EA MLA Signatory
Český institut pro akreditaci, o.p.s.
Olšanská 54/3, 130 00 Praha 3

issues

according to section 16 of Act No. 22/1997 Coll., on technical requirements for products, as amended

CERTIFICATE OF ACCREDITATION

No. **749/2020**

EKO-LAB Žamberk spol. s r. o.
with registered office Zemědělská 1004, 564 01 Žamberk, Company Registration No. 13582488

to the Testing Laboratory No. **1254**
Testing Laboratory

Scope of accreditation:

Chemical and microbiological analysis of water, aqueous extracts, sludge, waste, plants, food, feedstuffs, soils, fertilizers and sediments. Sampling of water, sludge, soils, fertilizers, sediments, waste, food and feedstuffs to the extent as specified in the appendix to this Certificate.

This Certificate of Accreditation is a proof of Accreditation issued on the basis of assessment of fulfillment of the accreditation criteria in accordance with

ČSN EN ISO/IEC 17025:2018

In its activities performed within the scope and for the period of validity of this Certificate, the Body is entitled to refer to this Certificate, provided that the accreditation is not suspended and the Body meets the specified accreditation requirements in accordance with the relevant regulations applicable to the activity of an accredited Conformity Assessment Body.

This Certificate of Accreditation replaces, to the full extent, Certificate No.: 477/2019 of 24. 9. 2019, or any administrative acts building upon it.

The Certificate of Accreditation is valid until: **17. 4. 2023**

Prague: 9. 12. 2020

Český institut pro akreditaci, o.p.s.
NÁRODNÍ AKREDITAČNÍ ORGÁN
-2-

p.p.

Jiří Růžička
Director
Czech Accreditation Institute
Public Service Company

The Appendix is an integral part of
Certificate of Accreditation No. 749/2020 of 09/12/2020

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

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

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 from the Quality Manager.

The Laboratory is qualified to provide expert opinions and to interpret test results.

Tests:

Ordinal number [1]	Test procedure/method name	Test procedure/method identification [2]	Tested object
1	Determination of absorbance	SOP 543 (ČSN 75 7360)	Drinking(7), surface, underground water, bathing water
2	Determination of turbidity by nephelometry	SOP 552 (ČSN EN ISO 7027-1)	Drinking(7), underground water, bathing water
3	Determination of total nitrogen method using oxidative digestion with peroxodisulfate	SOP 520 (ČSN EN ISO 11905-1)	Drinking(7), surface, waste, underground water, bathing water
4	Determination of nitrate and $N\text{-}NO_3^-$ by calculation from measured values spectrometric method using sulfosalicylic acid	SOP 507 (ČSN ISO 7890-3)	Drinking(7), surface, waste, underground water, bathing water
5	Determination of nitrites, $N\text{-}NO_2^-$ and $N_{inorg.}$ by calculation from measured values manual absorption spectrophotometric method	SOP 508 (ČSN EN 26777)	Drinking(7), surface, waste, underground water, bathing water
6	Determination of ammonium and $N\text{-}NH_4^+$ by calculation from measured values manual spectrometric method.	SOP 509 (ČSN ISO 7150-1)	Drinking(7), surface, waste, underground water, bathing water
7	Determination of electrical conductivity	SOP 510 (ČSN EN 27888)	Drinking(7), surface, waste, underground water, bathing water
8	Determination of chemical oxygen demand with permanganate (COD_{Mn}) by titration	SOP 549 (ČSN EN ISO 8467)	Drinking(7), surface, underground water, bathing water

Český institut pro akreditaci, o.p.s.
NÁRODNÍ AKREDITAČNÍ ORGÁN

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

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

Ordinal number [1]	Test procedure/method name	Test procedure/method identification [2]	Tested object
9	Determination of chloride silver nitrate titration with chromate indicator (Mohr's method)	SOP 512 (ČSN ISO 9297)	Drinking(7), surface, waste, underground water, bathing water
10	Determination of sulphate and nitrate by isotachophoretic method	SOP 513 (ÚRVJT method)	Drinking(7), surface, waste, underground water, bathing water
11	Determination of ammonium by distillation	SOP 556 (ČSN ISO 5664)	Surface, waste, underground water, bathing water
12*	Determination of free and total chlorine by HACH set and bound chlorine by calculation from measured values	SOP 542 (HACH set manual)	Drinking(7), underground water, bathing water
13	Determination of phosphorus. Ammonium molybdate spectrophotometric method	SOP 518 (ČSN EN ISO 6878)	Drinking(7), surface, waste, underground water, bathing water
14	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. 294/2005 Coll.)	Drinking, surface, waste, underground water, bathing water, food industry products raw materials, vegetable material, sludge, soil, sediments, feedstuffs, fodder raw materials, waste, industrial compost, barnyard manure
15	Determination of biochemical oxygen demand after n days (BOD_n). Dilution and seeding method with allylthiourea addition	SOP 553 (ČSN EN 1899-1)	Drinking(7), surface, waste, underground water, bathing water
16	Determination of chemical oxygen demand using (COD-Cr) by test-tube method	SOP 521 (ČSN ISO 15705)	Drinking(7), surface, waste, underground water, bathing water
17*	Determination of pH	SOP 522 (ČSN ISO 10523)	Drinking(7), surface, waste, underground water, bathing water
18	Gravimetric determination of suspended solids	SOP 523 (ČSN EN 872, ČSN 75 7350)	Drinking(7), surface, waste, underground water, bathing water
19	Determination of dissolved oxygen by membrane probe	SOP 530 (ČSN EN ISO 5814)	Drinking(7), surface, waste, underground water, bathing water

Český institut pro akreditaci, o.p.s.
NÁRODNÍ AKREDITAČNÍ ORGÁN
-2-

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

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

Ordinal number [1]	Test procedure/method name	Test procedure/method identification [2]	Tested object
20	Gravimetric determination of dissolved solids and dissolved inorganic salts (DIS)	SOP 525 (ČSN 75 7346, ČSN 75 7347)	Drinking(7), surface, waste, underground water, bathing water
21	Determination of nonpolar extractives by infrared spectrometry method (NEL_{IR})	SOP 526 (ČSN 75 7505)	Drinking(7), surface, waste, underground water, bathing water
22	Determination of extractives by infrared spectrometry method (EL_{IR})	SOP 527 (ČSN 75 7506)	Drinking(7), surface, waste, underground water, bathing water
23*	Determination of temperature	SOP 550 (ČSN 75 7342)	Drinking(7), surface, waste, underground water, bathing water
24*	Preliminary sensory analysis of water	SOP 551 (ČSN EN ISO 7887, ČSN 75 7340)	Drinking, surface, underground water, bathing water
25*	Determination of redox potential	SOP 557 (ČSN 75 7367)	Drinking(7), surface, waste, underground water, bathing water
26	Determination of dissolved oxygen by iodometry	SOP 531 (ČSN EN 25813)	Drinking(7), surface, waste, underground water, bathing water
27	Determination of acid neutralizing capacity (ANC) by titration	SOP 532 (ČSN EN ISO 9963-1)	Drinking(7), surface, waste, underground water, bathing water
28	Determination of basic neutralizing capacity (BNC)	SOP 533 (ČSN 75 7372)	Drinking(7), surface, waste, underground water, bathing water
29	Determination of hydrocarbons C_{10} to C_{40} by gas chromatography (GC/FID)	SOP 528 (ČSN EN ISO 9377-2)	Drinking, waste, underground water, bathing water
30	Determination of chromium (VI) by spectrophotometric method with 1,5-Diphenylcarbazide	SOP 540 (ČSN ISO 11083)	Surface and waste water

Český institut pro akreditaci, o.p.s.
NÁRODNÍ AKREDITAČNÍ ORGÁN

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

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

Ordinal number [1]	Test procedure/method name	Test procedure/method identification [2]	Tested object
31	Determination of 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 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(7), surface, waste, underground water, bathing water
32	Determination of 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 by ICP-OES method	SOP 536A (ČSN EN 13804, ČSN EN 14082, ČSN EN 13805, ČSN EN 15621, ČSN EN 15510)	Food industry products and raw materials, feedstuffs, fodder raw materials, vegetable materials, barnyard manure, BPS products
33	Determination of 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 by ICP-OES method	SOP 536C (JPP-ÚKZÚZ, Brno, ČSN 46 5735, ČSN EN ISO 11885, ČSN EN 13657, MoA Regulation No. 475/2000 Coll.)	Soils(3), sludge, sediments, industrial compost, barnyard manure, waste, sandboxes
34	Determination of sugar content of sugar beet by polarimetry	SOP 124 (ČSN 46 2110)	Sugar beet
35	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
36	Determination of Kjeldahl nitrogen	SOP 100-4 (ČSN 46 7092-4, ČSN EN 13342, ČSN ISO 11261, ČSN 46 5735, MoA Regulation No. 475/2000 Coll.)	Feedstuffs, fodder raw materials, vegetable materials, food, soil, sludge, sediments, industrial compost, barnyard manure, BPS products
37	Determination of pH	SOP 250 (ČSN ISO 10390, ČSN 46 5735, ČSN EN 15933, MoA Regulation No. 474/2000 Coll.)	Soils(4), barnyard manure, industrial compost, sludge, BPS products
38	Determination of ammonia nitrogen by spectrophotometry	SOP 251 (JPP ÚKZÚZ Brno)	Soils, sludge

Český institut pro akreditaci, o.p.s.
NÁRODNÍ AKREDITAČNÍ ORGÁN
-2-

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

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

Ordinal number [1]	Test procedure/method name	Test procedure/method identification [2]	Tested object
39	Determination of nitrate nitrogen by ISE	SOP 252 (JPP ÚKZÚZ Brno)	Soils, sludge
40	Determination of dry matter and annealing residue by gravimetry, water content and loss by ignition (combustible matter) by calculation from measured values	SOP 100-3 (ČSN 46 7092-3, ČSN 46 7092-9, ČSN EN 15169, ČSN EN 12880, ČSN 46 5735, ČSN EN 15934, ČSN EN 15935 MoA Regulation No. 475/2000 Coll.)	Feedstuffs, fodder raw materials, vegetable materials, food, soil, sludge, sediments, industrial compost, barnyard manure, waste, BPS products
41	Determination of fibre content by gravimetry	SOP 100-20 (ČSN ISO 6541)	Feedstuffs, vegetable material, food
42	Determination of starch content by polarimetry.	SOP 100-21 (ČSN 46 7092-21)	Feedstuffs, vegetable material, food
43	Determination of saccharide content by titration	SOP 100-22 (ČSN 46 7092-22)	Feedstuffs, vegetable material, food
44	Determination of fat content by gravimetry	SOP 100-7 (ČSN 46 7092-7)	Feedstuffs, vegetable material, food
45	Determination of vitamin A, E content by HPLC/UV method	SOP 150 (ÚKZÚZ Brno bulletin, part 3, procedure 12.1)	Feedstuffs and food supplements
46	Determination of organic acids(5) by ITP method	SOP 102 (ČSN 46 7092-42)	Feedstuffs, biodegradable waste, BPS products
47	Titrimetric determination of the content of volatile organic acids (FOS) and total inorganic carbon (TAC)	SOP 117 (Hach-Lange method)	BPS products
48-99	Reserved		
100	Detection and enumeration of coliform bacteria and *Escherichia coli* by Colilert-18/Quanti-Tray method	SOP 643 (ČSN EN ISO 9308-2)	Drinking(7), surface, waste, underground water, bathing water
101	Enumeration of *Escherichia coli* and coliform bacteria by membrane filtration method	SOP 607 (ČSN EN ISO 9308-1)	Drinking(7), surface, underground water, bathing water
102	Detection and enumeration of thermotolerant coliform bacteria and *Escherichia coli* by membrane filtration method	SOP 602 (ČSN 75 7835)	Drinking(7), surface, waste, underground water

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

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

Ordinal number [1]	Test procedure/method name	Test procedure/method identification [2]	Tested object
103	Detection and enumeration of intestinal enterococci by membrane filtration method	SOP 603 (ČSN EN ISO 7899-2)	Drinking(7), surface, waste, underground water, bathing water
104	Detection and enumeration of *Pseudomonas aeruginosa* by membrane filtration method	SOP 609 (ČSN EN ISO 16266)	Drinking(7) water, bathing water
105	Enumeration of coagulase-positive staphylococci by membrane filtration method	SOP 619 (ČSN EN ISO 6888-1)	Drinking(7), surface, waste, underground water, bathing water
106	Enumeration of *Clostridium perfringens* by membrane filtration method	SOP 618 (MoH Regulation No. 252/2004 Coll., Annex No. 6)	Drinking(7), surface, waste, underground water, bathing water
107	Enumeration of culturable microorganisms at 22 °C and 36 °C by direct inoculation method	SOP 611 (ČSN EN ISO 6222)	Drinking(7), surface, waste, underground water, bathing water
108	Detection and enumeration of *Legionella spp* membrane filtration method	SOP 624 (ČSN EN ISO 11731)	Drinking water, bathing water
109	Detection of *Salmonella spp* by direct inoculation method	SOP 621 (ČSN ISO 19250)	Drinking(7), surface, waste, underground water, bathing water
110	Determination of abioseston by microscopic method	SOP 660 (ČSN 75 7713)	Drinking(7), surface, underground water, bathing water
111	Determination of bioseston by microscopic method	SOP 661 (ČSN 75 7712)	Drinking(7), surface, underground water, bathing water
112-115	Reserved		
116	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
117	Enumeration of coliforms by direct inoculation method	SOP 632 (ČSN ISO 4832)	Food industry products and raw materials, feedstuffs and fodder raw materials, swabs
118	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
119	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

Český institut pro akreditaci, o.p.s.
NÁRODNÍ AKREDITAČNÍ ORGÁN

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

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

Ordinal number [1]	Test procedure/method name	Test procedure/method identification [2]	Tested object
120	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
121	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
122	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
123	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
124	Reserved		
125	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
126	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
127-128	Reserved		
129	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
130	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
131	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)

Český institut pro akreditaci, o.p.p.
NÁRODNÍ AKREDITAČNÍ ORGÁN
-2-

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

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

[3] Superscript (3) at the tested object indicates extract according to Mehlich III or aqua regia extract or 2 M HNO_3 or aqueous extract

[4] Superscript (4) at the tested object indicates calcium chloride extract or potassium chloride extract or just aqueous extract

[5] Superscript (5) at the method name identifies the range of determined analytes: acetic acid, lactic acid, butyric acid, propionic acid, valeric acid

[6] Superscript (6) at the sampled object identifies waste: debris, building materials, pasty, solid and liquid waste

[7] Superscript (7) at the tested object identifies drinking, bottled, raw and produced water

Annex:

Flexible scope of accreditation

Ordinal numbers of tests
31-33

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	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[(7)] water including 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

Český institut pro akreditaci, o.p.s.
NÁRODNÍ AKREDITAČNÍ ORGÁN

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

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

Ordinal number	Sampling procedure name	Sampling procedure identification [1]	Sampled object
3	Surface water sampling.	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	Underground 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)	Underground water
6	Agricultural products sampling	SOP 757 (ČSN 46 7090:2004, ČSN ISO 6639-2)	Agricultural products, fruit and vegetables
7	Waste sampling	SOP 760 (MoE Regulation 341/2008 Coll.; ČSN 46 3735 ČSN EN ISO 5667-13, ČSN EN ISO 5667-15 MoA Regulation No. 475/2000 Coll.; MoE CR Guideline for waste sampling, MoE CR Bulletin No. 6/2008)	Waste[(6)], sludge, composts, barnyard manure, BPS products
8	Agricultural soil sampling	SOP 761 (AZP ÚKZÚZ Brno working procedure, 1999; MoA Regulation No. 400/2004 Coll.)	Soils
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

Český institut pro akreditaci, o.p.s.
NÁRODNÍ AKREDITAČNÍ ORGÁN

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

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

[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)

Explanations of used abbreviations and terms:

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	Biogas plant

Český institut pro akreditaci, o.p.s.
NÁRODNÍ AKREDITAČNÍ ORGÁN