International Standard 5534

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION•МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ•ORGANISATION INTERNATIONALE DE NORMALISATION

Cheese and processed cheese — Determination of total solids content (Reference method)

Fromages et fromages fondus — Détermination de la matière sèche (Méthode de référence)

First edition — 1985-06-01

UDC 637.3 : 543.82 **Ref. No. ISO 5534-1985 (E)**

Descriptors : dairy products, cheeses, tests, determination of content, solids.

Price based on 2 pages

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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 5534 was prepared by Technical Committee ISO/TC 34, *Agricultural food products*.

NOTE — The method specified in this International Standard has been developed jointly with the International Dairy Federation (IDF) and the Association of Official Analytical Chemists (AOAC) and will also be published by these organizations.

Printed in Switzerland

Cheese and processed cheese — Determination of total solids content (Reference method)

1 Scope and field of application

This International Standard specifies the reference method for the determination of the total solids content of cheese and processed cheese. It may not be applicable to process cheese preparations as defined in FAO/WHO Codex Alimentarius Commission, Milk and milk products standards, No. A-8 (c).

2 References

ISO 707, *Milk and milk products — Methods of sampling.*

FAO/WHO Codex Alimentarius Commission, Milk and milk products standards, No. A-8 (c) (1970). *General standard for process(ed) cheese preparations.*

3 Definition

total solids content: The mass remaining after completion of the heating process specified in this International Standard.

The total solids content is usually reported as a mass fraction, and is then conventionally expressed as a percentage by mass.

4 Principle

Evaporation of the water from a test portion in the presence of sand at a temperature of 102 ± 2 °C in a drying oven.

5 Apparatus and materials

The water used shall be distilled water or water of at least equivalent purity.

Usual laboratory apparatus, and in particular

5.1 Analytical balance.

5.2 Desiccator, provided with an efficient desiccant (for example freshly dried silica gel with a hygrometric indicator).

5.3 Drying oven, ventilated, capable of being maintained thermostatically at 102 ± 2 °C throughout the total working space.

5.4 Flat-bottom dishes, of height 20 to 25 mm, diameter 50 to 75 mm, and of appropriate material (for example stainless steel, nickel or aluminium), provided with well-fitting, readily removable lids.

5.5 Short glass stirring rods, flattened at one end and fitting into the dish (5.4).

5.6 Quartz sand or **sea sand,** which passes through a woven wire cloth sieve of nominal aperture size 500 µm, but is retained by a sieve of nominal aperture size 180 µm, and which passes the following suitability test.

5.6.1 Place approximately 20 g of sand in a dish containing a stirring rod. Heat the open dish and sand, stirring rod and lid in the oven (5.3) for at least 2 h. Fit the lid, allow the dish to cool in the desiccator (5.2) to the temperature of the balance room and weigh to the nearest 0,1 mg.

5.6.2 Moisten the sand with approximately 5 ml of water, mix the sand and water using the stirring rod, and heat the dish and sand, stirring rod and lid in the oven (5.3), for at least 4 h. Fit the lid, allow the dish to cool in the desiccator (5.2) to the temperature of the balance room and weigh again to the nearest 0,1 mg.

The difference between the two weighings shall not exceed 0,5 mg.

NOTE — If this requirement is not met, the sand can be made suitable for the determination as follows.

Leave the sand immersed in 25 % (m/m) hydrochloric acid for 3 days. Stir occasionally. Decant the supernatant liquid as far as possible. Then wash the sand with water until the acid reaction has disappeared.

Heat the sand at approximately 160 °C for at least 4 h. Then repeat the test for the suitability of the sand as described.

5.7 Appropriate devices for grating, grinding or mixing the sample.

6 Sampling

See ISO 707.

7 Preparation of the test sample

Unless specified otherwise, remove prior to the analysis the rind, smear or mouldy surface layer of the cheese in such a way as to provide a sample representative of the cheese as it is usually consumed. Grind or grate the sample by means of an appropriate device (5.7); mix the ground mass quickly, and, if necessary for semi-hard and hard cheeses, grind a second time and again mix thoroughly. Clean the device after grinding each