



**NSAI**  
Standards

Irish Standard Recommendation  
S.R. CWA 17102:2017

Water analysis - Virus sensor system -  
Monitoring rotavirus, norovirus and hepatitis  
A virus in various types of water intended for  
human use

**S.R. CWA 17102:2017**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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## National Foreword

S.R. CWA 17102:2017 is the adopted Irish version of the European Document CWA 17102:2017, Water analysis - Virus sensor system - Monitoring rotavirus, norovirus and hepatitis A virus in various types of water intended for human use

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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**CEN**

**CWA 17102**

**WORKSHOP**

January 2017

**AGREEMENT**

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ICS 07.100.20

English version

**Water analysis - Virus sensor system - Monitoring  
rotavirus, norovirus and hepatitis A virus in various types  
of water intended for human use**

This CEN Workshop Agreement has been drafted and approved by a Workshop of representatives of interested parties, the constitution of which is indicated in the foreword of this Workshop Agreement.

The formal process followed by the Workshop in the development of this Workshop Agreement has been endorsed by the National Members of CEN but neither the National Members of CEN nor the CEN-CENELEC Management Centre can be held accountable for the technical content of this CEN Workshop Agreement or possible conflicts with standards or legislation.

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**CWA 17102:2017 (E)**

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## European foreword

This CEN Workshop Agreement (CWA) has been drafted and approved by a Workshop of representatives of interested parties on 2016-01-25, the constitution of which was supported by CEN following the public call for participation on 2015-12-03.

A list of the individuals and organizations which supported the technical consensus represented by the CEN Workshop Agreement is available to purchasers from the CEN-CENELEC Management Centre. These organizations were drawn from the following economic sectors: Nanotechnology, Water Environment, Diagnostic testing, Environmental Engineering and Advanced Technology

The formal process followed by the Workshop in the development of the CEN Workshop Agreement has been endorsed by the National Members of CEN but neither the National Members of CEN nor the CEN-CENELEC Management Centre can be held accountable for the technical content of the CEN Workshop Agreement or possible conflict with standards or legislation. This CEN Workshop Agreement can in no way be held as being an official standard developed by CEN and its members.

The final review/endorsement round for this CWA was started on 2016-07-08 and was successfully closed on 2016-07-28. The final text of this CWA was submitted to CEN for publication on 2016-11-04.

Below is a list of companies/institutions that endorsed this CWA:

- **DTU Nanotech (Noemi Rozlosnik, Mark Holm Olsen);**
- **DELTA (Julia Skov);**
- **Philips BioCell (Sanne Larsen);**
- **TorVergata University (Maurizio Divizia);**
- **BME Budapest University of Technology and Economics (Ferenc Szilágyi, Peter Budai);**
- **CORIS BioConcept (Olivia Lefevre);**
- **DHI (Gerald Heinicke, Claus Jorgensen);**
- **Acea Elaborasi SpA (Laura Diaco)**

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## **CWA 17102:2017 (E)**

### **Introduction**

Water-borne viral diseases pose high risks for public health worldwide. Infectious viral particles commonly enter water bodies through the release of sanitary wastewater, which may contain feces from infected individuals. Other people may be infected with the viruses when exposed to the contaminated water in various ways.

This CWA focuses on the detection of rotavirus, norovirus and hepatitis A virus, in

- Municipal water,
- Surface water,
- Bathing water,
- Drinking water and
- Ground water.

The process described in this document is also adaptable for other viruses and water types. The main objective of this CWA is to describe the system overview on how to detect viruses in the aforementioned water types.



## 1 Scope

This CEN Workshop Agreement “Water analysis — Virus sensor system — Monitoring rotavirus, norovirus and hepatitis A virus in various types of water intended for human use” defines a sensor system which is intended to provide a rapid, simple and economic method for monitoring dangerous levels of hepatitis A virus, norovirus and rotavirus in various types of water intended for human use via consumption, recreation or food production.

## 2 Normative references

Not applicable.

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

### 3.1

#### **antibody**

a protein produced by the immune system of an organism in response to exposure to a foreign molecule and characterized by its specific binding to a site of that molecule

[SOURCE: PAC, 1992, 64, 143. Glossary for chemists of terms used in biotechnology]

### 3.2

#### **aptamer**

small single-stranded nucleic acids that fold into a well-defined three-dimensional structure showing a high affinity and specificity for their target molecules and inhibit their biological functions

[SOURCE: Mayer, G. (2009), The Chemical Biology of Aptamers. Angew. Chem. Int. Ed 48]

### 3.3

#### **bathing water**

all parts of natural surface waters where public access is explicitly allowed by the designated authorities, as well as all water that is used within the indoor or outdoor bathing infrastructure of publicly accessible bathing institutions

EXAMPLE pools, tubs, showers, steam chambers and saunas

### 3.4

#### **biosensor**

a device that uses specific biochemical reactions mediated by isolated enzymes, immunosystems, tissues, organelles or whole cells to detect chemical compounds usually by electrical, thermal or optical signals

[SOURCE: PAC, 1992, 64, 143. Glossary for chemists of terms used in biotechnology]

### 3.5

#### **drinking water**

water intended for human consumption as defined in Directive 98/83/EC

[SOURCE: EN 14652+A1:2007-06, 3.12]

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