Serial Number **1948/145**

NEW ZEALAND.

THE STOCK-FOODS REGULATIONS 1948

B. C. FREYBERG, Governor-General

ORDER IN COUNCIL

At the Government House at Wellington, this 8th day of September, 1948

Present:

HIS EXCELLENCY HE GOVERNOR-GENERAL IN COUNCIL

PURSUANT to the Stock-foods Act, 1946, His Excellency the Governor-General, acting by and with the advice and consent of the Executive Council, doth hereby make the following regulations.

REGULATIONS

1. These regulations may be cited as the Stock-foods Regulations 1948.

2. These regulations shall come into force on the 1st day of October, 1948.

3. (1) In these regulations, unless inconsistent with the context, "the said Act" means the Stock-foods Act, 1946.

(2) Terms defined by the said Act shall, when used in these regulations, have the respective meanings assigned thereto by the said Act.

SAMPLING

4. (1) Where for the purposes of the said Act a sample of any stock-food other than a feeding-oil is taken by an Inspector for analysis, the sample shall be taken in manner prescribed by this regulation.

(2) Where the stock-food of the same kind and name of which a sample is to be taken is contained in packages and is offered for sale in packages, one of those packages, or, if necessary for the purpose of securing a 5 lb. sample in accordance with the provisions prescribed in this clause, such further number of packages as may be required to produce not less than 6 lb. of such stock-food, shall be selected at random and the contents shall be emptied on a clean and dry floor and thoroughly mixed. Where necessary the material shall then be made into a circular flat heap, then divided into four approximately equal parts, and two opposite quadrants shall then be set aside. The remaining two quadrants shall be assembled together and mixed, and the operation of dividing, discarding, assembling, and mixing

shall, if necessary, be repeated as before until the mixture is reduced in size to an estimated quantity of not less than 6 lb. nor more than 8 lb. From the initial mixture, or, as the case may be, the mixture reduced as aforesaid, a sample of 5 lb. shall be taken.

(3) Where the stock-food of the same kind and name of which a sample is to be taken is in bulk not less than six shovelfuls shall be taken at random from different parts of the whole quantity and thoroughly mixed together on a clean and dry floor. The mixture shall, where necessary, be reduced in size in manner prescribed by clause (2) of this regulation to an estimated quantity of not less than 6 lb. nor more than 8 lb. From this mixture a sample of not less than 5 lb. shall be taken.

5. (1) Where for the purposes of the said Act a sample of a stock-food, being a feeding-oil, is taken by an Inspector for analysis, the sample shall be taken in manner prescribed by this regulation.

(2) The package of feeding-oil to be sampled shall be selected at random, and upon being opened by the Inspector in the normal manner the contents shall be stirred or agitated so as to ensure that a truly representative sample is obtained.

(3) The quantity or volume of the sample to be taken shall be not less than $2\frac{1}{2}$ pints.

6. (1) The parts into which any sample is to be divided, pursuant to subsection (2) of section 12 of the said Act, shall be such that the part to be delivered to the Analyst and the part to be retained by the Inspector shall each be twice the weight or volume of the other part.

(2) Each of the parts into which the sample is divided as aforesaid shall be placed into a clean and dry receptacle, which, after being sealed with the official seal, shall have affixed thereto a label in the form No. 1 in the Schedule hereto.

(3) The said label shall contain the particulars in the said form No. 1 and shall be signed by the Inspector and by the vendor or other witness present at the taking of the sample.

Analysis of Stock-foods

7. (1) Every sample of stock-food, not being a feeding-oil, taken pursuant to the said Act and these regulations shall be prepared for analysis and analysed in manner prescribed by this regulation.

(2) The sample shall be so ground or otherwise treated as to be capable of being passed through a sieve having circular openings of a diameter not exceeding 1/25 in. or 1 millimetre or having not less than 20 square openings per linear inch.

(3) The percentage of crude protein shall be determined by the Gunning method in accordance with the directions following, namely :—

Place from 0·7 to 3·5 grammes, according to the nitrogen content of the material to be analysed, in a Kjeldahl digestion flask of 500 to 800 millilitres capacity. Add 10 grammes of powdered K_2SO_4 or anhydrous Na_2SO_4 and from 15 to 25 millilitres (ordinarily about 20 millilitres) of concentrated H_2SO_4 (from 93 to 96 per cent. H_2SO_4 and free from nitrates and $(NH_4)\ 2SO_4$). Add from 0·1 to 0·3 grammes of crystallized $CuSO_4\ 5H_2O$. Place flask in inclined position and heat below boiling-point of acid until frothing has ceased. (A

small piece of paraffin may be added to prevent extreme frothing.) Increase heat until acid boils briskly, and digest after mixture is colourless or nearly so for about two hours or until oxidation is complete.

After cooling, dilute with about 200 millilitres of water and add a few pieces of granulated zinc or pumice stone to prevent bumping. Add sufficient NaOH solution (450 grammes commercial NaOH, free from nitrates, dissolved in 1 litre H_2O) to make reaction strongly alkaline (50 millilitres usually sufficient), pouring it down side of flask so that it does not mix at once with acid solution. Connect flask to condenser by means of a Kjeldahl or other suitable splash head, taking care that tip of condenser extends below surface of the standard sulphuric acid in the receiver. Mix contents of distillation flask by shaking and distil until all NH_3 has passed over into a measured quantity of the standard acid. (First 150 millilitres of distillate generally contains all the NH_3.) Titrate with standard NaOH solution using methyl red or cochineal indicator. Crude protein = nitrogen x 6·25.

(4) The percentage of crude fat shall be determined in accordance with the directions following, namely :—

Where the presence of large quantities of soluble carbohydrates is likely to interfere with the complete extraction of fat, extract with H_2O before proceeding with the determination.

Extract the sample of about 2 grammes weight, dried for twenty-four hours at 100° c. in a weighing-bottle or aluminium dish at least 50 millimetres in diameter (sample on which the moisture is determined may be used) with anhydrous ether in a Soxhlet extraction apparatus for sixteen hours. Dry extract at 100° c. for thirty minutes, cool in desiccator, and weigh. Continue at thirty-minute intervals this alternate drying and weighing until weight is constant.

(5) The percentage of crude fibre shall be determined in accordance with the directions following, namely :—

Preliminary : Prepare a solution of sulphuric acid containing 1·25 grammes H_2SO_4 per 100 millilitres and a solution of sodium hydroxide containing 1·25 grammes of NaOH per 100 millilitres free, or practically free, from Na_2CO_3, and check carefully the concentration of these solutions by titration.

Digest on a steam bath or at equivalent temperature a suitable quantity of asbestos for not less than eight hours with about 5 per cent. NaOH solution and thoroughly wash with hot water. Then digest in a similar manner for eight hours with HCl (1 + 3), and again wash thoroughly with hot water. Dry and ignite at bright-red heat.

Determination : Use residue from crude fat determination or extract about 2 grammes of dry material with anhydrous ether in manner prescribed by clause (4) of this regulation and transfer residue, together with about 0·5 grammes of asbestos prepared as aforesaid, to digestion flask of such size and shape that the solution will be not less than 1 in. nor more than 1·5 in. in depth.

Add 200 millilitres of the boiling H_2SO_4, immediately connect digestion flask with reflux condenser, and apply heat so that contents of flask will come to boiling within one minute and continue to boil briskly for exactly thirty minutes. Rotate flask every five minutes in order to mix the charge thoroughly. Care must be taken to keep the material from remaining on the sides of flask out of contact with solution. (A blast of air conducted into the flask will serve to reduce frothing of the liquid.) At the expiration of thirty minutes remove flask, immediately filter in fluted funnel through cloth in the funnel, of such character that no appreciable solid matter will pass through when filtering is rapid, and wash with boiling water until washings are no longer acid. Bring a quantity of the NaOH solution to boiling and keep at this temperature under reflux condenser until used. Wash charge and asbestos back into flask with 200 millilitres of the boiling NaOH solution, using wash bottle marked to deliver 200 millilitres. Connect flask with reflux condenser and boil for exactly thirty minutes. At the expiration of thirty minutes remove flask and immediately filter through Gooch crucible prepared with asbestos mat, through alundum crucible or through the filtering-cloth in the fluted funnel. If the filtering-cloth is used, thoroughly wash residue with boiling water and transfer it to Gooch crucible with thin but close layer of ignited asbestos. After thoroughly washing with boiling water, wash with 15 millilitres of alcohol. Dry crucible and contents at 100° c. to constant weight. Cool in efficient desiccator and weigh. Incinerate contents of crucible in electric muffle or over Meker burner at dull-red heat for about twenty minutes or until carbonaceous matter has been consumed. Cool in desiccator and weigh. Report loss in weight as crude fibre.

(6) The percentage of common salt (sodium chloride) shall be determined in accordance with the directions following, namely :—

Moisten approximately 5 grammes of material in a platinum dish with 20 millilitres of a 5 per cent. Na_2CO_3 solution evaporate to dryness, and ignite as thoroughly as possible in a muffle furnace at a temperature not exceeding dull redness. Extract with hot water, filter, and wash. Return residue to dish and ignite to ash, dissolve in HNO_3 (1 + 4), filter from any insoluble residue, wash thoroughly, and add this solution to water extract.

If platinumware is not available, weigh out a suitable quantity of material into a vitreosil basin and mix to a paste with one-quarter of its weight of calcium oxide and a little water. Dry the mixture on a water bath and then gently ash in a muffle furnace at a temperature below a dull-red heat. Extract the residue with hot approximately $2NHNO_3$ and filter and wash with hot water.

To the solution prepared as aforesaid or a suitable portion thereof, add a known volume of 0·1 $NAgNO_3$ in slight excess. Stir well, filter, and wash AgCl precipitate thoroughly. To the combined filtrate and washings add 5 millilitres of a saturated solution of $FeNH_4$ (SO_4) 2, 12 H_2O and a few millilitres of nitric acid, freed from lower

oxides of nitrogen by diluting the usual pure acid with about one-quarter of its volume of water and boiling till perfectly colourless, and titrate the excess of silver nitrate with 0·1 N. potassium or ammonium thiocyanate until a permanent light-brown colour appears. 1 millilitre of 0·1 N. $Ag.NO_3$ = ·00585 grammes NaCl.

(7) The percentage of ash shall be determined in accordance with the directions following, namely :—

Ignite approximately 5 grammes of the material to a white or pale-grey ash in a muffle furnace at a temperature not exceeding 525° C. If necessary, a few drops of pure olive-oil may be added to the original material and the dish heated slowly over a flame till swelling ceases. Moisten the ash with water, dry on a steam bath, then on a hot plate, and finally re-ash in the muffle at 525° C. to constant weight.

(8) The percentage of moisture shall be determined in accordance with the directions following, namely :—

Dry an amount of the material corresponding to about 2 grammes of dry matter in a weighing-bottle or aluminium dish not less than 50 millimetres in diameter for twenty-four hours at 100° C. Report loss in weight as moisture.

8. (1) Every sample of stock-food, being a feeding-oil, taken pursuant to the said Act and these regulations shall be analysed in manner prescribed by or adopted for the purposes of this regulation.

(2) For the purposes of this regulation,—

" British Pharmacopœia " means the second issue (April, 1933) of the 1932 edition of the British Pharmacopœia, and includes the several addenda thereto that have been published before the coming into force of these regulations :

" British Standard Specification " means a specification issued under that name by the British Standards Institution, and includes the latest revision thereof or any specification issued in lieu thereof by that Institution before the coming into force of these regulations.

(3) The amount of vitamin A and vitamin D contained in a feeding-oil (other than the amount of vitamin D contained in a feeding-oil which is sold as being recommended for use as food for poultry) shall be determined in accordance with the respective methods set out in the British Pharmacopœia and any conversion factor involved in such determination shall be as prescribed by the British Pharmacopœia.

(4) The amount of vitamin D contained in a feeding-oil which is sold as being recommended for use as food for poultry shall be determined in accordance with the methods set out in the British Standard Specification No. 911 (1940) in which the biological assay of Vitamin D by the chick method is defined.

Form of Certificate of Analyst

9. For the purposes of section 13 of the said Act the certificate of the Analyst in respect of a stock-food shall be in the form No. 2 in the Schedule hereto.

10. (1) The fee upon payment of which a vendor may, under subsection (4) of section 13 of the said Act, obtain a copy of the Analyst's certificate where no discrepancy materially prejudicial to a purchaser is found in any sample of a stock-food taken under the said Act shall be £1 1s.

(2) The fee upon payment of which a purchaser of any stock-food may, under subsection (2) of section 14 of the said Act, have a sample of such stock-food taken for analysis shall be £2 2s.

MINERAL INGREDIENTS

11. (1) No person shall incorporate as an ingredient of any stock-food any mineral unless it has been so ground or otherwise treated as to be capable of being passed through a sieve having circular openings of a diameter not exceeding 1/25 in. or 1 millimetre or having not less than 20 square openings per linear inch.

(2) Every person who commits a breach of this regulation shall be liable to a fine of £5.

MIXING AND PACKING

12. (1) No person shall sell or offer for sale in packages any stock-food unless and until it has been so mixed before being packed that a sample taken from any portion of a package containing the stock-food fairly and substantially represents the whole of the contents of the package.

(2) Every person who commits a breach of this regulation shall be liable to a fine of £5.

FEEDING-OILS

13. Any feeding-oil, if it contains no vitamin D other than vitamin D naturally present in such oil and is sold as being recommended for use as a food for poultry, is hereby exempted from the provisions of section 5 of the said Act in so far only as the said section and item No. 4 of the First Schedule to the said Act requires the vendor to show in the invoice or label the minimum vitamin D content of such feeding-oil expressed in chick units.

SCHEDULE

[Form No. 1. (Reg. 6 (2).)

The Stock-foods Regulations 1948

INSPECTOR'S LABEL

(To be affixed to Samples)

THIS receptacle, sealed with the official seal, contains a sample of a stock-food taken by me pursuant to the Stock-foods Act, 1946, and the regulations thereunder for analysis under the said Act and regulations :—

Name of stock-food :.....

Vendor's full name and address :.....

Purchaser's full name and address (if sample taken at purchaser's request under section 14 of the Act) :.....

Premises on which sample taken :.....

Witness in whose presence taken : [*Insert full name and address ; if vendor present, insert simply* " *Vendor* "].

This sample is accompanied by (an invoice) (a label) relating to the said stock-food, and supplied to me by the (vendor) (purchaser). (*Strike out words inapplicable*).

Date on which sample taken :.....

Full name and address of analyst to whom this sample handed or forwarded :.....

Date on which forwarded :.....

....., (Signature of Inspector.)

....., (Signature of vendor or other witness.)

[Form No. 2.
(Reg. 9.)

The Stock-foods Regulations 1948

CERTIFICATE OF ANALYSIS

I, [*Name in full*], of ....., the undersigned, in my capacity as an Analyst appointed under the Stock-foods Act, 1946, do hereby certify as follows:—

1. That on the ..... day of ....., 19.. (there was delivered to me by) (I received by registered post from) ..... (personally), an Inspector under the said Act, a receptacle under seal—namely, [*State nature of receptacle*]—in good condition, and having affixed thereto an Inspector's label, a copy of which is attached to this certificate and marked with the letter "A," followed by my signature. *(If not received in good condition add to this paragraph a statement of the respects in which the receptacle was damaged or affected.)*
2. That the said seal was intact at the time of delivery of the said receptacle to me, and that the impress on the said seal was as follows:.....
3. That attached to this certificate and marked with the letter "B," followed by my signature, is the (invoice) (label) relating to the said stock-food which accompanied the said receptacle when it was delivered to me.
4. That I divided the contents of the said receptacle into two approximately equal portions, one of which I fastened up and sealed in a [*State nature of receptacle*], labelled for purposes of subsequent identification.
5. That the remaining portion of the said contents I have analysed in accordance with the provisions of the said Act and the regulations made thereunder.
6. That the result of my analysis above mentioned is as follows:.....
7. That I have compared the said result of my analysis with the particulars contained in the (invoice) (label) (marked "B" as aforesaid) which accompanied the said receptacle, and I have found that there (was a) (was no) discrepancy between the said result of my analysis and the said particulars.

(If a discrepancy is certified, add:)

8. That in my opinion the said discrepancy (after allowing for the prescribed limits of variation in respect of the several ingredients) (*delete if none prescribed*) (would) (would not) be materially to the prejudice of a purchaser.

Given under my hand at ....., this ..... day of ....., 19..

....., Analyst.

T. J. SHERRARD,
Clerk of the Executive Council.

Issued under the authority of the Regulations Act, 1936.
Date of notification in *Gazette*: 9th day of September, 1948.
These regulations are administered in the Department of Agriculture.

(Notice No. Ag. 4544.)