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

**GEOtest, a.s.** CAB No. 1271, GEOtest Laboratories Šmahova 1244/112, Slatina, 627 00 Brno

### **Testing laboratory locations:**

1.	Analytical Laboratories	Šmahova 1244/112, Slati	na, 627 00 Brno
2.	Laboratories for Soil Mechanics	Šmahova 1244/112, Slati	na, 627 00 Brno

*The laboratory applies a flexible approach to the scope of accreditation.* 

The current list of activities carried out within the flexible scope is publicly available on the laboratory (e.g. website <u>https://analytickalaborator.cz/flexibilita</u> in the form "List of activities within the flexible scope of accreditation". The laboratory is qualified to carry out independent sampling.

Detailed information on the activities within the scope of accreditation (determined analytes/ subject of testing) is given in the section "Specification of the scope of accreditation".

#### 1. Analytical Laboratories

#### **Tests:**

Ordinal number <sup>1</sup>	Test procedure/method name	Test procedure/method identification <sup>2</sup>	Subject of the test	Degrees of freedom <sup>3</sup>
1*	Determination of pH by potentiometry	SOP AL-01 (ČSN ISO 10523)	Drinking, ground, surface and waste water, aqueous extract, aqueous solution	-
2*	Determination of electrical conductivity	SOP AL-02 (ČSN EN 27888)	Drinking, ground, surface and waste water, aqueous extract, aqueous solution	-
3	Determination of acid neutralizing capacity (ANC) by titration	SOP AL-03 (ČSN EN ISO 9963-1)	Drinking, ground, surface and waste water, aqueous extract, aqueous solution	-
4	Determination of chloride - Silver nitrate titration	SOP AL-04 (ČSN ISO 9297)	Drinking, ground, surface and waste water, aqueous extract, aqueous solution, absorption solution	-
5	Determination of nitrate by spectrophotometry and nitrate nitrogen by calculation from measured values	SOP AL-05 (ČSN ISO 7890-3)	Drinking, ground, surface and waste water, aqueous extract, aqueous solution, absorption solution	-
6	Determination of fluorides by electrochemical method	SOP AL-06 (ČSN ISO 10359-1)	Drinking, ground, surface and waste water, aqueous extract, aqueous solution, absorption solution	-

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Ordinal number <sup>1</sup>	Test procedure/method name	Test procedure/method identification <sup>2</sup>	Subject of the test	Degrees of freedom <sup>3</sup>
7	Determination of ammonium by spectrophotometry, determination of ammonia nitrogen and free ammonia by calculation from measured values	SOP AL-07 (ČSN 83 0530:1978, part 26)	Drinking, ground, surface and waste water, aqueous extract, aqueous solution, absorption solution	-
8	Determination of nitrite by spectrophotometry, determination of nitrite nitrogen and inorganic nitrogen by calculation from measured values	SOP AL-08 (ČSN EN 26 777)	Drinking, ground, surface and waste water, aqueous extract, aqueous solution, absorption solution	-
9	Determination of ammonium – spectrometric method	SOP AL-09 (ČSN ISO 7150-1)	Drinking, ground, surface and waste water, aqueous extract, aqueous solution	-
10	Determination of iodide by potentiometry	SOP AL-10 (HANNA Instruments manual)	Drinking, ground and surface water, aqueous solution	-
11	Determination of chemical oxygen demand with permanganate (COD-Mn)	SOP AL-11 (ČSN EN ISO 8467)	Drinking, ground and surface water	-
12	Determination of anions by ion chromatography	SOP AL-12 (ČSN EN ISO 10304-1; ČSN EN ISO 10304-4; ČSN EN ISO 15061)	Drinking, ground, surface and waste water, aqueous extract, aqueous solution	В
13	Determination of total cyanide by spectrophotometry	SOP AL-13 (ČSN 75 7415; ASTM 413 A; ASTM 413 B; ASTM 413 D)	Drinking, ground, surface and waste water, aqueous extract, aqueous solution, absorption solution	-
14	Determination of total cyanide by spectrophotometry	SOP AL-13A (ČSN 75 7415; ASTM 413 A; ASTM 413 B; ASTM 413 D)	Solid matrices	-
15	Determination of easily liberatable cyanides by spectrophotometry	SOP AL-14 (ČSN ISO 6703-2; ASTM 413 A; ASTM 413 D)	Drinking, ground, surface and waste water, aqueous extract, aqueous solution	-

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Ordinal number <sup>1</sup>	Test procedure/method name	Test procedure/method identification <sup>2</sup>	Subject of the test	Degrees of freedom <sup>3</sup>
16	Determination of easily liberatable cyanides by spectrophotometry	SOP AL-14A (ČSN ISO 6703-2; ASTM 413 A; ASTM 413 D)	Solid matrices	-
17*	Preliminary determination of odour and taste	SOP AL-15 (ČSN EN 1622; TNV 75 7340)	Drinking water	-
18	Determination of selected elements by ICP-OES method	SOP AL-16 (ČSN EN ISO 11885)	Drinking, ground, A, surface and waste water, aqueous extract, aqueous solution, absorption solution	
19	Determination of selected elements by ICP-OES method	SOP AL-16A (ČSN EN ISO 11885; ČSN EN 16173)	Solid matrices	A, B
20	Determination of total mercury by atomic absorption spectrometry	SOP AL-17 (ČSN 75 7440)	Drinking, ground, surface and waste water, aqueous extract, aqueous solution, absorption solution	-
21	Determination of total mercury by atomic absorption spectrometry	SOP AL-17A (ČSN 75 7440; ČSN EN 16173)	Solid matrices	А
22	Determination of chromium (Cr <sup>6+</sup> ) – spectrophotometric method with 1,5- diphenylcarbazide	SOP AL-18 (ČSN ISO 11083)	Drinking, ground, surface and waste water, aqueous extract, aqueous solution	-
23	Determination of bivalent iron (Fe <sup>2+</sup> ) - photometric method using 1,10 phenanthroline	SOP AL-19 (ČSN ISO 6332)	Drinking, ground, surface and waste water	-
24	Determination of adsorbable organically bound halogens (AOX) by coulometry	SOP AL-20 (ČSN EN ISO 9562)	Drinking, ground, surface and waste water	-
25	Determination of adsorbable organically bound halogens (AOX) by coulometry	SOP AL-20A (ČSN EN 16166)	Solid matrices	-
26	Determination of extractable organically bound halogens (EQX) by coulometry	SOP AL-21 (DIN 38414-S17)	Solid matrices	-

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Ordinal number <sup>1</sup>	Test procedure/method name	Test procedure/method identification <sup>2</sup>	Subject of the test	Degrees of freedom <sup>3</sup>
27	Determination of phenol index with 4-aminoantipyrine by spectrophotometry after distillation	SOP AL-22 (ČSN ISO 6439)	Drinking, ground, surface and waste water, aqueous extract, aqueous solution	-
28	Determination of anionic surfactants (MBAS) by photometry	SOP AL-23 (ČSN EN 903)	Drinking, ground, surface and waste water	-
29	Determination of anionic surfactants (MBAS) by photometry - HACH LANGE commercial analytical set	SOP AL-24 (HACH LANGE Manual)	Drinking, ground, surface and waste water	-
30*	Determination of dissolved oxygen – electrochemical method	SOP AL-25 (ČSN EN ISO 5814)	Drinking, ground, surface and waste water	-
31	Determination of dissolved solids and dissolved inorganic salts (DIS) by gravimetry	SOP AL-26 (ČSN 75 7346; ČSN 75 7347)	Drinking, ground, surface and waste water, aqueous extract	-
32	Determination of suspended solids by gravimetry	SOP AL-27 (ČSN EN 872)	Drinking, ground, surface and waste water	-
33	Determination of biochemical oxygen demand (BOD <sub>5</sub> ) - electrochemical determination	SOP AL-28 (ČSN EN ISO 5815-1)	Surface, ground and waste water	-
34	Determination of total organic carbon (TOC) and dissolved organic carbon (DOC) photometrically - HACH LANGE commercial analytical kit	SOP AL-29 (HACH LANGE Manual)	Drinking, ground, surface and waste water, aqueous extract	-
35	Determination of chemical oxygen demand with dichromate (COD-Cr) by spectrophotometry - HACH LANGE commercial analytical set	SOP AL-30 (HACH LANGE Manual)	Drinking, ground, surface and waste water	-
36	Determination of total nitrogen (TN) by photometry - HACH LANGE commercial analytical set	SOP AL-31 (HACH LANGE Manual)	Drinking, ground, surface and waste water, aqueous extract	-

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Ordinal number <sup>1</sup>	Test procedure/method name	Test procedure/method identification <sup>2</sup>	Subject of the test	Degrees of freedom <sup>3</sup>
37	Determination of carbon (TOC, TIC, TC), total nitrogen (TN) and total sulphur (TS) by combustion analyzer with TCD detection	SOP AL-32 (ČSN EN 15936; manual to Flash 2000 by Thermo Scientific, page 119)	Solid matrices, bio- waste, plant material	-
38	Determination of methyl tert- butyl ether (MTBE) and ethyl tert-butyl ether (ETBE) by GC/MS headspace method	SOP AL-33 (ČSN EN ISO 17943; EPA Method 8260C)	Drinking, ground, surface and waste water	-
39	Determination of highly volatile halogenated hydrocarbons, selected aromatic hydrocarbons by GC/MS and sum of BTEX by calculation from measured values	SOP AL-34 (ČSN EN ISO 10301)	Drinking, ground, surface and waste water	В
40	Determination of highly volatile halogenated hydrocarbons, selected aromatic hydrocarbons by GC/MS and sum of BTEX by calculation from measured values	SOP AL-34A (ČSN EN ISO 22155)	Solid matrices	Α, Β
41	Determination of selected volatile organic compounds by GC/FID and calculation of the sum of trihalomethanes from measured values and the sum of BTEX from measured values	SOP AL-35 (ČSN EN ISO 15680)	Drinking, ground, surface and waste water	В
42	Determination of attenuation gases by GC/FID headspace method	SOP AL-36 (The Validation of Methodology in the Determination of Methane in Water, Lewin, K., Blakey, N.C., Cooke, D.A., 1990)	Drinking, ground, surface and waste water	В
43	Determination of non-polar extractives by ultraviolet spectrometry method (NEL <sub>UV</sub> )	SOP AL-37 (ČSN 83 0540-4)	Drinking, ground, surface and waste water, aqueous extract	-
44	Determination of non-polar extractives by ultraviolet spectrometry method (NEL <sub>UV</sub> )	SOP AL-37A (ČSN 83 0540-4:1984)	Solid matrices	-

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Ordinal number <sup>1</sup>	Test procedure/method name	Test procedure/method identification <sup>2</sup>	Subject of the test	Degrees of freedom <sup>3</sup>
45	Determination of nonpolar extractives by infrared spectrometry method (NEL <sub>IR</sub> )	SOP AL-38 (ČSN 75 7505:1998)	Drinking, ground, surface and waste water, aqueous extract	-
46	Determination of nonpolar extractives by infrared spectrometry method (NEL <sub>IR</sub> )	SOP AL-38A (TNV 75 8052)	Solid matrices	
47	Determination of extractives by infrared spectrometry method (EL <sub>IR</sub> )	SOP AL-39 (ČSN 75 7506)	Drinking, ground, surface and waste water	-
48	Determination of the content of hydrocarbons $C_{10}$ - $C_{40}$ by method using solvent extraction and gas chromatography (GC/FID)	SOP AL-40 (ČSN EN ISO 9377-2)	Drinking, ground, surface and waste water, aqueous extract	В
49	Determination of the content of hydrocarbons $C_{10}$ - $C_{40}$ by method using solvent extraction and gas chromatography (GC/FID)	SOP AL-40A (ČSN EN 14039; ČSN EN ISO 16703)	Solid matrices	A, B
50	Determination of selected phthalic acid esters by GC/MS method	SOP AL-41 (ČSN EN ISO 18856; EPA Method 8060)	Drinking, ground, surface and waste water	В
51	Determination of PCB, OCP by GC/MS and sum of PCB, sum of OCP by calculation from measured values	SOP AL-42 (ČSN EN ISO 6468; EPA Method 680)	Drinking, ground, surface and waste water, aqueous extract	В
52	Determination of PCB, OCP by GC/MS and sum of PCB, sum of OCP by calculation from measured values	SOP AL-42A (ČSN EN 17322; EPA Method 680)	Solid matrices	A, B
53	Determination of selected PAH by HPLC/FLUD, DAD and calculation of the sum of PAH from the measured values	SOP AL-43 (ČSN EN ISO 17993)	Drinking, ground, surface and waste water, aqueous extract	В
54	Determination of selected PAH by HPLC/FLUD, DAD and calculation of the sum of PAH from the measured values	SOP AL-43A (ČSN EN 17503)	Solid matrices	A, B
55	Determination of selected pesticides by LC-MS method	SOP AL-44 (EPA Method 535; EPA Method 1694)	Drinking, ground, surface and waste water	В

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Ordinal number <sup>1</sup>	Test procedure/method name	Test procedure/method identification <sup>2</sup>	Subject of the test	Degrees of freedom <sup>3</sup>
56	Determination of dry matter in a solid sample by gravimetry	SOP AL-45 (ČSN EN 15934)	Solid matrices	-
57	Determination of loss by ignition by gravimetry	SOP AL-46 (ČSN EN 15935)	Solid matrices	-
58*	Indicative determination of methane and carbon dioxide by IR and carbon monoxide, hydrogen sulphide and oxygen by electrochemical method using MULTITEC® 545 mobile analyzer	SOP AL-47 (Hermann Sewerin manufacturer's manual)	Soil air	
59*	Determination of the total content of selected elements in solid matrices by X-ray fluorescence with a manual ED-XRF analyser	SOP AL-48 (ČSN EN 16424; BAS Rudice spol. s r.o. manufacturer's manual)	Solid matrices	-
60*	Determination of free and total chlorine colorimetrically – HACH LANGE commercial analytical kit and bound chlorine by calculation	SOP AL-49 (HACH LANGE Manual)	Drinking and surface water	-
61*	Determination of temperature	SOP AL-50 (ČSN 75 7342)	Drinking, ground, surface and waste water	-
62	Determination of base neutralizing capacity (BNC) by titration and calculation of free carbon dioxide	SOP AL-51 (ČSN 75 7372; ČSN 75 7373)	Drinking, ground, surface and waste water, aqueous extract, aqueous solution	-
63*	Determination of redox potential (ORP) electrometrically	SOP AL-52 (ČSN 75 7367)	Drinking, ground, surface and waste water, aqueous extract	-
64*	Determination of turbidity by nephelometry	SOP AL-53 (ČSN EN ISO 7027-1)	Drinking, ground, surface and waste water	_

<sup>1</sup> asterisk at the ordinal number identifies the tests, which the Laboratory is qualified to carry out outside the permanent laboratory premises

<sup>2</sup> 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)

<sup>3</sup> degrees of freedom: A – Flexibility concerning materials/products (subject of the test), B – Flexibility concerning components/parameters/characteristics, C – Flexibility concerning the performance of the method, D – Flexibility concerning the method

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The laboratory can modify the test procedures with the specified degree(s) of freedom in the scope of accreditation while maintaining the principle of measurement. If no degree of freedom is specified, the laboratory cannot apply a flexible approach to the scope of accreditation for the test.

Ordinal test number	Detailed information on activities within the scope of accreditation (determined analytes)		
12	Chlorites, chlorates, bromates, fluorides, sulphates, phosphates, nitrites, nitrates		
18	Ag, Al, As, B, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, Li, Mn, Mo, Sb, Se, Sn, Ni, Pb, Ptot., Stot., V, Zn, Na, K, Mg, total hardness and hardness as CaCO <sub>3</sub> by calculation from measured values		
19	Ag, As, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, Mn, Mo, Sn, Ni, Pb, Ptot., Stot., V, Zn		
39	1,1-dichloroethene, cis-1,2-dichloroethene, trans-1,2-dichloroethene, trichloroethene, tetrachloroethene, 1,2- dichloroethane, dichloromethane, trichloromethane, tetrachloromethane, bromodichloromethane, dibromochloromethane, tribromomethane, chlorobenzene, dichlorobenzenes, vinylchloride, benzene, toluene, ethylbenzene, xylenes, 1,1-dichloroethane, 1,1,2-trichloroethane, 1,1,1,2-tetrachloroethane, 1,1,2,2- tetrachloroethane, sum of BTEX		
40	1,1-dichloroethene, cis-1,2-dichloroethene, trans-1,2-dichloroethene, trichloroethene, tetrachloroethene, 1,2- dichloroethane, dichloromethane, trichloromethane, tetrachloromethane, bromodichloromethane, dibromochloromethane, tribromomethane, chlorobenzene, dichlorobenzenes, benzenes, toluene, ethylbenzenes, xylenes, sum of BTEX		
41	Benzene, toluene, ethylbenzene, xylenes, styrene, isopropylbenzene, cis-1,2-dichloroethene, trichloroethene, tetrachloroethene, trichloromethane, bromodichloromethane, dibromochloromethane, tribromomethane, 1,2-dichloroethane, dichloromethane, sum of BTEX, sum of THM		
42	Methane, ethane, propane, ethyne		
50	Di-n-butylphthalate, bis-(2-ethylhexyl)phthalate		
51, 52	PCB – congeners 28, 52, 101, 118, 138, 153, 180, sum of PCB OCP – trichlorobenzenes, hexachlorobenzene, heptachlorine, heptachloroepoxide, DDD, DDE, DDT, aldrin, dieldrin, α-HCH, β-HCH, γ-HCH (lindan), δ-HCH, $\epsilon$ -HCH, isodrin, methoxychlorine		
53, 54	Naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene, fluoranthene, pyrene, benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, dibenzo(a,h)anthracene, benzo(ghi)perylene, indeno(1,2,3-cd)pyrene, sum of PAH		
55	Ametryn, atraton, atrazine, atrazine-2-hydroxy, chloridazon, chloridazon-desphenyl, prometon, prometryn, propazine, secbumeton, simazine, simazine-2-hydroxy, simetryn, terbutylazine, terbutryn		
59	P, S, K, Cl, Ca, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, As, Se, Rb, Sr, Zr, Mo, Ag, Cd, Sn, Sb, W, Hg, Pb, Bi, Th, U		

#### Specification of 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 (tested object)
1 - 9, 12, 13, 15, 18, 20, 22, 27, 31, 34, 36, 43, 45, 48, 51, 53 62, 63	Aqueous extract – aqueous extract made with distilled water in ratio 1:10 on dry matter of the sample according to Decree No. 294/2005 Coll., as amended by Decree No. 387/2016 Coll. (SOP NM-9, ČSN 12457-4)
1 - 10, 12, 13, 15, 18, 20, 22, 27, 62	Aqueous solution – absorption solution of a defined composition or a solution of a chemical in water
1- 9, 12, 13, 15, 18, 20, 22 - 24, 27 - 36, 38, 39, 41 - 43, 45, 47, 48, 50, 51, 53, 55, 61 - 64	Waste water – WWTP, industrial, process
1-13, 15, 18, 20, 22 - 24, 27 - 36, 38 - 39, 41 - 43, 45, 47, 48, 50, 51, 53, 55, 61 - 64	Ground water – mineral, spa, mine
4 - 8, 13, 18, 20	Absorption solution – absorption solutions from emission sampling
14, 16, 19, 21, 25, 26, 37, 40, 44, 46, 49, 52, 54, 56, 57, 59	Solid matrices – various types of solid samples of soils, sediments, composts, sludge, waste, soils, building structures, AHV
37	Bio-waste – biodegradable waste and biodegradable municipal waste that is capable of anaerobic or aerobic decomposition
37	Plant material – roots, stems, flowers and leaves of plants

# Sampling:

Ordinal number	Sampling procedure name	Sampling procedure identification <sup>1</sup>	Subject of sampling
1	Drinking, raw and hot water sampling	SOP VS-101 (ČSN EN ISO 5667-1; ČSN EN ISO 5667-3; ČSN ISO 5667-5; ČSN EN ISO 19458; ČSN ISO 5667-21)	Drinking, raw and hot water
2	Waste water sampling (manual sampling and sampling using automatic samplers)	SOP VS-102 (ČSN EN ISO 5667-1; ČSN EN ISO 5667-3; ČSN ISO 5667-10; ČSN 75 7315)	Waste water

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

	1	1	1
Ordinal number	Sampling procedure name	Sampling procedure identification <sup>1</sup>	Subject of sampling
3	Ground water sampling	SOP VS-103	Ground water
	(static and dynamic sampling)	(ČSN EN ISO 5667-1;	
		ČSN EN ISO 5667-3;	
		ČSN ISO 5667-11;	
		ČSN EN ISO 19458)	
4	Surface water sampling	SOP VS-104	Surface water
	(manual sampling)	(ČSN EN ISO 5667-1;	
		ČSN EN ISO 5667-3;	
		ČSN ISO 5667-4;	
		ČSN EN ISO 5667-6;	
		ČSN EN ISO 19458)	
5	Soil sampling	SOP VS-106	Soil
		(ČSN 015111)	
6	Sampling of bottom sediments	SOP VS-107	Bottom sediments, sludge
	and sludge	(ČSN EN ISO 5667-1;	
		ČSN EN ISO 5667-3;	
		ČSN ISO 5667-12;	
		ČSN EN ISO 5667-13)	
7	Sampling of waste, building	SOP VS-108	Waste, building materials
	materials, and structures	(ČSN EN 14899,	and structures
		MoE Bulletin No. 4, April 2008 <sup>2</sup> )	
8	Soil air sampling on a solid	SOP VS-109	Soil air
	sorbent	(MoE Bulletin No. 3, March 2011 <sup>3</sup> ;	
		MoE Bulletin No.9, September 2005 <sup>4</sup> ;	
		MoE Bulletin No. 2, February 2007 <sup>5</sup> )	

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<sup>2</sup> MoE Bulletin No. 4, April 2008 - Ministry of Environment Guideline for Waste Sampling

<sup>3</sup> MoE Bulletin No. 9, March 2011 - Ministry of Environment Guideline for Contaminated Areas Risk Analysis

<sup>4</sup> MoE Bulletin No. 9, September 2005 - Ministry of Environment Guideline for Contaminated Areas Survey

<sup>5</sup> MoE Bulletin No. 2, February 2007 - Ministry of Environment Guideline for Sampling in Rehabilitation Geology

### 2. Laboratory for Soil Mechanics

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**Tests:** 

Ordinal number <sup>1</sup>	Test procedure/method name	Test procedure/method identification <sup>2</sup>	Subject of the test	Degrees of freedom <sup>3</sup>
1	Determination of moisture content	ČSN EN ISO 17892-1	Soils	-
2	Determination of bulk density by direct measurement	ČSN EN ISO 17892-2 cl. 4.1, 5.1, 6.1, 7	Soils	-
3	Determination of apparent density of solid particles	ČSN EN ISO 17892-3, excl. cl. 4.4, 5.2, 6.2	Soils	-
4	Determination of grain size	ČSN EN ISO 17892-4, excl. cl. 4.4, 5.4, 6.3	Soils	-
5	Determination of Atteberg limits	ČSN EN ISO 17892-12, excl. cl. 4.3, 5.4, 6.3	Soils	-
6	Determination of carbonates	ČSN 72 1022	Soils	-
7	Determination of loss by ignition	ČGÚ 1987 Methods Chapter 8 – for other soils	Soils	-
8	Determination of compactability – Proctor compaction	ČSN EN 13286-2, Annex NB	Soils	-
9	Determination of California bearing ratio, immediate bearing index and linear swelling	ČSN EN 13286-47	Soils	-
10	Determination of compressibility in oedometer	ČSN EN ISO 17892-5	Soils	-
11	Determination of swelling- ability in oedometer	ČGÚ 1987 Methods Chapter 20, Procedure A	Soils	-
12	Test of uniaxial compressive strength	ČSN EN ISO 17892-7	Soils	-
13	Unconsolidated undrained triaxial test for the determination of strength	ČSN EN ISO 17892-8	Soils	-
14	Direct shear test	ČSN EN ISO 17892-10	Soils	-
15*	Determination of bulk density	ČSN 72 1010, method D1	Soils	-
16*	Static loading test	ČSN 72 1006, Annex A, B, D	Soils and backfills	-
17*	Impact loading test	ČSN 73 6192, Group C	Pavements and base courses	-
18*	Irregularity measurement of pavement courses by check bar	ČSN 73 6175, chapter 8	Pavement courses	-

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Ordinal number <sup>1</sup>	Test procedure/method name	Test procedure/method identification <sup>2</sup>	Subject of the test	Degrees of freedom <sup>3</sup>
19	Determination of the water content by drying in a ventilated oven	ČSN EN 1097-5	Aggregates	-
20	Determination of particle size distribution – sieving analysis	ČSN EN 933-1	Aggregates	-

asterisk at the ordinal number identifies the tests, which the Laboratory is qualified to carry out outside the permanent laboratory premises

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<sup>3</sup> degrees of freedom: A – Flexibility concerning materials/products (subject of the test), B – Flexibility concerning components/parameters/characteristics, C – Flexibility concerning the performance of the method, D – Flexibility concerning the method

The laboratory can modify the test procedures with the specified degree(s) of freedom in the scope of accreditation while maintaining the principle of measurement. If no degree of freedom is specified, the laboratory cannot apply a flexible approach to the scope of accreditation for the test.

#### **Explanatory notes:**

1

- ČGÚ Czech Geological Survey
- AHV Bituminous compacted layer (according to Decree No. 130/2019 Coll.)
- MoE Ministry of the Environment of the Czech Republic
- MZ Ministry of Health of the Czech Republic
- AA Inorganic analysis
- OA Organic analysis
- ASA Inorganic Trace Analysis
- TM Field Measurement
- OV Waste water
- TNV Branch Technical Standard of Water Management
- ASTM AMERICAN STANDARD TEST METHODS FOR THE examination of Water and Waste Water, American Public Health Association, American Water Works Association, Water Pollution Control Federation, 14th edition, Washington DC, 1975
- US-EPA Environmental Protection Agency of the United States of America
- DIN Deutsches Institut für Normung
- ORION Operation manual of the manufacturer ORION Research, Cambridge, Massachusetts, U.S.A.
- PCB Polychlorinated Biphenyls
- OCP Organochlorine Pesticides
- PAH Polyaromatic Hydrocarbons
- TOC Total Organic Carbon
- TIC Total Inorganic Carbon
- TC Total Carbon
- DOC Dissolved Organic Carbon
- AOX Adsorbable Organically Bound Halogens
- EOX Extractable Organically Bound Halogens
- HPLC High-Performance Liquid Chromatography

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

GC	Gas Chromatography
IR	Infrared Spectrometry
UV	Ultraviolet Spectrometry
MS	Mass spectrometry
ED-XRF	Energy Dispersive X-Ray Fluorescence
DAD	Diode Array Detector
FID	Flame Ionization Detector
FLUD	Fluorescence Detector
MSD	Mass Detector
TCD	Thermal Conductivity Detector
THM	Trihalomethanes
BTEX	Benzene, toluene, ethylbenzene, xylenes
ICP/OES	Inductively Coupled Plasma Optical Emission Spectrometry
ORP	Redox Potential