
Mikrobiologija v prehranski verigi - Horizontalna metoda za ugotavljanje prisotnosti in števila *Campylobacter* spp. - 1. del: Metoda za ugotavljanje prisotnosti - Dopolnilo A1: Vključitev metod za molekularno potrditev in identifikacijo toplotno stabilnih bakterij *Campylobacter* spp. z uporabo rastnega dodatka v prestonskem bujonu ter spremembe v preskušanju učinkovitosti gojišč (ISO 10272-1:2017/Amd 1:2023)

Microbiology of the food chain - Horizontal method for detection and enumeration of *Campylobacter* spp. - Part 1: Detection method - Amendment 1: Inclusion of methods for molecular confirmation and identification of thermotolerant *Campylobacter* spp., the use of growth supplement in Preston broth and changes in the performance testing of culture media (ISO 10272-1:2017/Amd 1:2023)

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Mikrobiologie der Lebensmittelkette - Horizontales Verfahren zum Nachweis und zur Zählung von *Campylobacter* spp. - Teil 1: Nachweisverfahren - Änderung 1 (ISO 10272-1:2017/Amd 1:2023)

Microbiologie de la chaîne alimentaire - Méthode horizontale pour la recherche et le dénombrement de *Campylobacter* spp. - Partie 1: Méthode de recherche - Amendment 1: Ajout de méthodes pour la confirmation et l'identification moléculaires de *Campylobacter* spp. thermotolérants, de l'utilisation d'un supplément de croissance dans le bouillon de Preston, et modification des essais de performance des milieux de culture (ISO 10272-1:2017/Amd 1:2023)

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This amendment A1 modifies the European Standard EN ISO 10272-1:2017; it was approved by CEN on 29 November 2022.

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This amendment 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 CEN-CENELEC Management Centre has the same status as the official versions.

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European foreword

This document (EN ISO 10272-1:2017/A1:2023) has been prepared by Technical Committee ISO/TC 34 "Food products" in collaboration with Technical Committee CEN/TC 463 "Microbiology of the food chain" the secretariat of which is held by AFNOR.

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 August 2023, and conflicting national standards shall be withdrawn at the latest by August 2023.

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Endorsement notice

The text of ISO 10272-1:2017/Amd 1:2023 has been approved by CEN as EN ISO 10272-1:2017/A1:2023 without any modification.

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INTERNATIONAL
STANDARDISO
10272-1Second edition
2017-06AMENDMENT 1
2023-01

**Microbiology of the food chain —
Horizontal method for detection and
enumeration of *Campylobacter* spp. —****Part 1:
Detection method**

**AMENDMENT 1: Inclusion of methods
for molecular confirmation and
identification of thermotolerant
Campylobacter spp., the use of growth
supplement in Preston broth and changes
in the performance testing of culture
media**

*Microbiologie de la chaîne alimentaire — Méthode horizontale pour
la recherche et le dénombrement de *Campylobacter* spp. —*

Partie 1: Méthode de recherche

*AMENDEMENT 1: Ajout de méthodes pour la confirmation et
l'identification moléculaires de *Campylobacter* spp. thermotolérants,
de l'utilisation d'un supplément de croissance dans le bouillon de
Preston, et modification des essais de performance des milieux de
culture*

Reference number
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CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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Foreword

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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).

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This document was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 9, *Microbiology*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 463, *Microbiology of the food chain*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

A list of all the parts in the ISO 10272 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Microbiology of the food chain — Horizontal method for detection and enumeration of *Campylobacter* spp. —

Part 1: Detection method

AMENDMENT 1: Inclusion of methods for molecular confirmation and identification of thermotolerant *Campylobacter* spp., the use of growth supplement in Preston broth and changes in the performance testing of culture media

3.1

Replace the text with the following:

3.1 *Campylobacter*

genus of microorganisms of the family *Campylobacteraceae*, forming characteristic colonies on solid selective media, such as modified Charcoal Cefoperazone Deoxycholate (mCCD) agar, when incubated in a microaerobic atmosphere at 41,5 °C and displaying certain characteristics with biochemical confirmation tests and by microscopy

Note 1 to entry: Microscopy, the biochemical confirmation tests and the characteristics of *Campylobacter* are described in 9.5.

Note 2 to entry: This document targets the thermotolerant *Campylobacter* species relevant to human health. The most frequently encountered and relevant to human health are *Campylobacter jejuni* and *Campylobacter coli*. However, other species have been described (*Campylobacter lari*, *Campylobacter upsaliensis* and others).

Note 3 to entry: *Campylobacter* is usually capable of growth in the selective enrichment media Bolton broth and Preston broth.

4.1

Add the following note after the last paragraph:

NOTE The enrichment broth used in Detection procedure B (Preston broth) can be too selective to allow the recovery of strains of *Campylobacter* species (particularly *C. coli*), see ISO 17995^[18]. The addition of growth supplement to Preston broth enhances the recovery of *Campylobacter* spp. and some strains will not grow without it. This issue arose after the publication of ISO 10272-1:2017 and is due to properties of the antibiotic solution. Supporting data are available at: <https://standards.iso.org/iso/10272/-1/ed-1/en/amd/1/>.

9.5.1

Add the following text after the last paragraph:

NOTE PCR tests for confirmation and species identification are described in Annexes D and E. The results for the ILS study are described in Annex F.

ISO 10272-1:2017/Amd.1:2023(E)*9.6.1, second sentence*

Replace the text with the following:

However, other species have been described (*Campylobacter lari*, *Campylobacter upsaliensis* and others); the characteristics given in Table 2 permit their differentiation from *Campylobacter jejuni* and *Campylobacter coli*.

9.6.1

Add the following text as the third sentence:

Additionally, Annex E describes molecular methods for identification of thermotolerant *Campylobacter* species, which can be used as an alternative to the biochemical identification described in 9.6.2 to 9.6.5.

9.6.4, second paragraph

Replace the text with the following:

If the indoxyl acetate is hydrolysed, a colour change to blue occurs within 5 min to 10 min. If there is an unclear result after 10 min, a better result can be obtained after waiting for another 20 min. No colour change indicates hydrolysis has not taken place.

9.6.5, Table 2

Replace the table with the following:

Characteristic	<i>C. jejuni</i>	<i>C. coli</i>	<i>C. lari</i> ^b	<i>C. upsaliensis</i> ^b
Catalase (9.6.2)	+	+	+	– or weak
Hydrolysis of hippurate (9.6.3)	+ ^a	–	–	–
Indoxyl acetate (9.6.4)	+	+	–	+ ^c
Key				
+ = positive				
– = negative				
^a Some hippurate-negative <i>C. jejuni</i> strains have been reported.				
^b The same characteristics can appear also for other <i>Campylobacter</i> spp.				
^c Indoxyl acetate negative <i>C. upsaliensis</i> strains have been reported.				

11.1

Add the following text after the first sentence:

The results have been published, see Reference [19].