

ISO

Handwritten signature

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION

R 1739

BUTTER

**DETERMINATION OF THE REFRACTIVE INDEX OF THE FAT
(REFERENCE METHOD)**

1st EDITION

January 1971

COPYRIGHT RESERVED

The copyright of ISO Recommendations and ISO Standards belongs to ISO Member Bodies. Reproduction of these documents, in any country, may be authorized therefore only by the national standards organization of that country, being a member of ISO.

For each individual country the only valid standard is the national standard of that country.

Printed in Switzerland

Also issued in French and Russian. Copies to be obtained through the national standards organizations.

BRIEF HISTORY

The ISO Recommendation R 1739, *Butter – Determination of the refractive index of the fat (Reference method)*, was drawn up by Technical Committee ISO/TC 34, *Agricultural food products*, the Secretariat of which is held by the Magyar Szabványügyi Hivatal (MSZH).

Work on this question led to the adoption of Draft ISO Recommendation No. 1739, which was circulated to all the ISO Member Bodies for enquiry in October 1968. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies :

Australia	Hungary	Romania
Belgium	India	South Africa, Rep. of
Brazil	Iran	Spain
Canada	Israel	Sweden
Colombia	Korea, Rep. of	Switzerland
Czechoslovakia	Netherlands	Thailand
France	New Zealand	Turkey
Germany	Peru	U.A.R.
Greece	Poland	U.S.S.R.

The following Member Bodies opposed the approval of the Draft :

Portugal
United Kingdom

This Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided to accept it as an ISO RECOMMENDATION.

NOTE. – This ISO Recommendation has been developed jointly with the IDF (International Dairy Federation) and the AOAC (Association of Official Analytical Chemists; U.S.A.) on the basis of an IDF Standard for the purpose of being included in the FAO/WHO Code of Principles concerning Milk and Milk Products and Associated Standards.

The text as approved by the above organizations was also published by FAO/WHO (Code of Principles, Standard No. B-5), by the IDF (IDF Standard 7A) and by the AOAC (Official Methods of Analysis, 11th Edition, 16.171).

BUTTER

DETERMINATION OF THE REFRACTIVE INDEX OF THE FAT
(REFERENCE METHOD)

1. SCOPE

This ISO Recommendation describes a reference method for the determination of the refractive index of the fat from butter.

2. DEFINITION

By the *refractive index* of the fat from butter is meant the ratio, at 40 °C, of the velocity of light of defined wavelength (the mean of D-lines of sodium) in air to its velocity in fat from butter.*

3. PRINCIPLE

Measurement, by means of a suitable refractometer, of the refractive index of the fat obtained by melting butter.

4. APPARATUS

- 4.1 *Refractometer* with a scale graduated in refractive index units to the third decimal place and having prisms heated by means of a circulating liquid at 40 °C, the temperature being thermostatically controlled to within ± 0.1 °C.
- 4.2 *Light source*. Sodium vapour lamp.

White light can also be used if the refractometer is fitted with an achromatic compensating device.

5. SAMPLING

Carry out the sampling by the appropriate method described in ISO Recommendation R 707, *Milk and milk products - Sampling*.

* In theory, there are two D-lines of sodium and the ratio should be referred to the velocity of light in vacuum, not in air. In practice, sodium light can be considered monochromatic, and the ratio related to that in air.