PD ISO/TS 19046-2:2017

BSI Standards Publication

# Cheese — Determination of propionic acid level by chromatography

Part 2: Method by ion exchange chromatography



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# National foreword

This Published Document is the UK implementation of ISO/TS 19046-2:2017.

The UK participation in its preparation was entrusted to Technical Committee AW/5, Chemical analysis of milk and milk products.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.


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TECHNICAL SPECIFICATION

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# IDF/RM 233-2

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# Cheese — Determination of propionic acid level by chromatography —

## Part 2: Method by ion exchange chromatography

*Fromages — Détermination de la teneur en acide propionique par chromatographie —*

*Partie 2: Méthode par chromatographie par échange d'ions*



Reference numbers
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# Forewords

**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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www. iso. org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www. iso. org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso. org/iso/foreword. html.

This document was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 5, *Milk and milk products* and the International Dairy Federation (IDF). It is being published jointly by ISO and IDF.

A list of all parts in the ISO/TS 19046 | IDF/RM 233 series can be found on the ISO website.

**IDF (the International Dairy Federation**) is a non-profit private sector organization representing the interests of various stakeholders in dairying at the global level. IDF members are organized in National Committees, which are national associations composed of representatives of dairy-related national interest groups including dairy farmers, dairy processing industry, dairy suppliers, academics and governments/food control authorities.

ISO and IDF collaborate closely on all matters of standardization relating to methods of analysis and sampling for milk and milk products. Since 2001, ISO and IDF jointly publish their International Standards using the logos and reference numbers of both organizations.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. IDF shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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ISO/TS 19046-2 | IDF/RM 233-2 was prepared by the IDF Standing Committee on *Analytical Methods for Composition* and ISO Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 5, *Milk and milk products.*

The IDF Reviewed method is equal to an ISO Publicly Available Specification (ISO/PAS) or an ISO Technical Specification (ISO/TS) and is therefore published jointly under ISO conditions.

The work was carried out by the IDF/ISO Project Group on Propionic acid (C25) of the Standing Committee on *Analytical Methods for Composition* under the aegis of its project leader P. Trossat (FR).

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TECHNICAL SPECIFICATION

ISO/TS 19046-2:2017(E)
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# Cheese — Determination of propionic acid level by chromatography —

## Part 2:
## Method by ion exchange chromatography

**WARNING — This document can involve the use of products and implementation of procedures and equipment of a hazardous nature. This document does not aim to address all the risks related to its use. It is the responsibility of the user of this document to establish appropriate hygiene and safety practices before using it, and to determine the applicability of any other restrictions.**

## 1 Scope

This document specifies a method for the determination of propionic acid level in cheese, using ion exchange chromatography.

## 2 Normative references

There are no normative references in this document.

## 3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at http://www.iso.org/obp

**3.1**
**level of propionic acid**
mass fraction of propionic acid determined following the procedure described in this document

Note 1 to entry: The level of propionic acid is expressed in mg/100 g of cheese.

## 4 Principle

Aqueous extraction of propionic acid by dilution of samples in the mobile phase, centrifugation of the solution obtained, and filtration and assay of the propionic acid in the filtrate by ion exchange chromatography.

## 5 Reagents

Use only reagents of recognized analytical grade, unless otherwise specified, and distilled or demineralized water or water of equivalent purity.

**5.1 Propionic acid** [$CH_3\ CH_2COOH$] of purity ≥ 99,5 % mass fraction.

**5.2 Sulfuric acid** [$H_2SO_4$] containing a mass/volume fraction of 98 %.