

ANNEX

METHODS OF SAMPLING RELATED TO THE CONTROL OF CHEMICAL ANALYSIS OF CERTAIN PARTLY OR WHOLLY DEHYDRATED PRESERVED MILK PRODUCTS II. METHOD 1: SAMPLING OF PARTLY DEHYDRATED MILKS

1. **Scope and field of application**

- unsweetened condensed high-fat milk,
- unsweetened condensed milk,
- unsweetened condensed partly skimmed milk,
- unsweetened condensed skimmed milk,
- sweetened condensed milk,
- sweetened condensed skimmed milk,
- sweetened condensed partly skimmed milk.

2. **Equipment**

2.1. *General*

See Section 2 of the General Provisions.

2.2. *Plungers and agitators*

Plungers or agitators, for mixing liquids in bulk, shall be of sufficient area to produce adequate disturbance of the product without developing rancid flavour. In view of the different shapes and sizes of containers, no specific design of plunger can be recommended for all purposes, but plungers shall be designed in such a way as to avoid scratching the inner surface of the product containers during agitation.

Suitable material has been described in Section 2 of the General Provisions.

A form of plunger recommended as being suitable for the mixing of liquids in buckets or in cans has the following dimensions (Fig. 1): a disc 150 millimetres in diameter, perforated with six holes each of 12,5 millimetres in diameter on a circle 100 millimetres in diameter, the disc being fixed centrally to a metallic rod, the other end of which forms a loop handle. The length of the rod, including the handle, shall be approximately 1 metre.

A suitable plunger for use for small tanks, has the following approximate dimensions (Fig. 2): a rod not less than 2 metres in length, fitted with a disc 300 millimetres in diameter perforated with 12 holes each 30 millimetres in diameter on a circle 230 millimetres in diameter.

For mixing the contents of large vessels, mechanical agitation or agitation by clean compressed air is advisable. Minimal air pressure and volume shall be used to prevent rancid flavour development.

Note: Wherever ‘clean compressed air’ is required by this guide, it is necessary to use compressed air from which all contaminants (including oil, water and dust) have been excluded.

2.3. *Stirrer*

Broad bladed, of sufficient depth to reach the bottom of the product container, and which preferably has one edge shaped to the contour of the container (see Fig. 3).

2.4. *Dippers*

A dipper of suitable size and shape for collecting the sample is illustrated in Fig. 4. The dipper shall be fitted with a solid handle at least 150 millimetres in length. The capacity of the dipper

Status: EU Directives are being published on this site to aid cross referencing from UK legislation. After IP completion day (31 December 2020 11pm) no further amendments will be applied to this version.

shall be not less than 50 millilitres. It is an advantage for the handle to be bent over. The tapered form of the cup permits nesting of the dippers.

Alternatively, a dipper of similar capacity may be used, but it should have parallel sides graduated into five equal sections for assistance in sampling proportionately consignments held in more than one container.

2.5. *Rod*

Round, about 1 metre long and 35 millimetres in diameter.

2.6. *Container*

For sub-sampling capacity of 5 litres, wide mouthed.

2.7. *Spoon or spatula*

Broad bladed.

2.8. *Sample containers*

See Section 3 of General Provisions.

3. **Procedure**

3.1. *Sampling of unsweetened partly dehydrated milks*

A sample of not less than 200 grams shall be taken.

3.1.1. The product shall be thoroughly mixed by plunging or stirring, or by mechanical agitation, or by pouring from one container to another, or by the use of clean compressed air (see note 2.2), until sufficient homogeneity is obtained.

Take the sample immediately after mixing by means of a dipper. If obtaining sufficient homogeneity presents difficulties, samples shall be taken from different portions of the product container to a total of not less than 200 grams. (It shall be noted if the sample is a mixture of sub-samples on the sample label and in the accompanying report).

3.1.2. *Sampling products packed in small retail containers*

The intact and unopened container may constitute the sample. One or more containers with the same batch or code number shall be taken to make up a sample of not less than 200 grams.

3.2. *Sampling of sweetened partly dehydrated milk*

3.2.1. **General**

The sampling of bulk containers of sweetened partly dehydrated milk may be a matter of extreme difficulty, particularly when the product is not homogeneous and is highly viscous. Problems of sampling may arise through the presence of large crystals of sucrose or lactose, or through precipitation of various salts which may occur throughout the body of the product or adhere to the walls, or through the presence of lumpy matter. Such conditions will become apparent when a sampling rod is introduced into the product container and is withdrawn after exploring as large an area of contact as possible. Provided the size of sugar crystals is not larger than 6 millimetres, difficulties in sampling should not be experienced from this cause. When the product is not homogeneous, this fact shall be noted on the sample label of the accompanying report. Since sweetened condensed milk is frequently stored at atmospheric temperature, it is recommended that in order to obtain a representative sample the contents shall be brought to a temperature of not less than 20 °C.

3.2.2. Procedure

A sample of not less than 200 grams shall be taken.

— Open containers

One end of the container, previously thoroughly cleaned and dried to prevent foreign matter falling into the bulk during the opening process, shall be removed. The contents shall be mixed by using a stirrer (see Fig. 3). The blade shall be scraped around the sides and bottom of the container to remove any adhering product. The contents shall be thoroughly mixed by a combination of rotary and vertical movements, with the stirrer inclined diagonally, taking care to avoid incorporation of air in the sample. The stirrer shall be withdrawn and the condensed milk adhering to it shall be transferred into the 5-litre (2.6) container by means of a spatula or spoon. The mixing and withdrawal shall be repeated until 2 to 3 litres have been collected. This shall be mixed until homogeneous and a sample of not less than 200 grams shall be taken.

— Enclosed drums with bungs at the end, or at the side

For the reasons described in 3.2.1, sampling through the bung hole is suitable only with condensed milk which flows readily and is of uniform consistency. The contents shall be mixed by inserting a rod through the bung hole, and after exploring and stirring as far as possible in all directions, the rod shall be withdrawn and a sample shall be prepared as described in 3.2.1. Alternatively, the contents may be allowed to run into a suitable container, care being taken that as much of the contents as possible be recovered from the drum. After stirring with a stirrer the sample shall be collected as described in 3.2.1.

3.2.3. Sampling products packed in small retail containers

The intact and unopened container may constitute the sample. One or more containers with the same batch or code number shall be taken to make up a sample of not less than 200 grams.

3.3. Preservation, storage and transport of sample

See Sections 5 and 6 of the General Provisions.