

SCHEDULE 1

Regulation 3

MANNER OF TAKING, MARKING, SEALING AND FASTENING UP OF SAMPLES

PART I DEFINITIONS

In this Schedule: —

“sampled portion” means a quantity of a material constituting a unit and having characteristics presumed to be uniform;

“incremental sample” means a quantity taken from one point in the sampled portion;

“aggregate sample” means an aggregate of incremental samples taken from the same sampled portion;

“reduced sample” means a representative part of the aggregate sample obtained from the latter by a process of reduction; and

“final sample” means a representative part of the reduced sample or, where no intermediate reduction is required, of the aggregate sample.

PART II

GENERAL INSTRUCTIONS FOR THE TAKING OF SAMPLES

1. In the case of fertiliser in containers, only unopened containers which appear to the inspector proposing to take the sample to be the original containers of the fertiliser shall be selected for the purpose of sampling.

2. The sample shall be taken and prepared as quickly as possible having regard to the precautions necessary to ensure that it remains representative of the sampled portion. Instruments, surfaces and containers used in sampling shall be clean and dry.

3. No sample shall be drawn from any part of the sampled portion which appears to be damaged.

4. When stones are naturally present in a fertiliser, they shall, if possible, be broken up and mixed with the quantity from which a sample is to be drawn. Failing this they shall be removed from the mixture from which a sample is to be drawn and the weight of the residue of that mixture and the weight of the stones ascertained and reported to the analyst. In addition, a representative sample of the stones shall be sent to the analyst with the final sample.

5. An inspector who intends to take a sample in accordance with the provisions of section 76(1) on premises (not being premises used only as a dwelling) on which he has reasonable cause to believe that there is any fertiliser which the occupier of the premises has purchased, shall: —

- (a) satisfy himself that the conditions in which the fertiliser is stored are not such as might cause undue deterioration of the said fertiliser and that the fertiliser appears not to have been contaminated by any other material;
- (b) where he has reasonable cause to believe that fertiliser in containers is only part of an original consignment, select the number of containers to be sampled as if not less than the whole consignment were still present, except that sampling shall not take place if fewer than the minimum number of containers prescribed in Table 1 of Part VI for the purposes of paragraph 2(a) and (c) of Part III of this Schedule are present.

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The provisions of this paragraph shall not apply as respects any fertiliser purchased for the purpose of resale in the course of trade.

6. The sampling apparatus shall be made of materials which cannot affect the characteristics of the materials to be sampled.

7. In the case of a sampling spear its dimensions shall be appropriate to the characteristics of the sampled portion in all respects including dimensions of the container and particle size of the fertiliser.

8. Notwithstanding the provisions of these Regulations, a sampling spear shall not be used if, prior to the taking of a sample, objection is raised thereto by the manufacturer on the grounds that the material is unsuitable.

9. Mechanical apparatus may be used for the sampling of moving fertilisers, if the apparatus is capable of taking samples right across the flow of the product.

10. Apparatus designed to divide the sample into approximately equal parts may be used for taking incremental samples and for the preparation of reduced and final samples.

11. A sample taken in accordance with the methods described below shall be deemed to be representative of the sampled portion.

PART III

QUANTITATIVE REQUIREMENTS

Sampled portion

1. The sampled portion in compliance with regulation 2 shall be such that each of its constituent parts can be sampled in accordance with the requirements of this Schedule.

Incremental sample

2. The incremental samples shall be selected in the following manner: —

(a) in the case of solid fertilisers in containers —

(i) where the content of each of the containers in the sampled portion is greater than 1kg in weight, the number of containers shall be selected in accordance with Table 1 in Part VI of this Schedule;

(ii) where the content of each of the containers in the sampled portion does not exceed 1kg in weight, the number of containers shall be selected in accordance with Table 1 in Part VI of this Schedule, except that the number selected shall be not less than four;

(b) in the case of loose solid fertilisers the number of incremental samples shall be selected in accordance with Table 2 in Part VI of this Schedule;

(c) in the case of fluid fertilisers —

(i) where each container in the sampled portion contains not more than 100 litres the number of containers shall be selected in accordance with Table 3 in Part VI of this Schedule;

(ii) where each container in the sampled portion contains more than 100 litres an incremental sample shall be drawn from each container.

Aggregate sample

3. The weight or volume, as appropriate, of the aggregate sample shall be not less than the following: —

(a)	(a) solid fertilisers in containers —	
(i)	containers of more than 1 kg	4 kg
(ii)	containers not exceeding 1 kg (subject to sub-paragraph (iii) below)	2 kg
(iii)	containers of ammonium nitrate sampled for testing in accordance with method 14 in Part I of Schedule 2	4 kg
(b)	(b) loose solid fertilisers	4 kg
(c)	(c) fluid fertilisers —	
(i)	containers exceeding 250,000 litres	5 litres
(ii)	containers exceeding 1 litre but not exceeding 250,000 litres	4 litres
(iii)	containers not exceeding 1 litre	2 litres

Final sample

4. The weight or volume, as appropriate, of each final sample shall not be less than the following: —

(a)	(a) solid fertilisers (except 500 g as mentioned in sub-paragraph (b) below)	
(b)	(b) ammonium nitrate fertilisers sampled for testing in accordance with method 14 in Part I of Schedule 2	1 kg
(c)	(c) fluid fertilisers	500 ml

PART IV

TAKING AND PREPARATION OF SAMPLES

Incremental samples

1. Incremental samples of approximately equal sizes shall be taken at random throughout the whole sampled portion in the following manner: —

- (a) in the case of solid fertilisers in containers —
- (i) having selected the required number of containers for sampling in accordance with paragraph 2(a) of Part III of this Schedule, part of the content of each selected container shall be taken as the incremental sample, except in the case of material to which sub-paragraph (iv) of this paragraph applies;

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- (ii) where necessary, each selected container shall be emptied and worked up with a shovel separately and one shovelful taken as the incremental sample;
 - (iii) when the material is of a suitable nature the incremental sample may be taken from each selected container by means of a sampling spear or by divider;
 - (iv) when the material is so packed or of such a nature that a shovel or spear or divider cannot be used, or where the content of the container does not exceed 1kg, the whole container shall be taken as the incremental sample;
 - (v) where the fertiliser is in a coarse or lumpy condition incremental samples shall be taken in accordance with sub-paragraph (ii) or (iv) of this paragraph as appropriate. These shall be crushed immediately and the whole passed through a sieve with meshes 31.8mm square;
 - (vi) where the fertiliser consists of bulky material, uneven in character and likely to get matted together, each selected package shall be emptied separately and the matted portions torn up and the whole of the contents of each package shall be thoroughly mixed. The incremental samples shall then be taken in accordance with sub-paragraphs (ii) or (iv) of this paragraph as appropriate;
- (b) in the case of loose solid fertilisers —
- (i) an imaginary division shall be made of the sampled portion into a number of approximately equal parts, corresponding to the number of incremental samples required in accordance with Table 2 in Part VI of this Schedule and at least one incremental sample shall be taken at random from each of these parts;
 - (ii) when sampling is being carried out while the material comprising the sampled portion is in motion, the incremental samples shall be taken from the approximately equal parts as required in sub-paragraph (b)(i) of this paragraph;
 - (iii) when a sampling spear is used the sample shall be taken at an angle to the base of the heap;
 - (iv) where the fertiliser is in a coarse or lumpy condition, or consists of bulky material, uneven in character and likely to get matted together, the incremental samples shall be taken in accordance with the relevant provisions of paragraph 1(a)(v) or 1(a)(vi), as appropriate;
 - (v) where it is not possible to comply with the requirements of paragraph 1 of Part III of this Schedule when sampling fertilisers in bulk, the sampling should be carried out when the sampled portion is loaded or unloaded. In this case samples shall be taken from the randomly selected notional parts, as defined in sub-paragraph (b)(i) of this paragraph, while these are being moved;
- (c) in the case of fluid fertilisers in containers each containing not more than 100 litres, the number of containers to be selected shall be taken in accordance with Table 3 in Part VI of this Schedule and —
- (i) where the containers each contain not more than 1 litre the entire contents of the selected containers shall be transferred into a clean dry vessel of suitable material;
 - (ii) where the containers each contain more than 1 litre and not more than 100 litres the selected containers shall be well shaken or the contents agitated or otherwise treated to ensure uniformity. An approximately equal proportion of fluid shall then be taken immediately from each of the selected containers and transferred into a clean dry vessel of suitable material;
- (d) in the case of fluid fertilisers in containers each containing more than 100 litres —

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- (i) when a consignment is being withdrawn from the container and there is a tap in the outlet pipe from which it is suitable to draw a sample, a quantity of not less than 4 litres shall be drawn from the tap (after first withdrawing sufficient to remove any residues in the pipe) into a clean dry vessel of suitable material, made up of portions not less than 0.5 litres and of approximately equal size taken at regular intervals; otherwise
- (ii) if the liquid is homogeneous, about 1 litre shall be drawn from a convenient outlet in the container (after first withdrawing sufficient to remove any residues in the outlet) into a clean dry vessel of suitable material, or
- (iii) if the liquid is not homogeneous, the contents shall be well stirred or otherwise agitated and sampling shall then proceed as in sub-paragraph (ii), but
- (iv) if it is not possible to make the liquid homogeneous, in the manner described in sub-paragraph (iii), or if the inspector considers that the procedure in sub-paragraphs (i), (ii) and (iii) may not be appropriate, the contents shall be sampled by lowering an open tube (which must be long enough to reach the bottom of the container) perpendicularly into the container. One or both ends of the tube shall then be closed and the contents transferred into a clean dry vessel of suitable material. If sampling by tube is impracticable, portions shall be taken from various levels of the container with a sampling bottle so as to obtain a quantity fairly representative of the whole. The appropriate process shall be repeated until a quantity of not less than 4 litres has been withdrawn;
- (v) where a sampled portion consists of two or more containers, incremental samples of approximately equal size shall be taken from each, drawn in the manner described in sub-paragraphs (i), (ii), (iii) or (iv), as appropriate, and shall be placed in a clean dry vessel of suitable material.

Aggregate sample

2. The incremental samples shall be thoroughly mixed to form a single aggregate sample. In the case of solid fertilisers the material in the aggregate sample shall be carefully mixed to obtain an homogenised sample. Any lumps inconsistent with the nature of the material shall be broken up (if need be by separating them out and returning them to the aggregate sample).

Reduced sample

- (a) (a) In the case of solid fertilisers the aggregate sample shall, if necessary, be reduced to not less than 2 kg, or 4 kg for ammonium nitrate fertilisers sampled for testing in accordance with method 14 in Part I of Schedule 2, in the following manner: —
 - (i) the material shall be heaped to form a “cone”, which shall then be flattened and quartered. Two diagonally opposite quarters shall be rejected and the remainder shall then be mixed and the quartering and rejection continued as necessary; or
 - (ii) the reduction method effected by the use of a mechanical device.
- (b) In the case of fluid fertilisers if the aggregate sample consists of approximately 2 litres this may be taken as the reduced sample. In all other cases the aggregate sample shall be thoroughly mixed and a quantity of at least 2 litres transferred immediately into a clean dry vessel of suitable material.

Final samples

4. The final samples shall be obtained in the following manner: —

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- (a) in the case of solid fertilisers, the reduced sample or where necessary the aggregate sample shall be thoroughly mixed and divided into three or, in the circumstances set out in section 77(2), four similar and approximately equal parts, and each part placed in an appropriate airtight container;
- (b) in the case of fluid fertilisers the reduced sample or where necessary the aggregate sample shall be thoroughly mixed and at once divided into three or, in the circumstances set out in section 77(2), divided into four similar and approximately equal parts by pouring successive portions into appropriate airtight containers.

The containers used shall be such that the characteristics of the fertiliser at the time of sampling are preserved. In the case of a sample e.g. ammonium nitrate which is to be tested for particle size, precautions shall be taken to ensure that the physical condition of the sample does not change between sampling and testing. Where any void would occur within the sample container the sample may be placed in a plastic bag before being put in the final container and in that event the void shall be filled with a neutral product which will not affect either the physical or chemical composition of the sample. For the tests specified in Part I of Schedule 2, Methods 14 a-g, the final samples shall be kept at a temperature between 0 C and 25 C.

PART V

MARKING, SEALING AND FASTENING UP OF THE FINAL SAMPLE

1. Each container of a final sample shall be so secured and sealed by the person taking the sample that the container cannot be opened without breaking the seal; alternatively the container may be placed in a stout envelope or in a linen, cotton or plastic bag, and this further receptacle then secured and sealed in such a manner that the contents cannot be removed without breaking the seal or the receptacle.
2. A label shall be attached to the container or receptacle containing the final sample and sealed in such a manner that it cannot be removed without the seal being broken. The label shall be marked with the following particulars, which shall be visible without the seal being broken: —
 - (a) name of the inspector as well as the department to which he belongs;
 - (b) identification mark given by the inspector to the sample;
 - (c) place of sampling;
 - (d) date of sampling;
 - (e) name of the material; and
 - (f) identification code, batch reference number or consignment identification of the material sampled, where readily available.
3. The container or receptacle may also be sealed, or the label also signed or initialled, by the holder of the material sampled or person acting on his behalf.

PART VI SAMPLING TABLES

TABLE 1
FERTILISERS IN CONTAINERS

<i>Number of containers in the sampled portion</i>	<i>Number of containers to be selected for sampling</i>
1 to 4	All containers
5 to 16	not less than 4
17 to 25	not less than 5
26 to 36	not less than 6
37 to 49	not less than 7
50 to 64	not less than 8
65 to 81	not less than 9
82 to 100	not less than 10
101 to 121	not less than 11
122 to 144	not less than 12
145 to 169	not less than 13
170 to 196	not less than 14
197 to 225	not less than 15
226 to 256	not less than 16
257 to 289	not less than 17
290 to 324	not less than 18
325 to 361	not less than 19
362 and above	not less than 20

TABLE 2
LOOSE FERTILISERS

<i>Size of sampled portion in tonnes</i>	<i>Number of incremental samples required</i>
Up to and including 2.5	not less than 7
Greater than 2.5 and up to and including 3	not less than 8
Greater than 3 and up to and including 4	not less than 9
Greater than 4 and up to and including 5	not less than 10
Greater than 5 and up to and including 6	not less than 11
Greater than 6 and up to and including 7	not less than 12

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<i>Size of sampled portion in tonnes</i>	<i>Number of incremental samples required</i>
Greater than 7 and up to and including 8	not less than 13
Greater than 8 and up to and including 9	not less than 14
Greater than 9 and up to and including 11	not less than 15
Greater than 11 and up to and including 12	not less than 16
Greater than 12 and up to and including 14	not less than 17
Greater than 14 and up to and including 16	not less than 18
Greater than 16 and up to and including 18	not less than 19
Greater than 18 and up to and including 20	not less than 20
Greater than 20 and up to and including 22	not less than 21
Greater than 22 and up to and including 24	not less than 22
Greater than 24 and up to and including 26	not less than 23
Greater than 26 and up to and including 28	not less than 24
Greater than 28 and up to and including 31	not less than 25
Greater than 31 and up to and including 33	not less than 26
Greater than 33 and up to and including 36	not less than 27
Greater than 36 and up to and including 39	not less than 28
Greater than 39 and up to and including 42	not less than 29
Greater than 42 and up to and including 45	not less than 30
Greater than 45 and up to and including 48	not less than 31
Greater than 48 and up to and including 51	not less than 32
Greater than 51 and up to and including 54	not less than 33
Greater than 54 and up to and including 57	not less than 34
Greater than 57 and up to and including 61	not less than 35
Greater than 61 and up to and including 64	not less than 36
Greater than 64 and up to and including 68	not less than 37
Greater than 68 and up to and including 72	not less than 38
Greater than 72 and up to and including 76	not less than 39
Greater than 76	not less than 40

TABLE 3

FLUID FERTILISERS

<i>Number of containers in sampled portion</i>	<i>Number of containers to be selected for sampling</i>
1 to 3	All containers
4 to 20	not less than 4

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<i>Number of containers in sampled portion</i>	<i>Number of containers to be selected for sampling</i>
21 to 60	not less than 6
61 to 100	not less than 8
101 to 400	not less than 10
More than 400	not less than 20