

Fertilizers —

Part 2: Sampling —

Section 2.9 Sampling plan for the evaluation of a large delivery of solid fertilizer

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Chemicals Standards Policy Committee (CIC/-) to Technical Committee CIC/37, upon which the following bodies were represented:

- Association for Consumer Research (ACRE)
- Association for Public Analysts
- British Aggregate Construction Materials Industries
- British Coal Corporation
- Chemical Industries' Association
- Department of Trade and Industry (Laboratory of the Government Chemist)
- Fertiliser Manufacturers' Association Ltd.
- Institute of Trading Standards Administration
- Ministry of Agriculture, Fisheries and Food
- Ministry of Defence

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National foreword

This Section of BS 5551 has been prepared under the direction of the Chemicals Standards Policy Committee. For some years the United Kingdom has participated in the standardization of methods of sampling fertilizers through Subcommittee 2, Sampling, of Technical Committee 134, Fertilizers and soil conditioners, of the International Organization for Standardization (ISO). As international agreement is reached on the methods, it is proposed to publish them as Sections of BS 5551.

BS 5551 is published in four Parts, each Part being subdivided into Sections and, where appropriate, Subsections. The four Parts are:

- *Part 1: Terminology and labelling;*
- *Part 2: Sampling;*
- *Part 3: Physical properties;*
- *Part 4: Chemical analysis.*

This Section of Part 2 is identical with ISO 8634:1991 “*Solid fertilizers — Sampling plan for the evaluation of a large delivery*”.

Cross-references

International Standard	Corresponding British Standard
	BS 5551 <i>Fertilizers</i>
ISO 5306:1983	Section 2.2:1984 <i>Presentation of sampling reports</i> (Identical)
ISO/TR 7553:1987	Section 2.7:1988 <i>Recommendations for minimum mass of increment of a solid fertilizer to be taken to be representative of the total sampling unit</i> (Identical)
ISO 7742:1988	Section 2.5:1989 <i>Method for reduction of samples of solid fertilizers</i> (Identical)
ISO 8358:1991	Section 2.8:1991 <i>Methods for preparation of samples of solid fertilizer for chemical and physical analysis</i> (Identical)

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 10, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

1 Scope

This International Standard specifies a method for sampling a delivery of more than 250 t of fertilizer and, after analysis of the sample or samples, presents rules for assessing whether the delivery can be accepted by a buyer, allowing for given reselling risks under given local legal conditions (or if he wishes to guarantee to the final buyer a given mean assay with a given risk).

The weighing of the bags or lots, the date limit for sampling, etc., which are of necessity involved in the definitive evaluation of the delivery, are not dealt with in this International Standard.

This sampling plan is applicable to a large delivery of fertilizer supplied to a third party for resale under his own responsibility, in small lots, each of which would be subject to legislation.

By "large amount" is understood, for example, a full boat-load (5 000 t, 10 000 t or more) corresponding to a relatively long period of manufacture, but the plan may be used for any delivery of 250 t or more.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 5306:1983, *Fertilizers — Presentation of sampling reports*.

ISO/TR 7553:1987, *Fertilizers — Sampling — Minimum mass of increment to be taken to be representative of the total sampling unit*.

ISO 7742:1988, *Solid fertilizers — Reduction of samples*.

ISO 8358:1991, *Solid fertilizers — Preparation of samples for chemical and physical analysis*.

3 Definitions

For the purposes of this International Standard, the following definitions apply. These definitions are taken from ISO 8157/Add.1. ISO 8157 contains additional definitions relating to the sampling of fertilizers.

3.1

lot; sample portion

the total quantity of material, assumed to have the same characteristics, to be sampled using a particular sampling plan

3.2

delivery

a quantity of material transferred at one time

3.3

sampling unit

a defined quantity of material having a boundary which may be physical, for example a container, or hypothetical, for example a particular time or time interval in the case of a flow of material

3.4

increment

a representative quantity of material taken from a sampling unit

3.5

aggregate sample

a combination of all increments from the lot

NOTE 1 In this International Standard, all the increments are grouped in equal numbers to form aggregate samples.

3.6

reduced sample

a representative part of the aggregate sample obtained by a process of reduction in such a manner that the mass approximates to that of the final (laboratory) samples

3.7

final sample

a representative part of the reduced sample or, where no intermediate reduction is required, of the aggregate sample

4 Symbols

The following symbols appear in this International Standard and have the meanings assigned to them below.

- | | |
|-------|---|
| N | Number of sampling units to be selected during the sampling of the delivery. (Increments.) |
| N' | Number of analyses to be carried out on the N increments during the inspection of the delivery. |
| N_R | Number of sampling units contained in the smallest lot presented for resale. |
| k | Number of increments to be combined into each aggregate sample for analysis. |
| n | Number of sampling units which will be mandatorily selected during the official sampling of a lot of N_R sampling units. |
| s | Estimate of $\sigma/\sqrt{k}$ with the aid of N' analyses, where σ is the standard deviation between the sampling units in the delivery. |