

# Microbiological examination for dairy purposes —

**Part 3 Methods for detection and/or  
enumeration of specific groups of  
microorganisms —**

**Section 3.15 Detection of *Listeria  
monocytogenes***

IMPORTANT NOTE. It is essential that Part 0 and Section 1.1, which are published separately, be read in conjunction with this Section

# Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Agriculture and Food Standards Policy Committee (AFC/-) to Technical Committee AFC/14, upon which the following bodies were represented:

- AFRC Institute of Food Research
- Association of British Preserved Milk Manufacturers
- Association of Clinical Pathologists
- Association of Public Analysts
- BLWA Ltd. (the Association of the Laboratory Supply Industry)
- British Food Manufacturing Industries Research Association
- Campden Food and Drink Research Association
- Dairy Trade Federation
- Department of Agriculture Northern Ireland
- Department of Health
- Department of Trade and Industry (Laboratory of the Government Chemist)
- Milk Marketing Board
- Milk Marketing Board for Northern Ireland
- Ministry of Agriculture, Fisheries and Food
- Preserved Milk Association
- Public Health Laboratory Service
- Scottish Milk Marketing Board
- Society for Applied Bacteriology
- United Kingdom Dairy Association

This British Standard, having been prepared under the direction of the Agriculture and Food Standards Policy Committee, was published under the authority of the Standards Board and comes into effect on 15 December 1993

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## Amendments issued since publication

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# National foreword

This Section of BS 4285 has been prepared under the direction of the Agriculture and Food Standards Policy Committee. It is identical with ISO 10560:1993 including Technical Corrigendum 1. *Milk and milk products — Detection of *Listeria monocytogenes**, prepared by the International Organization for Standardization (ISO) in cooperation with the International Dairy Federation (IDF) and the Association of Official Analytical Chemists (AOAC).

## Cross-references

| International standard | Corresponding British Standard                                                                                                                 |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| ISO 707:1985           | BS 809:1985 <i>Method for sampling of milk and milk products</i><br>(Identical)                                                                |
| ISO 7218:1985          | BS 5763 <i>Microbiological examination of food and animal feeding stuffs</i><br>Part 0:1986 <i>General laboratory practices</i><br>(Identical) |

The Technical Committee has reviewed the provisions of ISO 8261:1989 to which normative reference is made in the text, and has decided that they are acceptable for use in conjunction with this standard. A related British Standard to ISO 8261:1989 is BS 4285-1.1:1991 *Sampling and preparation of samples*.

NOTE *Typographical error.* In 9.4.4.1 the reference to clause 6.1.4 should be read as 6.1.14.  
A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

**Compliance with a British Standard does not of itself confer immunity from legal obligations.**

## Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 10, an inside back cover and a back cover.  
This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

## 1 Scope

This International Standard specifies methods for the detection of *Listeria monocytogenes* in milk and milk products.

## 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 7218:1985, *Microbiology — General guidance for microbiological examinations*.

ISO 8261:1989, *Milk and milk products — Preparation of test samples and dilutions for microbiological examination*.

## 3 Definitions

For the purposes of this International Standard, the following definitions apply.

### 3.1 *Listeria* spp.

Microorganisms which form typical colonies on a solid selective medium and which display the morphological, physiological and biochemical characteristics described when tests are carried out in accordance with this International Standard.

#### 3.1.1

#### *listeria monocytogenes*

a *Listeria* species which is considered as pathogenic and which can be differentiated by specific biochemical characteristics from other, non-pathogenic species occurring in milk and milk products

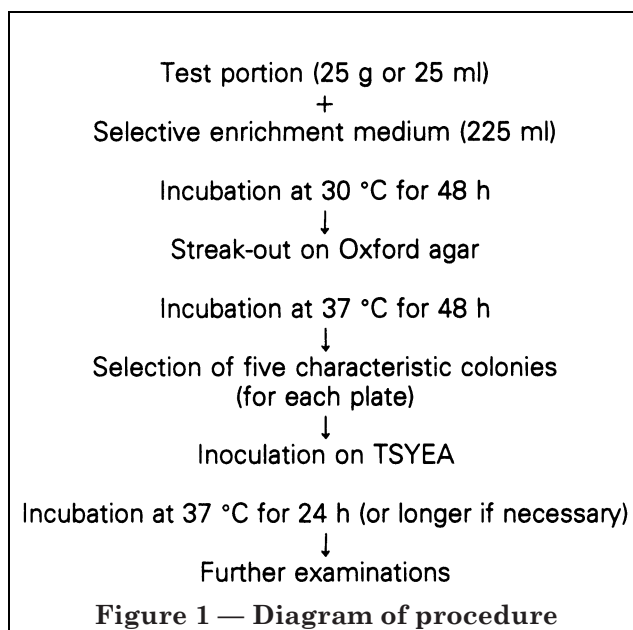
#### 3.2

#### detection of *listeria monocytogenes*

determination of the presence or absence of this microorganism, in a specified mass or volume, when tests are carried out in accordance with this International Standard

## 4 Principle

In general, the detection of *Listeria* spp. necessitates at least three successive stages as in 4.1 to 4.3. See also the diagram of procedure in Figure 1.



### 4.1 Enrichment in selective liquid medium

Inoculation of the selective medium with the test portion of the sample and incubation at 30 °C for 48 h.

### 4.2 Isolation and presumptive identification

Inoculation of the isolation medium with the culture obtained in the enrichment medium (4.1), incubation at 37 °C and examination after 48 h to check for the presence of colonies which, from their appearance, are considered to be presumptive *Listeria* spp.

### 4.3 Confirmation

Subculturing of colonies of presumptive *Listeria* spp. (4.2) on a non-selective solid medium, and confirmation by means of appropriate morphological, physiological and biochemical tests.

## 5 Culture media and reagent

### 5.1 General

For current laboratory practice, see ISO 7218.

### 5.2 Culture media

#### 5.2.1 *Selective medium: Enrichment medium*

##### 5.2.1.1 *Base*