

SAMPLING METHODS

OILS, FATS, TECHNICAL TALLOWES, GREASES AND ACID OILS

Sampling	ISO 5555:2001/Amd 1:2014
Preparation of laboratory samples	ISO 5555:2001/Amd 1:2014 Section 6.9
Labelling of laboratory samples	ISO 5555:2001/Amd 1:2014 Section 7.2
Preparation of test sample	ISO 661:2003
Packaging and storage of oils and fats samples	FOSFA International Official Method

FOSFA INTERNATIONAL OFFICIAL METHOD

PACKAGING AND STORAGE OF OILS AND FATS SAMPLES

1 Scope

This FOSFA method for the labelling, packaging, transport and storage of samples is applicable to all samples drawn under the terms of FOSFA International contracts for analysis, arbitration or standards purposes.

2 Label design

2.1 Labels must comply with ISO 5555:2001/Amd 1:2014 Section 7.2.

2.2 Labels should be completed in legible handwriting, preferably in capital letters, or typed. Labels should be securely attached to the samples they represent.

3 Sample labelling, sealing and distribution

The label is to be affixed to the sample bottle and sealed to the bottle (jointly where appropriate) and to clearly indicate the appropriate FOSFA International contract number.

Sealing wax, if used, should not contain copper. If a sealing wax does contain copper or the composition is unknown, the sample container shall be placed in a tight-fitting plastic bag and labelled and sealed therein.

Samples shall be distributed in accordance with the relevant FOSFA International contract requirements.

4 Packaging of oils and fats samples for analysis

The samples shall be packed in accordance with ISO 5555:2001/Amd 1:2014. For contractual analysis a sample of 250 ml is sufficient. Where special analyses are needed, a sample of 500 ml or more will be required.

5 Storage of samples after analysis

Samples should be clearly marked and stored with an in-house reference number in cool, dry conditions, away from strong light. The sample area should be insect and rodent free and hygienic. In normal circumstances, it has been the experience that contractual samples should be stored for a minimum of three months and longer if circumstances so dictate.

SAMPLING METHODS

OLEAGINOUS SEEDS AND OLEAGINOUS SEED PRODUCTS

Sampling	ISO 21294:2017
Preparation of laboratory samples	ISO 21294:2017 Section 7
Packing and Labelling of laboratory samples	ISO 21294:2017 Section 9
Reduction of laboratory sample to test sample	ISO 664:2008
Packaging and storage of oilseeds samples	FOSFA International Official Method
Sampling of edible groundnuts for aflatoxin testing	FOSFA International Official Method

FOSFA INTERNATIONAL OFFICIAL METHOD

PACKAGING AND STORAGE OF OILSEEDS SAMPLES

1 Scope

This FOSFA method for the labelling, packaging, transport and storage of oilseeds samples is applicable to all samples drawn under the terms of FOSFA International contracts for analysis, arbitration or standards purposes.

2 Label design

2.1 Labels must comply with ISO 21294:2017 Section 9.

2.2 Labels should be completed in legible handwriting, preferably in capital letters, or typed. Labels should be securely attached to the samples they represent.

NOTE 1 It is important that principals' instructions to superintendents make it quite clear whether the samples are being drawn for analysis and arbitration purposes.

3 Packaging

3.1 Samples of all oilseeds (other than palm kernels and other lauric seeds) sent to laboratories for analysis should be packed in water-tight plastic jars with screw caps of the same materials or in glass jars with plastic screw caps, of not less than 500 ml, which shall be filled to the top and sealed.

3.2 Palm kernels, illipe nuts, sheanuts, groundnuts – to be packed in a woven polypropylene bag closed and/or sealed then packed in a strong cotton or linen bag, which is then sealed – bags of plastic sheet must not be used.

4 Storage

4.1 Oilseed samples shall be stored at not more than 20°C. Palm kernel, illipe, sheanuts, copra (and other lauric seeds) should be cold stored at minus 15°C.

4.2 Where the sample is not packed and stored in accordance with this recommendation, the oil content at re-test should be adjusted in relation to the variation in moisture between the original test and the re-test.

FOSFA INTERNATIONAL OFFICIAL METHOD

SAMPLING OF EDIBLE GROUNDNUTS FOR AFLATOXIN TESTING

(Not applicable for groundnuts imported into the European Union)

1 Definitions

1.1

lot

An identifiable quantity of a food commodity delivered at one time and determined by an official to have common characteristics, such as origin, variety, type of packaging, packer, consignor or marking.

1.2

sublot

Designated part of a large lot in order to apply the sampling method on that designated part. Each sublot must be physically separate and identifiable.

1.3

incremental sample

A quantity of material taken from a single place in the lot or sublot.

1.4

aggregate sample

The combined total of all incremental samples taken from a lot or sublot.

1.5

laboratory sample

Sample intended for the laboratory (= subsample).

2 General provision

2.1 Material to be sampled

Each lot which is to be examined must be sampled separately. In accordance with the provisions in point 4, large lots should be subdivided into sublots and sampled separately.

2.2 Precautions to be taken

In the course of sampling and preparation of the laboratory samples precautions must be taken to avoid changes which adversely affect the aflatoxin content and the analytical determination or make the aggregate samples unrepresentative.

2.3 Incremental samples

As far as possible incremental samples should be taken at various places distributed throughout the lot or sublot, see Table 1. Departure from this procedure must be recorded in the record referred to in point 2.7.

2.4 Preparation of the aggregate sample and laboratory samples

The aggregate sample is made up by combining and sufficiently mixing the incremental samples.

2.5 Replicate samples

Replicate samples for enforcement, trade (defence) and referee purposes are to be taken from the homogenised laboratory samples.

Packaging and transmission of laboratory samples

Each laboratory sample must be placed in a clean inert container offering adequate protection from contamination and against damage in transit. All necessary precautions must be taken to avoid any change in composition of the laboratory sample which might arise during transportation or storage.

2.6 Sealing and labelling of laboratory sample

Each sample taken from official use shall be sealed at the place of sampling and identified. A record must be kept of each sampling, so that each lot can be identified unambiguously, with the date and place of sampling together with any additional information likely to assist the analyst.

3 Explanatory provisions

3.1 Sampling frequency

Without prejudice to the specific provisions as laid down in point 4, the following formula can be used as a guide for the sampling of lots traded in individual packings (sacks, bags, retail packings, etc).

$$\text{Sampling frequency (SF)} = \frac{\text{Weight of the lot} \times \text{weight of the incremental sample}}{\text{Weight of the aggregate sample} \times \text{weight of individual packing}}$$

Weight: in kg

Sampling frequency (SF): every *n*th sack or bag from which an incremental sample must be taken (decimal figures should be rounded to the nearest whole number).

3.2 Weight of the incremental sample

The weight of the increment sample should be about 300 grams, unless otherwise defined in Table 1. For retail packings, the weight of the incremental sample depends on the weight of the retail packing.

4 Specific provisions

4.1 Lots should be subdivided into sublots not exceeding 25 tonnes in weight. The minimum number of incremental samples and aggregate sample size to be taken from each subplot are given in Table 1.

- a. each subplot must be sampled separately;
- b. samples shall be taken as randomly as possible from throughout the consignment;
- c. each sample taken shall be ground finely and mixed thoroughly using a process that has been demonstrated to achieve complete homogenisation;
- d. samples of nuts that are "in shell" may include the shell in the final homogenate;
- e. the formal samples for enforcement, trade (defence) and referee purposes shall be taken from the homogenised material. In the case of the formal enforcement samples a minimum of three independent subsamples (each a minimum weight of 50 g) shall be removed from the mixed slurry sample for analysis and the size of the sample shall be sufficient to allow for this.

The result shall be taken to be the mean of the analytical results of the three independent subsamples.

4.2 Acceptance of a subplot

- a. accept if the mean of the independent subsamples conforms with the maximum limit;
- b. reject if the mean of the independent subsamples exceeds the maximum limit.

Table 1 – Sample sizes

Nuts and nut products	Minimum no. of incremental samples	Approximate incremental sample size (g)	Minimum aggregate sample size (kg)
Groundnuts shelled raw/roasted	30	330	10
Groundnuts in shell	30	660	20*
Peanut butter	24	200	5

* weight of nuts in shell