

**Vee kvaliteet. Kultiveeritavate mikroorganismide loendamine. Kolooniate arv toiteagarsöötmesse külvil**

**Water quality - Enumeration of culturable micro-organisms - Colony count by inoculation in a nutrient agar culture medium (ISO 6222:1999)**

## EESTI STANDARDI EESSÕNA

See Eesti standard EVS-EN ISO 6222:2001 sisaldab Euroopa standardi EN ISO 6222:1999 ingliskeelset teksti.

Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.

Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 15.05.1999.

Standard on kättesaadav Eesti Standardikeskusest.

## NATIONAL FOREWORD

This Estonian standard EVS-EN ISO 6222:2001 consists of the English text of the European standard EN ISO 6222:1999.

This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.

Date of Availability of the European standard is 15.05.1999.

The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile [standardiosakond@evs.ee](mailto:standardiosakond@evs.ee).

ICS 13.060.30

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**English version**

**Water quality**

Enumeration of culturable micro-organisms – Colony count  
by inoculation in a nutrient agar culture medium  
(ISO 6222 : 1999)

Qualité de l'eau – Dénombrement des  
micro-organismes revivifiants –  
Comptage des colonies par ense-  
mencement dans un milieu de culture  
nutritif gélosé (ISO 6222 : 1999)

Wasserbeschaffenheit – Quantitative  
Bestimmung der kultivierbaren  
Mikroorganismen – Bestimmung der  
Koloniezahl durch Einimpfen in ein  
Nähragarmedium (ISO 6222 : 1999)

This European Standard was approved by CEN on 1999-03-16.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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**CEN**

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

**Central Secretariat: rue de Stassart 36, B-1050 Brussels**

## Foreword

International Standard

ISO 6222 : 1999 Water quality – Enumeration of culturable micro-organisms – Colony count by inoculation in a nutrient agar culture medium,

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 November 1999 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 6222 : 1999 was approved by CEN as a European Standard without any modification.

## Introduction

Waters of all kinds invariably contain a variety of micro-organisms derived from various sources, such as soil and vegetation, and estimation of the overall numbers provide useful information for the assessment and surveillance of water quality. Separate counts are usually made of the micro-organisms which are able to grow and form colonies on nutrient agar media at 36 °C and 22 °C.

Colony counts are useful for assessing the integrity of ground water sources and the efficiency of water treatment processes such as coagulation, filtration and disinfection and provide an indication of the cleanliness and integrity of the distribution system. They can also be used to assess the suitability of a supply for the preparation of food and drink, where the water supply should contain few micro-organisms to avoid contaminating the product with spoilage organisms.

The main value of colony counts lies in the detection of changes from those expected, based on frequent, long term monitoring. Any sudden increase in the count can be an early warning of serious pollution and calls for immediate investigation.

## 1 Scope

This European Standard specifies a method for the enumeration of culturable micro-organisms in water by counting the colonies formed in a nutrient agar culture medium after aerobic incubation at 36 °C and 22 °C.

The method is intended to measure the operational efficiency of the treatment process of public drinking water supplies and for general application to all types of water. It is particularly applicable to the examination of water intended for human consumption, including water in closed containers and to natural mineral waters.

## 2 Normative references

This European Standard incorporates provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed thereafter. For dated references, subsequent amendment to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the most recent edition of the publication referred to applies.

EN ISO 3696

Water for analytical laboratory use – Specification and test methods (ISO 3696:1987)

EN ISO 5667-3

Water quality – Sampling – Part 3: Guidance on the preservation and handling of samples (ISO 5667-3:1994)

EN 25667-2

Water quality – Sampling – Part 2: Guidance on sampling techniques (ISO 5667-2:1991)

ISO 6887

Microbiology – General guidance for the preparation of dilutions for microbiological examinations

ISO 8199

Water quality – General guide to the enumeration of micro-organisms by culture