Water quality - Detection and enumeration of bacteriophages - Part 1: Enumeration of F-specific RNA bacteriophages

Water quality - Detection and enumeration of bacteriophages - Part 1: Enumeration of F-specific RNA bacteriophages
### EESTI STANDARDI EESSÕNA


Käesolev dokument on jõustatud 14.02.2002 ja selle kohta on avaldatud teade Eesti standardorganisatsiooni ametlikus väljaandes.

Standard on kättesaadav Eesti standardorganisatsiooni keskusest.

### NATIONAL FOREWORD


This document is endorsed on 14.02.2002 with the notification being published in the official publication of the Estonian national standardisation organisation.

The standard is available from Estonian standardisation organisation.

### Käsitlusala:

This part of EN ISO 10705 specifies a method for the detection and enumeration of F-specific ribonucleic acid (RNA) bacteriophages by incubating the sample with an appropriate host strain.

### Scope:

This part of EN ISO 10705 specifies a method for the detection and enumeration of F-specific ribonucleic acid (RNA) bacteriophages by incubating the sample with an appropriate host strain.

### ICS 07.100.20

### Võtmesõnad:

bacteria count methods, bacteria cultures, bacteriological quality, counting, culture (biology), cultures (biology), microbiological analysis, microbiology, ribonucleic acid, testing, water analysis, water quality, verification, viruses
English version

Water quality – Detection and enumeration of bacteriophages

Part 1: Enumeration of F-specific RNA bacteriophages

(ISO 10705-1 : 1995)

Qualité de l’eau – Détection et dénombrement des bactériophages – Partie 1: Dénombrement des bactériophages ARN F spécifiques


This European Standard was approved by CEN on 2001-06-29.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

The European Standards exist 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 Management Centre has the same status as the official versions.

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

CEN

European Committee for Standardization

Comité Européen de Normalisation

Europäisches Komitee für Normung

Management Centre: rue de Stassart 36, B-1050 Brussels
Foreword
International Standard
which was prepared by ISO/TC 147 'Water quality' of the International Organization for Standardization, has been adopted by Technical Committee CEN/TC 230 'Water analysis', the Secretariat of which is held by DIN, as a European Standard.
This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, and conflicting national standards withdrawn, by February 2002 at the latest.
In accordance with the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard:
Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

Endorsement notice
The text of the International Standard ISO 10705-1:1995 was approved by CEN as a European Standard without any modification.

1 Scope
This part of ISO 10705 specifies a method for the detection and enumeration of F-specific ribonucleic acid (RNA) bacteriophages by incubating the sample with an appropriate host strain. The method can be applied to all kinds of water, sediments and sludges, where necessary after dilution. In the case of low numbers, a preconcentration step may be necessary for which a separate part of ISO 10705 will be developed. The method can also be applied to shellfish extracts. Depending on the relative abundance of F-specific RNA bacteriophages to background organisms, additional confirmatory tests may be necessary and are also specified in this part of ISO 10705.

The presence of F-specific RNA bacteriophages in a water sample generally indicates pollution by wastewater contaminated by human or animal faeces. Their survival in the environment, removal by widely used water treatment processes and concentration or retention by shellfish resembles that of foodborne and waterborne human enteric viruses, for example the enteroviruses, hepatitis A virus and rotaviruses.

2 Normative references
The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 10705. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 10705 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.


3 Definition
For the purposes of this part of ISO 10705, the following definition applies.

3.1 F-specific RNA bacteriophages: Bacterial viruses which are capable of infecting a specified host strain with F-pili or sex-pili to produce visible plaques (clearance zones) on a confluent lawn grown under appropriate culture conditions, whereas the infectious process is inhibited in the presence of a concentration