
Mikrobiologija v prehranski verigi - Ugotavljanje prisotnosti in števila "Cryptosporidium" in "Giardia" v sveži zeleni listni zelenjavi in jagodičevju (ISO 18744:2016)

Microbiology of the food chain - Detection and enumeration of Cryptosporidium and Giardia in fresh leafy green vegetables and berry fruits (ISO 18744:2016)

Mikrobiologie der Lebensmittelkette - Nachweis und Zählung von Cryptosporidium und Giardia in frischem grünem Blattgemüse und Beeren (ISO 18744:2016)

Microbiologie de la chaîne alimentaire - Recherche et dénombrement des Cryptosporidium et Giardia dans les légumes verts frais à feuilles et les fruits à baies (ISO 18744:2016)

Ta slovenski standard je istoveten z: EN ISO 18744:2016

ICS:

07.100.30	Mikrobiologija živil	Food microbiology
67.080.01	Sadje, zelenjava in njuni proizvodi na splošno	Fruits, vegetables and derived products in general

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EUROPEAN STANDARD

EN ISO 18744

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2016

ICS 07.100.30

English Version

Microbiology of the food chain - Detection and enumeration of *Cryptosporidium* and *Giardia* in fresh leafy green vegetables and berry fruits (ISO 18744:2016)

Microbiologie de la chaîne alimentaire - Recherche et dénombrement des *Cryptosporidium* et *Giardia* dans les légumes verts frais à feuilles et les fruits à baies (ISO 18744:2016)

Mikrobiologie der Lebensmittelkette - Nachweis und Zählung von *Cryptosporidium* und *Giardia* in frischem grünem Blattgemüse und Beeren (ISO 18744:2016)

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European foreword

This document (EN ISO 18744:2016) 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of an identical text or by endorsement, at the latest by october 2016, and conflicting national standards shall be withdrawn at the latest by october 2016.

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INTERNATIONAL
STANDARD

ISO
18744

First edition
2016-04-01

**Microbiology of the food chain —
Detection and enumeration of
Cryptosporidium and *Giardia* in fresh
leafy green vegetables and berry fruits**

*Microbiologie de la chaîne alimentaire — Recherche et
dénombrement de *Cryptosporidium* et *Giardia* dans les légumes verts
frais à feuilles et les fruits à baies*

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Reference number
ISO 18744:2016(E)

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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.

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The committee responsible for this document is ISO/TC 34, *Food products*, Subcommittee SC 9, *Microbiology*.

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Introduction

Cryptosporidium spp. and *Giardia duodenalis* (syn. *G. lamblia*, *G. intestinalis*) are protozoan parasites that can cause enteric illness in humans. Both organisms are characterized by a robust transmission stage, the *Cryptosporidium* oocyst and the *Giardia* cyst, which can survive in moist environments for prolonged periods. These transmission stages are hereafter referred to collectively as (oo)cysts. *Cryptosporidium* oocysts in particular are highly resistant to chlorine at the concentrations used in the treatment of drinking water, and chemical disinfection of leafy green vegetables and berry fruits, where performed during processing, may also be ineffective. Consequently, the absence of vegetative bacteria on fresh produce as indicators of faecal contamination does not necessarily indicate the absence of (oo)cysts. No practical method exists to culture *Cryptosporidium* spp. and *Giardia duodenalis* for the purpose of detection, and therefore, in order to detect contamination with these parasites, direct removal of the (oo)cysts from the food sample must be performed, followed by visualization of the (oo)cysts by microscopy. The methods described in this International Standard are for determining whether *Cryptosporidium* and/or *Giardia* (oo)cysts are present on the surfaces of fresh produce and for their enumeration. This International Standard is based on published methods that have been tested in a multicentre collaborative trial. Alternative methods can be used following a demonstration of their equivalence with this International Standard following the protocol described in ISO 16140.^[1]

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