
**Oilseeds — Manual or automatic
discontinuous sampling**

*Graines oléagineuses — Échantillonnage discontinu manuel ou
automatique*

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Foreword

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Introduction

Most oilseeds are marketed on the basis of the result of analysis of the samples representing lots, and disputes are invariably settled by reference to these samples. Careless or inaccurate sampling practices could lead to misunderstandings, delays and unwarranted financial adjustments.

Correct sampling is a difficult process and one that requires the most careful attention. Emphasis cannot therefore be too strongly laid on the necessity of obtaining a representative sample of oilseeds for analysis.

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Oilseeds — Manual or automatic discontinuous sampling

1 Scope

This document specifies the requirements for discontinuous sampling of oilseeds, using the manual or automatic method, for the purpose of assessing their quality and condition.

NOTE An example of “condition” is an odour due to a treatment product.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 664, *Oilseeds — Reduction of laboratory sample to test sample*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at <http://www.electropedia.org/>

— ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1

discontinuous sampling

sampling by automatic or manual means of at least one position within a *lot* (3.3) of both static and moving oilseeds

Note 1 to entry: Manual sampling of moving oilseeds is considered discontinuous sampling.

Note 2 to entry: For comparison, continuous sampling is the automatic uninterrupted sampling of moving oilseeds within a lot across the entire flow (for example, a permanent sampling system on a conveyor belt or any circulation flow that enables continuous sample taking throughout the loading or discharge of the consignment; there is no break in the sampling procedure).

EXAMPLE Hand-scoops, manual and/or automatic samplers (sequenced), shovels, suitable sampling buckets, etc. are means of sequenced sampling and are part of discontinuous sampling.

3.2

consignment

quantity of oilseeds dispatched or received at one time and covered by a particular contract or shipping document

Note 1 to entry: The consignment can be composed of one or more lots or part of a lot.

3.3

lot

stated quantity of the *consignment* (3.2) presumed to be of uniform characteristics, which can be sampled in order to determine its quality and condition

Note 1 to entry: The quantity of the lot can be of a mass up to 5 000 t.

**3.4
increment sample**

amount of material taken at one time at each individual sampling point (at each individual sampling time for moving lot) throughout a *lot* (3.3)

**3.5
bulk sample**

quantity of oilseeds obtained by combining and blending the increments taken from any one particular *lot* (3.3)

**3.6
homogenization**

thorough blending by mechanical or manual means so that any contaminants or foreign materials are thoroughly distributed throughout the bulk or *laboratory sample* (3.7)

**3.7
laboratory sample**

representative quantity of oilseeds obtained by *homogenization* (3.6) and division of the *bulk sample* (3.5) and intended for analysis or other examination in a laboratory

4 Principles

4.1 Representative samples

The laboratory samples shall be as representative as possible of the lots from which they are taken. Each consignment shall be divided, actually or notionally, into lots of 500 t to 5 000 t according to its size. At least a minimum number of increments shall be taken from each lot and homogenized carefully in order to obtain a bulk sample from which laboratory samples may be taken by successive division. A laboratory sample shall result from the sampling of each lot (see Table 1).

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A diagram showing the different steps for laboratory samples is given in Annex A.

4.2 Oilseeds sampling

This document covers both the discontinuous sampling of oilseeds in motion while being transferred and the sampling of static lots. Samples shall be taken using manual or automatic methods. Where possible, sampling should be performed when the oilseeds are flowing (e.g. during loading or unloading) so that the constituent parts of the lot have the same probability of being sampled and comply with the minimum number and mass of increments prescribed.

Sampling shall be carried out in such a manner as to protect the samples, the sampling instruments and the container in which the samples are placed to prevent unintentional adventitious contamination such as rain, dust, introduction of foreign material, etc.

All sampling operations shall be carried out over a sufficiently short period of time so as to avoid any alteration in the composition of the samples. If one of the sampling stages requires too long a period of time, the samples or intermediate samples shall be preserved in airtight containers.

It is extremely important that the preparation/reduction of a bulk sample be done using the appropriate equipment and method. Failure to complete this process accurately will impact any analysis conducted on a sample that might or might not be representative of the lot. It is important to maintain the representativeness of the lot being sampled, specifically by avoiding segregation of materials in order to achieve random sampling, which shall be carried out using unbiased methods.

5 Equipment and devices

5.1 Special care shall be taken to ensure that all sampling apparatus is clean, dry, free from foreign odours and made from material which will not contaminate or alter the quality and the condition of the oilseeds.

The devices used for sampling and division fall under the categories described in [5.2](#) to [5.4](#); examples are given in each case.

NOTE Examples of a device used for sampling and division are given in [Annex B](#). There are a number of different types of sampling equipment or devices. It is advisable to choose the most appropriate equipment according to the type of oilseed to be sampled and the containers (e.g. bottles, jars or tins) to be used.

5.2 Devices for sampling from bags: sack-type tapered sampling probes, cylindrical samplers, conical samplers and hand-scoops.

5.3 Devices for sampling bulk products: large shovels, hand-scoops, cylindrical samplers, conical samplers, automatic samplers and other devices for taking small periodical increments discontinuously from a flow of oilseeds

NOTE This list is not exhaustive.

5.4 Devices for mixing and reduction: dividing instruments, shovels and quartering irons.

6 Time and place of sampling and limitation of the size of lots

6.1 General information

Whether the consignment is in bulk or in bags, sampling shall be normally carried out during, and at the place of, loading into or discharge from the ship, barge, wagon or lorry or at the time of entry into or exit from the silo or warehouse, as agreed between the parties concerned. According to the consignment mass of the sampled product, each laboratory sample should be identified with the bulk tonnage of the sampled product and should represent a lot up to 5 000 t plus a remainder (see [Table 1](#)). Special requirements for bulk transfer are given in [6.2](#).

6.2 Bulk transfer

6.2.1 General

It is generally advisable to use the procedures described in [6.2.2](#) to [6.2.4](#) for the bulk transfer of oilseeds.

6.2.2 Transfer to lorries and wagons

The increments should be taken from the flow of product (preferred method) during the entire loading or entire discharge (particularly for tanker-wagons where internal sampling is not possible), or in the lorry or wagon, as soon as possible after loading. At least five different positions should be sampled according to the size of the lorry or wagon (see [7.2.3.3](#)) for the purpose of providing one bulk sample (see [Table 1](#)).

6.2.3 Transfer to barges

The increments should be taken systematically and randomly from the flow of product (preferred method) during the entire loading or entire discharge. Each hold should be sampled throughout the entire duration of loading for the purpose of providing one bulk sample.