The Appendix is an integral part of
Certificate of Accreditation No. 182/2023 of 13/04/2023

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

EKO-LAB Žamberk spol. s r.o.
CAB number 1254, Testing Laboratory
Zemědělská 1004, 564 01 Žamberk

The laboratory provides opinions and interpretations of 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]	Subject of the test	Degrees of freedom[3]
1	Determination of absorbance	SOP 543 (ČSN 75 7360)	Drinking, bottled, raw, produced, surface, ground water, bathing water	-
2	Determination of turbidity by nephelometry	SOP 552 (ČSN EN ISO 7027-1)	Drinking, bottled, raw, produced, ground water, bathing water	-
3	Determination of total nitrogen method using oxidative digestion with peroxodisulfate	SOP 520 (ČSN EN ISO 11905-1)	Drinking, bottled, raw, produced, surface, waste, ground water, bathing water	-
4	Determination of nitrate and N-NO_3^- by calculation from measured values spectrometric method using sulfosalicylic acid	SOP 507 (ČSN ISO 7890-3)	Drinking, bottled, raw, produced, surface, waste, ground water, bathing water	-
5	Determination of nitrites, N-NO_2^- and $N_{inorg.}$ by calculation from measured values manual absorption spectrophotometric method	SOP 508 (ČSN EN 26777)	Drinking, bottled, raw, produced, surface, waste, ground water, bathing water	-
6	Determination of ammonium and N-NH_4^+ by calculation from measured values manual spectrometric method.	SOP 509 (ČSN ISO 7150-1)	Drinking, bottled, raw, produced, surface, waste, ground water, bathing water	-
7	Determination of electrical conductivity	SOP 510 (ČSN EN 27888)	Drinking, bottled, raw, produced, surface, waste, ground water, bathing water	-
8	Determination of chemical oxygen demand with permanganate (COD_{Mn}) by titration	SOP 549 (ČSN EN ISO 8467)	Drinking, bottled, raw, produced, surface, ground water, bathing water	-

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EKO-LAB Žamberk spol. s r.o.
CAB number 1254, Testing Laboratory
Zemědělská 1004, 564 01 Žamberk

Ordinal number[1]	Test procedure / method name	Test procedure / method identification[2]	Subject of the test	Degrees of freedom[3]
9	Determination of chloride silver nitrate titration with chromate indicator (Mohr's method)	SOP 512 (ČSN ISO 9297)	Drinking, bottled, raw, produced, surface, waste, ground water, bathing water	-
10	Determination of sulphate and nitrate by isotachophoretic method	SOP 513 (ÚRVJT method)	Drinking, bottled, raw, produced, surface, waste, ground water, bathing water	-
11*	Determination of free and total chlorine by HACH set and bound chlorine by calculation from measured values	SOP 542 (HACH set manual)	Drinking, bottled, raw, produced, ground water, bathing water	-
12	Determination of phosphorus. Ammonium molybdate spectrophotometric method	SOP 518 (ČSN EN ISO 6878)	Drinking, bottled, raw, produced, surface, waste, ground water, bathing water	-
13	Determination of total mercury by single-purpose atomic absorption spectrometer	SOP 519 (ČSN 75 7440; ČSN 46 5735; MoE Regulation No. 153/2016 Coll.; MoE Regulation No. 273/2021 Coll.)	Drinking, bottled, raw, produced, surface, waste, ground water, bathing water, food industry products raw materials, vegetable material, sludge, soil, sediments, feedstuffs**,** fodder raw materials, waste, industrial compost, barnyard manure	-
14	Determination of biochemical oxygen demand after n days (BOD_n). Dilution and seeding method with allylthiourea addition	SOP 553 (ČSN EN ISO 5815-1)	Drinking, bottled, raw, produced, surface, waste, ground water, bathing water	-
15	Determination of chemical oxygen demand using (COD-Cr) by test-tube method	SOP 521 (ČSN ISO 15705)	Drinking, bottled, raw, produced, surface, waste, ground water, bathing water	-
16*	Determination of pH by potentiometry	SOP 522 (ČSN ISO 10523)	Drinking, bottled, raw, produced, surface, waste, ground water, bathing water	-
17	Gravimetric determination of suspended solids	SOP 523 (ČSN EN 872; ČSN 75 7350)	Drinking, bottled, raw, produced, surface, waste, ground water, bathing water	-

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CAB number 1254, Testing Laboratory
Zemědělská 1004, 564 01 Žamberk

Ordinal number[1]	Test procedure / method name	Test procedure / method identification[2]	Subject of the test	Degrees of freedom[3]
18	Determination of dissolved oxygen by membrane probe	SOP 530 (ČSN EN ISO 5814)	Drinking, bottled, raw, produced, surface, waste, ground water, bathing water	-
19	Gravimetric determination of dissolved solids and dissolved inorganic salts (DIS)	SOP 525 (ČSN 75 7346; ČSN 75 7347)	Drinking, bottled, raw, produced, surface, waste, ground water, bathing water	-
20	Determination of nonpolar extractives by infrared spectrometry method (NEL_{IR})	SOP 526 (ČSN 75 7505)	Drinking, bottled, raw, produced, surface, waste, ground water, bathing water	-
21	Determination of extractives by infrared spectrometry method (EL_{IR})	SOP 527 (ČSN 75 7506)	Drinking, bottled, raw, produced, surface, waste, ground water, bathing water	-
22*	Determination of temperature	SOP 550 (ČSN 75 7342)	Drinking, bottled, raw, produced, surface, waste, ground water, bathing water	-
23*	Preliminary sensory analysis of water (odour, flavour, colour)	SOP 551 (ČSN EN ISO 7887; ČSN 75 7340)	Drinking, bottled, raw, produced, surface, ground water, bathing water	-
24*	Determination of redox potential	SOP 557 (ČSN 75 7367)	Drinking, bottled, raw, produced, surface, waste, ground water, bathing water	-
25	Determination of dissolved oxygen by iodometry	SOP 531 (ČSN EN 25813)	Drinking, bottled, raw, produced, surface, waste, ground water, bathing water	-
26	Determination of acid neutralizing capacity (ANC) by titration	SOP 532 (ČSN EN ISO 9963-1)	Drinking, bottled, raw, produced, surface, waste, ground water, bathing water	-
27	Determination of basic neutralizing capacity (BNC)	SOP 533 (ČSN 75 7372)	Drinking, bottled, raw, produced, surface, waste, ground water, bathing water	-
28	Determination of hydrocarbons C_{10} to C_{40} by gas chromatography (GC/FID)	SOP 528 (ČSN EN ISO 9377-2)	Drinking, waste, ground water, bathing water	-
29	Determination of chromium (VI) by spectrophotometric method with 1,5-Diphenylcarbazide	SOP 540 (ČSN ISO 11083)	Surface and waste water	-

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EKO-LAB Žamberk spol. s r.o.
CAB number 1254, Testing Laboratory
Zemědělská 1004, 564 01 Žamberk

Ordinal number[1]	Test procedure / method name	Test procedure / method identification[2]	Subject of the test	Degrees of freedom[3]
30	Determination of elements by ICP-OES method and the sum of (Ca+Mg) by calculation from measured values	SOP 536 (ČSN EN ISO 11885; ČSN EN ISO 15587-1; ČSN EN ISO 15587-2)	Drinking, bottled, raw, produced, surface, waste, ground water, bathing water	-
31	Determination of elements by ICP-OES method	SOP 536A (ČSN EN 13805; ČSN EN 15621; ČSN EN 15510)	Feedstuffs, fodder raw materials, vegetable materials, barnyard manure, BPS products, food supplements	-
32	Determination of elements by ICP-OES method	SOP 536C (JPP-ÚKZÚZ, Brno; ČSN 46 5735; ČSN EN ISO 11885; ČSN EN 13657; MoA Regulation No. 309/2021 Coll.)	Mehlich III extract, aqua regia extract, 2M HNO^3 extract, aqueous extract, sludge, sediment, industrial composts, waste	-
33	Determination of sugar content of sugar beet by polarimetry	SOP 124 (ČSN 46 2110)	Sugar beet	-
34	Determination of nitrogen by LECO analyser	SOP 120 (LECO method)	Feedstuffs, fodder raw materials, vegetable materials, food, soil, sludge, sediments, industrial compost, barnyard manure, BPS products	-
35	Determination of Kjeldahl nitrogen	SOP 100-4 (ČSN 46 7092-4; ČSN EN 13342; ČSN ISO 11261; ČSN 46 5735; MoA Regulation No. 309/2021 Coll.)	Feedstuffs, fodder raw materials, vegetable materials, food, soil, sludge, sediments, industrial compost, barnyard manure, BPS products	-
36	Determination of pH by potentiometry	SOP 250 (ČSN EN ISO 10390; ČSN 46 5735; MoA Regulation No. 309/2021 Coll.)	Calcium chloride extract, potassium chloride extract, aqueous extract, barnyard manure, industrial composts, sludge, BPS products	-
37	Determination of ammonia nitrogen by spectrophotometry	SOP 251 (JPP ÚKZÚZ Brno)	Soils, sludge	-
38	Determination of nitrate nitrogen by ISE	SOP 252 (JPP ÚKZÚZ Brno)	Soils, sludge	-
39	Determination of dry matter and annealing residue by gravimetry, water content and loss by ignition	SOP 100-3 (ČSN 46 7092-3; ČSN 46 7092-9; ČSN EN 12880; ČSN 46 5735;	Feedstuffs, fodder raw materials, vegetable materials, food, soil, sludge, sediments, industrial	-

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CAB number 1254, Testing Laboratory
Zemědělská 1004, 564 01 Žamberk

Ordinal number[1]	Test procedure / method name	Test procedure / method identification[2]	Subject of the test	Degrees of freedom[3]
	(combustible matter) by calculation from measured values	ČSN EN 15934; ČSN EN 15935; MoA Regulation No. 309/2021 Coll.)	compost, barnyard manure, waste, BPS products	
40	Determination of fibre content by gravimetry	SOP 100-20 (ČSN ISO 6541)	Feedstuffs, vegetable material, food	-
41	Determination of starch content by polarimetry.	SOP 100-21 (ČSN 46 7092-21)	Feedstuffs, vegetable material, food	-
42	Determination of saccharide content by titration	SOP 100-22 (ČSN 46 7092-22)	Feedstuffs, vegetable material, food	-
43	Determination of fat content by gravimetry	SOP 100-7 (ČSN 46 7092-7)	Feedstuffs, vegetable material, food	-
44	Determination of vitamin A, E content by HPLC/UV method	SOP 150 (ÚKZÚZ Brno bulletin, part 3, procedure 12.1)	Feedstuffs and food supplements	-
45	Determination of organic acids by ITP method	SOP 102 (ČSN 46 7092-42)	Feedstuffs, biodegradable waste, BPS products	-
46	Titrimetric determination of the content of volatile organic acids (FOS) and total inorganic carbon (TAC)	SOP 117 (Hach-Lange method)	BPS products	-
47	Detection and enumeration of coliform bacteria and *Escherichia coli* by Colilert-18/Quanti-Tray method	SOP 643 (ČSN EN ISO 9308-2)	Drinking, bottled, raw, produced, surface, waste, ground water, bathing water	-
48	Enumeration of *Escherichia coli* and coliform bacteria by membrane filtration method	SOP 607 (ČSN EN ISO 9308-1)	Drinking, bottled, raw, produced, surface, ground water, bathing water	-
49	Detection and enumeration of thermotolerant coliform bacteria and *Escherichia coli* by membrane filtration method	SOP 602 (ČSN 75 7835)	Drinking, bottled, raw, produced, surface, waste, ground water	-
50	Detection and enumeration of intestinal enterococci by membrane filtration method	SOP 603 (ČSN EN ISO 7899-2)	Drinking, bottled, raw, produced, surface, waste, ground water, bathing water	-
51	Detection and enumeration of *Pseudomonas aeruginosa* by membrane filtration method	SOP 609 (ČSN EN ISO 16266)	Drinking, bottled, raw, produced, bathing water	-

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CAB number 1254, Testing Laboratory
Zemědělská 1004, 564 01 Žamberk

Ordinal number[1]	Test procedure / method name	Test procedure / method identification[2]	Subject of the test	Degrees of freedom[3]
52	Enumeration of coagulase-positive staphylococci by membrane filtration method	SOP 619 (ČSN EN ISO 6888-1)	Drinking, bottled, raw, produced, surface, waste, ground water, bathing water	-
53	Enumeration of *Clostridium perfringens* by membrane filtration method	SOP 618 (MoH Regulation No. 252/2004 Coll., Annex No. 6)	Drinking, bottled, raw, produced, surface, waste, ground water, bathing water	-
54	Enumeration of *Clostridium perfringens* by membrane filtration method	SOP 620 (ČSN EN ISO 14189)	Drinking, bottled, raw, produced, surface, waste, ground water, bathing water	
55	Enumeration of culturable microorganisms at 22 °C and 36 °C by direct inoculation method	SOP 611 (ČSN EN ISO 6222)	Drinking, bottled, raw, produced, surface, waste, ground water, bathing water	-
56	Detection and enumeration of *Legionella spp* membrane filtration method	SOP 624 (ČSN EN ISO 11731)	Drinking, bathing water	-
57	Detection of *Salmonella spp* by direct inoculation method	SOP 621 (ČSN ISO 19250)	Drinking, bottled, raw, produced, surface, waste, ground water, bathing water	-
58	Determination of abioseston by microscopic method	SOP 660 (ČSN 75 7713)	Drinking, bottled, raw, produced, surface, ground water, bathing water	-
59	Determination of bioseston by microscopic method	SOP 661 (ČSN 75 7712)	Drinking, bottled, raw, produced, surface, ground water, bathing water	-
60	Enumeration of total microorganisms at 30 °C by direct inoculation method	SOP 631 (ČSN EN ISO 4833-1)	Food industry products and raw materials, feedstuffs and fodder raw materials, swabs	-
61	Enumeration of coliforms by direct inoculation method	SOP 632 (ČSN ISO 4832)	Food industry products and raw materials, feedstuffs and fodder raw materials, swabs	-
62	Enumeration of *Staphylococcus aureus* by direct inoculation method	SOP 635 (ČSN EN ISO 6888-1)	Food industry products and raw materials, feedstuffs and fodder raw materials, swabs	-
63	Enumeration of *Escherichia coli* by direct inoculation method	SOP 633 (ČSN ISO 16649-2)	Food industry products and raw materials, feedstuffs and fodder raw materials, swabs	--

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CAB number 1254, Testing Laboratory
Zemědělská 1004, 564 01 Žamberk

Ordinal number[1]	Test procedure / method name	Test procedure / method identification[2]	Subject of the test	Degrees of freedom[3]
64	Enumeration of yeasts and moulds by direct inoculation method	SOP 638 (ČSN ISO 21527-1; ČSN ISO 21527-2)	Food industry products and raw materials, feedstuffs and fodder raw materials, swabs	-
65	Enumeration of *Clostridium perfringens* by direct inoculation method	SOP 637 (ČSN EN ISO 7937)	Food industry products and raw materials, feedstuffs and fodder raw materials, swabs	-
66	Detection and enumeration of *Enterobacteriaceae* without resuscitation by direct inoculation method	SOP 634 (ČSN EN ISO 21528-2)	Food industry products and raw materials, feedstuffs and fodder raw materials, swabs	-
67	Detection of *Listeria monoccytogenes* by direct inoculation method	SOP 644 (ČSN EN ISO 11290-1)	Food industry products and raw materials, feedstuffs and fodder raw materials, swabs	-
68	Detection of *Salmonella spp* by direct inoculation method	SOP 639 (ČSN EN ISO 6579-1)	Food industry products and raw materials, feedstuffs and fodder raw materials, swabs	-
69	Enumeration of sulfite-reducing bacteria growing under anaerobic conditions by direct inoculation method	SOP 630 (ČSN ISO 15213)	Food industry products and raw materials, feed and fodder raw materials	-
70	Detection of *Salmonella spp* by direct inoculation method	SOP 639A (ČSN EN ISO 6579-1; AHEM č. 1/2008)	Sludge, sediments, organic fertilizers, BPS products	-
71	Enumeration of thermotolerant coliform bacteria by direct inoculation method	SOP 640 (ČSN 75 7835 AHEM č. 7/2001; AHEM č. 1/2008)	Sludge, sediments, organic fertilizers, BPS products	-
72	Enumeration of intestinal enterococci by direct inoculation method	SOP 641 (ČSN EN ISO 7899-2; AHEM č. 7/2001; AHEM č. 1/2008)	Sludge, sediments, organic fertilizers, BPS products	-

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

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Specification of the scope of accreditation:

Ordinal test number	Detailed information on activities within the scope of accreditation (determined analytes)
31-33	Ag, Al, As, B, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, Hg, K, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Se, V, Zn
46	Acetic acid, lactic acid, butyric acid, propionic acid, valeric acid

Sampling:

Ordinal number	Sampling procedure name	Sampling procedure identification[1]	Subject of sampling
1	Drinking water sampling	SOP 751 (ČSN EN ISO 5667-1; ČSN EN ISO 5667-3; ČSN ISO 5667-5; ČSN EN ISO 5667-14; ČSN EN ISO 19458)	Drinking, bottled, raw, produced, hot water
2	Waste water sampling. (Manual and by an automatic sampler)	SOP 752 (ČSN EN ISO 5667-1; ČSN EN ISO 5667-3; ČSN ISO 5667-10; ČSN EN ISO 5667-14; ČSN EN ISO 19458; ČSN 75 7315)	Waste water
3	Surface water sampling from rivers and streams	SOP 753 (ČSN EN ISO 5667-1; ČSN EN ISO 5667-3; ČSN EN ISO 5667-6; ČSN EN ISO 5667-14; ČSN EN ISO 19458)	Surface water
4	Sampling of water from swimming pools	SOP 756 (ČSN EN ISO 5667-1; ČSN EN ISO 5667-3; ČSN EN ISO 5667-14; ČSN EN ISO 19458; MoH Regulation No. 238/2011 Coll.)	Bathing water
5	Ground water sampling. (Manual and by a submersible pump)	SOP 754 (ČSN EN ISO 5667-1; ČSN EN ISO 5667-3; ČSN ISO 5667-11; ČSN EN ISO 5667-14; ČSN EN ISO 19458)	Ground water

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EKO-LAB Žamberk spol. s r.o.
CAB number 1254, Testing Laboratory
Zemědělská 1004, 564 01 Žamberk

Ordinal number	Sampling procedure name	Sampling procedure identification[1]	Subject of sampling
6	Agricultural products sampling	SOP 757 (ČSN 46 7090:2004; Commission Regulation (EC) No. 152/2009; ČSN 56 2253)	Agricultural products, fruit and vegetables
7	Waste sampling	SOP 760 (MoE Regulation 273/2021 Coll.; ČSN 46 3735; ČSN EN ISO 5667-13; ČSN EN ISO 5667-15; MoE CR Guideline for waste sampling, MoE CR Bulletin No. 4/2008)	Construction debris, construction materials, pasty, solid and liquid waste, sludge, composts, BPS products
8	Agricultural soil sampling	SOP 761 (AZP ÚKZÚZ Brno working procedure, 1999; MoA Regulation No. 400/2004 Coll.; MoA Regulation No. 309/2021 Coll.)	Soils, fertilizers
9	Sampling of sediments	SOP 763 (ČSN EN ISO 5667-1; ČSN EN ISO 5667-3; ČSN EN ISO 5667-14; ČSN ISO 5667-12; MoA and MoE Regulation No. 257/2009 Coll.)	Sediments

[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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Explanatory notes:

MoH:	Ministry of Health
AZP	Agrochemical Soil Testing
HPLC	High-Performance Liquid Chromatography
UV	Ultraviolet range detection
ITP	Isotachophoresis
GC	Gas Chromatography
FID	Flame Ionization Detector
EDTA	Ethylenediaminetetraacetic Acid
AHEM	Acta Hygienica, Epidemiologica et Microbiologica
TNV	Branch Technical Standard of Water Management
ÚRVJT method	Method of ÚRVJT VVZ PJT Spišská Nová Ves
SOP	Standard operating procedure
JPP ÚKZÚZ	Central Institute for Supervising and Testing in Agriculture - Uniform Working Procedures
MoA	Ministry of Agriculture
ISE	Ion Selective Electrode
BPS	BPSBiogas plant