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British Standard Methods for **Sampling animal and vegetable fats and oils**

Méthodes d'échantillonnage des corps gras d'origine animale et végétale

Verfahren zur Probenahme von tierischen und pflanzlichen Fetten und Ölen

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Foreword

This British Standard has been prepared under the direction of the Food and Agriculture Standards Committee as the third revision of BS 627. It supersedes the 1965 edition which is withdrawn. The revision is based on work of the International Organization for Standardization in which the United Kingdom has taken an active part. It makes use of the text of the draft International Standard DIS 5555-1982 'Animal and vegetable fats and oils — Sampling', which was developed from BS 627 : 1965 and differs from BS 627 : 1965 in that, following international discussion, the text is more suitable for use in international trade. The definitions (see clause 2)

have been revised and in particular the term 'laboratory sample' is used in place of 'contract sample' or 'quality sample'. Greater emphasis is laid on temperature control and the appendix giving temperature limits has been revised.

When ISO 5555 is published, it is intended to consider publishing the text as an identical British Standard.

The method of preparing test samples from the laboratory sample is described in BS 684 : Part 0.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

British Standard Methods for

Sampling animal and vegetable fats and oils

0. Introduction

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

Practically all fats and oils are sold on the basis of a sample and on the result of an analysis of the sample, and disputes are invariably settled by reference to the sample, so that careless or inaccurate sampling can lead to misunderstanding, delay and unnecessary financial adjustments.

The procedures given in this standard are recognized as good practice and it is strongly recommended that they be followed wherever practicable. It is recognized that it is difficult to lay down fixed rules to be followed in every case, and particular circumstances may render some modification of the methods desirable.

1. Scope

This British Standard describes methods for sampling of crude or processed animal and vegetable fats and oils. It also describes apparatus in use for this purpose.

NOTE 1. Throughout this standard, the word 'animal' includes marine animal.

NOTE 2. The titles of publications referred to in this standard are listed on the inside back cover.

2. Definitions

For the purposes of this British Standard, the following definitions apply.

2.1 consignment. The quantity of fat or oil despatched at one time and covered by a particular contract or shipping document. It is composed of one or more lots or parts of lots.

2.2 lot. A given quantity of the consignment presumed to be of uniform quality, and allowing the quality to be assessed.

2.3 primary sample. A quantity of fat or oil drawn from one place in the lot. The primary samples as a whole shall be representative of the lot.

NOTE. The terms 'sub-sample' and 'increment' are also used to describe a primary sample.

2.4 bulk sample. A quantity of fat or oil obtained by combining the various primary samples from a lot in amounts proportional to the quantities they represent.

2.5 laboratory sample. The quantity of fat or oil obtained from the bulk sample after suitable homogeni-

zation and reduction in size, that is representative of the lot and intended for laboratory examination.

NOTE. The term 'contract sample' is also used to describe a laboratory sample.

2.6 weight per unit volume sample. The quantity of fat or oil obtained from the points where the weight of fat or oil is to be calculated from volume (see 6.7).

3. General

The object of sampling and of preparing samples is to obtain from a consignment (which may be in lots) manageable quantities of fat or oil, the properties of which correspond as closely as possible to the properties of the consignment sampled or of the individual lots sampled.

The methods of sampling, described in this standard, are intended for the guidance of experts and can be used for:

- (a) consignments in bulk, e.g. land tanks, ships' tanks, tank wagons, tank cars;
- (b) consignments consisting of a number of packages, e.g. barrels, drums, cases, tins, bags.

4. Apparatus

4.1 General. The choice of instrument for a particular purpose and its effectiveness depend on the skill of the sampler in following the recommended procedure.

4.2 Materials. Sampling instruments shall be made of material which does not have a significant chemical reaction with the fat or oil being sampled, or catalyse any such reaction. Copper or copper-bearing metals shall not be used. Stainless steel, aluminium, glass and some non-softening plastics materials are suitable; glass shall be used only if alternative materials are not acceptable.

Warning. When glass equipment is used, great care should be taken to avoid breakages, with resulting danger of contamination of the sample and the bulk with broken glass.

4.3 Types of sampling instruments

4.3.1 General. Many forms and variations of sampling apparatus exist, and the instruments described in this standard are to be regarded only as examples of well established practice.

The instruments illustrated are all simple, robust, easily cleaned and relatively cheap to manufacture. They will perform all the sampling tasks described in this standard with all the types of fats and oils commonly found in world commerce. Many of the alternative designs of

instruments available have been designed to meet the special requirements of individual users.

Certain basic requirements are common to all sampling instruments. These are to take a representative sample from a required level or area in a receptacle and to preserve the integrity of the sample until it can be transferred to a sample container. Ease of cleaning, handy size and ability to withstand rough usage are other essential characteristics.

The instruments listed in 4.3.2 to 4.3.5 are made in various convenient sizes and those listed in 4.3.7 and 4.3.8 can be made of small diameter for use through small access holes.

Illustrations of the types of apparatus listed in 4.3.2 to 4.3.10 are given in appendix B. Dimensions given in the illustrations are not intended to be mandatory, but to serve as a guide to manufacturers.

4.3.2 Sample bottle or can (see B.1 and figure 4).

4.3.3 Sampling tipping dipper (see B.2 and figure 5).

4.3.4 Valve sampling cylinder (sinker sampler) (see B.3 and figure 6).

4.3.5 Bottom samplers or zone samplers (see B.4 and figures 7 and 8).

4.3.6 Continuous average sampler (see B.5 and figures 9 and 10).

4.3.7 Sampling tubes (see B.6 and figure 11).

4.3.8 Valve sampling tube (see B.7 and figure 12).

4.3.9 Compartmented valve sampling cylinder (see B.8 and figures 13 and 14).

4.3.10 Sampling scoops (see B.9 and figures 15 and 16).

4.4 Ancillary apparatus. The following equipment is required in addition to sampling apparatus.

4.4.1 Water-finding instruments (see B.10, figures 17 and 18).

4.4.2 Sampling tube withdrawal cleaner (see B.11 and figure 19).

4.4.3 Sample containers

4.4.4 Adhesive and tie-on labels and sealing apparatus.

4.4.5 Thermometers.

4.4.6 Measuring tape.

5. Sampling technique

5.1 Perform all sampling operations with clean hands or wearing gloves (clean plastics or cotton gloves may be used).

5.2 Use only clean, dry apparatus and sample containers. Wash the sampling apparatus with a hot solution of soap or other detergent, and afterwards rinse it thoroughly with clean hot water. Before use, dry the washed apparatus carefully, e.g. in a hot cupboard. If steam is available, hold the washed apparatus in a jet of steam for a short time.

5.3 Carry out sampling in such a manner as to protect the samples, the fat or oil being sampled, the sampling instruments and the containers in which the samples are placed, from adventitious contamination, such as rain or dust.

5.4 Remove all extraneous material from the outside of the sampling instrument before the latter is emptied.

NOTE. It is important that fats and oils are not overheated. It is recommended that, in accordance with normal practice, the temperature of the bulk of a fat or oil in a large tank should not be raised by more than 5 °C per day.

It is also recommended that the temperature of the fat or oil during sampling be within the range given in appendix A.

6. Methods of sampling

6.1 Types of container. A distinction is made between the following types of containers from which samples are drawn and which can affect the method of sampling:

- (a) vertical cylindrical land tanks;
- (b) ships' tanks;
- (c) tank wagons or cars;
- (d) horizontal land tanks;
- (e) weigh hoppers;
- (f) pipelines;
- (g) consignments in packages, e.g. barrels, drums, cases, tins, bags.

In all circumstances, it shall be considered whether or not the sample is intended for preliminary inspection or for analysis or for the determination of weight per unit volume and approximate action taken.

6.2 Sampling from vertical cylindrical land tanks

6.2.1 Preparatory measures. Before sampling begins, take care to ensure that all of the fat or oil in each tank is as homogeneous and as nearly liquid as possible. Ascertain, by means of a bottom sampler and a water-finding instrument, whether or not there is a sediment or a layer of oil of different composition, or a layer of water, at the bottom. If oil layers of different composition are present, achieve homogeneity in most cases by heating, but limit the heating to what is strictly necessary, and never heat by direct contact of steam with the product.

NOTE. It is recommended that the maximum temperatures given in appendix A should not be exceeded.

When heating is applied, preferably use hot water passing through the heating coils or, if steam is used, a maximum steam pressure of 240 kPa gauge reading (138 °C).

If heating is not permissible because of the nature of the oil, or if it is not necessary, or if heating has to be omitted for any other reason, make the oil homogeneous by blowing nitrogen through it*.

6.2.2 Procedure

6.2.2.1 General. As far as possible, run off any free water before sampling commences. Measure this quantity of water and report it to the representatives of the parties concerned.

If the condition of the oil to be sampled (after any water has been run off) is not known, obtain a sample for information, either by a continuous average sampler (4.3.6) or by taking a sample from the bottom of the tank, using a bottom or zone sampler (4.3.5) or valve sampler (4.3.4), to show whether the contents of the tank are homogeneous or not.

* If an oil is known to be inhomogeneous and nitrogen is not available then the separate parties may if they choose agree to blow with air, although this process is to be deplored as it involves deterioration of the oil by oxidation. If air is used, note this in the sampling report.

6.2.2.2 Inhomogeneous fats and oils. Preferably, use a valve sampler (4.3.4) but a bottom sampler (4.3.5), used with a cord is also suitable. Take primary samples at every 300 mm from the top to the bottom until the layer of different composition is reached. In this layer, take more primary samples (e.g. at every 100 mm) together with a bottom sample. Prepare three samples as follows:

- (a) a sample of the clear oil;
- (b) a sample of the separated layer;
- (c) a bulk sample prepared by mixing samples (a) and (b) in proportion to the respective sizes of the two layers, taking care to ensure that the correct proportions are as exact as possible.

6.2.2.3 Homogeneous fats and oils. Use the same sampling instruments detailed in 6.2.2.2, but in this case take at least three primary samples, from 'top', 'middle' and 'bottom'. Prepare the bulk sample by mixing one part from each of the top and bottom samples with at least three parts from the middle.

6.3 Sampling from ships' tanks. The shape and disposition of ships' tanks make it difficult, if not impossible, to draw samples properly. Preferably, sample in the course of transference as described in 6.6. If, however, samples are drawn from ships' tanks, use, as far as possible, the method described in 6.2, including the preparatory measures such as heating.

Sample each tank separately and take the number of samples given in table 1. In making up the bulk sample from a tank, allow for the shape of the ships' tank, as far as possible, by mixing the primary samples in the corresponding proportions. Preferably, sample barge tanks as soon as they have been filled.

Table 1. Number of bulk samples to be taken from each ship or land tank

Weight of tank contents	Number of samples to be taken
up to 500	1
500 to 1000	2
over 1000	1 for every 500 or part thereof

6.4 Sampling from tank wagons or cars and from horizontal cylindrical tanks. Preferably, sample these as soon as they have been filled, i.e. before settlement occurs leading to possible fractionating or layering.

Draw the primary samples by means of the valve sampling tube (4.3.8). Insert this open and use a sampling tube that is sufficiently long to touch the bottom of the tank, so that it takes a sample throughout the whole depth of the liquid. Alternatively, use the valve sampling cylinder (4.3.4) and the procedure described in 6.2.2.

If the primary samples cannot be drawn immediately after the tanks have been filled, first make a test, if necessary, for the presence of free water. If free water is present in substantial quantities, draw it off by opening the bottom cock, and determine accurately the weight of the water drawn off and report it to the parties involved. Then make the contents sufficiently homogeneous by blowing

nitrogen† through them and/or heating them until they are entirely liquid, always provided that the particular oil being sampled will not suffer from such treatment.

If circumstances require that static liquid should be sampled in a tank wagon or horizontal cylindrical tank, without mixing as indicated above, take the greatest care in drawing the correct proportion of sample relative to the liquid depth.

Whereas one dip of the valve sampling tube would give a correct sample for freshly filled tanks, for static liquid in tanks of circular or elliptical cross section make a correction for tank shape. Make the correction by taking a second dip from the middle layers of the tank, drawing only about one third of the amount of the first dip. Mix the two dips to make the bulk sample.

Figure 1 shows cross sections of typical tanks, drawn on squared paper and marked off at 300 mm levels and to make comparisons of the areas, and hence the volumes, of each 300 mm depth, count the squares; these approximate comparative areas are shown in the column at the right of each diagram.

For sampling with bottle or zone-type samplers, take proportions from each level equivalent to the approximate comparative areas shown in figure 1 to form the bulk sample.

For cylindrical tanks take one full dip of the valve sampling tube and one dip inserted to one third of the depth from the surface, whilst for tanks of elliptical cross section take one full dip and one slightly less than one third of the depth from the surface.

NOTE 1. In practice, the proportion of one and a third dips is used for both shapes of tanks as the difference is insignificant.

The method of taking the above mentioned 'tank-shape-corrected' sample is as follows.

Take three dips in all, ensuring that the first two are full dips, with the sampling tube reaching to the bottom of the tank and showing the depth of oil on the tube markings. Only insert the other dip to two thirds of the depth from the surface, so that it holds only two thirds the amount of either of the first two dips. In all three cases, insert the valve sampling tube open, first clearing away any scum at the surface of the oil. In the first two cases, lower the tube slowly throughout the whole depth and in the third case, drop the tube very rapidly through the first third and slowly through the middle third.

NOTE 2. This ensures that the primary samples are drawn where required. Whilst it is appreciated that the third dip can be made with the tube closed until it reaches the middle layer, confusion may arise with the two different methods employed and the established practice of bulk sampling.

Thoroughly mix the three dips to obtain the bulk sample.

If a valve sampling cylinder is used to sample every 300 mm of the tank wagon, mix the proportions of primary samples, from each 300 mm level, as shown in figure 1 to make the bulk sample.

NOTE 3. This fairly simple method of drawing to scale, on graph paper, the cross section of any shaped tank of any size can be used to indicate the proportions of primary samples for mixing.

Sample inclined tanks by the methods described in 6.3 for ships' tanks.

NOTE 4. The tank shape corrections given in this subclause are not applicable to inclined or irregular tanks.

* Preferably take the top primary sample at a level one tenth of the depth of the surface, the middle primary sample at one half of the depth and the bottom primary sample at a point nine tenths of the depth from the surface of the oil.

† See footnote to 6.2.1.

Alternatively, use a compartmented valve sampling cylinder (4.3.9) for tanks, wagons, cars, or horizontal cylindrical tanks. Immerse the closed tube to its full height*.

6.5 Sampling from weigh tanks. Sample weigh tanks as soon as they are filled, before settling has occurred. Draw the sample by allowing the sampling instrument (for example a zone sampler) to sink to the middle and fill it there. Should unavoidable delay occur, which results in the sinking of sediment or flocs to the bottom of the tank, agitate the contents before sampling or carry out sampling at depths of every 300 mm. If the tank is a closed one, sample it from a horizontal drip cock immediately after filling.

6.6 Sampling of oils in course of transfer

6.6.1 Introduction. Use this method only if the product is entirely liquid, homogeneous and contains no components which could block the cock. Draw off and weigh any water-containing emulsion, i.e. fore-pump oil, store and sample this separately.

Draw samples of very large quantities in bulk, during the transfer, by means of frequent dipping of the stream at regular intervals during outflow of the whole contents of the tanks; this method is particularly easy in application when the oil is transferred through a weighmeter tank.

Alternatively, carry out the sampling by means of a side or secondary stream tapped from the main stream, carefully observe certain conditions to ensure accurate sampling by this method, which is most suited to relatively homogeneous consignments of oil, as the difficulties arising from the presence of free water and flocs are obvious.

6.6.2 Tap or drip cock. Fit the tap or drip cock from a nozzle not less than 9.5 mm diameter, introduced into the centre of the main discharge pipeline and facing the flow of liquid. Do not let the tap into the side or bottom of the pipeline. Introduce the tap or drip cock, if possible, into a horizontal section of the main pipeline, as far from elbows and tees as possible, and preferably within 10 m to 50 m of the pressure side of the pump (see figure 2).
NOTE. A pet-cock is not recommended.

The sampling line shall not be less than 9.5 mm pipe diameter and shall fall continuously to its outlet. The tap or drip cock shall be of such design as to be easily and quickly cleaned in case of blockage.

6.6.3 Procedure. Maintain the rate of flow in the main pipeline as constant as possible at a value sufficient to ensure the turbulence necessary to effect complete mixture of the materials in the pipe.

Fit a cover over the whole apparatus and sample collecting containers to prevent adventitious contamination of the sample.

Carefully mix the total sample from the drip cock immediately after the completion of the discharge to form the bulk sample, from which the laboratory sample is to be drawn.

NOTE. Figure 3 shows a suitable tank for the collection and mixing of the bulk sample.

In view of the possible choking of the drip cock, etc., by pieces of dirt and of the variations that inevitably occur in the rate of flow, it is essential that an experienced sampler is in constant attendance throughout the sampling.

6.6.4 Bulk sample size. Take bulk samples during the transfer from each tank as indicated in table 2.

Table 2. Minimum size of bulk sample

Weight of tank contents	Minimum sample size
t	L
up to 20	1
20 to 50	5
50 to 500	10

6.7 Sampling from tanks for determination of weight per unit volume

NOTE. The weight per unit volume is used to calculate the weight of the contents of a tank from the product of the volume of the tank and the weight per unit volume.

To draw the special sample for determining the weight per unit volume, heat all fats which are not liquid, or are only partially liquid, slowly before measuring and sampling, so that the contents of the tank are uniformly heated and local overheating is avoided†.

Continue heating until the fat has completely melted. However, avoid heating to too high a temperature, as this may damage the quality of the fat.

NOTE 1. For the oils and fats listed (see appendix A). It is recommended that the temperature at the time of measuring and sampling should be kept within the limits shown in appendix A, unless otherwise agreed between the parties concerned.

After uniform heating, allow the contents of the tank to stand until they are more or less free from air and there is little or no scum floating on the top and then draw the sample.

To obtain the sample for determining the weight per unit volume, draw primary samples, preferably at more than one point, at three levels, upper, middle, lower, but not less than 100 mm from the bottom. Pour them into a sampling bucket and mix to form the bulk sample. If there is much sediment in the contents of the tank, draw the primary samples at every 300 mm. Determine the temperature and volume of the contents of the tank immediately before and after sampling.

Measure the temperature to the nearest 0.5 °C, preferably at more than one point, at each of three levels.

NOTE 2. The average of the values found is regarded as the temperature of the contents of the tank during sampling.

6.8 Sampling from packages (small packing units)

6.8.1 Introduction. If a consignment consists of a large number of separate small packing units, e.g. small tanks, barrels, drums, cases, tins (loose or in cartons), bottles or bags, it will often be difficult, if not impossible, to sample each separate item.

* If the diameter of the tank is less than the length of the sampling tube, the latter is inclined at a suitable angle.

† It is recommended in accordance with standard practice that the temperature of the bulk of a fat or oil on a large tank should not be raised by more than 5 °C per day.

In such cases, therefore, a suitable number of units are chosen from the consignments at random* to ensure as far as possible, that together they represent the average properties of the consignment.

It is impossible to give any hard and fast rule for the number of units to be sampled, as this depends to a large extent on the uniformity of the consignment.

The uniformity of a consignment is classified as one of the following:

- (a) class a consignments, which may be assumed to be more or less uniform;
- (b) class b consignments, which are known not to be uniform;
- (c) class c consignments, about which nothing is known;
- (d) class d consignments, of which the quality is suspect owing to the possible presence of foreign bodies in one or more of the packing units.

Treat the consignment according to its classification as follows:

- (e) for class a consignments, treat the consignment as one lot;
- (f) for class b consignments, treat each quality, based on visual inspection, as one lot, the proportion of each lot being determined;
- (g) for class c consignments, carry out a preliminary investigation and then reclassify;
- (h) for class d consignments, carry out an inspection and isolate the suspect packages and deal with these individually, and then reclassify the remainder of the consignment.

In the event of a single bulk sample representing the whole consignment being required, mix the primary samples drawn from the different qualities together in the same proportions as exist between the masses of the different qualities.

6.8.2 Selection of packages. When a consignment can be assumed to be reasonably homogeneous, sample packages or containers at random. The number of packages or containers to be selected from a lot for sampling is given in table 3.

6.8.3 Procedures for packages containing solid or semi-liquid fats. To obtain primary samples from solid fats in drums, insert a sampling scoop (4.3.10) through the opening of the drum, probing the whole depth of the contents in as many directions as possible. Withdraw the scoop with a twisting motion, bringing with it a 'cylinder' of fat. Mix the samples from each drum thoroughly in a stainless steel or aluminium bucket and draw the mixed sample into sample jars.

If water is present, make a hole through the fat to the bottom of the container and remove the water by a suitable means.

Sample soft paste and semi-liquids in drums in a similar manner, but use, for example, a sampling scoop (4.3.10) or valve sampling tube (4.3.8). In this case, insert the scoop or tube open into the drum contents, close the shutter and withdraw the primary sample. Make a mixed sample in the same way as described for solid fats.

6.8.4 Procedure for packages containing liquid fats or oils. Roll and tip drums, barrels and casks filled with liquid fat

or oil and stir the contents well, by hand or mechanically, with a paddle or stirrer. Draw a primary sample from each container to be sampled with a suitable sampling instrument (4.3.7, 4.3.8), inserted through a convenient opening in the containers in such a manner as to sample from as many parts of the contents as possible. Mix equal portions of these primary samples thoroughly to form the bulk sample.

6.8.5 Procedure for packages containing loose solid fats. When fats are in a loose lumpy condition, obtain a representative sample by collecting, from all different parts, sufficient amounts of all sizes of lumps, broken to smaller pieces if necessary, and quarter the resultant sample down to a suitable size.

An alternative procedure is to mix and reduce the primary samples to produce the bulk sample on a mixing table, at least 750 mm square and having a top covered with a sheet of plate glass, white tile or stainless steel.

Empty the primary samples on to the mixing table and knead to a doughy homogeneous consistency and mix with a large (250 mm) spatula so that any particles of dirt and/or globules of moisture are evenly distributed throughout the mass.

Reduce the resultant sample to the required size by quartering, using the spatula.

If the primary samples of fat are too hard for hand kneading, allow them to stand in a warm place until sufficiently softened. Do not apply heat, which might cause loss of moisture by evaporation.

NOTE. This alternative procedure is usually undertaken by agreement between the parties concerned.

Table 3. Numbers of packages to be sampled

Size of package or container	Number of packages or containers in the lot	Number of packages or containers to be selected for sampling
More than 20 kg and up to 5 t maximum	1 to 5	each container
	6 to 50	6
	51 to 75	8
	76 to 100	10
More than 5 kg and up to 20 kg inclusive	1 to 200	20
	201 to 800	25
	801 to 1 600	35
	1 601 to 3 200	45
	3 201 to 8 000	60
	8 001 to 16 000	72
	16 001 to 24 000	84
	24 001 to 32 000	96
	more than 32 000	108
5 kg or less	1 to 1 500	20
	1 501 to 5 000	25
	5 001 to 15 000	35
	15 001 to 35 000	45
	35 001 to 60 000	60
	60 001 to 90 000	72
	90 001 to 130 000	84
	130 001 to 170 000	96
	more than 170 000	108

* Tables of random numbers may be used such as those in BS 6000.

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6.9 Production of laboratory (contract) sample. Prepare one homogeneous bulk sample (2.4) for every 500 t or part thereof of each lot. Prepare the laboratory (contract) samples (2.5) either:

- (a) after a weighted average sample has been prepared from the bulk samples; *or*
- (b) using each of the bulk samples separately.

NOTE 1. If agreed between the parties concerned, the laboratory may prepare a weighted average sample from the laboratory samples.

NOTE 2. Whether (a) or (b) is used depends on trade practice or agreement between the parties involved.

Whether procedure (a) or (b) is followed, divide the prepared samples in order to obtain at least four laboratory samples of minimum size of 250 mL in the case of oils or 250 g in the case of fats. Put the samples into clean dry containers with lids (new corks or caps), seal and label (see clause 7).

NOTE 3. For certain purposes, a sample of 500 mL or 500 g or even more may be required.

7. Packaging and labelling of samples

7.1 Packaging of samples. The samples shall be packed in clean dry airtight containers made of glass or other material (e.g. tinned steel) which will not have a harmful effect on the sample. The sample containers shall be almost, but not quite, filled; a little air space shall be allowed at the top for expansion. However, this space shall not be too large, as air exerts detrimental action on most oils. The containers shall be closed.

NOTE 1. Glass bottles are recommended for oils and glass jars for fats.

Rubber and flexible PVC stoppers shall not be used to close the containers. For oils of acid character, metal containers or closures shall not be used.

NOTE 2. Plastics containers are not recommended as they may absorb fat or oil or soften when heated.

All samples shall be protected from light and heat. The full details of sampling, number of packages sampled, etc., shall be recorded, and a label bearing particulars of the sample shall be attached and sealed where required to every sample container. The sample shall not be accessible without breaking the seal.

7.2 Information concerning samples. All the information necessary for identification of the sample, including the following, shall be marked durably on the label.

1. Ship or vehicle;
2. From;
3. To;
4. Arrived;
5. Quantity;
6. Bulk/packages;
7. Goods and origin;
8. Identification mark;
9. Bill of Lading No. and date or Contract No. and date;
10. Sampled conjointly by;
11. Method of sampling (e.g. tank sampling);
12. Date of sampling;
13. Place and point of sampling;
14. Name of organization responsible for terms of contract.

NOTE. It is recommended that, if paper labels are used, they should be of a suitable quality and size for the purpose. The eyelet hole in the label should be reinforced.

8. Despatch of samples

Laboratory samples shall be despatched as soon as possible, and only in exceptional circumstances more than 48 h after sampling has been completed, non-business days excluded.

The samples shall be kept cool and away from light as far as possible, unless only a determination of weight per unit volume is required.

9. Sampling report

The sampling report shall give the information listed in 7.2 and it shall make reference to the condition of the oil or fat sampled. It shall also refer to the technique applied, if this differs from that described in this standard, and to all the circumstances that may have influenced the sampling.