RESOLUTION OIV-OENO 662N-2023

HORIZONTAL METHOD FOR THE ENUMERATION OF BETA-GLUCURONIDASE-POSITIVE ESCHERICHIA COLI

THE GENERAL ASSEMBLY,

IN VIEW OF Article 2, paragraph iv of the Agreement of 3 April 2001 establishing the International Organisation of Vine and Wine,

CONSIDERING the work of the "Methods of Analysis" Sub-Commission on the development of methods of analysis for grape juices, concentrated grape juices, reconstituted grape juices and grape nectars,

CONSIDERING the ISO standard ISO 16649-2:2001 regarding method for the enumeration of beta-glucuronidase-positive Escherichia coli which can be access through the ISO website [1]

CONSIDERING the work of the OIV "Microbiology" Expert Group and the favourable opinion of the Scientific and Technical committee of the OIV to make reference to this ISO standard knowing that some of the elements of this ISO standard may be the subject of copyright protection,

AT THE PROPOSAL OF the Commission Oenology,

DECIDES to adopt the following microbiological method of analysis for grape juices, concentrated grape juices, reconstituted grape juices and grape nectars:

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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.

Attention is drawn to the possibility that some of the elements of this part of ISO 16649 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 16649-2 was prepared by Technical Committee ISO/TC 34, Food products, Subcommittee SC 9, Microbiology.

ISO 16649 consists of the following parts, under the general title Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of □-glucuronidase-positive Escherichia coli:

- Part 1: Colony-count technique at 44 °C using membranes and 5-bromo-4-chloro-3-indolyl β-D-glucuronide
- Part 2: Colony-count technique at 44 °C using 5-bromo-4-chloro-3-indolyl β-D-glucuronide
- Part 3: Most probable number technique

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Part 2: Colony-count technique at 44 °C using 5-bromo-4-chloro-3-indolyl □-D-glucuronide

Introduction

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 16649 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 groups 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 16649 so that eventually the only remaining departures from this horizontal method will be those necessary for well-established technical reasons.

This International Standard describes two horizontal methods (ISO 16649-1 and ISO 16649-2) for the enumeration of □-glucuronidase-positive Escherichia coli.

The user may choose either ISO 16649-1 or ISO 16649-2. Either part is for general application. However, ISO 16649-1 should be used for foodstuffs which may contain severely stressed cells.

1. Scope

This part of ISO 16649 specifies a horizontal method for the enumeration of □-glucuronidase-positive Escherichia coli in products intended for human consumption or for the feeding of animals. It uses a colony-count technique at 44 °C on a solid medium containing a chromogenic ingredient for detection of the enzyme □-glucuronidase.

WARNING — Strains of Escherichia coli which do not grow at 44 °C and, in particular, those that are □-glucuronidase negative, such as Escherichia coli O157, will not be detected.

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2. Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 16649. 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 16649 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 — Preparation of test samples, initial suspension and decimal dilutions for microbiological examination — Part 1: General rules for the preparation of the initial suspension and decimal dilutions.
- ISO 7218, Microbiology of food and animal feeding stuffs — General rules for microbiological examinations.

3. Terms and definitions

For the purposes of this part of ISO 16649, the following terms and definitions apply.

3.1. □-glucuronidase-positive Escherichia coli

bacteria which at 44 °C form typical blue colony on tryptone-bile-glucuronide medium (TBX) under the conditions specified in this part of ISO 16649

3.2. enumeration of □-glucuronidase-positive Escherichia coli

determination of the number of colony-forming units (CFU) of □-glucuronidase-positive Escherichia coli, per millilitre or per gram of sample, when test and calculations are carried out in accordance with this part of ISO 16649

Bibliography

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[1] https://www.iso.org/obp/ui/#iso:std:iso:16649:-2:ed-1:v1:en

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