

Notification

Notification of the German Federal Ministry for the Environment

Microbiological verification procedures to TrinkwV 2001, list of alternative procedures to § 15 Abs. 1 TrinkwV 2001 – 1. amendment information

Announcement of the Ministry for the Environment

In accordance with § 15 section 1 of the German Drinking Water Ordinance (TrinkwV) 2001 verification procedures may be used for microbiological tests under § 14 other than the test procedures (reference procedures) listed in Appendix 5, no. 1. when it has been established to the terms of generally accepted good technical practise by the German Federal Ministry for the Environment (Umweltbundesamt) that the results achieved using these procedures are at least equal to the results obtained with the specified procedures and that they have been subsequently published by the Ministry for the Environment in a list of alternative procedures in the official Federal Health Gazette.

The acceptance of an alternative verification procedure for determining the enterococcus parameter in the above list of alternative procedures in accordance with § 15 Abs. 1 TrinkwV 2001, as coordinated with the Drinking Water Commission at the Ministry for the Environment is published in the following.

The calculation and provision of the results to ISO 8199 must be made for quantitative verification procedures to the standards

DIN EN ISO 9308-1

DIN EN ISO 7899-2

DIN EN 12780

DIN EN ISO 6222

Parameter	Reference procedures	Alternatives procedures
coliform bacteria and colibacillus(E. coli)	DIN EN ISO 9308-1	Demonstrating presence of colibacillus(E. coli) und coliform bacteria with Colilert®-18/Quanti-Tray®a
enterococcus	DIN EN ISO 7899-2	Demonstrating presence of enterococcus with Chromocult® enterococcus agar

Pseudomonas aeruginosa	DIN EN 12780	–
Colony count at 22 °C	to Appendix 1 Nr. 5 TrinkwV 1990b or DIN EN ISO 6222b	–
Demonstrating presence of 36 °C	to Appendix 1 Nr. 5 TrinkwV 1990b or DIN EN ISO 6222b	–
Clostridium perfringens (including spores)	Procedure text to appendix 5 no. T. 1 (to § 15 section 1) TrinkwV 2001	–

a US-Patent no.: 5,610,029 of 11.3.1997; 5,518,892 of 21. 5. 1996; 5,620,895 of 15. 4. 1997;

5,753,456 of 19. 5. 1998, s. a. German Federal Health Publication. - Health Research - Protection of Health 2004,

47:714; b *The incubation temperatures as given in each of the reference procedures must be maintained. The process used must at all events be given in documenting the results.*

All of the standards quoted may be obtained from Beuth-Verlag GmbH, 10772 Berlin.

Note on verification procedures for enterococcus using Chromocult®-enterococcus-Agar

The following procedure description is given in order to ensure that the above procedure is applied in such a manner that it is acknowledged as being at least equal to the reference procedure as acknowledged by the UBA:

Chromocult® enterococcus agar (Merck KGaA & Co., cat. no. 1.00950.0500) is a selective medium to prove the presence of enterococcus in water sample, in the course of which the presence of enterococcus is proved by the exploitation of the chromogenic substrates salmon-glucoside by means of the enzyme β -Dglucosidase characteristic for enterococcus. The colonies are coloured red on transposing of the substrates. Sodium azide and ox gall are present in the agar to inhibit accompanying flora.

All other micro-organisms that are able to grow on the nutrient, form colourless, blue-violet or turquoise colonies that can be readily differentiated from the colonies of the target organism. The typical composition of the nutrient medium Chromocult® enterococcus agar, its production and data on quality control can be found in the product information provided by Merck KGaA & Co. In order to test drinking water samples a membrane filtration of the sample is made and the filter is placed on Chromocult®-enterococcus agar with incubation at $(36 \pm 1) ^\circ\text{C}$ for (24 ± 4) h. The evaluation procedure is made by counting the red colonies (enterococcus).

ISO 8199 is also to be followed in the evaluation and issuing of the results.

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