SLOVENSKI STANDARD
SIST EN ISO 6497:2005

01-junij-2005

Krma - Vzorļenje (ISO 6497:2002)

Animal feeding stuffs - Sampling (ISO 6497:2002)

Futtermittel - Probenahme (ISO 6497:2002)

Aliments des animaux - Echantillonnage (ISO 6497:2002)

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65.120	Krmila	Animal feeding stuffs

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Futtermittel - Probenahme (ISO 6497:2002)

This European Standard was approved by CEN on 17 February 2005.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

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Foreword

The text of ISO 6497:2002 has been prepared by Technical Committee ISO/TC 34 "Agricultural food products" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 6497:2005 by Technical Committee CEN/TC 327 "Animal feeding stuffs - Methods of sampling and analysis", the secretariat of which is held by NEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2005, and conflicting national standards shall be withdrawn at the latest by September 2005.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Endorsement notice

The text of ISO 6497:2002 has been approved by CEN as EN ISO 6497:2005 without any modifications.

INTERNATIONAL STANDARD

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Animal feeding stuffs — Sampling

Aliments des animaux — Échantillonnage

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 6497 was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 10, *Animal feeding stuffs*.

Annex A of this International Standard is for information only.

Animal feeding stuffs — Sampling

1 Scope

This International Standard specifies methods of sampling animal feeding stuffs, including fish feed, for quality control for commercial, technical and legal purposes.

It is not applicable to pet foods. Nor are the methods intended for sampling for the purpose of microbiological examination. Conditions of, and requirements for, sampling are specified separately for feeding stuffs of different physical natures.

For certain categories of animal feeding stuff, specific methods of sampling are specified in other International Standards. A list of these can be found in the bibliography. When sampling the products specified, it is these methods which shall be used.

Methods of sampling for the determination of substances likely to be non-uniformly distributed are described in Annex A.

2 Terms and definitions

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

2.1
consignment
a specified quantity of feeding stuff on offer, dispatched or received at one time

NOTE It may consist of one or more lots (see 2.2).

2.2
lot
an identified quantity of a consignment having characteristics presumed to be uniform

NOTE The uniformity of the characteristics may be due, for example, to the fact that the products are supplied by a single producer always using the same production process, where production is stable and the individual characteristics follow a normal distribution or a close approximation to a normal distribution (note that special circumstances can give rise to subdivisions in the distribution). Consequently, the term “lot” means an “inspection lot” in sampling, i.e. a quantity of material or a collection of items (a population) from which a sample is to be drawn and inspected. It may therefore differ from a collection of items referred to as a lot in the shipment context, for example.

2.3
increment
a quantity of material taken at one time from a single point in a lot

2.4
bulk sample
a quantity of material obtained by combining and mixing all the increments taken from the same lot

NOTE A collection of distinct and identifiable increments intended for separate investigation may be denoted the “gross sample”.

2.5
reduced sample
a representative part of the bulk sample, obtained by a process of successive division or reduction in such a manner that the mass or volume approximates to that of the laboratory samples

2.6
laboratory sample
a sample representative of the quality and condition of the lot, obtained by division of the reduced sample and intended for analysis or other examination

NOTE For each sample taken, three or four laboratory samples are normally produced. One of these should be submitted for testing and at least one stored for reference purposes. If more than four laboratory samples are required, the quantity of the reduced sample will have to be increased so that the minimum quantity requirement for all laboratory samples can be met.

3 General principles

3.1 Representative sampling

The purpose of representative sampling is to obtain a small fraction from a lot in such a way that a determination of any particular characteristic of this fraction will represent the mean value of the characteristic of the lot.

The lot shall be sampled by repeatedly taking increments at various single positions in the lot. These increments shall be combined by mixing to form a bulk sample from which representative laboratory samples shall be prepared by dividing.

3.2 Selective sampling

If portions of the material to be sampled show a noticeable difference in quality from the rest of the material, such portions shall be separated from the material and treated as a separate lot. In such cases, mention shall be made of this fact in the sampling report.

If it is not possible to divide the material into separate lots, the material shall be sampled as one lot, and the sampling report shall indicate this fact. The proportion of the product suspected to be different shall be given, if possible.

3.3 Statistical considerations

Acceptance sampling is the usual method of sampling for animal feeding stuffs. For sampling by attributes, there is a theoretical sampling plan based on a binomial distribution, but, for practical purposes, this plan has been simplified to a square-root relationship between the lot size and the number of increments.

NOTE 1 With bulk products, sample variances can be expected to be acceptably uniform if, for lots up to 2,5 tonnes, at least seven increments are taken and, for lots between 2,5 tonnes and 80 tonnes, the number of increments taken is at least equal to $\sqrt{20m}$, where m is the mass, in tonnes, of the lot. If the lot exceeds 80 tonnes, the square-root relationship is still applicable, but the risk of making incorrect decisions on the basis of the samples increases. However, this can be the subject of agreement between the interested parties.

NOTE 2 The application of the square-root relationship is somewhat different for the sampling of packaged animal feeding stuffs, for liquids and semi-liquids, for blocks and licks and for roughages, because the sample size may vary.

4 Sampling personnel

Sampling shall be carried out by persons suitably trained and experienced in the sampling of animal feeding stuffs and who are particularly aware of the hazards and dangers the product and the sampling process may involve.

5 Identification and general inspection of the lot prior to sampling

Positively identify the lot in question before any samples are taken, and, for this purpose, compare, as appropriate, the number of items in the lot, the mass of the lot or the volume of the lot, and the markings on containers and labels, with the entries on the relevant documents.

Note for inclusion in the sampling report any features, relevant to the taking of representative samples, concerning the condition of the lot and of the surroundings.

Separate damaged portions of the lot and/or, if the lot is unduly heterogeneous, divide it into portions with more similar properties. Treat each of these portions as separate lots.

6 Sampling equipment

6.1 General

Select a sampling device appropriate to the particle size of the product, the size of the sample to be taken, the size of the container, the physical state of the product, etc.

6.2 Apparatus for taking increments from solid products

6.2.1 Examples of apparatus for manual sampling

6.2.1.1 Sampling from bulk

Examples are an ordinary shovel, hand-scoop, cylindrical sampler (for example sampling spear, stick-trier or sleeve-trier) and conical sampler. The sampling spear may comprise one or more compartments.

Sampling of products in motion at relatively low flow rates can be performed manually.

6.2.1.2 Sampling from bags or other packages

Examples are a hand-scoop, sack-type sampling spear or trier, cylindrical sampler, conical sampler and riffle divider.

6.2.2 Examples of apparatus for mechanical sampling

Approved apparatus for taking increments periodically from a flow of product (for example pneumatic apparatus) may be used.

Sampling of products in motion at high flow rates can be performed by machines with manual control.

6.3 Apparatus for taking increments from liquid or semi-liquid products by manual or mechanical means

Examples are a stirrer plunger, agitator, sampling bottle, sampling tube, zone sampler and dipper, of an appropriate size.

6.4 Cleanliness

When taking, reducing, storing and handling samples, special care shall be taken to ensure that the properties of the samples and the sampled lot are not affected. The sampling equipment shall be clean, dry and free from foreign odours. The material from which the sampling apparatus is made shall not influence the quality of the sample. Apparatus shall be cleaned thoroughly between samples. This is particularly important when sampling feed with high oil content. Sampling personnel shall wear disposable gloves and dispose of them between samples so as not to contaminate the subsequent sample.