



BSI Standards Publication

**Microbiology of food and animal feeding
stuffs - Horizontal method for the enumeration
of coagulase-positive staphylococci
(*Staphylococcus aureus* and other species)**

Part 1: Technique using Baird-Parker agar medium

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National foreword

This British Standard is the UK implementation of EN ISO 6888-1:1999+A2:2018. It is identical to ISO 6888-1:1999, incorporating amendment 1:2003 and amendment 2:2018. It supersedes BS EN ISO 6888-1:1999, which is withdrawn.

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to ISO text carry the number of the ISO amendment. For example, text altered by ISO amendment A1 is indicated by A1 A1.

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

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English Version

Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of coagulase- positive staphylococci (*Staphylococcus aureus* and other species) – Part 1: Technique using Baird- Parker agar medium

Microbiologie des aliments – Méthode horizontale
pour le dénombrement des staphylocoques
à coagulase positive (*Staphylococcus aureus*
et autres espèces) – Partie 1: Technique
utilisant le milieu gélosé de Baird-Parker

Mikrobiologie von Lebensmitteln und Futtermitteln
- Horizontales Verfahren für die Zählung von
koagulasepositiven Staphylokokken (*Staphylococcus*
aureus und andere Spezies) - Teil 1: Verfahren mit
Baird-Parker-Agar - Änderung 1: Präzisionsdaten

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.



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European foreword

The text of the International Standard from Technical Committee ISO/TC 34, Agricultural food products, of the International Organization for Standardization (ISO) has been taken over as an European Standard by Technical Committee CEN/TC 275, Food analysis — Horizontal methods, the Secretariat of which is held by DIN.

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The text of the international standard ISO 6888-1:1999 has been approved by CEN as a European standard without any modification.

Foreword to amendment A1

The document EN ISO 6888-1:1999/A1:2003 has been prepared by Technical Committee ISO/TC 34, Agricultural food products, in collaboration with Technical Committee CEN/TC 275, Food analysis — Horizontal methods, the Secretariat of which is held by DIN.

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Foreword to amendment A2

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Endorsement notice

The text of the international standard ISO 6888-1:1999/Amd 2:2018 has been approved by CEN as EN ISO 6888-1:1999/A2:2018 without any modifications.

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Foreword

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 6888-1 was prepared by Technical Committee ISO/TC 34, *Agricultural food products*, Subcommittee SC 9, *Microbiology*.

This first edition of ISO 6888-1, together with ISO 6888-2, cancels and replaces ISO 6888:1983, which has been technically revised.

ISO 6888 consists of the following parts, under the general title *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species)*:

- *Part 1: Technique using Baird-Parker agar medium*
- *Part 2: Technique using rabbit plasma fibrinogen agar medium*

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Introduction

0.1 Because of the large variety of food and feed products, this horizontal method may not be appropriate in every detail for certain products. In this case, different methods, which are specific to these products, may be used if absolutely necessary for justified technical reasons. Nevertheless, every attempt should be made to apply this horizontal method as far as possible.

When this part of ISO 6888 is next reviewed, account will be taken of all information then available regarding the extent to which this horizontal method has been followed and the reasons for deviations from this method in the case of particular products.

The harmonization of test methods cannot be immediate and, for certain group of products, International Standards and/or national standards may already exist that do not comply with this horizontal method. It is hoped that when such standards are reviewed they will be changed to comply with this part of ISO 6888 so that eventually the only remaining departures from this horizontal method will be those necessary for well-established technical reasons.

0.2 ISO 6888 describes two horizontal methods (part 1 and part 2) for the enumeration of coagulase-positive staphylococci among which enterotoxinogenic strains are encountered. It is mainly concerned with *Staphylococcus aureus*, but also with *S. intermedius* and certain strains of *S. hyicus*.

A1 Both parts of ISO 6888 are given equivalent status. Nevertheless, it is recommended to use the procedure described in ISO 6888-2 (see reference [1]) for the foods (such as cheeses made from raw milk and certain raw meat products) likely to be contaminated by: **A1**

- staphylococci forming atypical colonies on a Baird-Parker agar medium;
- background flora which can obscure the colonies being sought.

0.3 For the purposes of this part of ISO 6888, the confirmation of staphylococci is based on a positive coagulase reaction, but it is reconized that some strains of *Staphylococcus aureus* give weakly positive coagulase reactions. These latter strains may be confused with other bacteria but they may be distinguished from such other bacteria by the use of additional tests not included in this part of ISO 6888, such as the sensitivity to lysostaphin, the production of haemolysin, of thermostable nuclease and of acid from mannitol (see [reference \[2\]](#)).

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Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of coagulase-positive staphylococci (*Staphylococcus aureus* and other species) —

Part 1: Technique using Baird-Parker agar medium

1 Scope

This part of ISO 6888 specifies a horizontal method for the enumeration of coagulase-positive staphylococci in products intended for human consumption or feeding of animals, by counting of colonies obtained on a solid medium (Baird-Parker medium) after aerobic incubation at 35 °C or 37 °C.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 6888. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 6888 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 6887-1, *Microbiology of food and animal feeding stuffs — Rules for the preparation of the test sample, of initial suspension and of decimal dilutions for microbiological examination — Part 1: General rules for the preparation of the initial suspension and of decimal dilutions.*

ISO 7218, *Microbiology of food and animal feeding stuffs — General rules for microbiological examination.*

ISO 11133, *Microbiology of food, animal feed and water — Preparation, production, storage and performance testing of culture media.*

3 Terms and definitions

For the purposes of this part of ISO 6888, the following terms and definitions apply.

3.1

coagulase-positive staphylococci

bacteria which form typical and/or atypical colonies on the surface of a selective culture medium and which show a positive coagulase reaction when the test is performed following the method specified in this part of ISO 6888

3.2

enumeration of the coagulase-positive staphylococci

determination of the number of coagulase-positive staphylococci found per millilitre or per gram of sample when the test is carried out according to the method specified in this part of ISO 6888