

VEE KVALITEET

Proovivõtt

**Osa 5: Juhised joogivee proovivõtuks
veetöötlusjaamadest ja veevarustuse jaotusvõrkudest**

Water quality

Sampling

**Part 5: Guidance on sampling of drinking water from
treatment works and piped distribution systems
(ISO 5667-5:2006)**

EVS

EESTI STANDARDI EESSÕNA**NATIONAL FOREWORD**

<p>See Eesti standard EVS-ISO 5667-5:2014 „Vee kvaliteet. Proovivõtt. Osa 5: Juhised joogivee proovivõtuks veetöötusjaamadest ja veevarustuse jaotusvõrkudest“ sisaldab rahvusvahelise standardi ISO 5667-5:2006 „Water quality -- Sampling -- Part 5: Guidance on sampling of drinking water from treatment works and piped distribution systems“ identset ingliskeelset teksti.</p>	<p>This Estonian Standard EVS-ISO 5667-5:2014 consists of the identical English text of the International Standard ISO 5667-5:2006 „Water quality – Sampling – Part 5: Guidance on sampling of drinking water from treatment works and piped distribution systems“.</p>
<p>Ettepaneku rahvusvahelise standardi ümbertrüki meetodil ülevõtuks on esitanud EVS/TK 47, standardi avaldamist on korraldanud Eesti Standardikeskus.</p>	<p>Proposal to adopt the International Standard by reprint method has been presented by EVS/TK 47, the Estonian standard has been published by the Estonian Centre for Standardisation.</p>
<p>Standard EVS-ISO 5667-5:2014 on jõustunud sellekohase teate avaldamisega EVS Teataja 2014. aasta septembrikuu numbris.</p>	<p>This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.</p>
<p>Standard on kättesaadav Eesti Standardikeskusest.</p>	<p>The standard is available from the Estonian Centre for Standardisation.</p>

Käsitlusala

See ISO 5667 osa kehtestab olmevee proovivõtumeetodite põhimõtted.

Selle ISO 5667 osa tähenduses on olmevesi:

- a) igasugune vesi, mis alguses olekus või peale töötlust on ettenähtud joomiseks, toidu ja toiduainete valmistamiseks, või muuks olmeliseks otstarbeks, sõltumata selle päritolust; samuti
- b) igasugune vesi, mida kasutatakse tootmisettevõtetes inimtarbimiseks ettenähtud toodete või ainete valmistamiseks, töötlemiseks, säilitamiseks või turustamiseks, välja arvatud siis, kui pädev riiklik asutus on veendunud, et vee kvaliteet ei saa mõjutada toiduaine tervislikkust selle valmis kujul.

Selles ISO 5667 osas antud juhised on piiratud nende olukordadega, kus vesi võetakse munitsipaal- või samalaadsest jaotusvõrgust (kaasa arvatud individuaalsed torustikud), kus eelnev töötlus ja/või kvaliteedi hindamine on andnud tulemuseks vee, mis klassifitseerub tarbimiseks või toiduainetetööstuses kasutamiseks sobivaks. Standard on eriti kohalduv pideva veevarustuse korral igale kasutuselapile kuni jaotusvõrgu tarbimiskohani (kaasa arvatud). See sisaldab jaotust suurtes ehitistes, kus võib olla rakendatav täiendav vee kvaliteediohje.

See ISO 5667 osa on samuti kohalduv proovivõtule olukordades, mis võivad olla tingitud jaotusvõrgu häirete või hädaolukordade uuringutest, kus proove võtavad isikud ei ole ohtu seatud.

See ISO 5667 osa ei anna juhiseid veeallikate jaoks ja toodete jaoks, mille valmistamisel on kasutatud joogivett. Järgnevad näited on juhtumid, mida antud dokument ei käsitle:

- proovivõtt veeallikast, näiteks põhja- ja pinnavee kogumid;
- joogiveevarustuse proovivõtt ajutistest allikatest (näiteks paakautodest);
- proovivõtt lennukite, rongide ja laevade veemahutitest;
- proovivõtt joogitoodetest (kaasa arvatud pudelitesse villitud vesi) või toidust, mis sisaldab tootmisel kasutatud joogivett;
- proovivõtt joogiautomaatidest, mis väljastavad jooke lahtistes topsides.

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

ICS 13.060.20, 13.060.45

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:
Aru 10, 10317 Tallinn, Eesti; www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:
Aru 10, 10317 Tallinn, Estonia; www.evs.ee; phone 605 5050; e-mail info@evs.ee

Contents

Page

Foreword.....	iv
Introduction	vi
1 Scope	1
2 Terms and definitions.....	2
3 Design of sampling programmes	2
4 Sampling equipment.....	2
5 Sample collection locations	2
5.1 General.....	2
5.2 Service reservoirs (including water towers)	3
5.3 Water treatment plants	3
5.4 Disinfection/oxidation plants.....	3
5.5 Distribution system	3
6 Pre-collection cleaning, disinfection and flushing.....	7
6.1 General.....	7
6.2 Service reservoirs (including water towers)	7
6.3 Hydrants	8
6.4 Faucets	8
6.5 Dip sampling	9
7 On-site analysis of samples	9
8 Frequency and timing of sampling	9
9 Sample collection and handling	10
9.1 General.....	10
9.2 Volume of samples	10
9.3 Precautions to minimize contamination.....	10
9.4 Order of sampling	11
10 Sampling for particular types of analysis	12
10.1 Sampling for physical, chemical and radiological analysis	12
10.2 Sampling for microbiological analysis	12
10.3 Sampling for biological analysis.....	13
10.4 Sampling for virological analysis.....	13
11 Field measurements and continuous on-line monitoring	13
12 Sample identification and records	13
13 Sampling quality	14
13.1 General.....	14
13.2 Sampling manual	14
13.3 Training of samplers.....	15
13.4 Verification checking of the collection, handling, temporary storage and transport of samples.....	15
13.5 Independent reviews	16
Bibliography	17

Introduction

ISO 5667 is a group of standards dealing with the general aspects of sampling (Parts 1 to 3) and with the sampling of specific types of water (from Part 4 onwards). ISO 5667-5 covers the sampling of drinking water within a piped distribution system and should be read in conjunction with ISO 5667-1 and ISO 5667-3.

Effective monitoring of drinking water requires collaboration between sampling programme designers, water treatment plant and distribution system operators, sample collectors, laboratory analysts and data users. ISO 5667-5 gives guidance on the selection of sampling locations and the collection of samples when monitoring drinking water from treatment plants and from piped distribution systems.

Understanding of the purposes for monitoring drinking water and of the principles behind the methods of analysis is important, since specific sampling protocols can vary widely in accordance with different purposes and different analytical methods.

Examples of sampling purposes include:

- a) checking of drinking water to ensure compliance with national and/or international regulations (e.g. WHO *Guidelines for Drinking Water Quality* ^[1] and the EU Drinking Water Directive ^[2]);
- b) determination of the efficiency of a drinking water treatment plant or components thereof (for example, disinfection);
- c) quality monitoring of the water leaving the treatment plant;
- d) quality monitoring of the water within the distribution system (including distribution within large buildings);
- e) search for the cause of contamination of the distribution system (for example, in response to customer complaints);
- f) monitoring of the corrosive potential of drinking water to plumbing;
- g) assessment of the effects of materials in contact with water on the water quality (chemical and biological);
- h) monitoring of the influent water and the various processing stages in a food or beverage processing plant, including necessary treatment steps.

EVS

Water quality — Sampling —

Part 5:

Guidance on sampling of drinking water from treatment works and piped distribution systems

1 Scope

This part of ISO 5667 establishes principles to be applied to the techniques of sampling water intended for human consumption.

For the purposes of this part of ISO 5667, water intended for human consumption comprises:

- a) all water either in its original state or after treatment, intended for drinking, cooking, food preparation, or other domestic purposes, regardless of its origin, plus
- b) all water used in any production undertaking for the manufacture, processing, preservation or marketing of products or substances intended for human consumption unless the competent national authorities are satisfied that the quality of the water cannot affect the wholesomeness of the foodstuff in its finished form.

The guidance given in this part of ISO 5667 is confined to those circumstances where water is drawn from municipal or similar distribution systems (including individual systems) where prior treatment and/or quality assessment has resulted in the water being classified as suitable for drinking or potable process purposes. Specifically, this part of ISO 5667 is applicable to water that is in continuous supply relative to any stage of use up to and including the point of consumption in a distribution system. This includes distribution within large buildings in which additional water quality management might be applicable.

This part of ISO 5667 is also applicable to sampling situations that can arise relative to the investigation of system defects or emergency situations where the safety of sampling operatives is not compromised.

This part of ISO 5667 does not provide guidance for water sources or for products generated by using drinking water. The followings items are examples of cases not addressed by the present document:

- the sampling of source water, for example groundwater and surface water impoundments;
- sampling of drinking water supplies derived from non-continuous sources (for example, from road tankers);
- sampling of bulk storage of water on airplanes, trains and ships;
- the sampling of beverage products (including bottled waters) or food containing potable water used in its preparation;
- sampling of drink vending machines that dispense unsealed cups of drinks.