

ISO 17678:2019 (E)

Milk and milk products — Determination of milk fat purity by gas chromatographic analysis of triglycerides

Contents

	Foreword
1	Scope
2	Normative references
3	Terms and definitions
4	Principle
5	Reagents
6	Apparatus
7	Sampling
8	Procedure
8.1	Preparation of test samples
8.1.1	General
8.1.2	Isolation from butter or butteroil
8.1.3	Extraction according to the Röse–Gottlieb gravimetric method
8.1.4	Extraction from milk using silica gel columns
8.1.5	Extraction from cheese
8.2	Preparation of fat sample solution
8.3	Chromatographic triglyceride determination
8.3.1	Baseline drift
8.3.2	Injection technique
8.3.2.1	Packed column
8.3.2.2	Capillary column
8.3.3	Calibration
8.3.3.1	General
8.3.3.2	Commercial milk fat standard
8.3.3.3	Laboratory milk fat standard
8.3.4	Chromatographic conditions
8.3.4.1	General
8.3.4.2	Packed column
8.3.4.3	Capillary column
9	Integration, evaluation and control of the analytical performance
10	Calculation and expression of results
10.1	Triglyceride composition
10.1.1	Calculation
10.1.2	Expression of test results
10.2	S-values
10.2.1	Calculation
10.2.2	Expression of test results
10.3	Detection of foreign fat
11	Precision
11.1	Interlaboratory test
11.2	Repeatability
11.3	Reproducibility

12 Test report

Annex A (normative) Preparation of the packed column

- A.1 Reagents and materials**
- A.2 Apparatus**
- A.3 Silanization (deactivation of the glass surface)**
- A.4 Filling**
- A.5 Conditioning**

Annex B (informative) Quantification of the foreign fat content

- B.1 General**
- B.2 Calculation**
- B.3 Expression of test results**

Annex C (informative) Uncertainty of measurement

Annex D (informative) Interlaboratory test

Page count: 24