

**The Appendix is an integral part of
Certificate of Accreditation No. 672/2022 of 28. 12. 2022**

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

ABITEC, s.r.o.
Testing Laboratory
Radiová 7, 102 31 Praha 10

The Laboratory provides expert opinions and interpretations test results.

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	<i>Daphnia magna</i> mobility inhibition test	SOP 1.1 (ČSN EN ISO 6341, OECD 202)	Water, extract, substance
2	Freshwater algal growth inhibition test	SOP 1.2 (ČSN EN ISO 8692, OECD 201)	Water, extract, substance
3	Determination of the acute lethal toxicity to a freshwater fish <i>Poecilia reticulata</i>	SOP 1.3 (ČSN EN ISO 7346-2, OECD 203)	Water, extract, substance
4	<i>Sinapis alba</i> root growth inhibition test	SOP 1.4 (Ministry of Environment Bulletin, Volume XVII, No. 4/2007)	Water, extract, substance
5	Root growth inhibition test of monocotyledonous and dicotyledonous plants	SOP 1.5 (Ministry of Environment Bulletin, Volume XVII, No. 4/2007)	Water, extract, substance
6	Determination of the inhibitory effect of samples on the light emission of <i>Vibrio fischeri</i>	SOP 1.8 (ČSN EN ISO 11348-2, ČSN EN ISO 11348-3)	Water, extract, substance
7	Four-day respiratory activity test – AT ₄	SOP 1.9 (Önorm S 2027-4)	Compost, soil, biowaste, waste
8	Determination of microbial soil respiration by measurement of pressure in static system (basal and substrate induced respiration)	SOP 1.16 (ČSN EN ISO 16072, ISO 17155)	Soil
9	Determination of microbial respiration of water by measurement of pressure in static system (basal and substrate induced respiration)	SOP 1.17 (ČSN EN ISO 16072, ISO 17155)	Water, extract, culture medium
10	Determination of residual biogas production	SOP 1.18 (Ministry of Environment Bulletin, Volume XIX, No. 3/2009, ČSN EN ISO 11734)	Digestate, substance

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Ordinal number ¹	Test procedure/ method name	Test procedure/ method identification ²	Tested object
11	Determination of inhibition of plant root growth <i>Lactuca sativa</i> and others (terrestrial test)	SOP 1.6 (ČSN EN ISO 11269-1, ASTM E1963-09)	Soil, sediment, sludge, waste, substance, construction product
12	Test of inhibition of reproduction of Collembola (<i>Folsomia candida</i>)	SOP 1.12 (ČSN EN ISO 11267, OECD 232)	Soil, sediment, sludge, waste, substance, construction product
13	Test of inhibition of reproduction of Enchytraeidae (<i>Enchytraeus crypticus</i>)	SOP 1.13 (ČSN EN ISO 16387, OECD 220)	Soil, sediment, sludge, waste, substance, construction product
14	Determination of inhibition of nitrification – Rapid test by ammonium oxidation	SOP 1.14 (ČSN EN ISO 15685)	Soil, sediment, sludge, waste, construction product, extract, substance
15	Determination of the inhibitory effects on the light emission of <i>Vibrio fischeri</i> (kinetic luminescent bacteria test)	SOP 1.11 (ČSN ISO 21338)	Soil, sediment, sludge, waste, biowaste, construction product, water, extract, substance
16	Determination of aerobic biodegradability of organic substances - Manometric respirometry	SOP 1.21 (OECD 301F, ČSN EN ISO 9408)	Water, extract, substance
17 - 21	Reserved		
22	Enumeration of thermotolerant coliform bacteria and <i>E.coli</i> by spread plate method	SOP 3.21 (TNI CEN/TR 16193, AHEM No. 7/2001, AHEM No. 1/2008)	Sludges, sands, soils, biowaste, substrates
23	Enumeration of intestinal streptococci (enterococci) by spread plate method	SOP 3.22 (AHEM No. 7/2001, AHEM No. 01/2008)	Sludges, sands, soils, biowaste, substrates
24	Reserved		
25	Detection of <i>Salmonella spp.</i> by spread plate method	SOP 3.24 (AHEM No. 7/2001, AHEM No. 1/2008)	Sludges, sands, soils, biowaste, substrates
26	Enumeration of total aerobic heterotrophic bacteria at 20°C by pour plate method	SOP 3.25 (ČSN 75 7842)	Sludges, sands, soils, biowaste, substrates
27	Enumeration of total bacteria decomposing petroleum hydrocarbons by spread plate method	SOP 3.26 (Ref. 1)	Sludges, sands, soils, biowaste, substrates

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28	Enumeration of total anaerobic bacteria by pour plate method	SOP 3.27 (Ref. 2, ČSN 75 7841)	Sludges, sands, soils, biowaste, substrates
29	Enumeration of culturable microorganisms at 22°C and 36°C by pour plate method	SOP 3.30 (ČSN EN ISO 6222)	Water
30	Detection and enumeration of <i>Escherichia coli</i> and coliform bacteria by membrane filtration method	SOP 3.32 (ČSN EN ISO 9308-1)	Water
31	Enumeration of coliform bacteria in non-disinfected water by membrane filtration method	SOP 3.33 (ČSN 75 7837)	Water
32	Enumeration of thermotolerant coliform bacteria and <i>Escherichia coli</i> by membrane filtration method	SOP 3.34 (ČSN 75 7835)	Water
33	Enumeration of intestinal enterococci by membrane filtration method	SOP 3.35 (ČSN EN ISO 7899-2)	Water
34	Enumeration of total aerobic heterotrophic bacteria at 20°C by pour plate method	SOP 3.36 (ČSN 75 7842)	Water
35	Enumeration of total bacteria decomposing petroleum hydrocarbons by spread plate method	SOP 3.37 (Ref. 1)	Water
36	Enumeration of total anaerobic bacteria by pour plate method	SOP 3.38 (Ref. 2, ČSN 75 7841)	Water
37	Reserved		
38	Determination of sulphate-reducing bacteria by MPN method	SOP 3.31, part A (ASTM D4412-15)	Water, water sediment
39	Method for the detection of sulphate-reducing bacteria	SOP 3.31, part B (ASTM D4412-15)	Water, water sediment
40	Method for the detection of <i>Salmonella spp.</i> by spread plate method	SOP 3.42 (ČSN ISO 19250)	Water
41 - 50	Reserved		
51	Determination of non-ionogenic surfactants by spectrophotometry with the usage of Merck's set Spectroquant, standard Triton X-100	SOP 2.6, part A (Merck firm publication)	Water, extract

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Ordinal number ¹	Test procedure/ method name	Test procedure/ method identification ²	Tested object
52	Determination of non-ionogenic surfactants by spectrophotometry with the usage of Merck's set Spectroquant, standard ABI-REM	SOP 2.6, part B - 2 (Merck firm publication)	Water, extract
53	Determination of dry matter – gravimetric method	SOP 2.2 (ČSN ISO 11465, ČSN EN 15934)	Soil, sediment, sludge, waste, biowaste, construction product, sands
54	Determination of pH – electrometric method	SOP 2.3 (ČSN ISO 10523)	Water, extract
55	Determination of pH – electrometric method	SOP 2.3 (ČSN EN ISO 10390)	Soil, waste, sediment, sludge
56	Determination of electrical conductivity	SOP 2.4 (ČSN EN 27888)	Water, extract
57	Determination of nitrite nitrogen spectrophotometrically and of nitrite by calculation from measured values	SOP 2.7 (ČSN EN 26777)	Water, extract
58	Determination of nitrate spectrophotometrically and of nitrate nitrogen by calculation from measured values	SOP 2.8 (ČSN ISO 7890-3)	Water, extract
59	Determination of ammonia nitrogen spectrophotometrically and of ammonium by calculation from measured values	SOP 2.10 (ČSN ISO 7150-1)	Water, extract
60	Determination of orthophosphate phosphorus spectrophotometrically and of orthophosphate by calculation from measured values	SOP 2.11 (ČSN EN ISO 6878)	Water, extract

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)

Legend:

AT4	Four-day respiratory activity of sample
AHEM	Acta hygienica, epidemiologica et microbiologica
ASTM	American Society for Testing and Materials – American Technical Standards
MPN	most probable number method
Önorm	Austrian standard
Ref. 1	Häusler J. (1995): <i>Mikrobiological cultivation methods for the water quality testing</i> , Part III. Determination of microbiological indicators, ISBN 80-7084-107-9, Prague, In Czech.

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Ref. 2	Ambrožová J. (2004): Mikrobiology in water technology, ISBN 80-7080-534-X, UCT Prague, In Czech.
Biowaste	biodegradable waste (definition according to the Act No. 541/2020 Coll., Act on waste , verifying of efficiency of sludge hygienization according to the Regulation No. 273/2021 Coll., on details of waste management
Digestate	solid or liquid material resulting from anaerobic digestion during biogas production (i.e. production by controlled microbial transformation of organic substances from biologically decomposable wastes in the absence of oxygen)
Sludge	definition according to the Act No. 541/2020 Coll., Act on Wastes , sludge, treated sludge,sewage sludge, verifying of efficiency of sludge hygienization according to the Regulation No. 273/2021 Coll., on details of waste management
Substance	according to the definition according to Regulation (EC) No. 1907/2006 of the European Parliament and of the Council concerning the registration, evaluation, authorisation and restriction of chemicals
Waste	according to the definition according to the Act No. 541/2020 Coll., Act on Waste, waste treated according to the Regulation No. 294/2005 Coll., Regulation No. 94/2016 Coll., Regulation No. 257/2009 Sb., Regulation No. 273/2021 Coll., Regulation No. 8/2021 Coll.
Sediment	definition according to the Act No. 541/2020 Coll., Act on Waste, sediment treated according to Regulation No. 257/2009 Coll.
Substrates	garden substrate, compost
Water	underground, drinking, raw, surface, waste, industrial, bathing water
Extract	extract of solid sample according to the identification of test procedure/method, furthermore according to the ČSN EN 1783, ČSN EN 12457-2, ČSN EN 12457-4, AHEM No. 3/2001
Water borne sediment	any accumulation of water-borne suspended solids or solids from surface in contact with water. It can be also classified as scale, sludge, corrosion and sediment
Soil	definition according to the ČSN EN ISO 14688-1, soil treated according to the Regulation No. 294/2005 Coll., Regulation No. 94/2016 Coll., Regulation. No. 257/2009 Coll., Regulation No. 273/2021 Coll., Regulation No. 8/2021 Coll.
Terrestrial test	test with a terrestrial organism
Ministry of Environment Bulletin	Volume XVII, No. 4/2007: Guideline of the Waste Department for the determination of waste ecotoxicity. In Czech.
Ministry of Environment Bulletin	Volume XIX, No. 3/2009: Test method for the determination of residual biogas production in digestate. In Czech.

Sampling:

Ordinal number	Sampling procedure name	Sampling procedure identification ¹	Sampled object
1	Sampling of wastes	SOP 5.1 (ČSN EN 14899, ČSN EN ISO 5667-1, ČSN ISO 5667-11, ČSN ISO 5667-12, ČSN EN ISO 5667-13, ČSN EN ISO 5667-16, ČSN 01 5111, ČSN 015112, ČSN EN ISO 5555, ČSN 46 5735,	Solid, pasty and liquid wastes, soils, sludges, sediments, fly ashes, composts and biowastes

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Ordinal number	Sampling procedure name	Sampling procedure identification ¹	Sampled object
		TNI CEN/TR 15310-1, TNI CEN/TR 15310-2, TNI CEN/TR 15310-3, TNI CEN/TR 15310-4, TNI CEN/TR 15310-5, Regulation No. 273/2021 Coll., Regulation No. 8/2021 Coll., Ministry of Environment Bulletin, Volume XVIII, No. 3/2008, Ministry of Environment Bulletin, Volume XVIII, No. 4/2008, Ministry of Environment Bulletin, Volume XVII, No. 2/2007, Ministry of Environment Bulletin, Volume XIV, No. 1/2014)	
2	Sampling of sediments and sludge	SOP 5.2 (ČSN EN ISO 5667-1, ČSN ISO 5667-12, ČSN EN ISO 5667-13, ČSN EN ISO 5667-14, ČSN ISO 5667-15, Regulation No. 273/2021 Coll. , Regulation No. 257/2009 Coll.)	Sediments, sludges
3	Sampling of soils	SOP 5.3 (ČSN EN ISO 5667-1, Regulation No. 275/1998 Coll., Regulation No. 153/2016 Coll.)	Soils

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)

Legend:

Ministry of Environment Bulletin, Volume XVIII, No. 3/2008: Guideline of the Waste Department for the handling of waste from construction production, renovation and demolition of buildings,

Ministry of Environment Bulletin, Volume XVIII, No. 4/2008: Guideline for waste sampling

Ministry of Environment Bulletin, Volume XVII, No. 2/2007: Annexe: Guideline – Sampling in Rehabilitation Geology

Ministry of Environment Bulletin, Volume XIV, No. 1/2014: Guideline - Pollution indicators.