

Methods for

Microbiological examination of food and animal feeding stuffs —

Part 14: Detection of *Vibrio*
parahaemolyticus

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/9, upon which the following bodies were represented:

- Association of Public Analysts
- British Food Manufacturing Industries' Research Association
- British Poultry Federation Limited
- Campden Food and Drink Research Association
- Department of Agriculture Northern Ireland
- Department of Health
- Department of Trade and Industry (Laboratory of the Government Chemist)
- Flour Milling and Baking Research Association
- Food and Drink Federation
- Fruit and Vegetable Canners' Association
- Institute of Brewing
- Joint Committee of the Milk Marketing Board and the Dairy Trade Federation
- Ministry of Agriculture, Fisheries and Food
- Natural Resources Institute
- Pet Food Manufacturers' Association
- Public Health Laboratory Service
- Society for Applied Bacteriology
- United Kingdom Association of Frozen Food Producers
- United Kingdom Dairy Association
- University of Reading

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National foreword

This Part of BS 5763 has been prepared under the direction of the Agriculture and Food Standards Policy Committee. It is identical with ISO 8914:1990 “Microbiology — General guidance for the detection of *Vibrio parahaemolyticus*” published by the International Organization for Standardization (ISO), and in the preparation of which the United Kingdom played a full part.

Cross-references

International standard	Corresponding British Standard
	BS 5763 <i>Methods for microbiological examination of food and animal feeding stuffs</i>
ISO 6887:1983	Part 6:1983 <i>Preparation of dilutions</i> (Identical)
ISO 7218:1985	Part 0:1986 <i>General laboratory practices</i> (Identical)

Additional information. In 9.4.4.2, paragraph 3 “the breathing type” should be taken as meaning “whether it is of anaerobic or aerobic nature”.

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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 gives general guidance for the detection of *Vibrio parahaemolyticus* present in products intended for human consumption or animal feeding stuffs.

The incubation temperature used may be 35 °C or 37 °C, this temperature forming the subject of agreement between the parties concerned.

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 6887:1983, *Microbiology — General guidance for the preparation of dilutions for microbiological examination*.

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

3 Definitions

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

3.1

vibrio parahaemolyticus

halophilic microorganisms which form characteristic colonies on solid selective media, and which display the biochemical characteristics described when tests are carried out in accordance with this International Standard

3.2

Detection of *Vibrio parahaemolyticus*

determination of the presence or absence of these microorganisms in a particular mass of product when tests are carried out in accordance with this International Standard

4 Principle

In general, the detection of *Vibrio parahaemolyticus* is carried out in three successive phases as follows.

4.1 Enrichment in selective media

Inoculation of the test portion into the following two selective enrichment media:

- a) salt polymyxin B broth (SPB);
- b) alkaline saline peptone water or saline glucose culture medium with sodium dodecyl sulfate (known previously as sodium lauryl sulfate) (GST).

Incubation at 35 °C or 37 °C (as agreed) for 7 h to 8 h.¹⁾

4.2 Plating out and identification

From the cultures obtained in (4.1), inoculation of the following two selective solid media:

- a) thiosulfate citrate bile sucrose agar (TCBS);
- b) triphenyltetrazolium chloride soya tryptone agar (TSAT).

Incubation at 35 °C or 37 °C, and then examination after 18 h, 24 h or 48 h (depending on the medium) to check for the presence of colonies presumed to be *Vibrio parahaemolyticus* by their visible characteristics. The temperature forms the subject of agreement between the parties concerned and is indicated in the test report.

4.3 Confirmation

Testing of the presumptive *Vibrio parahaemolyticus* colonies by confirmatory tests.

5 Culture media and reagents

5.1 General

For general guidance, see ISO 7218.

5.2 Enrichment media

NOTE 1 Because of the large number of culture media and reagents, it was considered preferable, for the clarity of the text, to give their composition and preparation in Annex B, which also includes details of dispensing, storage, etc.

5.2.1 Salt polymyxin B broth (SPB)

See B.1.1.

5.2.2 Alkaline saline peptone water

See B.1.2.

5.2.3 Saline glucose culture medium with sodium dodecyl sulfate (GST)

See B.1.3.

¹⁾ It is recommended for deep-frozen products that two plating out operations as described in 4.2 be carried out, one after incubation for 7 h to 8 h and the other after incubation for 18 h.