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# Whey cheese — Determination of dry matter (Reference method)

Fromage de sérum — Détermination de la matière sèche (Méthode de référence)

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

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 document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 2920 IDF 58 was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 5, *Milk and milk products*, and the International Dairy Federation (IDF), in collaboration with AOAC International. It is being published jointly by ISO and IDF and separately by AOAC International.

This edition of ISO 2920 IDF 58 cancels and replaces ISO 2920:1974, of which it constitutes a minor revision.

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**IDF** (the International Dairy Federation) is a worldwide federation of the dairy sector with a National Committee in every member country. Every National Committee has the right to be represented on the IDF Standing Committees carrying out the technical work. IDF collaborates with ISO and AOAC International in the development of standard methods of analysis and sampling for milk and milk products.

Draft International Standards adopted by the Action Teams and Standing Committees are circulated to the National Committees for voting. Publication as an International Standard requires approval by at least 50 % of the National Committees casting a vote.

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# Whey cheese — Determination of dry matter (Reference method)

# 1 Scope

This International Standard specifies a reference method for the determination of the dry matter of whey cheese.

## 2 Terms and definitions

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

#### 2 1

### dry matter of whey cheese

residue obtained by application of the procedure specified in this International Standard and including the water of crystallization of lactose

NOTE It is expressed as a mass fraction in percent.

# 3 Principle

A sample of whey cheese is desiccated in a ventilated oven set at a temperature of 88 °C.

#### 4 Apparatus and materials

- **4.1 Grinding mill** or other appropriate device.
- **4.2** Analytical balance, capable of weighing to the nearest 0,000 5 g.
- **4.3 Desiccator**, provided with an efficient drying agent (e.g. silica gel with hygrometric indicator).
- **4.4 Drying oven**, well ventilated and thermostatically controlled, capable of being maintained at  $88 \,^{\circ}\text{C} \pm 2 \,^{\circ}\text{C}$ .
- **4.5 Dishes**, of stainless steel, nickel or aluminium, with height about 20 mm and diameter 60 mm to 80 mm.
- **4.6 Quartz sand** or **sea sand**, which passes through a sieve with 10 openings per centimetre but not through a sieve with 40 openings per centimetre.

For example, use woven wire cloth test sieves with nominal size of aperture of  $500\,\mu m$  and  $180\,\mu m$  respectively (for details, see ISO 565).

If necessary, the sand shall be washed with hot concentrated hydrochloric acid and water, then dried and ignited.

### **4.7** Glass stirrers, flat ended.

# 5 Sampling

A representative sample should have been sent to the laboratory. It should not have been damaged or changed during transport or storage.

Sampling is not part of the method specified in this International Standard. A recommended sampling method is given in ISO 707.

# 6 Preparation of test sample

Grind the representative sample of the cheese by means of the grinding mill (4.1). If the soft consistency of the cheese makes the use of a grinding mill impossible, mix the sample thoroughly by means of another appropriate device (e.g. a glass stirrer or spatula). Avoid losses by evaporation.

Keep the prepared sample in a suitable airtight container until analysis. Start the analysis within 1 h.

### 7 Procedure

# 7.1 Number of determinations

Carry out two determinations of the same test sample.

#### 7.2 Determination

- **7.2.1** Weigh about 20 g of sand (4.6) in a dish (4.5) together with a glass stirrer (4.7). With hard and semi-hard whey cheeses, which can be adequately ground by means of the grinding mill, the use of sand may be omitted.
- 7.2.2 Moisten the sand with water and dry the dish to constant mass in the oven (4.4) set at 88 °C.
- **7.2.3** Allow the dish to cool in the desiccator (4.3) and weigh to the nearest 0,000 5 g.
- **7.2.4** Quickly weigh, to the nearest 0,000 5 g, about 3 g of the test sample in the dish.
- **7.2.5** Thoroughly mix the test portion with the sand by means of the stirrer.
- **7.2.6** Dry the dish and contents in the oven (4.4) set at 88 °C for 4 h.
- **7.2.7** Allow to cool in the desiccator (4.3) and weigh to the nearest 0,000 5 g.
- **7.2.8** Dry in the oven (4.4) again for 1 h. Cool in the desiccator and weigh to the nearest 0,000 5 g.
- **7.2.9** Repeat the operations of drying and cooling until the difference in mass between two successive weighings is not more than 0,001 g