NÁRODNÍ AKREDITAČNÍ ORGÁN

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. **519/2019**

Výzkumný ústav organických syntéz a.s.
with registered office č.p.296, 533 54 Rybitví, Company Registration No. 60108975

to the Testing Laboratory No. **1057**
ANALYTIKA

Scope of accreditation:

Analytical and physico-chemical testing of biological substances, chemical substances, chemical products, waste and samples from the environment, including sampling 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.: 335/2018 of 28. 6. 2018, or any administrative acts building upon it.

The Certificate of Accreditation is valid until: **3. 2. 2022**

Prague: 10. 10. 2019

Český institut pro akreditaci, o.p.s.
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Jiří Růžička
Director
Czech Accreditation Institute
Public Service Company

The Appendix is an integral part of
Certificate of Accreditation No. 519/2019 of 10/10/2019

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

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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 Quality Manager.

Tests:

Ordinal number[1]	Test procedure/ method name	Test procedure/ method identification [2]	Tested object
1	Determination of polyaromatic hydrocarbons by GC-MS method[1)]	ZP 1	Surface and waste water.
2	Determination of nitrocompounds by GC-MS method[2)]	ZP 3	Surface and waste water
3	Determination of volatile organic compounds by by GC-MS method[3)]	ZP 4	Surface and waste water
4	Determination of phenolic compounds by GC-MS[4)]	ZP 6	Surface and waste water
5	Determination of polychlorinated biphenyls by GC-MS method. Congener analysis[5)]	ZP 7	Surface and waste water
6	Determination of polychlorinated biphenyls by GC-MS method. Congener analysis[5)]	ZP 8	Soils and solid waste
7	Determination of polychlorinated biphenyls by GC-MS method using internal marked standards[6)]	ZP 10	Chemical products
8	Determination of specified aromatic amino compounds by GC-MS method[7)]	ZP 11	Surface and waste water
9	Determination of amide value of pectins	ZP 91	pectins
10	Determination of mercury by single purpose mercury analyzer	ZP 16 A (ČSN 757440)	Water[8)] and aqueous extracts

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Ordinal number[1]	Test procedure/ method name	Test procedure/ method identification [2]	Tested object
11	Determination of mercury by single purpose mercury analyzer	ZP 16 B	Solid waste, soils, composts, sludge, sediments, toys, organic[12)] and inorganic compounds[14)]
12	Determination of elements by ICP-OES method[9)]	ZP 17 (ČSN EN ISO 11885)	Water[8)] and aqueous extracts
13	Determination of elements by atomic spectrometry - flame method[9)]	ZP 18 (ČSN 757400; ČSN EN 1233; ČSN ISO 7980; ČSN ISO 8288; ČSN ISO 9964-1, ČSN ISO 9964 – 2, ČSN ISO 9964 – 3)	Water[8)] and aqueous extracts
14	Determination of elements by atomic spectrometry - graphite furnace method[9)]	ZP 19 (ČSN EN ISO 15586)	Water[8)] and aqueous extracts
15	Determination of elements by ICP-OES method[10)]	ZP 20 (ČSN EN ISO 11885)	Soils, composts, sludge, sediments, solid waste
16	Determination of elements by atomic spectrometry - flame method[10)]	ZP 21 (ČSN 757400; ČSN EN 1233; ČSN ISO 7980; ČSN ISO 8288; ČSN ISO 9964-1, ČSN ISO 9964 – 2, ČSN ISO 9964 – 3)	Soils, composts, sludge, sediments, solid waste
17	Determination of elements by atomic spectrometry - graphite furnace method[10)]	ZP 22 (ČSN EN ISO 15586)	Soils, composts, sludge, sediments, solid waste
18	Determination of elements by ICP-OES method[11)]	ZP 26 (ČSN EN ISO 11885)	Organic compounds[12)]
19	Determination of elements by atomic spectrometry - flame method[11)]	ZP 27 (ČSN 757400; ČSN EN 1233; ČSN ISO 7980; ČSN ISO 8288; ČSN ISO 9964-1, ČSN ISO 9964 – 2, ČSN ISO 9964 – 3)	Organic compounds[12)]

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Ordinal number[1]	Test procedure/ method name	Test procedure/ method identification [2]	Tested object
20	Determination of elements by atomic spectrometry - graphite furnace method[11)]	ZP 28 (ČSN EN ISO 15586)	Organic compounds[12)]
21	Determination of elements by ICP-OES method[13)]	ZP 29 (ČSN EN ISO 11885)	Inorganic compounds[14)]
22	Determination of elements by atomic spectrometry - flame method[13)]	ZP 30 (ČSN 757400; ČSN EN 1233; ČSN ISO 7980; ČSN ISO 8288; ČSN ISO 9964-1, ČSN ISO 9964 – 2, ČSN ISO 9964 – 3)	Inorganic compounds[14)]
23	Determination of elements by atomic spectrometry - graphite furnace method[13)]	ZP 31 (ČSN EN ISO 15586)	Inorganic compounds[14)]
24-39	Reserved		
40	Determination of electrical conductivity	ZP 47 (ČSN EN 27888)	Drinking, surface and waste water
41	Determination of pH by potentiometry	ZP 49 (ČSN ISO 10 523)	Drinking, surface and 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).

Annex:
Flexible scope of accreditation

Ordinal numbers of tests
1-8, 12-23

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.

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Sampling:

Ordinal number	Sampling procedure name	Sampling procedure identification [1]	Sampled object
1	Sampling of surface and underground water by manual and automatic sampler	ZP 33 (ČSN EN ISO 5667-1, ČSN EN ISO 5667-3, ČSN ISO 5667-10, ČSN ISO 5667-6, VP 61/L, ČSN 75 7315)	Surface, underground water
2	Waste water sampling by manual and automatic sampler	ZP 34 (ČSN EN ISO 5667-1, ČSN EN ISO 5667-3, ČSN ISO 5667-10, VP 61/L, ČSN 75 7315)	Waste water
3	Manual sampling of waste	ZP 36 (Ministry of Environment Guideline for waste sampling 2008, ČSN EN 14899)	Solid and pasty wastes

[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:

[1)]analytes for ordinal number 1 naphthalene, acenaphthylene, acenaphthene, fluorene, phenathrene, anthracene, fluoranthene, pyrene, benzo/a/anthracene, chrysene, benzo/b/fluoranthene, benzo/k/fluoranthene, benzo/a/pyrene, indeno(1,2,3,-cd) pyrene, benzo/g,h,i/perylene, dibenzo/a,h/anthracene

[2)]analytes for ordinal number 2 nitrobenzene, o-nitrotoluene, m-nitrotoluene, p-nitrotoluene, 2,4,- dinitrotoluene, 2,6-dinitrotoluene, 1-chloro-2-4-dinitrobenzene

[3)]analytes for ordinal number 3 chloroform, 1,2,-dichloroethane, benzene, tetrachloromethane, trichloroethylene, 1,1,2-trichloroethane, octane, toluene, tetrachloroethylene, butylacetate, chlorobenzene, ethylbenzene, m-xylene + p-xylene, o-xylene, styrene, 1,2,4,-trimethylbenzene, m-dichlorobenzene, p-dichlorobenzene, o-dichlorobenzene, o-chlorotoluene, 1,2,3-trichlorobenzene, 1,3,5-trichlorobenzene, 1,2,4-trichlorobenzene, undecane, 1,2,-trans-dichloroethene, 1,1-trans-dichloroethene, hexachlorobutadiene, dichloromethane, ethyl acetate, naphthalene

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[4]analytes for ordinal number 4	phenol, o-chlorophenol, m-chlorophenol, p-chlorophenol, 2,4,-dichlorophenol, 2,5,-dichlorophenol, 2,3,-dichlorophenol, 3,4,-dichlorophenol, 2,4,6-trichlorophenol, 2,4,5-trichlorophenol, pentachlorophenol, o-methylphenol, 2,4-dibromophenol, m-methylphenol, p-methylphenol, 2,6-dimethylphenol, 2,4-dimethylphenol, 3,5-dimethylphenol, 2-naphthol
[5]analytes for ordinal number 5+6	2,4,4′-TriCB (28), 2,2′,5,5′-tetraCB(52), 2,2′,4,5,5′-pentaCB(101), 2,2′,3,4,4′,5′-hexaCB(138), 2,2′,4,4′,5,5′-hexaCB(153), 2,2′,3,4,4′,5,5′-heptaCB(180), DekaCB(209), hexachlorocyclohexane, pentachlorobenzene, hexachlorobenzene
[6]analytes for ordinal number 7	PCB-28 2,4,4′-trichlorobiphenyl PCB-52 2,2′,5,5′-tetrachlorobiphenyl PCB-101 2,2′,4,5,5′-pentachlorobiphenyl PCB-118 2,3′,4,4′,5-pentachlorobiphenyl PCB-138 2,2′,3,4,4′,5′-hexachlorobiphenyl PCB-153 2,2′,4,4′,5,5′-hexachlorobiphenyl PCB-180 2,2′,3,4,4′,5,5′-heptachlorobiphenyl PCB-209 Decachlorobiphenyl Sum of chlorohomolog groups Cl_1-Cl_{10}
[7]analytes for ordinal number 8	aniline, o-chloroaniline, m-chloroaniline + p- chloroaniline, 2,4,6-trimethylaniline, 4-fluoroaniline, 2,5-dichloroaniline, 3,4-dichloroaniline, N-ethylaniline
[8]water	Drinking and waste water
[9]analytes for ordinal number 12+13+14	Ag, Al, As, B, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, P, Pb, Pd, S, Sb, Se, Si, Sn, Sr, Ti, V, W, Zn, Zr
[10]analytes for ordinal number 15+16+17	As, Ba, Be, Ca, Cd, Co, Cr, Cu, K, Mg, Mo, Ni, P, Pb, Sb, Sn, V, Zn
[11]analytes for ordinal number 18+19+20	Ag, Al, As, Ba, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Na, Ni, Pd, Pb, Sb, Se, Sn, Zn
[12]	dyes, pigments, selected raw materials, etc.
[13]analytes for ordinal number 21+22+23	Ag, Al, As, B, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn
[14]	inorganic salts, acids, etc.
[15]	Test principle is independent of the matrix character

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DSC	Differential Scanning Calorimetry
ED	Electrochemical detector
GC/MS	Gas Chromatography/Mass Spectrometry
ICP - OES	Inductively Coupled Plasma Optical Emission Spectrometry
MoE	Ministry of Environment
OES	Optical Emission Spectrometry
Water	Drinking, surface, underground and waste water
VP	Internal Specification of the Laboratory
ZP	Testing Procedure (Internal Specification of the Laboratory)
Aqueous extracts	Aqueous extracts of solid samples according to MoE Reg. No. 294/2005 Coll. and ČSN EN 12457
	Extracts of materials intended for contact with food according to the Commission Regulation (EU) No. 10/2011 as amended