

**The Appendix is an integral part of
Certificate of Accreditation No. 181/2023 of 13/04/2023**

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

PRECIOSA, a.s.
CAB number 1455, Analytical Laboratory
Sklářská 92, Pilínkov, 463 12 Liberec 24

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

Tests:

Ordinal number¹	Test procedure / method name	Test procedure / method identification²	Subject of the test	Degrees of freedom³
1	Determination of elements by ICP AES and expression of oxide content by calculation	SPP 020 (ČSN EN 62321-5 ČSN EN ISO 11885; CPSC-CH-E1003-09.1; CPSC-CH-E1002-08.3; CPSC-CH-E1001-08.3; ASTM F963, cl. 4.3.5. and 8.3.1; ASTM F2923, cl. 5 and 9; OEKO-TEX 100, Annex 4)	Glass, ceramic, porcelain products, synthetic and natural gems and raw-materials for their production, silicate production waste, other materials for the production of costume jewellery (metal, coatings, plastic)	-
2	Determination of silicon dioxide by gravimetry	SPP 021 (ČSN 70 0621-1; ČSN 70 0621-2)	Glass, glass ceramics and ceramics	-
3	Determination of density by double weighing method	SPP 022 (ČSN EN ISO 1183-1, method A)	Glass, ceramic, porcelain products, synthetic and natural gems and raw-materials for their production	-
4	Determination of the content of CrV1 by spectrophotometry	SPP 024 (BAM-S004; ČSN EN 62321-7-1; ČSN EN 62321-7-2)	Glass, ceramic, porcelain products, synthetic and natural gems and raw-materials for their production, other materials for the production of costume jewellery (metals, coatings, plastics)	-
5	Determination of elements by XRF spectrometry method and expression of oxide content by calculation	SPP 026 (SPECTRO manual, ČSN EN 62321-3-1; CPSC-CH-E1003-09.1; CPSC-CH-E1002-08.3; CPSC-CH-E1001-08.3; ASTM F963, cl. 4.3.5. and 8.3.1.; ASTM F2923, cl. 5 and 9; OEKO-TEX 100, Annex 4)	Glass, ceramic, porcelain products, synthetic and natural gems and raw-materials for their production, silicate production waste, other materials for the production of costume jewellery (metals, coatings, plastics)	-

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Ordinal number ¹	Test procedure / method name	Test procedure / method identification ²	Subject of the test	Degrees of freedom ³
6	Determination of resistance to acid by gravimetry	SPP 028 (ČSN 70 0532-2; DIN 12116)	Glass	-
7	Resistance to attack by a boiling aqueous solution of mixed alkali by gravimetry	SPP 029 (ČSN ISO 695)	Glass	-
8	Resistance of glass cullet to water at 98 °C by titration	SPP 030 (ČSN ISO 719)	Glass	-
9	Determination of pH by potentiometry	SPP 001 (ČSN ISO 10523)	Ground, surface and waste water, extracts of waste	-
10	Determination of BOD5 by titration	SPP 002 (ČSN EN ISO 5815-1)	Ground, surface and waste water	-
11	Determination of nitrate ions by spectrophotometry and nitrate and total inorganic nitrogen by calculation	SPP 003 (ČSN ISO 7890-3)	Ground, surface and waste water	-
12	Determination of ammonium by spectrophotometry and ammonia nitrogen by calculation	SPP 004 (ČSN ISO 7150-1)	Ground, surface and waste water, extracts of waste	-
13	Potentiometric determination of fluoride by ISE	SPP 005 (ČSN ISO 10359-1)	Ground, surface and waste water, extracts of waste	-
14	Determination of chlorides by mercurymetry	SPP 006 (ČSN 83 0530-20:1978, method B)	Ground, surface and waste water, extracts of waste	-
15	Determination of electrical conductivity	SPP 007 (ČSN EN 27888)	Ground, surface and waste water, extracts of waste	-
16	Determination of anionic surfactants by spectrophotometry	SPP 008 (ČSN EN 903)	Ground, surface and waste water	-
17	Determination of sulphate by gravimetry as BaSO ₄	SPP 009 (TNV 75 7476)	Ground, surface and waste water	-
18	Determination of CODCr by titrimetry	SPP 010 (ČSN ISO 6060)	Ground, surface and waste water	-

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Ordinal number ¹	Test procedure / method name	Test procedure / method identification ²	Subject of the test	Degrees of freedom ³
19	Determination of nitrite by spectrophotometry and nitrite nitrogen by calculation	SPP 011 (ČSN EN 26 777)	Ground, surface and waste water, extracts of waste	-
20	Determination of DS and DIS by gravimetry	SPP 012 (ČSN 75 7346; ČSN 75 7347)	Ground, surface and waste water	-
21	Determination of suspended solids by gravimetry	SPP 013 (ČSN EN 872)	Ground, surface and waste water	-
22	Determination of elements by ICP AES method	SPP 016 (ČSN EN ISO 11885; ČSN EN 71-3+A1, part 3; ASTM F963, cl. 4.3.5. and 8.3.4.; ASTM F2923, cl. 8 and 10; ČSN EN 12457-2; OEKO-TEX 100, Annex 4; ČSN EN 1811+A1; MoH CR Regulation No. 38/2001, Annex No. 9)	Ground, surface and waste water, extracts of waste and extracts of materials for jewellery and costume jewellery, extracts in demineralized water, aqueous solutions and simulant solutions	-

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

Specification of the scope of accreditation:

Ordinal test number	Detailed information on activities within the scope of accreditation (determined analytes)
1	Ag, Al, As, Au, B, Ba, Bi, Ca, Cd, Ce, Co, Cr _{tot} , Cu, Er, Fe, Gd, Hf, K, La, Li, Mg, Mn, Mo, Na, Nd, Ni, P, Pb, Pr, Sb, Se, Si, Sn, Sr, Ti, Y, Zn, Zr
5	Cd, Fe, Pb, Cr, Ni
22	Ag, Al, As, Au, B, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Se, Si, Sn, Sr, Ti, Zn, Zr

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Sampling:

Ordinal number	Sampling procedure name	Sampling procedure identification¹	Subject of sampling
1	Surface water sampling - manual sampling	SPP 017 A (ČSN EN ISO 5667-1; ČSN EN ISO 5667-3; ČSN ISO 5667-4; ČSN EN ISO 5667-6; ČSN EN ISO 5667-14)	Surface water
2	Waste water sampling - manual sampling, sampling by an automatic sampler	SPP 017 B (ČSN EN ISO 5667-1; ČSN EN ISO 5667-3; ČSN ISO 5667-10; ČSN EN ISO 5667-14)	Waste water
3	Ground water sampling from a faucet or tank - manual sampling	SPP 017 C (ČSN EN ISO 5667-1; ČSN EN ISO 5667-3; ČSN ISO 5667-11; ČSN EN ISO 5667-14)	Ground water – sampling from a faucet or tank

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)

Abbreviations used:

SPP – Standard Working Procedure
ICP-AES – Inductively Coupled Plasma Atomic Emission Spectrometry
XRF – X-Ray Fluorescence Spectrometry
BAM – Federal Institute for Materials Research and Testing
OEKO-TEX 100 – international testing and certification system for textiles, made only from health-safe materials
CPSC-CH – Consumer Product Safety Commission
ASTM – American Society for Testing and Materials
DS – Dissolved Solids
DIS – Dissolved Inorganic Salts