

**The Appendix is an integral part of
Certificate of Accreditation No. 172/2023 of 11/04/2023**

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

BorsodChem MCHZ, s.r.o.

TK S-blok Laboratory

Chemická 2039/1, 709 00 Ostrava - Mariánské Hory

The Laboratory has a flexible scope of accreditation permitted as detailed in the Annex.

Updated list of activities provided within the flexible scope of accreditation is available at the Laboratory from the Laboratory Manager.

The Laboratory is qualified to carry out independent sampling.

Tests:

Ordinal number ¹	Test procedure/method name	Test procedure/method identification ²	Tested object
1	Determination of C10 – C40 by GC-FID technique	A3-0200 (ČSN EN ISO 9377-2, ČSN EN 14039)	Waste water, aqueous extracts
2	Determination of anions by IC method with conductivity detection ³	A3-0229 (ČSN EN ISO 10304-1)	Drinking, ground, surface, waste water, aqueous extracts
3	Determination of semi-volatile compounds in water by SPME-GC with FID detection ³	A3-0257 (EPA 8270, EPA 609)	Drinking, ground, surface, waste water, aqueous extracts
4	Determination of phosphate and total phosphorus by spectrophotometry using HACH commercial set	A3-0315 (ČSN ISO 17381, Instructions to the HACH set)	Drinking, ground, surface, waste water, aqueous extracts
5	Determination of the content of metals by flame AAS method ³	A3-0345 (ČSN ISO 8288, ČSN EN 1233, ČSN ISO 7980, ČSN ISO 9964-1, ČSN ISO 9964-2, ČSN 75 7385)	Drinking, ground, surface, waste water, aqueous extracts
6	Determination of ammonium by spectrophotometry	A3-0368 (ČSN ISO 7150-1)	Drinking, ground, surface, waste water, aqueous extracts
7	Determination of phenols by 4-aminoantipyrine spectrophotometric method after distillation	A3-0369 (ČSN ISO 6439)	Drinking, ground, surface, waste water, aqueous extracts
8	Determination of nitrate by spectrophotometry and nitrate nitrogen by calculation from measured values	A3-0370 (ČSN ISO 7890-3)	Drinking, ground, surface, waste water, aqueous extracts
9	Determination of chemical oxygen demand COD _{Cr} by spectrophotometric method using HACH commercial set	A3-0373 (ČSN ISO 17381, Instructions to the HACH set)	Drinking, ground, surface, waste water, aqueous extracts
10	Determination of nitrite by spectrophotometry and nitrite nitrogen by calculation from measured values	A3-0391 (ČSN EN 26 777)	Drinking, ground, surface, waste water, aqueous extracts
11	Determination of ozone by spectrophotometry	A3-0395 (Instructions for using the EUTECH ECC105 colorimeter)	Drinking, ground, surface, waste water, aqueous extracts

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Ordinal number ¹	Test procedure/method name	Test procedure/method identification ²	Tested object
12	Determination of dissolved solids and dissolved inorganic salts by gravimetry	A3-0431A (ČSN 75 7346, ČSN 75 7347)	Drinking, ground, surface, waste water
13	Determination of biochemical oxygen demand (BOD ₅) by manometric method	A3-0592 (Manual, WTW O2 500 230)	Drinking, ground, surface, waste water, aqueous extracts
14	Determination of electrical conductivity	A3-0829 (ČSN EN 27888)	Drinking, ground, surface, waste water, aqueous extracts
15	Determination of TC, TOC, InC, DOC by IR detection	A3-0922A (ČSN EN ISO 20236)	Drinking, ground, surface, waste water, aqueous extracts
16	Determination of pH by potentiometry	A3-1023 (ČSN ISO 10523)	Drinking, ground, surface, waste water, aqueous extracts
17	Determination of volatile compounds in water by SPME-GC with FID detection ³	A3-2047 (TNV 75 7550:1998, ČSN ISO 11423-2)	Drinking, ground, surface, waste water, aqueous extracts
18	Determination of organic compounds in working environment by TD – GC with FID detection ³	A3-0254 (ČSN EN ISO 16017-1, EPA TO-17)	Air
19	Determination of NO, NO ₂ , NH ₃ in working environment by electrochemical method	A3-0310 (Instructions to IBRID MX6)	Air
20	Determination of ammonia in working environment by spectrophotometry	A3-0339 (ČSN 834728, NIOSH 6015, ČSN ISO 7150-1)	Air
21	Determination of nitric acid in working environment by spectrophotometry	A3-0814 (NIOSH 7903, ČSN ISO 7890-3)	Air
22	Determination of formaldehyde in working environment by HPLC technique with UV VIS detection	A3-2048 (ČSN EN ISO 16000-2, NIOSH 2016)	Air
23	Determination of TN by chemiluminescence	A3-0922B (ČSN EN ISO 20236)	Drinking, ground, surface, waste water, aqueous extracts
24	Determination of suspended solids by filtration method	A3-0431B (ČSN EN 872)	Drinking, ground, surface, waste 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 edition of the specified procedure is used (including any changes)

³ the range of determined parameters for test procedures is specified at the end of this Appendix

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Annex:

Flexible scope of accreditation

Ordinal numbers of tests
2,3,5,17,18

The Laboratory is allowed to modify the test methods listed in the Annex within the specified scope of accreditation provided the measuring principle is observed. The flexible approach to the scope of accreditation cannot be applied to the tests not included in the Annex.

Sampling:

Ordinal number	Sampling procedure name	Sampling procedure identification ¹	Sampled object
1	Waste water sampling – automatic samplers	O4-027/72 (ČSN EN ISO 5667-1, ČSN EN ISO 5667-3, ČSN ISO 5667-10, ČSN ISO 5667-14)	Waste water
2	Waste water sampling – manual sampling	O4-028/72 (ČSN EN ISO 5667-1, ČSN EN ISO 5667-3, ČSN ISO 5667-10, ČSN ISO 5667-14)	Waste water
3	Surface water sampling – manual sampling	O4-031/72 (ČSN EN ISO 5667-1, ČSN EN ISO 5667-3, ČSN ISO 5667-4, ČSN ISO 5667-6, ČSN ISO 5667-14)	Surface water
4	Sampling of air from working environment – sorption tubes	O4-029/72 (ČSN EN 482, ČSN EN 689+AC, GR No.361/2007Coll.)	Air

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)

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Range of determined parameters:

Test (ordinal number)	analytes
2	chlorides, nitrates, nitrites, sulphates, phosphates
3	aniline, nitrobenzene
5	Fe,Cu,Ni,Cr,Zn,Cd,Pb,Ca,Na,K,Mg
17	benzene, toluene, xylenes
18	benzene, acetone, aniline, N-ethylaniline, N,N-diethylaniline, nitrobenzene, dimethylamine, dimethylisopropylamine, cyclohexylamine, dimethylcyclohexylamine, diethylenglycol,

Explanatory notes:

A - Test Procedure

O - Sampling Procedure

GC - Gas Chromatography

AAS - Atomic Absorption Spectrometry

EPA - Environmental Protection Agency

IC - Ion Chromatography

IR - Infrared

NIOSH - National Institute for Occupational Safety and Health

SPME - Solid Phase Micro Extraction

TD - Thermal Desorption

TC - Total Carbon

TOC - Total Organic Carbon

InC - Inorganic Carbon

DOC - Dissolved Organic Carbon

TN - Total Nitrogen

FID - Flame Ionisation Detector

ECD - Electron Capture Detector

N₂O - Nitrogen oxide

NO₂ - Nitrogen dioxide

GR - Government Regulation

HPLC - High Pressure Liquid Chromatography

UV VIS - Ultraviolet-visible spectrography

Aqueous extract – Aqueous extracts of waste, sludge, soils according to MoE Regulation No. 61/2010 Coll.