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**Mikrobiologija v prehranski verigi - Horizontalna metoda za ugotavljanje *Vibrio* spp. - 1. del: Ugotavljanje potencialno enteropatogene *Vibrio parahaemolyticus*, *Vibrio cholerae* in *Vibrio vulnificus* (ISO 21872-1:2017)**

Microbiology of the food chain - Horizontal method for the determination of *Vibrio* spp. - Part 1: Detection of potentially enteropathogenic *Vibrio parahaemolyticus*, *Vibrio cholerae* and *Vibrio vulnificus* (ISO 21872-1:2017)

Mikrobiologie von Lebensmitteln und Futtermitteln - Horizontales Verfahren zum Nachweis von potentiell enteropathogenen *Vibrio* spp. - Teil 1: Nachweis von *Vibrio parahaemolyticus* und *Vibrio cholerae* (ISO 21872-1:2017)

Mikrobiologie de la chaîne alimentaire - Méthode horizontale pour la détermination des *Vibrio* spp. - Partie 1: Recherche des espèces de *Vibrio parahaemolyticus*, *Vibrio cholerae* et *Vibrio vulnificus* potentiellement entéropathogènes (ISO 21872-1:2017)

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Microbiology of food and animal feeding stuffs - Horizontal method for the detection of potentially enteropathogenic *Vibrio* spp. - Part 1: Detection of *Vibrio parahaemolyticus* and *Vibrio cholerae* (ISO 21872-1:2017)

Microbiologie des aliments - Méthode horizontale pour la recherche des *Vibrio* spp. potentiellement entéropathogènes - Partie 1: Recherche de *Vibrio parahaemolyticus* et *Vibrio cholerae* (ISO 21872-1:2017)

Mikrobiologie von Lebensmitteln und Futtermitteln - Horizontales Verfahren zum Nachweis von potentiell enteropathogenen *Vibrio* spp. - Teil 1: Nachweis von *Vibrio parahaemolyticus* und *Vibrio cholerae* (ISO 21872-1:2017)

This European Standard was approved by CEN on 14 May 2017.

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<b>Contents</b>	<b>Page</b>
<b>European foreword.....</b>	<b>3</b>

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## European foreword

This document (EN ISO 21872-1:2017) has been prepared by Technical Committee ISO/TC 34 “Food products” in collaboration with Technical Committee CEN/TC 275 “Food analysis - Horizontal methods” the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by January 2018 and conflicting national standards shall be withdrawn at the latest by January 2018.

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**Microbiology of the food chain —  
Horizontal method for the  
determination of *Vibrio* spp. —**

Part 1:

**Detection of potentially  
enteropathogenic *Vibrio*  
*parahaemolyticus*, *Vibrio cholerae* and  
*Vibrio vulnificus***

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*Microbiologie de la chaîne alimentaire — Méthode horizontale pour  
la détermination des *Vibrio* spp. —*

*Partie 1: Recherche des espèces de *Vibrio parahaemolyticus*, *Vibrio cholerae*  
et *Vibrio vulnificus* potentiellement entéropathogènes*

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# Contents

Page

<b>Foreword</b> .....	<b>v</b>
<b>Introduction</b> .....	<b>vi</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>2</b>
<b>4 Principle</b> .....	<b>2</b>
4.1 General.....	2
4.2 Primary enrichment in a liquid selective medium.....	2
4.3 Secondary enrichment in a liquid selective medium.....	3
4.4 Isolation and identification.....	3
4.5 Confirmation.....	3
<b>5 Culture media and reagents</b> .....	<b>3</b>
5.1 Enrichment medium: alkaline saline peptone water (ASPW).....	4
5.2 Solid selective isolation media.....	4
5.2.1 First medium: thiosulphate, citrate, bile and sucrose agar medium (TCBS).....	4
5.2.2 Second medium.....	4
5.3 Saline nutrient agar (SNA).....	4
5.4 Reagent for detection of oxidase.....	4
5.5 Biochemical tests.....	4
5.5.1 L-lysine decarboxylase saline medium (LDC).....	4
5.5.2 Arginine dihydrolase saline medium (ADH).....	4
5.5.3 Reagent for detection of $\beta$ -galactosidase.....	5
5.5.4 Saline medium for detection of indole.....	5
5.5.5 Saline peptone waters.....	5
5.5.6 Sodium chloride solution.....	5
5.6 PCR.....	5
5.6.1 Tris acetate EDTA buffer (TAE) (or a buffer allowing similar performance for the purpose).....	5
5.6.2 Mastermix.....	5
5.6.3 Primers and probes.....	5
5.6.4 Positive control material.....	5
5.6.5 Negative extraction control.....	6
<b>6 Equipment and consumables</b> .....	<b>6</b>
<b>7 Sampling</b> .....	<b>6</b>
<b>8 Preparation of the test sample</b> .....	<b>6</b>
<b>9 Procedure (See <a href="#">Figure A.1</a>)</b> .....	<b>7</b>
9.1 Test portion and initial suspension.....	7
9.2 Primary selective enrichment.....	7
9.3 Secondary selective enrichment.....	7
9.4 Isolation and identification.....	8
9.5 Confirmation.....	8
9.5.1 General.....	8
9.5.2 Selection of colonies for confirmation and preparation of pure cultures.....	9
9.5.3 Tests for presumptive identification.....	9
9.5.4 Biochemical confirmation.....	10
9.5.5 PCR confirmation.....	12
9.5.6 DNA extraction.....	12
9.5.7 Conventional PCR.....	12
9.5.8 Real-time PCR.....	13
<b>10 Expression of results</b> .....	<b>13</b>

## ISO 21872-1:2017(E)

<b>11</b>	<b>Performance characteristics of the method</b> .....	<b>13</b>
11.1	Interlaboratory study.....	13
11.2	Sensitivity.....	14
11.3	Specificity.....	14
11.4	LOD <sub>50</sub> .....	14
<b>12</b>	<b>Test report</b> .....	<b>14</b>
<b>Annex A</b>	<b>(normative) Diagram of procedure</b> .....	<b>15</b>
<b>Annex B</b>	<b>(normative) Composition and preparation of the culture media and reagents</b> .....	<b>17</b>
<b>Annex C</b>	<b>(informative) Conventional PCR for the detection of <i>Vibrio parahaemolyticus</i>, thermostable direct haemolysin (<i>tdh</i>) and thermostable direct related haemolysin (<i>trh</i>) genes, <i>Vibrio cholerae</i> and <i>Vibrio vulnificus</i></b> .....	<b>23</b>
<b>Annex D</b>	<b>(informative) Real-time PCR for the detection of <i>Vibrio parahaemolyticus</i>, thermostable direct haemolysin gene (<i>tdh</i>) and <i>Vibrio vulnificus</i></b> .....	<b>27</b>
<b>Annex E</b>	<b>(informative) Results of an interlaboratory study</b> .....	<b>29</b>
<b>Bibliography</b>	.....	<b>32</b>

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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.

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](http://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](http://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 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](http://www.iso.org/iso/foreword.html).

This document was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 275, *Food analysis — Horizontal methods*, in collaboration with ISO Technical Committee TC 34, *Food products*, Subcommittee SC 9, *Microbiology*, in accordance with the agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This first edition cancels and replaces ISO/TS 21872-1:2007, which has been technically revised. It also incorporates ISO/TS 21872-1:2007/Cor.1:2008.

The main changes are as follows:

- introduction of optional molecular identification methods for major food borne *Vibrio* spp. (*V. parahaemolyticus*, including potentially enteropathogenic strains, *V. vulnificus* and *V. cholerae*);
- performance characteristics of the method have been added in [Annex E](#).

A list of all parts in the ISO 21872 series can be found on the ISO website.

**ISO 21872-1:2017(E)****Introduction**

Because of the large variety of food and feed products, the horizontal method described in this document 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 will be made to apply this horizontal method as far as possible.

The main changes, listed in the foreword, introduced in this document compared to ISO/TS 21872-1:2007 are considered as major (see ISO 17468).

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

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# Microbiology of the food chain — Horizontal method for the determination of *Vibrio* spp. —

## Part 1:

## Detection of potentially enteropathogenic *Vibrio parahaemolyticus*, *Vibrio cholerae* and *Vibrio vulnificus*

**WARNING** — In order to safeguard the health of laboratory personnel, it is essential that tests for detection of *Vibrio* spp., and particularly toxigenic *Vibrio cholerae*, be conducted only in laboratories equipped for this purpose and under the supervision of an experienced microbiologist, and that great care is exercised in the disposal of contaminated material.

### 1 Scope

This document specifies a horizontal method for the detection of enteropathogenic *Vibrio* spp., which causes human illness in or via the intestinal tract. The species detectable by the methods specified include *Vibrio parahaemolyticus*, *Vibrio cholerae* and *Vibrio vulnificus*.

It is applicable to the following:

- products intended for human consumption and the feeding of animals;
- environmental samples in the area of food production and food handling.

NOTE 1 This method may not be appropriate in every detail for certain products (see Introduction).

NOTE 2 The World Health Organization (WHO) has identified that *V. parahaemolyticus*, *V. cholerae* and *V. vulnificus* are the major food-borne *Vibrio* spp. However, the method in this document can also be appropriate for the identification of other *Vibrio* spp. causing illness in humans.<sup>[1]</sup>

### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 6887-1:2017, *Microbiology of the food chain — 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 6887-3, *Microbiology of the food chain — Preparation of test samples, initial suspension and decimal dilutions for microbiological examination — Part 3: Specific rules for the preparation of fish and fishery products*

ISO 7218, *Microbiology of food and animal feeding stuffs — General requirements and guidance for microbiological examinations*

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

ISO 22118, *Microbiology of food and animal feeding stuffs — Polymerase chain reaction (PCR) for the detection and quantification of food-borne pathogens — Performance characteristics*