

**The Appendix is an integral part of
Certificate of Accreditation No. 446/2024 of 30/08/2024**

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Vodotech, spol. s r.o.
CAB number 1259, Central Laboratory
Slavíkovců 571/21, 709 00 Ostrava - Mariánské Hory

The laboratory provides opinions and interpretations of the test results.

Detailed information on activities within the scope of accreditation (determined analytes) is given in the section "Specification of the scope of accreditation".

Tests:

Ordinal number ¹	Test procedure / method name	Test procedure / method identification ²	Tested subject	Degrees of freedom ³
1*	Determination of temperature	CH 01 (ČSN 75 7342)	Drinking, surface, ground, hot and waste water, liquid sludge, free air	-
2	Determination of turbidity by nephelometry	CH 03 (ČSN EN ISO 7027-1)	Drinking, surface, ground, hot and waste water	-
3	Determination of electrical conductivity by conductometry	CH 04 (ČSN EN 27888)	Drinking, surface, ground, hot and waste water	-
4*	Determination of odour and flavour – preliminary sensory analysis	CH 59 (ČSN 75 7340; ČSN EN 1622)	Drinking, surface, ground and hot water	-
5	Determination of pH by potentiometric method	CH 05 (ČSN ISO 10523; ČSN EN ISO 10390)	Drinking, surface, ground, hot and waste water, liquid sludge	-
6	Determination of dissolved oxygen by electrochemical method and % of saturation by calculation from measured values	CH 10 (ČSN EN ISO 5814)	Drinking, surface, ground and waste water	-
7	Determination of biochemical oxygen demand (BOD ₅) by electrochemical method	CH 51 (ČSN EN ISO 5815-1)	Drinking, surface, ground and waste water	-
8	Determination of acid neutralizing capacity (ANC _{4,5} and ANC _{8,3}) by titration and of carbon dioxide (CO ₂) forms by calculation from measured values	CH 06 (ČSN EN ISO 9963-1)	Drinking, surface, ground, hot and waste water	-
9	Determination of base neutralizing capacity (BNC _{8,3} and BNC _{4,5}) by titration	CH 07 (ČSN 75 7372)	Drinking, surface, ground, hot and waste water	-
10	Determination of chemical oxygen demand with permanganate (COD _{Mn}) by titration	CH 09 (ČSN EN ISO 8467)	Drinking, surface, ground and hot water	-

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Ordinal number ¹	Test procedure / method name	Test procedure / method identification ²	Tested subject	Degrees of freedom ³
11	Determination of total hardness (Ca+Mg) by complexometric titration	CH 11 (ČSN ISO 6059)	Drinking, surface, ground and hot water	-
12	Determination of calcium by complexometric titration and calculation of magnesium by measured values	CH 12 (ČSN ISO 6058)	Drinking, surface, ground, hot and waste water, liquid sludge	-
13	Determination of chloride by silver-nitrate titration	CH 17 (ČSN ISO 9297)	Drinking, surface, ground and waste water	-
14	Determination of sulphate by titration	CH 24 (ČSN 75 7477)	Drinking, surface, ground and waste water	-
15	Determination of chemical oxygen demand with dichromate (COD _{Cr}) by titration	CH 49 (ČSN ISO 6060)	Drinking, surface, ground and waste water	-
16	Determination of dissolved solids (DS) and dissolved inorganic salts (DIS) by gravimetry	CH 52 (ČSN 75 7346; ČSN 75 7347)	Drinking, surface, ground and waste water, liquid sludge	-
17	Determination of suspended solids (NL) and loss on ignition by gravimetry	CH 61 (ČSN EN 872; ČSN 75 7350)	Drinking, surface, ground and waste water, liquid sludge	-
18	Determination of dry residue (total solids) and loss on ignition by gravimetry	CH 53 (ČSN EN 12880; ČSN EN 12879:2001)	Liquid sludge	-
19	Determination of absorbance at 254nm wavelength by spectrophotometry	CH 08 (ČSN 75 7360)	Drinking, surface, ground water	-
20	Determination of colour by photometric method	CH 02 (ČSN EN ISO 7887, chap. 6, method C)	Drinking, surface, ground, hot and waste water	-
21	Determination of nitrate using sulfosalicylic acid by spectrophotometry and nitrate nitrogen (N-NO ₃) by calculation from measured values	CH 19 (ČSN ISO 7890-3)	Drinking, surface, ground, waste water, hot water, liquid sludge	-
22	Determination of nitrite by spectrophotometry and nitrite nitrogen (N-NO ₂) by calculation from measured values	CH 20 (ČSN EN 26777)	Drinking, surface, ground, hot and waste water, liquid sludge	-

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Ordinal number ¹	Test procedure / method name	Test procedure / method identification ²	Tested subject	Degrees of freedom ³
23	Determination of ammonium by spectrophotometry and ammonia nitrogen (N-NH ₄) and total inorganic nitrogen by calculation from measured values	CH 21 (ČSN ISO 7150-1)	Drinking, surface, ground, hot and waste water, liquid sludge	-
24	Determination of total phosphorus by spectrophotometry	CH 23 (ČSN EN ISO 6878)	Drinking, surface, ground, hot and waste water, liquid sludge	-
25	Determination of fluoride by spectrophotometry	CH 25 (M. Horáková, P. Lischke, A. Grünwald – Chemical and Physical Methods for Water Analysis, SNTL, 1986, page 202)	Drinking, surface, ground water	-
26	Determination of humic substances by spectrophotometry	CH 26 (ČSN 75 7536)	Drinking, surface and underground water	-
27	Determination of univalent phenols by spectrophotometry	CH 27 (ČSN ISO 6439)	Drinking, surface, ground and waste water, liquid sludge	-
28	Determination of anionic surfactants using methylene blue by spectrophotometry	CH 28 (ČSN EN 903)	Drinking, surface, ground and waste water, liquid sludge	-
29	Determination of total cyanide by spectrophotometry	CH 29 (ČSN 75 7415)	Drinking, surface, ground and waste water, liquid sludge	-
30	Determination of aluminium by spectrophotometry	CH 31 (ČSN ISO 10566)	Drinking, surface, ground and waste water	-
31	Determination of iron by spectrophotometry with HACH set	CH 70 (HACH manual)	Drinking, surface, ground water	-
32	Determination of manganese by spectrophotometry with HACH set	CH 71 (HACH manual)	Drinking, surface, ground water	-
33	Determination of total nitrogen by spectrophotometry with HACH set	CH 48 (HACH manual)	Drinking, surface, ground and waste water, liquid sludge	-

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Ordinal number ¹	Test procedure / method name	Test procedure / method identification ²	Tested subject	Degrees of freedom ³
34*	Determination of free and total chlorine by spectrophotometry using HACH set and bound chlorine by calculation from measured values.	CH 14 (HACH manual)	Drinking, surface, ground and hot water	-
35	Determination of chlorodioxide by spectrophotometry with HACH set	CH 15 (HACH manual)	Drinking, surface, ground and hot water	-
36	Determination of iron and manganese by F/AAS method	CH 30 (ČSN 75 7385)	Drinking, surface, ground, hot and waste water, liquid sludge	-
37	Determination of elements by ICP/OES method and water hardness (Ca+Mg) by calculation from measured values	CH 69 (ČSN EN ISO 11885; Spectro CS manual)	Drinking, surface, ground and waste water	-
38	Determination of extractives (EL) by FTIR method	CH 54 (ČSN 75 7506)	Drinking, surface, ground and waste water, liquid sludge	-
39	Determination of nonpolar extractives (NEL) by FTIR method	CH 43 (ČSN 75 7505:1998)	Drinking, surface, ground and waste water, liquid sludge	-
40	Determination of volatile organic compounds (VOC) by GC/ECD+FID and the sum of THM by calculation from measured values	CH 44 (ČSN EN ISO 10301)	Drinking, surface, ground and hot water	-
41	Determination of organochlorine pesticides (OCP) and semivolatile compounds by GC/MS and sum of OCP by calculation from measured values	CH 46 (ČSN EN ISO 6468)	Drinking, surface, ground water	-
42	Determination of the sum of hydrocarbons C ₁₀ – C ₄₀ by GC/FID method	CH 41 (ČSN EN ISO 9377-2)	Drinking, surface, ground and waste water	-

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Ordinal number ¹	Test procedure / method name	Test procedure / method identification ²	Tested subject	Degrees of freedom ³
43	Determination of dissolved anions by ion chromatography and of nitrate, nitrite, inorganic and organic nitrogen by calculation from measured values	CH 72 (ČSN EN ISO 10304-1; ČSN EN ISO 10304-4; ČSN EN ISO 15061)	Drinking, surface, ground, hot and waste water	-
44	Determination of polycyclic aromatic hydrocarbons (PAH) by HPLC/FluD method and the sum of PAH by calculation from measured values	CH 45 (ČSN EN ISO 17993)	Drinking, surface, ground and waste water	-
45	Determination of total organic carbon (TOC), dissolved organic carbon (DOC) after catalytic combustion by NDIR method	CH 56 (ČSN EN ISO 20236)	Drinking, surface, ground, hot and waste water	-
46	Determination of total bound nitrogen (TN _b) after catalytic combustion by NDIR method	CH 57 (ČSN EN ISO 20236)	Drinking, surface, ground and waste water, liquid sludge	-
47	Determination of bioseston by microscopic method	Bi 01 (ČSN 75 7712)	Drinking, surface, ground water	-
48	Determination of abioseston by microscopic method	Bi 02 (ČSN 75 7713)	Drinking, surface, ground water	-
49	Detection and enumeration of <i>Escherichia coli</i> and coliform bacteria by membrane filtration method	MBi 14 (ČSN EN ISO 9308-1)	Drinking, surface, ground and hot water	-
50	Detection and enumeration of <i>Escherichia coli</i> and coliform bacteria by most probable number method (Colilert-18)	MBi 16 (ČSN EN ISO 9308-2)	Drinking, surface, ground and hot water	-
51	Detection and enumeration of intestinal enterococci by membrane filtration method	MBi 07 (ČSN EN ISO 7899-2)	Drinking, surface, ground and hot water	-
52	Detection and enumeration of <i>Clostridium perfringens</i> (including spores) by membrane filtration method	MBi 15 (MoH Reg. No. 252/2004 Coll.)	Drinking, surface, ground and hot water	-

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Ordinal number ¹	Test procedure / method name	Test procedure / method identification ²	Tested subject	Degrees of freedom ³
53	Enumeration of <i>Clostridium perfringens</i> by membrane filtration method	MBi 4 (ČSN EN ISO 14189)	Drinking, surface, ground and hot water	-
54	Enumeration of culturable microorganisms at 22 °C and 36 °C by inoculation in a nutrient agar culture medium	MBi 12 (ČSN EN ISO 6222)	Drinking, surface, ground and hot water	-
55	Detection and enumeration of <i>Escherichia coli</i> and thermotolerant coliform bacteria by membrane filtration method	MBi 08 (ČSN 75 7835)	Drinking, surface, ground and hot water	-
56	Enumeration of coliforms by membrane filtration method	MBi 01 (ČSN 75 7837)	Drinking, surface, ground water	-
57	Detection and enumeration of <i>Pseudomonas aeruginosa</i> by membrane filtration method	MBi 10 (ČSN EN ISO 16266)	Drinking, surface, ground and hot water	-
58	Enumeration of staphylococci by membrane filtration method	MBi 11 (ČSN EN ISO 6888-1)	Drinking, surface, ground and hot water	-

¹ asterisk at the ordinal number identifies the tests, which the laboratory is qualified to carry out outside the permanent laboratory premises

² if the document identifying the test procedure is dated, only these specific procedures are used. If the document identifying the test procedure is not dated, the latest valid edition of the specified procedure is used (including any changes)

³ the laboratory does not apply a flexible approach to the scope of accreditation

Specification of the scope of accreditation:

Ordinal test number	Detailed information on activities within the scope of accreditation (determined analytes)
8	Forms of CO ₂ : CO ₂ free, bound, total, stable and aggressive, hydrogencarbonates, carbonates
37	Al, As, B, Ca, Cd, Cr, Cu, Fe, Hg, K, Mg, Mn, Na, Ni, Pb, Sb, Se, Zn
40	Trans-1,2-dichloroethene, cis-1,2-dichloroethene, benzene, 1,2-dichloropropane, toluene, chlorobenzene, ethylbenzene, m+p-xylene, styrene, 1,1-dichloroethene, dichloromethane, chloroform, 1,1,1-trichloroethane, tetrachloromethane, 1,2-dichloroethane, trichloroethene, bromodichloromethane, tetrachloroethene, dibromochloromethane, bromoform, 1,4-dichlorobenzene, 1,2-dichlorobenzene; sum of THM = chloroform+ bromodichloromethane+ dibromochloromethane+ bromoform

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Ordinal test number	Detailed information on activities within the scope of accreditation (determined analytes)
41	α -hexachlorocyclohexane, β -hexachlorocyclohexane, γ -hexachlorocyclohexane, aldrin, dieldrin, endrin, heptachlor, heptachloroepoxide, α -endosulfan, β -endosulfan, o,p'-DDT, p,p'-DDT, p,p'-DDE, p,p'-DDD, 1,2,4-trichlorobenzene, 1,2,4,5-tetrachlorobenzene, pentachlorobenzene, hexachlorobenzene, pentachloronitrobenzene, methoxychlor
43	Chlorides, fluorides, nitrates, nitrites, phosphates, sulphates, chlorates, chlorites, bromates
44	Fluoranthene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3- c,d)pyrene, benzo(g,h,i)perylene

Sampling:

Ordinal number	Sampling procedure name	Sampling procedure identification ¹	Subject of sampling
1	Drinking water sampling (manual sampling)	V 01 (ČSN EN ISO 5667-1; ČSN EN ISO 5667-3; ČSN ISO 5667-5; ČSN EN ISO 5667-14; ČSN ISO 5667-21; ČSN EN ISO 19458)	Drinking and hot water
2	Waste water sampling (manual and by automatic sampler)	V 02 (ČSN EN ISO 5667-1; ČSN EN ISO 5667-3; ČSN ISO 5667-10; ČSN ISO 5667-13; ČSN EN ISO 5667-14; ČSN 75 7315)	Waste water, liquid sludge

¹ If the document identifying the sampling procedure is dated, only these specific procedures are used. If the document identifying the sampling procedure is not dated, the latest edition of the specified procedure is used (including any changes).

Explanatory notes:

ICP/OES	Inductively Coupled Plasma Optical Emission Spectrometry
F/AAS	Flame Atomic Absorption Spectrometry
NDIR	Nondispersive infrared spectrometry
FTIR	Fourier Transformation Infrared Spectrometry
HPLC/FluD	Liquid Chromatography with Fluorescent Detector
GC/FID	Gas Chromatography with Flame Ionization Detector
GC/ECD	Gas Chromatography with Electron Capture Detector
GC/MS	Gas Chromatography with Mass Detector
THM	Trihalogenmethanes

"This document is an appendix to the certificate of accreditation. In case of any discrepancies between the English and Czech versions, the Czech version shall prevail, both for the certificate appendix and the certificate itself.