeur, verkoop word.

(b) Geen misstof wat enige bestanddeel van so 'n aard en in sodanige hoeveelhede bevat dat dit 'n wisselwerking kan veroorsaak wat die gedeeltelike of algehele verlies van een of meer van die bestanddele in 'n misstof tot gevolg kan hê, mag as 'n misstof geregistreer of verkoop word nie.

(c) Geen misstof mag as landboukalk geregistreer of verkoop word nie, tensy dit minstens 65 persent kalsium- en magnesiumkarbonaat, met 'n maksimum van 15 persent magnesiumkarbonaat, bevat.

(d) Geen misstof mag as dolomitiese landboukalk geregistreer of verkoop word nie, tensy dit minstens 65 persent kalsium- en magnesiumkarbonaat, met 'n minimum van 15 persent magnesiumkarbonaat, bevat.

(e) Geen misstof mag as landbougijs geregistreer of verkoop word nie, tensy dit minstens 65 persent kalsiumsulfaat ($\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$) en minder as 1 persent natrium (Na) bevat.

(f) Geen misstof mag as 'n landboukalk, dolomitiese landboukalk of landbougijs geregistreer of verkoop word nie, tensy minstens 30 persent deur 'n 60 maas-Tylersif en minstens 95 persent deur 'n 10 maas-Tylersif gaan.

(g) Geen misstof mag as 'n mikroelement of mengsel van mikroelemente geregistreer of verkoop word nie, tensy dit minstens 10 persent van die noodsaaklike elemente in die element vorm bevat.

STERILISERING VAN MISSTOWWE.

16. (1) Niemand mag—

- (a) 'n misstof wat been of 'n ander stof van dierlike oorsprong bevat; of
- (b) bene of ander stowwe van dierlike oorsprong vir die vervaardiging van 'n misstof;

in die Republiek invoer nie, tensy dit gesteriliseer is—

- (i) deur blootstelling aan versadigde stoom onder 'n druk van minstens 40 lb. per vierkante duim volgehou vir 'n tydperk van minstens twee uur in 'n digester met 'n inhoudsmaat van hoogstens 4 ton; of
- (ii) deur behandeling van die bene, nadat dit stukkend gebreek is, met die dampe van bensol wat tussen 95° C. en 115° C. kook vir 'n tydperk van minstens vier uur, waarna vars stoom onder 'n druk van 80 lb. per vierkante duim twee uur lank toegelaat moet word; of

- (iii) by treatment of the bones, after being broken up, with the vapour of benzol boiling between 95° C. and 115° C. for eight hours; or
- (iv) in the case of marine products, by heating for 20 minutes at a temperature of not less than 100° C., or equivalent treatment; or
- (v) by any other method approved of by the Registering Officer;

and is free from *bacillus anthracis* and organisms of the gas-gangrene type.

(2) No person shall manufacture or sell any fertilizer containing bone or any other substance derived from an animal carcass, unless such bone or substance has been sterilized in the manner prescribed in sub-regulation (1).

STANDARD SIEVE.

17. The standard sieve to be used for determining the fineness of basic slag and rock or treated phosphate shall be of metal and circular in shape with a diameter between 5 and 8 inches; it shall be mounted in a stout metal framework; the parts where the seam meets the framework shall be rounded off by solder or other suitable means in order to avoid crevices in which powder may collect. The sieve shall be fitted with a lid and a box underneath to collect fine material. The mesh of the standard sieve shall be of the "single weave" type, i.e. each wire shall pass alternately over and under successive wires and at right angles to those wires. The mesh shall be of even texture. The standard diameter of the wire and the standard length of the side of the aperture shall each be 0.147 millimeter. In all other respects the sieve shall comply with the specifications for the Tyler Screen Mesh 100.

ADVERTISING OF FERTILIZERS.

18. (a) Any advertisement which relates to a fertilizer shall state whether such fertilizer is a group 1 fertilizer or a group 2 fertilizer.

(b) Reference to registration in advertising literature shall be confined to the words "Registered in terms of the Fertilizers, Farm Feeds and Remedies Act, 1947 (Act No. 36 of 1947)", and no phrasing or trade mark shall be used which is calculated to lead the purchaser to believe that registration implies special approval or official guarantee of efficacy upon the part of the Department of Agricultural Technical Services.

(c) Claims in advertisements relating to the plant food ingredients of a fertilizer shall be restricted to those appearing on the relative application form and which were approved by the Registering Officer in respect of such fertilizer when he last granted the application for registration or renewal of registration.

(d) The chemical analysis or guarantee of each fertilizer as stated on the application form for registration of such fertilizer, shall be stated in any advertisement which relates to such fertilizer.

(e) The name of the fertilizer which appears in any advertisement shall be that which appears on the relative registration certificate.

(f) A typed or printed copy of any advertisement relating to a fertilizer shall be submitted to the Registering Officer either before publication or within 14 days after the first publication thereof.

TAKING OF SAMPLES.

19. (1) In terms of section fifteen of the Act an inspector any other officer specially authorised thereto by the Secretary, may take samples of fertilizers from closed containers anywhere in the Republic.

(2) Where a container contains 5 lb. or more material, sampling shall be performed by either of the following methods:—

- (i) *Mechanically*.—The inspector or other officer shall take 25 (twenty-five) closed containers, irrespective of the number of the run, lot or consignment. The

- (iii) deur behandeling van die bene, nadat dit stukkend gebreek is, met die dampe van bensol wat tussen 95° C. en 115° C. kook vir 'n tydperk van agt uur; of
- (iv) in die geval van seeprodukte, deur verhitting vir 20 minute by 'n temperatuur van minstens 100° C., of ekwivalente behandeling; of
- (v) volgens 'n ander metode goedgekeur deur die Registrasiebeampte;

en vry is van *bacillus anthracis* en organismes van die gas-gangreentipe.

(2) Niemand mag 'n misstof wat been of 'n ander stof afkomstig van die karkas van 'n dier bevat, vervaardig of verkoop nie, tensy sodanige been of stof op die wyse in subregulasie (1) voorgeskryf, gesteriliseer is.

STANDAARDSIF.

17. Die standaardsif wat gebruik word om die fynheid van slakmeel en rots- of behandelde fosfaat te bepaal, moet van metaal gemaak en rond wees met 'n deursnee van tussen 5 en 8 duim; dit moet in 'n stewige metaal-raamwerk gemonteer word; die dele waar die gaas teen die raam raak, moet met soldeersel of op 'n ander geskikte manier afgerond wees om skeurtjies waarin poeier kan versamel, uit te skakel. Die sif moet voorsien wees van 'n deksel en 'n kassie aan die onderkant om fyn materiaal op te vang. Die maaswerk van die standaardsif moet van die enkeldraad- ("single weave"-) tipe wees, d.i. elke draad moet beurtelings bo en onder die opeenvolgende drade deurgaan en moet reghoekig daarmee wees. Die sif se maas moet van egalige tekstuur wees. Die standaard-deursnee van die draad en die standaardlengte van die sy van die gaatjies moet elk 0.147 millimeter wees. In alle ander opsigte moet die sif aan die spesifikasies vir die Tyler Screen Mesh 100 voldoen.

ADVERTEER VAN MISSTOWWE.

18. (a) 'n Advertensie in verband met 'n misstof moet meld of sodanige misstof 'n groep 1-misstof of 'n groep 2-misstof is.

(b) Verwysing na registrasie in advertensieliteratuur word beperk tot die woorde "Geregistreer corenkomstig die Wet op Misstowwe, Veevoedsel en Middele, 1947 (Wet No. 36 van 1947)" en geen uitdrukking of handelsmerk wat daarop gemik is om by die koper die indruk te skep dat registrasie spesiale goedkeuring of 'n amptelike waarborg van die doeltreffendheid daarvan van die kant van die Departement van Landbou-egniese Dienste beteken, mag gebruik word nie.

(c) Aansprake in advertensies met betrekking tot die plantvoedselbestanddele van 'n misstof, word beperk tot dié wat op die betrokke aansoekvorm verskyn en wat deur die Registrasiebeampte goedgekeur is ten opsigte van sodanige misstof toe hy laas die aansoek om registrasie of hernuwing van registrasie toegestaan het.

(d) Die chemiese ontleding of waarborg van elke misstof soos op die aansoekvorm vir registrasie van sodanige misstof gemeld, moet in elke advertensie van sodanige misstof gemeld word.

(e) Die naam van die misstof wat in 'n advertensie verskyn moet dié wees wat op die betrokke registrasiesertifikaat vermeld staan.

(f) 'n Getikte of gedrukte kopie van 'n advertensie ten opsigte van 'n misstof moet of voor publikasie of binne 14 dae na die eerste publikasie daarvan by die Registrasie-beampte ingedien word.

NEEM VAN MONSTERS.

19. (1) Ooreenkomstig artikel vyftien van die Wet kan 'n inspekteur of 'n ander beampte spesiaal deur die Sekretaris daartoe gemagtig, op enige plek in die Republiek monsters van misstowwe uit toegemaakte houters haal.

(2) Waar 'n houer 5 lb. of meer stof bevat, word monsters op een van die volgende maniere geneem:—

- (i) *Meganies*.—Die inspekteur of ander beampte moet 25 (vyf-en-twintig) toegemaakte houters neem, afgesien van die totale getal daarvan in die reeks, lot of

25 containers selected for sampling shall be grouped into 5 lots of 5 each. Container No. 1 of the first lot shall then be opened and the contents thrown into the hopper of a sample splitter with the gate closed. The gate shall then be opened and the speed of feed regulated to avoid spilling from the splitting device.

Splitting devices capable of drawing 1/16th of the original weight of the material, are preferable. The sample so obtained shall then be transferred to a clean container. Containers Nos. 2, 3, 4 and 5 shall be similarly treated, and all samples transferred to the same container. A quantity of approximately 32 lb. should so be obtained in case of 100 lb. containers. This joint sample shall then be thoroughly mixed and again thrown into the hopper of the sample splitter, with the gate closed. The gate shall be opened and a sample of approximately 2 lb. collected. This procedure shall be repeated twice more. The three samples shall be well mixed and passed through a small sample splitter capable of dividing the sample into three portions. Each sample so obtained shall be transferred to an airdry container, sealed and marked. In all three samples shall be obtained from each lot of five containers.

The second, third, fourth and fifth lots shall be similarly treated.

If fewer than 25 containers are to be sampled, each and every container shall be taken.

It shall be the duty of the inspector or officer to clean the splitter thoroughly before a fertilizer is sampled; or

- (ii) *By Hand.*—The inspector or other officer shall take 25 (twenty-five) closed containers, irrespective of the number of the run, lot or consignment. The 25 containers selected for sampling shall be grouped into 5 lots of 5 each. Container No. 1 of the first lot shall then be opened and the contents shall be placed on a clean, smooth sheet, thoroughly mixed and spread out. By means of a scooping utensil take approximately 6 lb. of fertilizer from various locations of the heap. This sample shall be placed in a clean container. Containers Nos. 2, 3, 4 and 5 shall be similarly treated and the samples placed in the same container. A quantity of about 30 lb. should be so obtained from five 100 lb. containers. This joint sample shall be thoroughly mixed and be spread out on a clean, smooth sheet. By means of a scooping utensil take approximately 6 lb. of fertilizer from various locations of the heap. After thorough mixing the joint sample shall be passed through a small sample splitter capable of dividing the sample into three portions. Each sample so obtained shall be transferred to an airdry container, sealed and marked. Lots 2, 3, 4 and 5 shall be similarly treated.

If fewer than 25 containers are to be sampled, each and every container shall be sampled.

In the case of 5 lb. containers to be sampled the contents of all five containers of lot 1 shall be emptied onto the smooth sheet to obtain 25 lb. of material for further subdivision, mechanically or by hand.

- (3) Where a container contains less than 5 lb. of material, sampling shall be performed by the following method:—

An inspector may take any container or containers in which the fertilizer is kept and spread the contents thereof on a clean smooth sheet. Such contents shall thereafter be mixed, after which the inspector may take samples for examination and analysis therefrom.

besending. Die 25 houters wat vir die neem van monsters gekies word, word in 5 groepe van 5 elk gegroepeer. Houter No. 1 van die eerste groep word oopgemaak en die inhoud daarvan gegooi in die bak van 'n verdeler met die sluis toe. Die sluis word dan oopgemaak en die voerspoed gereël om te voorkom dat daar uit die verdelingstoestel gemors word.

Verdelers wat 'n monster van 1/16de van die oorspronklike gewig van die stof kan trek, word verkies. Die monster aldus opgevang word dan na 'n skoon houter oorgeplaas. Houters Nos. 2, 3, 4 en 5 word insgelyks behandel en alle monsters na dieselfde houter oorgeplaas. In die geval van 100 lb.-houters behoort 'n hoeveelheid van ongeveer 32 lb. opgevang te word. Hierdie gesamentlike monster word dan deeglik gemeng en weer in die bak van die monsterverdeler, met die sluis toe, gegooi. Die sluis word dan oopgemaak en 'n monster van ongeveer 2 lb. opgevang. Hierdie prosedure word nog twee maal herhaal. Die drie monsters word deeglik gemeng en deur 'n klein monsterverdeler, wat die monster in drie dele kan verdeel, gegooi. Elke monster aldus verkry, word in 'n lugdroë houter geplaas, verseël en gemerk. Altesaam moet drie monsters van elke groep van vyf houters verkry word.

Die tweede, derde, vierde en vyfde groepe word net so behandel.

Indien van minder as 25 houters monsters geneem moet word, moet uit elke afsonderlike houter geneem word.

Dit is die plig van die inspekteur of beamppte om die verdeler deeglik skoon te maak voordat van 'n misstof monsters geneem word; of

- (ii) *Met die hand.*—Die inspekteur of ander beamppte moet 25 (vyf-en-twintig) toegemaakte houters neem, afgesien van die totale getal daarvan in die reeks, lot of besending.

Die 25 houters wat vir die neem van die monsters gekies word, word in 5 groepe van 5 elk gegroepeer. Houter No. 1 van die eerste groep word oopgemaak en die inhoud daarvan op 'n skoon, gladde seiltjie uitgegooi, deeglik gemeng en oopgesprei. Met 'n skepding word ongeveer 6 lb. van die misstof van verskeie plekke op die hoop geneem. Hierdie monster word in 'n skoon houter geplaas. Houters Nos. 2, 3, 4 en 5 word net so behandel en die monsters word in dieselfde houter geplaas. 'n Hoeveelheid van ongeveer 30 lb. word aldus verkry uit vyf 100 lb.-houters. Hierdie gesamentlike monster word deeglik gemeng en op 'n skoon, gladde seiltjie uitgesprei. Met 'n skepding word ongeveer 6 lb. van die misstof van verskeie plekke op die hoop geneem. Na deeglike menging word die gesamenlike monster deur 'n klein monsterverdeler, wat die monster in drie dele kan verdeel, gegooi. Elke monster aldus verkry, word in 'n lugdroë houter geplaas, verseël en gemerk.

Die 2de, 3de, 4de en 5de groepe word net so behandel.

Indien van minder as 25 houters monsters geneem moet word, word uit elke afsonderlike houter geneem.

Waar van 5 lb.-houters monsters geneem word, word die inhoud van al vyf houters van groep No. 1 uitgegooi op die gladde seiltjie om ongeveer 25 lb. materiaal vir verdere onderverdeling—meganies of met die hand—te verkry.

- (3) Waar 'n houter minder as 5 lb. materiaal bevat, word monsters op die volgende wyse geneem:—

'n Inspekteur kan enige houter of houters waarin die misstof gehou word, neem en die inhoud daarvan op 'n skoon, gladde seiltjie oopsprei. Sodanige inhoud word dan gemeng, waarna die inspekteur monsters vir ondersoek en ontleding daaruit mag neem.

(4) The sample shall then be dealt with as prescribed by sub-section (2) of section fifteen of the Act.

(5) The certificate accompanying one part of the sample to the analyst as required by sub-section (2) of section fifteen of the Act, shall be in the form prescribed in the Fourth Schedule hereto.

ANALYSIS OF FERTILIZERS.

20. (1) The methods set out in sub-regulation (2) shall be employed by an analyst in respect of the analysis of samples of fertilizers submitted to him for analysis by an inspector or any other officer specially authorised by the Secretary to take samples for the purpose of examination or analysis.

(2) (a) *Preparation of Samples for Analysis.*—Any sample of fertilizer shall be prepared for analysis as follows:—

If foreign matter is present, e.g. feathers, this shall be removed, weighed and calculated as a percentage of the whole sample. The whole of the sample shall then be crushed until the following sizes are obtained: For NPK mixtures: All to pass a 60-mesh Tyler or B.S. Sieve, for straights: All to pass a 24-mesh Tyler or 22 B.S. Sieve. After crushing, the sample shall be mixed thoroughly by passing it through a laboratory-size riffle. The two portions thus obtained shall be combined and again passed through the riffle. This procedure shall be repeated twice more. The sample-portion of it shall then be stored in an airtight container.

(b) The following methods shall be employed to determine the amount of nitrogen:—

(i) *When present as ammonia or ammonium salts.*

Apparatus.

The apparatus represented in the diagram hereto or any standard distillation unit of a similar type may be used. The apparatus may be modified by replacing flask A with any other suitable flask, e.g. a Pyrex conical or round-bottom flask. The heating of the flask is best done electrically. The rubber connections in the apparatus shall be leak-free. The tap of the dropping funnel may be replaced by a rubber tube and screw clip.

Reagents.

The following reagents may be used:—

- (i) Standard sodium hydroxide solution, carbonate-free, 0.2N, accurately standardised by titration against standard acid using methyl red indicator;
- (ii) Standard hydrochloric acid solution, 0.2N, accurately standardised against pure sodium carbonate;
- (iii) Porcelain chips: Approximately 3 millimeter diameter.
- (iv) Concentrated sodium hydroxide solution: About 50 per cent W/V.

Procedure.

The following procedure shall be followed:—

Add from a pipette or burette, 50.00 ml. of standard hydrochloric acid to the clean flask F (Figure 1). Add an amount of water sufficient to cover the tip of the safety bulb when the apparatus is assembled. Add about 0.2 ml. of methyl red indicator.

Add a suitable volume or weighed portion of the material the nitrogen content of which is to be determined, to the distilling flask A (Figure 1). The amount of sample taken must have a nitrogen content equivalent to 40 to 45 ml. of 0.2N acid. Dilute the contents of flask A to about 250 ml. with water. This volume

(4) Die monster word dan behandel soos voorgeskryf by subartikel (2) van artikel vyftien van die Wet.

(5) Die sertifikaat soos vereis by subartikel (2) van artikel vyftien van die Wet, wat een deel van die monster na die ontleder vergesel, moet in die vorm wees wat in die Vierde Bylae hiervan voorgeskryf word.

ONTLEDING VAN MISSTOWWE.

20. (1) Die metodes in subregulasie (2) uiteengetrek, moet deur 'n ontleder gebruik word ten opsigte van die ontleding van misstofmonsters vir ontleding aan hom voorgelê deur 'n inspekteur of ander beaampte spesiaal deur die Sekretaris gemagtig om monsters vir die doel van ondersoek of ontleding te neem.

(2) (a) *Voorbereiding van monsters vir ontleding.*—'n Misstofmonster moet soos volg vir ontleding voorberei word:—

Indien daar vreemde materiaal, bv. vere, in is, word dit verwyder, geweeg en as persentasie van die hele monster bereken. Die hele monster word dan fyngemaak totdat die volgende groottes verkry is: Vir NPK-mengsels: Alles moet deur 'n 60 maas-Tyler- of B.S.-sif gaan: Vir enkelvoudige misstowwe: Alles moet deur 'n 24 maas-Tyler- of 22 B.S.-sif gaan. Nadat die monster fyngemaak is, word dit deeglik gemeng deur dit deur 'n verdeler van laboratoriumgrootte te gooi. Die twee dele aldus verkry, word saamgevoeg en weer deur die verdeler gegooi. Hierdie prosedure word nog twee maal herhaal. Die monsterdeel daarvan word dan in 'n lugdigte houer bewaar.

(b) Die volgende metodes moet gebruik word om die hoeveelheid stikstof te bepaal:—

(i) *Wanneer aanwesig as ammoniak of ammonium-soute.*

Apparaat.

Die apparaat in die skets hierby of enige standaarddistilleereenheid kan gebruik word. Die apparaat kan gewysig word deur fles A deur enige ander geskikte fles bv. 'n koniese of rondeboom-Pyrexflēs, te vervang. Elektriesiteit is die geskikste om die fles te verwarm. Die gomlastiekverbindinge in die apparaat moet dig wees. Die kraan van die drupregter kan deur 'n gomlastiekpypie en skroefknypier vervang word.

Reagense.

Die volgende reagense moet gebruik word:—

- (i) Standaardnatriumhidroksiedoplossing-karbonaatvry, 0.2N, akkuraat gestandaardiseer deur middel van titrasie teen 'n standaardsuur met gebruikmaking van metielrooi as indikator;
- (ii) standaardsootsuuroplossing, 0.2N, akkuraat gestandaardiseer teen suiwer natrium-karbonaat;
- (iii) porseleinstukkies: Ongeveer 3 millimeter in deursnee;
- (iv) gekonsentreerde natriumhidroksiedoplossing: Ongeveer 50 persent g/w.

Prosedure.

Onderstaande prosedure moet gevolg word:—

Bring deur middel van 'n pipet of buret 50.00 ml. standaardsootsuur in die skoon fles F (figuur 1) oor. Voeg genoeg water by om die punt van die veiligheidsbol toe te maak wanneer die apparaat aanmekaargesit is. Voeg ongeveer 0.2 ml. metielrooi-indikator by.

Voeg 'n geskikte volume of afgewegde deel van die materiaal waarvan die stikstofgehalte bepaal moet word, in die distilleerfles A (figuur 1). Die hoeveelheid monster geneem, moet 'n stikstofgehalte gelyk aan 40 tot 45 ml. 0.2N-suur hê. Verdun die inhoud van fles A tot ongeveer 250 ml. met water. Hierdie volume

may be increased if trouble with bumping is encountered. Add 2 to 3 porcelain chips or about 1 g. of granulated zinc to the solution in the distillation flask (zinc cannot be used if nitrates are present in the sample). Connect the flask to the rubber stopper containing the splash head and dropping funnel as shown in Figure 1.

Make the solution in the distilling flask alkaline by slowly adding through the dropping funnel, an amount of 50 per cent sodium hydroxide solution sufficient to neutralise any acid in the sample, and then add 25 ml. excess sodium hydroxide. If desired, phenolphthalein indicator may be added to the flask to enable the neutralization point to be noted. It is essential that, during the whole process of adding the sodium hydroxide solution, a liquid seal be maintained above the tap on the dropping funnel in order to avoid loss of ammonia.

Turn on the water to the condenser. Heat the contents of the distilling flask rapidly to boiling and then adjust the heat so that the boiling is continuous but not too rapid. Adjust the tip of the safety bulb in the receiving solution so that the end of the bulb dips only slightly into the solution. There should be a gentle oscillation of the short column of the acid in the tip of the safety bulb. Continue the distillation until at least 100 ml. of distillate has been collected. Lower the Erlenmeyer flask so that the end of the safety bulb is out of the acid and remove the source of heat from the distillation flask. Do not remove the source of heat until the receiver has been lowered, otherwise part of the acid may be sucked back. Disconnect the safety bulb from the condenser and rinse it out into the flask with a small amount of water from a wash bottle. Wash down the inside of the mouth of the Erlenmeyer flask with water. Titrate the solution in the flask with standard sodium hydroxide solution until the colour just changes from red to orange.

Carry out a blank determination by repeating the whole procedure omitting only the sample.

After allowing for the blank value, 1 ml. of 0.2000 N-NaOH is equal to 0.002802 gN.

(ii) *When present as urea, ammonia or ammonium salts.*

Apparatus.

The apparatus described in sub-paragraph (i) of paragraph (b) shall be used.

Reagents.

In addition to the reagents referred to in sub-paragraph (i) of paragraph (b), concentrated sulphuric acid 98/100 per cent w/w shall also be used as a reagent.

Procedure.

The following procedure shall be followed:—

Transfer to a 500 ml. Kjeldahl flask a volume or weighed portion of the sample sufficient to contain nitrogen equivalent to 40 to 45 ml. of 0.2 N acid. Wash the sample into the flask with about 10 ml. of water. Carefully add about 20 ml. of concentrated sulphuric acid, pouring the acid down the neck of the flask so as to wash any remaining sample into the flask. Mix the contents of the flask by swirling and add a few porcelain chips. Heat gently over a flame or electric heater until the initial reaction has subsided, then increase the heat and digest by boiling gently until the solution becomes a pale yellow in colour. The total boiling time is usually about 1 to 1½ hours. Allow the solution to cool to near room temperature. Dilute the contents of the flask to

kan vermeerder word indien moeilikheid met stamp ondervind word. Voeg 2 tot 3 porseleinstukkie of ongeveer 1 g. korrelsink by die oplossing in die distilleerfles (indien daar nitrate in die monster is, kan sink nie gebruik prop nie). Verbind die fles met die gomlastiekprop wat die spatkop en druptregter bevat, soos aangetoon in figuur 1.

Maak die oplossing in die distilleerfles alkalies deur stadig deur die druptregter 'n hoeveelheid van 50 persent natriumhidroksiedoplossing by te voeg, voldoende om enige suur in die monster te neutraliseer, en voeg dan 25 ml. oormaat natriumhidroksied by. Indien verlang, kan fenolftaleienindikator in die fles gevoeg word om die neutraalpunt te kan waarneem. Dit is noodsaaklik dat daar gedurende die hele proses van byvoeging van natriumhidroksiedoplossing 'n vloeistofseël bokant die kraan van die druptregter gehou moet word om verlies van ammoniak te voorkom.

Maak die waterkraan na die verkoeler oop. Verwarm die inhoud van die distilleerfles vinnig tot by kookpunt, en stel die hitte dan sodat dit aanhoudend maar nie te vinnig kook nie. Verstel die punt van die veiligheidsbol in die opvangoplossing sodat die punt van die bol net effens in die oplossing steek. Daar behoort 'n geringe skommeling in die kort kolom van die suur in die punt van die veiligheidsbol te wees. Hou aan met die distillering totdat minstens 100 ml. distillaat opgevang is. Laat sak die Erlenmeyerfles sodat die punt van die veiligheidsbol uit die suur is en verwyder die hittebron van die distilleerfles af. Die hittebron moet nie verwyder word voordat die opvangfles laat sak is nie, aangesien 'n deel van die suur teruggesuijg mag word. Maak die veiligheidsbol los van die afkoeler en spoel dit in die fles uit met 'n klein hoeveelheid water uit 'n wasbottel. Spoel die binnekant van die Erlenmeyerfles se bek met water af. Titreer die oplossing in die fles met standaardnatriumhidroksiedoplossing totdat die kleur net van rooi na oranje verander.

Doen 'n kontrolebepaling deur die hele proses te herhaal sonder die minster.

Nadat toegelaat is vir die kontrolewaarde, is 1 ml. van 0.2000N-NaOH gelyk aan 0.002802 gN.

(ii) *Wanneer aanwesig as ureum, ammoniak of ammoniumsoute.*

Apparaat.

Die apparaat in subparagraaf (i) van paragraaf (b) beskryf, word gebruik.

Reagense.

Behalwe die reagense genoem in subparagraaf (i) van paragraaf (b), moet ook gekonsentreerde swawelsuur 98/100 persent g/g as reagens gebruik word.

Prosedure.

Onderstaande prosedure moet gevolg word:—

Bring in 'n 500 ml.-Kjeldahlfles 'n volume of afgeweege deel van die monster oor voldoende om 'n stikstofekwivalent van 40 tot 45 ml. 0.2N-suur te bevat. Spoel die monster in die fles in met ongeveer 10 ml. water. Voeg versigtig ongeveer 20 ml. gekonsentreerde swawelsuur by; gooi die suur teen die nek van die fles af op so 'n wyse dat enige oorblywende deeltjies van die monster in die fles kom. Meng die inhoud van die fles deur dit te swaai-skud en voeg 'n paar stukkie porselein by. Verhit stadig oor 'n vlam of elektriese verwarmertotdat die aanvanklike reaksie bedaar het, verhoog die hitte en verteer deur versigtig te kook totdat die oplossing 'n ligte geel kleur aanneem. Die totale kooktyd is gewoonlik 1 tot 1½ uur. Laat die oplossing afkoel tot ongeveer kamertemperatuur. Verdun die

about 250 ml. by slowly adding water down the neck of the flask and turning the flask while the water runs down. Connect the Kjeldahl flask to the distillation apparatus shown in Figure 1. The further procedure as set out in sub-paragraph (i) shall then be followed.

Carry out a blank determination.

(iii) *When present as nitrate and/or organic nitrogen.*

This procedure may not be used when urea is present in the sample.

Apparatus.

The apparatus described in subparagraph (i) of paragraph (b) shall be used.

Reagents.

In addition to the reagents referred to in subparagraph (i) of paragraph (b), the following reagents shall also be used:—

- Salicylic acid.
- Sulphuric acid, 98/100 per cent w/w.
- Zinc dust.
- Mercuric sulphate.
- Potassium sulphate.

Procedure.

The following procedure shall be followed:—

Transfer to a 500-ml. Kjeldahl flask a weighed portion of the sample sufficient to contain nitrogen equivalent to 40 to 45 ml. of 0.2 N acid. Add a freshly prepared solution of 2 g. of salicylic acid and 30 ml. of concentrated sulphuric acid so as to cover the whole of the substance at once. Thoroughly mix the contents of the flask. Should the mixture become warm at any time during the mixing process, cool it immediately by placing the flask in ice water. Allow the flask to stand in the cold with occasional shaking for 30 minutes. Heat the flask on a boiling water bath for 30 minutes with occasional shaking.

Cool the solution and add 2 g. of zinc dust, little by little, through a long-stemmed funnel, shaking and cooling the contents of the flask meanwhile by immersion in cold water. When all the zinc has been added, shake the flask at intervals of 15 minutes for about 1½ hours and then allow it to stand overnight in the cold, the mouth of the flask being closed with a loosely fitting, pear-shaped, hollow glass stopper.

When reduction is completed, support the flask in an inclined position on a piece of asbestos millboard, having a circular hole 1 in. in diameter, and heat it with a low flame for 1½-2 hours. Increase the heat and boil the contents of the flask for 1½-2 hours, rotating the vessel at intervals. Remove the flame, add 1 g. of mercuric sulphate, and again boil for 1½ hours or until the acid becomes colourless. Remove the flame, add 7.5 g. of potassium sulphate and 10 ml. of concentrated sulphuric acid; gently boil the mixture for a further 1½-2 hours. If the mixture is colourless, the digestion is complete but if there are any brown specks, add 1 g. of coarsely powdered potassium sulphate and continue the boiling for 1 hour.

NOTE.—The volume of sulphuric acid shall be kept above 20 ml. at all stages during the digestion.

Cool the flask and carefully dilute the contents with about 200 ml. of water. Add about 1 g. of granulated zinc or porcelain chips. Connect the flask to the ammonia distillation apparatus. Add 10 ml. of 10 per cent (w/v) sodium sulphide solution. The ammonia shall then be distilled in the manner set out in subparagraph (i).

Carry out a blank determination.

inhoud van die fles tot ongeveer 250 ml. deur stadig water langs die nek van die fles af by te gooi en die fles te draai terwyl die water afloop. Verbind die Kjeldahl-fles met die distilleerapparaat aangetoon in figuur 1. Die verdere prosedure uiteengesit in subparagraaf (i) word dan gevolg.

Doen 'n kontrolebepaling.

(iii) *Wanneer aanwesig as nitraat en/of organiese stikstof.*

Hierdie prosedure mag nie gebruik word as daar ureum in die monster is nie.

Apparaat.

Die apparaat in subparagraaf (i) van paragraaf (b) beskryf, moet gebruik word.

Reagense.

Behalwe die reagense in subparagraaf (i) van paragraaf (b) genoem, moet ook die volgende reagense gebruik word:—

- Salisielsuur.
- Swawelsuur, 98/100 persent g/g.
- Sinkstof.
- Kwiksulfaat.
- Kaliumsulfaat.

Prosedure.

Onderstaande prosedure moet gevolg word:—

Bring in 'n 500 ml.-Kjeldahl-fles 'n afgewegde deel van die monster oor voldoende om 'n stikstofekwivalent van 40 tot 45 ml. van 0.2N-suur te bevat. Voeg 'n pas bereide oplossing van 2 g. salisielsuur by en 30 ml. gekonsentreerde swawelsuur sodat die hele monster meteens bedek word. Meng die inhoud van die fles deeglik. Indien die mengsel te eniger tyd gedurende die mengproses warm word, koel dit dadelik af deur die fles in yswater te plaas. Laat die fles 30 minute lank in die koue staan en skud af en toe. Verhit die fles 30 minute lank op 'n kookwaterbad en skud af en toe.

Koel die oplossing af en voeg 2 g. sinkstof, bietjie vir bietjie, deur 'n langsteelregter by, terwyl die inhoud intussen geskud en in koue water afgekoel word. Sodra al die sink bygevoeg is, skud die fles met tussenpose van 15 minute ongeveer 1½ uur lank en laat dit dan oornag in die koue staan, die bek van die fles toegemaak met 'n lospassende, peervormige, hol glasprop.

Wanneer reduksie klaar plaasgevind het, stut die fles in 'n effens skuins posisie op 'n stuk asbesplaat met 'n ronde gat van 1 duim in deursnee en verhit dit 1½ tot 2 uur lank met 'n klein vlammetjie. Verhoog die hitte en kook die inhoud van die fles 1½ tot 2 uur lank, terwyl die fles by tussenpose gedraai word. Verwyder die vlam, voeg 1 g. kwiksulfaat by en kook weer 1½ uur lank of totdat die suur kleurloos word. Verwyder die vlam, voeg 7.5 g. kaliumsulfaat en 10 ml. gekonsentreerde swawelsuur by; kook die mengsel nog 1½ tot 2 uur lank versigtig. As die mengsel kleurloos is, is die vertering voltooi, maar as daar enige bruin stippeltjies is, voeg 1 g. growwe kaliumsulfaatpoeier by en kook nog 1 uur.

BELANGRIK.—Die volume van die swawelsuur moet te alle tye gedurende die verteringsproses bo 20 ml. gehou word.

Koel die fles af en verdun die inhoud versigtig met ongeveer 200 ml. water. Voeg ongeveer 1 g. korrelsink of porseleinstukkies by. Verbind die fles met die ammoniakdistilleerapparaat. Voeg 10 ml. 10 persent (g/w)-natriumsulfiedoplossing by. Die ammoniak word dan gedistilleer op die wyse in subparagraaf (i) uiteengesit.

Doen 'n kontrolebepaling.

(c) The following methods shall be used to extract P_2O_5 and K_2O :—

(i) When in a water-soluble form—

Apparatus.

A stohman flask, with a calibration mark at 500 ml. and an end-over-end shaker rotating at 30-40 r.p.m. shall be used as apparatus.

Procedure.

The following procedure shall be followed:—

Weigh 10.000 (± 0.005) g. of prepared sample into the Stohman flask. Add distilled water (of pH 4.5 to 7.0 and temperature 20-25° C.) to the calibration mark. Stopper the flask and shake it on the end-over-end shaker for exactly 30 minutes. Filter the solution immediately through a dry medium-grained paper (Whatman No. 40 or equivalent).

Discard the first 25-50 ml. of filtrate and collect the remaining filtrate, which must be clear. If the filtrate is not clear, filter it through the same paper.

(ii) When in the form of citric-acid-soluble P_2O_5 or K_2O .

Apparatus.

The apparatus referred to in sub-paragraph (i) of paragraph (c) shall be used.

Reagents.

2 per cent citric acid w/v solution shall be used as a reagent and the solution shall be prepared fresh each day using B.P. grade (or equivalent) citric acid ($C_6H_8O_7 \cdot 2H_2O$).

Procedure.

The following procedure shall be used:—

Weigh 5.000 (± 0.005) g. of prepared sample into the Stohman flask. Add citric acid solution (of temperature 20-25° C.) to the calibration mark. Stopper the flask and shake it on the end-over-end shaker for exactly 30 minutes. Filter the solution immediately through a dry, medium grained paper (Whatman No. 40 or equivalent).

Discard the first 25-50 ml. of filtrate and collect the remaining filtrate, which must be clear. If the filtrate is not clear, refilter it through the same paper.

(d) The following method shall be employed to determine the amount of P_2O_5 :—

Apparatus.

Platinum crucibles, about 20-25 ml. and a muffle furnace, for temperatures up to 1,100° C. shall be used as apparatus.

Reagents.

The following reagents shall be used:—

Molybdate reagent, obtained as follows: Mix 100 g. of molybdic anhydride (MoO_3) with 400 ml. of water. While stirring vigorously, slowly add 80 ml. of ammonium hydroxide (25-27 per cent NH_3 w/w). When solution is complete, filter. Prepare a second solution by adding 500 ml. of 55 per cent nitric acid to 500 ml. of water. Stir this latter solution vigorously, preferably by means of a current of clean air, and add the molybdate solution very slowly through a tube dipping under the solution. When all has been added, continue the current of air for at least 1 hour. Allow the solution to settle, filter if necessary and store in a glass stoppered bottle.

Magnesia mixture, obtained as follows: Dissolve 50 g. of $MgCl_2 \cdot 6H_2O$ and 100 g. of NH_4Cl in 500 ml. of water. Add ammonium hydroxide in slight excess, allow to stand overnight, and filter if necessary. Make the solution just acid with hydrochloric acid, dilute to 1 litre, and store in a glass-stoppered bottle.

(c) Die volgende metodes om P_2O_5 en K_2O te ekstraheer, moet gebruik word.

(i) Wanneer in wateroplosbare vorm

Apparaat.

'n Stohmanfles met 'n ykmerk op 500 ml. en 'n tuimelskudmasjien wat teen 30 tot 40 o.p.m. draai, word gebruik.

Prosedure

Onderstaande prosedure moet gevolg word:—

Weeg 10.000 (± 0.005) g. van die voorbereide monster af in die Stohmanfles. Voeg gedistilleerde water (van pH 4.5 tot 7.0 en temperatuur 20° tot 25° C.) tot by die ykmerk by. Sit 'n prop op die fles en skud dit presies 30 minute lank in die tuimelskudmasjien. Filtreer die oplossing dadelik deur 'n droë middelkorrelrige filtreerpapier (Whatman No. 40 of ekwivalent).

Gooi die eerste 25 tot 50 ml. filtraat weg en vang die oorblywende filtraat op. Dit moet helder wees. Indien die filtraat nie helder is nie, filtreer dit weer deur dieselfde papier.

(ii) Wanneer in vorm van sitroensuuroplosbare P_2O_5 of K_2O .

Apparaat.

Die apparaat genoem in subparagraaf (i) van paragraaf (c) moet gebruik word.

Reagense.

2 persent g/v-sitroensuuroplossing moet as reagens gebruik word en die oplossing moet daagliks vars berei word deur sitroensuur ($C_6H_8O_7 \cdot 2H_2O$) van B.P.-graad (of ekwivalent) te gebruik.

Prosedure.

Onderstaande prosedure moet gevolg word:—

Weeg 5.000 (± 0.005) g. van die voorbereide monster in die Stohmanfles af. Voeg sitroensuuroplossing (van temperatuur 20°-25° C.) tot by die ykmerk by. Sit 'n prop op die fles en skud dit presies 30 minute in die tuimelskudmasjien. Filtreer die oplossing dadelik deur 'n droë middelkorrelrige filtreerpapier (Whatman No. 40 of ekwivalent).

Gooi die eerste 25 tot 50 ml. filtraat weg en vang die oorblywende filtraat op. Dit moet helder wees. Indien die filtraat nie helder is nie, filtreer dit weer deur dieselfde papier.

(d) Die volgende metode om die hoeveelheid P_2O_5 te bepaal, moet gebruik word:—

Apparaat.

Platinumkroesies, ongeveer 20 tot 25 ml., en 'n moffeloond vir temperature van tot 1100° C.

Reagense.

Die volgende reagense moet gebruik word:—

Molibdaatreagens, as volg verkry: Meng 100 g. molibdeen-anhidried (MoO_3) met 400 ml. water. Terwyl dit vinnig geroer word, gooi stadig 80 ml. ammonium-hidroksied (25-27% NH_3 g/g) by. Sodra oplossing voltooi is, filtreer. Berei 'n tweede oplossing deur 500 ml. 55%-salpetersuur by 500 ml. water te voeg. Roer hierdie laasgenoemde oplossing deeglik, verkieslik deur middel van 'n stroom skoon lug, voeg die molibdaatoplossing baie stadig by deur 'n buis waarvan die punt in die oplossing gedruk is. Wanneer alles bygevoeg is, word die stroom lug nog minstens een uur lank deurgestuurd. Laat die oplossing besink, filtreer indien nodig en bewaar in 'n bottel met glasprop.

Magnesiamengsel, as volg verkry: Los 50 g. $MgCl_2 \cdot 6H_2O$ en 100 g. NH_4Cl op in 500 ml. water. Voeg 'n geringe oormaat ammonium-hidroksied by, laat oornag staan, en filtreer indien nodig. Maak die oplossing net suur met sout-suur, verdun tot 1 liter en bewaar in 'n bottel met glasprop.

Mitric acid, concentrated, about 55 per cent w/w.

Ammonium nitrate, solid.

Ammonium nitrate solution, 5 per cent W/v.

Ammonium hydroxide solutions, obtained as follows:—

1+1; mix 1 volume of about 25 per cent w/w NH_3 solution with 1 volume of water.

1+2; mix 1 volume of about 25 per cent w/w NH_3 solution with 2 volumes of water.

1+20; mix 1 volume of about 25 per cent w/w NH_3 solution with 20 volumes of water.

Procedure.

The following procedure shall be used:—

Transfer an accurately measured volume of solution obtained as described in sub-paragraph (i) or (ii) of paragraph (c), containing 0.14-0.16 g. of P_2O_5 , to a clean unscratched 500 ml. glass-stoppered Erlenmeyer flask. Dilute to about 100 ml. with water and add 15 ml. of concentrated nitric acid. Cover the flask with a watch glass and boil the solution gently for 15-20 minutes.

Cool the solution to 40-50° C. add 10 g. of ammonium nitrate and swirl to dissolve. Keep the solution at 40-50° C. and add 100 ml. of molybdate reagent of the same temperature. Stopper the flask and shake vigorously for 5 to 10 minutes. Wash down the stopper and the mouth of the flask and allow to stand overnight.

Filter the solution through a Whatman No. 40 (or equivalent) paper without attempting to transfer the precipitate. Wash the precipitate by decantation 3 times with 20 ml. portions of 50 per cent ammonium nitrate solution. Allow the filter to drain.

Place the flask in which precipitation took place under the filter funnel. Dissolve the precipitate on the paper by pouring ammonium hydroxide (1+2) in a thin stream (a pipette is a convenient dispenser) onto the filter. Use as little ammonium hydroxide as possible. When no yellow precipitate remains, wash the filter successively with hot water, 2 N hydrochloric acid and finally with 1+2 ammonium hydroxide.

Add 0.5 g. of pure citric acid to the filtrate. If the solution is cloudy, refilter it through the original filter paper. If the filtrate is still not clear, add a small amount of filter pulp (made by macerating a 9 cm. filter paper), boil the solution and refilter it through the original paper.

Incinerate the washed filter paper and fuse the residue with about 0.2 g. of sodium carbonate. Dissolve the fused residue in water, filter the solution and make it just acid with hydrochloric acid. Add the acidified solution to the main filtrate.

Transfer the main filtrate quantitatively to a 500 ml. beaker. The volume of the main filtrate should now be about 100 ml. or less. Using methyl red indicator just acidify the solution with 5 N hydrochloric acid. Cool the solution and add 25 ml. of magnesia mixture. While stirring constantly, add from a burette 1+1 ammonium hydroxide at the rate of 1 drop per second. When the precipitate starts to form, stop the addition of ammonium hydroxide and stir until no further precipitation takes place. Then add a few more drops of ammonium hydroxide and stir again. Continue in this manner until the solution is alkaline. Finally add 10 ml. of 1+1 ammonium hydroxide, stir the solution, cover the beaker with a clock glass and allow to stand overnight.

Gekonsentreerde salpetersuur, ongeveer 55 persent g/g.

Ammoniumnitraat, vaste stof.

Ammoniumnitraat oplossing, 5 persent g/v.

Ammoniumhidroksiedoplossings, as volg verkry:—

1+1; meng 1 volume NH_3 -oplossing ± 25 persent g/g met 1 volume water.

1+2; meng 1 volume NH_3 -oplossing ± 25 persent g/g met 2 volumes water.

1+20; meng 1 volume NH_3 -oplossing ± 25 persent g/g met 20 volumes water.

Prosedure.

Onderstaande prosedure moet gevolg word:—

Bring 'n akkuraat afgemete volume oplossing verkry soos beskryf in subparagraaf (i) of (ii) van paragraaf (c), bevattende 0.14-0.16 g. P_2O_5 , oor in 'n ongeskraapte 500 ml.-Erlenmeyerfles met glasprop. Verdun tot ongeveer 100 ml. met water en voeg 15 ml. gekonsentreerde salpetersuur by. Maak die fles toe met 'n oorlosieglass en kook die oplossing 15-20 minute lank stadig.

Koel die oplossing tot 40-50° C. af, voeg 10 g. ammoniumnitraat by en swaaiskud die fles om die ammoniumnitraat op te los. Hou die oplossing by 40-50° C. en voeg 100 ml. molibdaat-reagens van dieselfde temperatuur by. Sit 'n prop op die fles en skud 5 tot 10 minute goed. Spoel die prop en die bek van die fles af en laat oornag staan.

Filtreer die oplossing deur 'n Whatman No. 40 papier (of ekwivalent) sonder om te probeer om die neerslag ook oor te bring. Was die neerslag 3 keer deur dekantering met hoeveelhede van 20 ml. 5 persent-ammoniumnitraatoplossing elk. Laat die filter dreineer.

Plaas die fles waarin die neerslag plaasgevind het onder die tregeter se punt. Los die neerslag op die papier op deur ammoniumhidroksied (1+2) in 'n dun straal ('n pipet is handig vir die doel) op die filter te laat loop. Gebruik so min ammoniumhidroksied as moontlik. Wanneer geen geel neerslag oorbly nie, word die filter agtereenvolgens met warm water, 2N-soutsuur en eindelik met 1+2-ammoniumhidroksied gewas.

Voeg 0.5 g. suiwer sitroensuur by die filtraat. As die oplossing troebel is, filtreer dit weer deur die oorspronklike filtreerpapier. As die filtraat nog nie helder is nie, voeg 'n klein hoeveelheid filtreerpulp (gemaak deur 'n 9 cm.-filtreerpapier fyn te vryf) by, kook die oplossing en filtreer dit weer deur die oorspronklike papier.

Veras die gewaste filtreerpapier en smelt die oorblyfsel met omtrent 0.2 g. natriumkarbonaat. Los die gesmelte res in water op, filtreer die oplossing en maak dit net suur met soutsuur. Voeg hierdie oplossing by die eerste filtraat. Bring die eerste filtraat kwantitatief oor in 'n 500 ml.-beker. Die volume van die eerste filtraat moet nou ongeveer 100 ml. of minder wees. Maak die oplossing net suur met 5N-soutsuur, met gebruikmaking van metielrooi-indikator. Koel die oplossing af en voeg 25 ml. magnesiameengsel by. Terwyl gedurig geroer word, voeg met 'n buret 1+1 ammoniumhidroksied by teen 1 druppel per sekonde.

Wanneer die neerslag begin vorm, hou op om ammoniumhidroksied by te voeg en roer totdat geen verdere neerslag plaasvind nie. Voeg dan 'n paar druppels ammoniumhidroksied by en roer weer. Hou op hierdie wyse aan totdat die oplossing alkalies is. Voeg uiteindelik 10 ml. 1+1 ammoniumhidroksied by, roer die oplossing, maak die beker met 'n oorlosieglass toe en laat oornag staan.

Filter the solution through a Whatman No. 40 (or equivalent) paper without attempting to transfer the precipitate. Wash the precipitate by decantation 3 times with 1+20 ammonium hydroxide solution using about 25 ml. portions for each washing. When adding the ammonium hydroxide to the beaker, use the solution to wash down the walls of the beaker. Place the beaker under the filter funnel. Dissolve the precipitate on the paper by pouring 25 ml. of 5 N hydrochloric acid in a thin stream from a pipette onto the filter. The hydrochloric acid should be added in 5 approximately equal portions. Wash the filter thoroughly with 0.5 N-HCl. Dilute the solution to about 100 ml. with water and add 2 ml. of magnesia mixture. Precipitate magnesium ammonium phosphate by adding 1+1 ammonium hydroxide, with stirring, exactly as described above. Finally add 10 ml. excess ammonium hydroxide, cover the beaker with a clock glass and allow to stand overnight.

Filter the solution through a Whatman No. 40 (or equivalent) paper. Wash the precipitate, first by decantation, and then on the filter, with 1+20 ammonium hydroxide until free from chlorides. Transfer last traces of precipitate from the beaker to the filter with the aid of a policeman.

Place the paper and precipitate in a clean, previously ignited and weighed platinum crucible. Dry the precipitate in an oven at about 100°C. Transfer the crucible to a muffle furnace at about 200°C., and raise the temperature slowly so as to char the paper without inflaming it. Burn off the carbon at the lowest possible temperature, but in any event below 800°C. Finally ignite at 1050 to 1100°C. Cool the crucible in a desiccator, allow it to stand in the balance case for 10 minutes and weigh. Repeat the incineration, cooling and weighing until the difference between successive weighings is not more than 0.0002 g.

Weight of precipitate $\times 0.6377$ = weight of P_2O_5 in the aliquot taken for analysis.

(e) The following method shall be employed to determine the amount of K_2O :—

Apparatus.

The following apparatus shall be used :—

Flat-bottom flask, 250 ml. long neck : Provided that other vessels, such as Kjeldahl flasks or volumetric flasks, may also be used. The essential feature is that the flasks must have long necks to avoid loss due to bumping during the evaporation step to precipitate potassium chloroplatinate. The necks also serve to provide reflux to ensure that the precipitate does not dry out prematurely.

Sintered glass crucible, porosity No. 4.

Electric oven, forced draught, capable of maintaining a temperature of $100^\circ\text{C} \pm 2^\circ\text{C}$.

Reagents.

The following reagents shall be used :—

Saturated ammonium oxalate solution obtained as follows.—Add 100 ml. of water to $120 \text{ g} \pm 1 \text{ g}$. ammonium oxalate. Stir vigorously. A small proportion of the salt should remain undissolved. Allow to settle and decant the clear solution.

Ammonium hydroxide, concentrated approximately 25 per cent w/w.

Nitric acid, concentrated, about 55 per cent w/w.

Hydrochloric acid, concentrated, about 30-33 per cent w/w.

Platinum solution obtained as follows: Dissolve $1.05 \text{ g} \pm 0.005 \text{ g}$. of chloroplatinic acid in 10 ml. of water.

Undenatured ethyl alcohol, about 95 per cent.

Filtreer die oplossing deur 'n Whatman No. 40-papier (of ekwivalent) sonder om te probeer om die neerslag oor te bring. Was die neerslag 3 keer deur dekantering met hoeveelhede van 25 ml. 1+20 ammoniumhidroksiedoplossing vir elke was. Wanneer die ammoniumhidroksied in die beker gevoeg word, gebruik die oplossing om die kante van die beker af te spoel. Plaas die beker onder die filtreertregter. Los die neerslag op die papier op deur 25 ml. 5N-soutsuur in 'n dun straal uit 'n pipet op die filter te laat loop. Die soutsuur moet in 5 ongeveer gelyke dele bygevoeg word. Was die filter deeglik met 0.5 N-HCl. Verdun die oplossing met water tot omtrent 100 ml. en voeg 2 ml. magnesiameengsel by. Slaan magnesium-ammoniumfosfaat neer deur byvoeging van 1+1-ammoniumhidroksied, en deur te roer, net soos hierbo beskryf. Voeg ten slotte 10 ml. oormaat ammoniumhidroksied by, maak die beker met 'n oorlosieglas toe en laat oornag staan.

Filtreer die oplossing deur 'n Whatman No. 40-papier (of ekwivalent). Was die neerslag, eers deur dekantering en dan op die filter, met 1+20 ammoniumhidroksied totdat dit vry van chloriede is. Bring die oorblyfsels van die neerslag van die beker na die filter oor met behulp van 'n rubberpuntstafie.

Plaas die papier en neerslag in 'n skoon, vooraf verhitte en geweegde platinumkroesie. Droog die neerslag in 'n oond by omtrent 100°C . Plaas die kroes oor na 'n moffellood van ongeveer 200°C . en verhoog die temperatuur stadig om die papier te verkool sonder dat dit aan die brand raak. Brand die koolstof by die laagste moontlike temperatuur af, maar in elk geval onder 800°C . Veras ten slotte by 1050° tot 1100°C . Koel die kroes in 'n desikkator af, laat dit 10 minute in die weegkas staan en weeg. Herhaal die verassing, afkoeling en weging, totdat die verskil tussen opeenvolgende wegings nie meer as 0.0002 g. is nie.

Gewig van neerslag $\times 0.6377$ = gewig van P_2O_5 in die alikwot vir ontleding geneem.

(e) Die volgende metode moet gebruik word om die hoeveelheid K_2O te bepaal :—

Apparaat.

Die volgende apparaat moet gebruik word :—

Platboomfles, 250 ml., met lang nek : Met dien verstande dat ander houers, soos Kjeldahlflesse of maatflesse, ook gebruik mag word. Die essensiële vereiste is dat die flesse lang nekke moet hê om verliese as gevolg van stamping gedurende die verdampingsproses om kaliumchloroplatinaat neer te slaan, te voorkom. Die nekke dien ook om 'n terugvloeiing te verskaf om te verseker dat die neerslag nie voor die tyd uitdroog nie.

Sponsglaskroesie, poreusheid No. 4.

Elektriese oond, geforseerde trek, in staat om 'n temperatuur van $100^\circ\text{C} \pm 2^\circ\text{C}$. te handhaaf.

Reagense.

Die volgende reagense moet gebruik word :—

Versadigde ammoniumoksalaatoplossing voeg 100 ml. water by $120 \text{ g} \pm 1 \text{ g}$. ammoniumoksalaat. Roer goed. 'n Klein hoeveelheid van die sout moet onopgelos bly. Laat afsak en dekanter die helder oplossing.

Gekonsentreerde ammoniak-hidroksiet ongeveer 25 persent g/g.

Gekonsentreerde salpetersuur, ongeveer 55 persent g/g.

Gekonsentreerde soutsuur, ongeveer 30-33 persent g/g.

Platinumoplossing soos volg verkry : Los $1.05 \text{ g} \pm 0.005 \text{ g}$. platinumchlorowatersofsuur (chloroplatiensuur) in 10 ml. water op.

Ongedenatureerde etielalkohol omtrent 95 persent.

Procedure.

The following procedure shall be used:—

Transfer an accurately measured volume of solution obtained as described in sub-paragraph (ii) paragraph (c), containing approximately 0.03 g. of K_2O , into a 250 ml. Erlenmeyer flask. Add about 50 ml. of water and boil the solution gently for a few minutes. Add 50 ml. of saturated ammonium oxalate solution. Boil gently for 30 minutes. Allow to cool to about 50°C. Add with swirling, a slight excess of concentrated ammonia solution (approximately 3 ml.), i.e. until there is a distinct smell of ammonia. Decant the supernatant liquid through a Whatman No. 542 (or equivalent) filter paper, collecting the filtrate and washing quantitatively in a 250 ml. long-neck flat-bottom flask. Transfer the precipitate from the Erlenmeyer flask to the filter paper with a stream of saturated ammonium oxalate solution from a wash bottle. Wash the filter paper and precipitate 5 times with 10-ml. portions of saturated ammonium oxalate solution, allowing thorough drainage between washings.

NOTE.—If no calcium is present in the sample to be analysed, the above precipitation with ammonium oxalate can, of course, be omitted.

Clean the sintered glass crucible. Place a silica granule, or a glass bead, into the crucible. Dry the crucible in an oven at 100° C. for ½ hour. Cool in a desiccator and weigh.

Transfer the silica granule (or glass bead) to the filtrate in the flask. Add 10 ml. of concentrated nitric acid. Boil the solution for 3 minutes. Add 10 ml. of concentrated hydrochloric acid. Evaporate the solution to 20-25 ml. by boiling gently.

When the solution is of the required volume, add 5 ml. of concentrated hydrochloric acid. Add 5 ml. of the platinum solution. Reduce the volume to 10-15 ml. by boiling, rotating the flask occasionally. Add 5 ml. of concentrated hydrochloric acid. Evaporate the solution until a precipitate separates. This usually occurs when the solution has been evaporated to a volume of about 8-10 ml. Carefully continue the evaporation, using reduced heat, until the volume of the solution has been reduced to 3-4 ml. Rotate the flask frequently near the end of the evaporation and compare the volume with a similar flask containing 4 ml. of water.

NOTE.—It is important that the volume is not reduced to less than 3 ml.

Remove the flask from the source of heat and cool it in running water. Add 25 ml. of cold (20° C. or less) alcohol whilst swirling the flask, adding the alcohol so that it washes down the neck of the flask. Cool the flask in running water and allow it to stand for not less than 10 minutes.

Decant the supernatant liquid, under gentle suction, into the previously weighed sintered glass crucible. Transfer the precipitate and the silica granule (or glass bead) quantitatively to the crucible by washing the flask with successive portions of cold alcohol from a wash bottle fitted with a very fine jet. More than 50 ml. of alcohol may not be used.

Dry the crucible and its contents in the oven for 30 minutes at 100° C. Cool in desiccator and weigh. Repeat the drying, cooling and weighing until the difference between successive weighings is not more than 0.0002 g.

Weight of precipitate $\times$ 1938 = weight of K_2O in the elignot taken for analysis.

Prosedure.

Onderstaande prosedure moet gevolg word:—

Bring 'n noukeurig afgemete volume van die oplossing verkry soos beskryf in subparagraaf (ii) van paragraaf (c), wat ongeveer 0.03 g. K_2O bevat in 'n 250 ml.-Erlenmeyerfles oor. Voeg omtrent 50 ml. water by en kook die oplossing 'n paar minute versigtig. Voeg 50 ml. versadigde ammonium-oksalaatoplossing by. Kook 30 minute lank versigtig. Laat tot omtrent 50° C. afkoel. Terwyl die fles geswaaiskud word, voeg 'n klein oormaat gekonsentreerde ammoniakoplossing (ongeveer 3 ml.) by, dit wil sê totdat daar 'n duidelike ammoniakreuk is. Dekanteer die bovloei-stof deur 'n Whatman No. 542 (of ekwivalent) filtreerpapier, vang die filtraat op en was kwantitatief af in 'n langnek-, platboomfles van 250 ml. Bring die neerslag uit die Erlenmeyerfles op die filtreerpapier oor met 'n straal versadigde ammonium-oksalaatoplossing uit 'n wasbottel. Was die filtreerpapier en neerslag 5 keer met 10 ml.-hoeveelhede versadigde ammoniumoksalaatoplossing; laat deeglike dreinerings tussen die wassings toe.

LET WEL.—Indien daar geen kalsium is in die monster wat ontleed moet word nie, kan bogenelde neerslag met ammoniumoksalaat natuurlik weggelaat word.

Maak die sponsglaskroesie skoon. Plaas 'n silikakorrel of 'n glaskraal in die kroesie. Maak die kroesie 'n halfuur lank in 'n oond by 100° C. droog. Koel in 'n desikkator af en weeg.

Bring die silikakorrel (of glaskraal) oor na die filtraat in die fles. Voeg 10 ml. gekonsentreerde salpetersuur by. Kook die oplossing 3 minute lank. Voeg 10 ml. gekonsentreerde soutsuur by. Verdamp die oplossing tot 20-25 ml. deur versigtig te kook.

Wanneer die oplossing van die verlangde volume is, voeg 5 ml. gekonsentreerde soutsuur en dan 5 ml. van die Platinumoplossing by. Verminder die volume tot 10-15 ml. deur te kook, terwyl die fles af en toe gedraai word. Voeg 5 ml. gekonsentreerde soutsuur by. Verdamp die oplossing totdat 'n neerslag gevorm word. Dit gebeur gewoonlik wanneer die oplossing tot omtrent 8-10 ml. verdamp is. Gaan versigtig voort met die verdamping, deur gebruik te maak van minder hitte, totdat die volume van die oplossing tot 3-4 ml. verminder het. Draai die fles dikwels wanneer die verdampingsproses sy einde nader en vergelyk die volume met 'n soortgelyke fles wat 4 ml. water bevat.

LET WEL.—Dit is belangrik dat die volume nie tot minder as 3 ml. verminder word nie.

Verwyder die fles van die hittebron en koel dit in lopende water af. Voeg 25 ml. koue (20° C. of minder) alkohol by terwyl die fles geswaaiskud word, op so 'n wyse dat die kante van die nek van die fles skoon gespoel word. Koel die fles in lopende water af en laat dit minstens 10 minute staan.

Dekanteer die bovloei-stof in die vooraf geweegde sponsglaskroesie, terwyl 'n geringe suiging toegepas word. Bring die neerslag en die silikakorrel (of glaskraal) kwantitatief oor in die kroesie deur die fles met verskeie hoeveelhede koue alkohol uit te was. Gebruik 'n wasbottel met 'n baie fyn spuitpunt. Moet nie meer as 50 ml. alkohol gebruik nie.

Maak die kroesie en sy inhoud 30 minute lank in 'n oond by 100° C. droog. Koel in 'n desikkator af en weeg. Herhaal die droog-, afkoel- en weegproses totdat die verskil tussen opeenvolgende wegings nie meer as 0.0002 g. is nie.

Gewig van neerslag $\times$ 1938 = gewig K_2O in die alikwot vir ontleding geneem.

(3) *Assessing quality.*(i) *Packings of 5 lb. and over each.*

For the purpose of assessing the quality of a lot comprising packings of 5 lb. and over, the average of the analysis obtained for the five samples shall be deemed to be the average for the 25 containers originally taken. If fewer than 25 containers were sampled, one sample of each and every container shall be analysed and the average of the analyses obtained shall be deemed to be the average for all containers.

Acceptable quality for straight fertilizers (superphosphate, double superphosphate, rock phosphate, rock-super mixture, basic slag, treated phosphate, limestone ammonium nitrate, ammonium sulphate, ammonium nitrate, urea, potassium chloride, potassium sulphate, potash-magnesia, etc.), shall be such that the average of the five samples shall be equal to or greater than 96 per cent of the guaranteed analysis.

In the case of mixtures and compound fertilizers, with two or more plant food components, as well as all fertilizers of group 2 acceptable quality shall be such that the average of the five samples analysed shall be equal or greater than 93 per cent of the guaranteed analysis of each and every component.

(ii) *Packings of less than 5 lb. each.*

Where packings of less than 5 lb. are analysed, acceptable quality shall be such that the analysis of a single sample is equal to or greater than 90 per cent of the guaranteed analysis in respect of each and every component in such a fertilizer.

OFFENCES AND PENALTIES.

21. Any person who contravenes, or fails to comply with any provision or requirement of these regulations shall be guilty of an offence and liable on conviction to a fine not exceeding two hundred rand or imprisonment for a period not exceeding six months, or to both such fine and such imprisonment.

FIRST ANNEXURE.

Registration Fees—Fertilizers.

	R
1. For original registration.....	4.00
2. For renewal of an existing registration if application for renewal is lodged—	
(a) on or before 30th June every year.....	0.50
(b) subsequent to the aforesaid date of expiry.....	4.00

SECOND ANNEXURE.

FERTILIZERS, FARM SEEDS AND REMEDIES ACT, 1947.
(To be rendered in triplicate.)

FERTILIZERS.

GROUP 1.

PART I.

Application for the Registration of a Group 1 Fertilizer.

1. Name and address of applicant.....
2. Whether applicant is responsible for the importation, manufacture, production or sale of fertilizer.....
3. Name under which fertilizer is to be sold.....

(3) *Beoordeling van kwaliteit.*(i) *Verpakkings van 5 lb. en meer elk.*

Vir die doel om die kwaliteit van 'n lot te beoordeel, bestaande uit verpakkings van 5 lb. en meer, word die gemiddelde ontleding van die vyf monsters geag die gemiddelde van die 25 houers oorspronklik geneem, te wees. Indien van minder as 25 houers monsters geneem word, moet een monster uit elke afsonderlike houer ontleed word en die gemiddelde van die ontledings aldus verkry word geag die gemiddelde vir al die houers te wees.

'n Aanneemlike kwaliteit van enkelvoudige misstowwe (superfosfaat, dubbelsuperfosfaat, rotsfosfaat, rotssupermengsel, slakmeel, behandelde fosfaat, kalksteenammoniumnitraat, ammoniumsulfaat, ammoniumnitraat, ureum, kaliumchloried, kaliumsulfaat, potasmagnesia, ens.) moet sodanig wees dat die gemiddelde ontleding van die vyf monsters gelyk aan of groter is as 96 persent van die gewaarborgde ontleding.

In die geval van mengsels en saamgestelde misstowwe met twee of meer plantvoedselbestanddele sowel as alle groep 2-misstowwe moet die aanneemlike kwaliteit sodanig wees dat die gemiddelde van die vyf monsters ontleed gelyk aan of groter is as 93 persent van die gewaarborgde ontleding van elke afsonderlike bestanddeel.

(ii) *Verpakkings van minder as 5 lb. elk.*

Waar verpakkings van minder as 5 lb. ontleed word, moet die aanneemlike kwaliteit sodanig wees dat die ontleding van 'n enkele monster gelyk aan of meer is as 90 persent van die gewaarborgde ontleding ten opsigte van elke afsonderlike bestanddeel van sodanige misstof.

MISDRYWE EN STRAFBEPALINGS.

21. Elkeen wat 'n bepaling van hierdie regulasies oortree of in gebreke bly om aan 'n vereiste daarvan te voldoen, is skuldig aan 'n misdryf en is by skuldigbevinding strafbaar bet 'n boete van hoogstens tweehonderd rand of met gevangenisstraf vir 'n tydperk van hoogstens ses maande, of met sowel sodanige boete as sodanige gevangenisstraf.

EERSTE BYLAE.

Registrasiegelde—Misstowwe.

	R
1. Vir oorspronklike registrasie.....	4.00
2. Vir hernuwing van 'n bestaande registrasie, indien aansoek om hernuwing ingedien word:—	
(a) Voor of op 30 Junie elke jaar.....	0.50
(b) Na genoemde vervaldatum.....	4.00

TWEDE BYLAE.

WET OP MISSTOWWE, VEEVOEDSEL EN MIDDELS, 1947.
(Moet in triplo ingedien word.)

MISSTOWWE.

GROEP 1.

DEEL I.

Aansoek om die registrasie van 'n Groep 1-misstof.

1. Naam en adres van applikant.....
2. Of applikant verantwoordelik is vir die invoer, vervaardiging, produksie of verkoop van die misstof.....
3. Naam waaronder misstof verkoop gaan word.....

4. Brand of fertilizer

5. Analysis:—

	Per Cent.
Nitrogen.....	_____
*Phosphoric oxide soluble in water.....	_____
Phosphoric oxide soluble in 2 per cent citric-acid solution.....	_____
Total phosphoric oxide.....	_____
Potassiumoxide soluble in water.....	_____
Potassiumoxide soluble in 2 per cent citric-acid solution.....	_____
Total potassiumoxide.....	_____
†Lime (CaO).....	_____
‡Sesquioxides of iron and aluminium....	_____

* To be completed only in the case of superphosphates.

† To be completed only in the case of bonemeal, bonedust, boneflour and natural phosphates.

‡ To be completed only in the case of natural phosphates.

6. Material or materials of which fertilizer is composed and proportions in which they are used (in the case of mixtures only)

I do hereby apply for registration, in terms of Act No. 36 of 1947, of the fertilizer, particulars of which are given above, and I do hereby certify that these particulars are to the best of my knowledge true and correct.

Date _____ Signature of Applicant.
Note.—Exact percentages as whole numbers and not merely a range of percentages must be inserted.

PART II.
(For official use only.)

No. _____
CERTIFICATE OF REGISTRATION.

I do hereby certify that the fertilizer referred to in Part I has been registered as a _____ group 1 fertilizer.

The registration expires on _____ and is subject to the following conditions _____

Date _____ Registering Officer.

THIRD ANNEXURE.

FERTILIZERS, FARM FEEDS AND REMEDIES ACT, 1947.
(To be rendered in triplicate.)

GROUP 2.

FERTILIZERS.

PART I.

Application for the Registration of a Group 2 Fertilizer.

1. Name and address of applicant _____
2. Whether applicant is responsible for importation, manufacture, production or sale of fertilizer _____
3. Name under which fertilizer is to be sold _____
4. Brand (if any) of fertilizer _____
5. What is the nature and chemical composition of fertilizer? _____
6. What directions for use are given and what claims are made in connection with fertilizer? _____
7. State weight per cubic yard _____

I do hereby apply for the registration in terms of Act No. 36 of 1947, of the fertilizer, particulars of which are given above, and I do hereby certify that these particulars are to the best of my knowledge true and correct.

Date _____ Signature of Applicant.

PART II.
(For official use only.)

No. _____
CERTIFICATE OF REGISTRATION.

I do hereby certify that the fertilizer referred to in Part I has been registered as a group 2 fertilizer.

The registration expires on _____ and is subject to the following conditions _____

Date _____ Registering Officer.

4. Handelsmerk van misstof

5. Ontleding:—

	Persent.
Stikstof.....	_____
*Fosforoksied oplosbaar in water.....	_____
Fosforoksied oplosbaar in 'n tweepersent sitroensuuroplossing.....	_____
Totoale fosforoksied.....	_____
Kaliumoksied oplosbaar in water.....	_____
Kaliumoksied oplosbaar in 'n tweepersent sitroensuuroplossing.....	_____
Totale kaliumoksied.....	_____
†Kalk (CaO).....	_____
‡Seskwioksied van yster en aluminium....	_____

* Moet slegs in die geval van superfosfate ingevul word.

† Moet slegs in die geval van beenmeel, beenstof, fynbeenmeel en natuurlike fosfate ingevul word.

‡ Moet slegs in die geval van natuurlike fosfate ingevul word.

6. Stof of stowwe waaruit misstof saamgestel is en verhouding waarin hul gebruik word (slegs in die geval van mengsels)

Hierby doen ek aansoek om die registrasie, ooreenkomstig Wet No. 36 van 1947, van die misstof waarvan besonderhede hierbo aangegee is, en sertifiseer ek dat die besonderhede na my beste wete waar en juis is.

Datum _____ Handtekening van Applikant.
Opmerking.—Presiese persentasies as heel getalle en nie net persentasiebestekke nie moet ingevul word.

DEEL II.
(Slegs vir amptelike gebruik.)

No. _____
REGISTRASIESERTIFIKAAT.

Hierby sertifiseer ek dat die misstof genoem in Deel I as 'n groep 1-misstof geregistreer is.

Die registrasie verval op _____ en is onderworpe aan die volgende voorwaardes _____

Datum _____ Registrasiebeampte.

DERDE BYLAE.

WET OP MISSTOWWE, VEEVOEDSEL EN MIDDELS, 1947.
(Moet in triplo ingedien word.)

GROEP 2.

MISSTOWWE.

DEEL I.

Aansoek om die registrasie van 'n Groep 2-misstof.

1. Naam en adres van applikant _____
2. Of applikant verantwoordelik is vir die invoer, vervaardiging, produksie of verkoop van die misstof _____
3. Naam waaronder misstof verkoop gaan word _____
4. Handelsmerk (indien daar is) van misstof _____
5. Wat is aard en chemiese samestelling van misstof? _____
6. Watter gebruiksaanwysings word gegee en watter aansprake word in verband met misstof gemaak? _____
7. Meld gewig per kubieke jaart _____

Hierby doen ek aansoek om die registrasie, ooreenkomstig Wet No. 36 van 1947, van die misstof waarvan besonderhede hierbo aangegee is, en sertifiseer ek dat die besonderhede na my beste wete waar en juis is.

Datum _____ Handtekening van Applikant.

DEEL II.
(Slegs vir amptelike gebruik.)

No. _____
REGISTRASIESERTIFIKAAT.

Hierby sertifiseer ek dat die misstof genoem in Deel I, as 'n groep 2-misstof geregistreer is.

Die registrasie verval op _____ en is onderworpe aan die volgende voorwaardes _____

Datum _____ Registrasiebeampte.

FOURTH ANNEXURE.

CERTIFICATE OF INSPECTOR OR OFFICER TAKING
SAMPLE OF FERTILIZER.

[In terms of section fifteen (2) of Fertilizers, Farm Feeds and Remedies Act, 1947.]

I do hereby certify that the accompanying is a sample of _____
taken by me on _____
at _____
(specify full address) from stock in charge of _____
in the presence of _____
(state name and address of witness).

The following further particulars are given in connection with the sample:—

1. Name and brand of article _____
2. Marks or number on sample _____
3. Information given on container from which sample was taken _____
4. Approximate quantity represented by sample _____
5. Name and address of seller _____
6. Condition of container from which sample was taken (i.e. whether opened or damaged) _____
7. Other particulars _____

Inspector or Officer.

Signature of Witness.

Place _____
Date _____

Note.—A copy of this certificate shall be handed or forwarded to the owner or seller of the article or to his agent. A third copy shall be retained by the inspector or officer.

FIFTH ANNEXURE.

CERTIFICATE OF RESULT OF ANALYSIS OR TEST OF
SAMPLE OF FERTILIZER BY ANALYST.

[In terms of section fifteen (3) of Fertilizers, Farm Feeds and Remedies Act, 1947.]

I (full name) _____
of _____
a duly appointed analyst, in terms of section fourteen of the Fertilizers, Farm Feeds and Remedies Act, 1947, do hereby make oath and state—

- (1) that on _____
I received a sample of* _____
from† _____
for analysis and/or test;
- (2) that the sample was labelled, sealed and marked‡
- (3) that I have analysed and/or tested the said sample, and as result of the analysis and/or test I find it to be constituted as follows:—

	Per Cent.
Nitrogen	_____
Phosphoric Oxide—	
(a) soluble in water	_____
(b) soluble in a 2 per cent citric-acid solution	_____
(c) total	_____
Potassiumoxide—	
(a) soluble in water	_____
(b) soluble in a 2 per cent citric-acid..	_____
(c) total	_____
Sesquioxides of iron and aluminium.....	_____
Lime (CaO)	_____
Fineness	_____
Observations	_____

Signature of Analyst.

* State name of article as specified on label.

† Insert name of person supplying the sample, and state whether "by hand", "by post" or "by rial".

‡ Insert distinguishing mark or number of sample.

Sworn to before me at _____
this _____ day of _____

The deponent acknowledges that he understands the contents of this document.

Justice of the Peace or
Commissioner of Oaths.

VIERDE BYLAE.

CERTIFIKAAT VAN INSPEKTEUR OF BEAMPTTE WAT
MONSTER VAN MISSTOF NEEM.

[Ooreenkomstig artikel vyftien (2) van die Wet op Misstawwe, Veevoedsel en Middels, 1947.]

Hierby sertifiseer ek dat die bygaande 'n monster is van _____
wat ek geneem het op _____
te _____
(gee volle adres) van voorrade onder toesig van _____
in die teenwoordigheid van _____
(gee naam en adres van getuie).

Die volgende verdere besonderhede word in verband met die monster gegee:—

1. Naam en handelsmerk van artikel _____
2. Merke of nommer aan monster _____
3. Inligting gegee op houer waaruit monster geneem is _____
4. Benaderde hoeveelheid deur monster verteenwoordig _____
5. Naam en adres van verkoper _____
6. Toestand van houer waaruit monster geneem is (d.i. of dit oop of beskadig was) _____
7. Ander besonderhede _____

Inspekteur of Beamppte.

Handtekening van Getuie.

Plek _____
Datum _____

Opmerking.—'n Afskrif van hierdie sertifikaat moet aan die eienaar of verkoper van die artikel of sy agent oorhandig of gestuur word. 'n Derde afskrif word deur die inspekteur of beamppte gehou.

VYFDE BYLAE.

CERTIFIKAAT VAN RESULTAAT VAN ONTLEDING OF
TOETS VAN MONSTER VAN MISSTOF DEUR ONTLEDER.

[Ooreenkomstig artikel vyftien (3) van die Wet op Misstawwe, Veevoedsel en Middels, 1947.]

Ek (volle naam) _____
van _____
'n behoorlik aangestelde ontleder, ooreenkomstig artikel veertien van die Wet op Misstawwe, Veevoedsel en Middels, 1947, verklaar hierby onder eed—

- (1) dat ek op _____
'n monster van* _____
van† _____
vir ontleding en/of toets ontvang het;
- (2) dat die monster geëtiketteer, verseël en gemerk was‡
- (3) dat ek die monster ontleed en/of getoets het en as gevolg van die ontleding en/of toets gevind het dat dit soos volg saamgestel is:—

	Persent.
Stikstof	_____
Fosforoksied—	
(a) oplosbaar in water	_____
(b) oplosbaar in 'n tweepersent sitroen-suuroplossing	_____
(c) totaal	_____
Kalsiumoksied—	
(a) oplosbaar in water	_____
(b) oplosbaar in 'n tweepersent sitroen-suuroplossing	_____
(c) totaal	_____
Seskwioksied van yster en aluminium...	_____
Kalk (CaO)	_____
Fynheid	_____
Opmerkings	_____

Handtekening van Ontleder.

* Vul in naam van artikel soos op etiket aangedui.

† Vul in naam van persoon wat monster verskaf het, en meld of dit „per hand”, „per pos” of „per spoor” geskied het.

‡ Vul in die onderskeidingsmerk of die nommer van die monster.

Beëdig voor my te _____
op hede die _____
dag van _____

Die deponent verklaar dat hy die inhoud van hierdie dokument begryp.

Vrederegter of Kommissaris van
Ede.

SIXTH ANNEXURE.
(To be rendered in triplicate.)

The Registering Officer of Fertilizers,
Department of Agriculture,
Private Bag 116,
Pretoria.

Dear Sir,

**APPLICATION FOR RENEWAL OF REGISTRATION
OF FERTILIZERS: ACT No. 36 OF 1947.**

Application is hereby made for the renewal of registration of the undermentioned fertilizers for the period 1st July, 19____, to the 30th June, 19____.

Registration Number.	Name of Fertilizer.	Brand.	Fee.
			R c
		TOTAL...	

I, the undersigned, duly authorised representative of the applicant for renewal of registration, certify herewith that the compositions of the above-mentioned fertilizers remain unchanged and that the labels as approved by the Registering Officer shall be the same.

Yours faithfully,

Signature.

Name and Address of Applicant:—

Dear Sir(s),

The fertilizers mentioned above are registered for the year ending

Yours faithfully,

Date _____ Registering Officer of Fertilizers.

SESDE BYLAE.
(Moet in triplo ingedien word.)

Die Registrasiebeampte van Misstowwe,
Departement van Landbou,
Privaatsak 116,
Pretoria.

Waarde Heer,

**AANSOEK OM HERNUWING VAN REGISTRASIE VAN
MISSTOWWE.—WET No. 36 VAN 1947.**

Hierby word aansoek gedoen om die hernuwing van registrasie van ondergenoemde misstowwe vir die tydperk 1 Julie 19____ tot 30 Junie 19____.

Registrasie-nummer.	Naam van Misstof.	Handelsmerk.	Gelde.
			R c
		TOTAAL..	

Ek, die ondergetekende, die behoorlik gemagtigde verteenwoordiger van die applikant om hernuwing van registrasie, sertifiseer hierby dat die samestellings van die misstowwe hierbo genoem onveranderd bly en dat die etikette soos goedgekeur deur die Registrasiebeampte daarmee sal ooreenstem.

Die uwe,

Handtekening.

Naam en adres van applikant—

Geagte Heer/Here,

Die misstowwe hierbo genoem, is geregistreer vir die jaar eindigende

Die uwe,

Datum _____ Registrasiebeampte van Misstowwe.

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Hierdie publikasies sluit die volgende in:—

- ★ Offisiële Jaarboek van Suid-Afrika
- ★ Delfstowwe van Suid-Afrika
- ★ Die Afrikaanse Woordeboek
- ★ Blomplante van Afrika
- ★ Argiefjaarboek van Suid-Afrikaanse Geskiedenis
- ★ Handel en Nywerheid (*Maandeliks*)

Asook

- Geologiese Publikasies
- Wette en Regulasies
- Landkaarte
- Statistiese Verslae
- Loonvasstellings
- Gekose Komitee Verslae
- Departementele Verslae (*Jaarliks*)
- Kommissie Verslae, ens.

Verdere besonderhede en pryse aangaande hierdie publikasies is verkrygbaar van die STAATSDRUKKER, Pretoria of Kaapstad

IT PAYS YOU WELL TO SAVE!

SAVE

- ★ FOR YOUR FAMILY'S FUTURE!
- ★ FOR YOUR OWN HOME!
- ★ FOR YOUR RETIREMENT!
- ★ FOR ALL EMERGENCIES!

POST OFFICE SAVINGS BANK

The Post Office Savings Bank earns $2\frac{1}{2}\%$ interest on the monthly balance, of which interest up to R100 per annum is *Free of Income Tax*.

The first deposit need to be no more than 10c. Such an account is very handy in times of emergency or when on holiday, as deposits or withdrawals can be made at any Post Office in the Republic.

Not more than R4,000 may be deposited by one person during a financial year.

DIT BETAAL U OM TE SPAAR!

SPAAR

- ★ VIR U FAMILIE SE TOEKOMS!
- ★ VIR U EIE HUIS!
- ★ VIR U AFTREDE!
- ★ VIR ALLE GEVALLE VAN NOOD!

POSSPAARBANK

Die Posspaarbank verdien $2\frac{1}{2}\%$ rente op die maandelikse balans, waarvan tot R100 per jaar van die rente van *Inkomstebelasting Vrygestel* is.

Die eerste belegging hoef nie meer as 10c te wees nie. So 'n rekening is baie handig in tye van nood of wanneer met vakansie, omdat stortings en terugvorderings by enige Poskantoor in die Republiek gedoen kan word.

Nie meer as R4,000 mag gedurende 'n boekjaar deur een persoon ingelê word nie