



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. 40/2021

LB MINERALS, s.r.o.
with registered office **Tovární 431, 330 12 Horní Bříza, Company Registration No. 27994929**

to the Testing Laboratory No. 1173
Central Laboratory

Scope of accreditation:

Chemical analysis of silicates, analyses of waste water including sampling, noise, dust and vibration measurement, determination of linear thermal expansion 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.: 682/2019 of 13. 12. 2019, or any administrative acts building upon it.

The Certificate of Accreditation is valid until: **14. 1. 2026**

Prague: 14. 1. 2021



Pavel Nosek
Director of the Department
of Testing and Calibration Laboratories
Czech Accreditation Institute
Public Service Company

**The Appendix is an integral part of
Certificate of Accreditation No. 40/2021 of 14/01/2021**

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

LB MINERALS, s.r.o.
Central Laboratory
Tovární 431, 330 12 Horní Bříza

The Laboratory is qualified to carry out independent sampling.

Tests:

Ordinal number ¹	Test procedure/method name	Test procedure/method identification ²	Tested object
1.1	Chemical analysis of silicates by X-ray fluorescence spectrometer - Chemical analysis of silicate by X-ray fluorescence spectrometer – determination of SiO ₂ , Al ₂ O ₃ , TiO ₂ , Fe ₂ O ₃ , CaO, MgO, Na ₂ O, K ₂ O, P ₂ O ₅ , ZrO ₂	KP 31 – 201 IMP No. 1 (PANalytical manual)	Raw materials, product ³
1.2	Determination of the loss of ignition by gravimetry	KP 31 – 201 IMP No. 1, chap. 2. 3. 1; chap. 2. 3. 2; (ČSN 72 0103)	Raw materials, product ³
2*	Measurement of dust nuisance	KP 31 – 203 IMP No. 3 (Government Regulation No. 361/2007 Coll., Annex 3, Part D; ČSN EN 481)	Working air
3*	Measurement of noise	KP 31 – 258 SOP (ČSN EN ISO 9612, Guideline – MoE Bulletin No. 4/2013)	Working
4.1	Determination of dissolved solids (RL 105), annealed dissolved solids (RL 550), dissolved inorganic salts (RAS) by gravimetry using glass fibre filters	KP 31 - 202 IMP No. 2 A (ČSN 75 7346, ČSN 75 7347)	Waste water, surface water ⁴ , underground water
4.2	Determination of suspended solids (NL 105), annealed suspended solids (NL 550), loss on ignition of suspended solids (ZZ) _{NL} by gravimetry	KP 31 - 202 IMP No. 2 B (ČSN EN 872, ČSN 75 7350)	Waste water, surface water ⁴ , underground water
4.3	Determination of sulphate (SO ₄ ²⁻) by spectrophotometry - HACH LANGE commercial analytical set	KP 31 – 272 SOP, (HACH LANGE Manual)	Waste water, surface water ⁴ , underground water, aqueous extract



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Ordinal number ¹	Test procedure/method name	Test procedure/method identification ²	Tested object
4.4	Determination of chemical oxygen demand with dichromate (COD _{Cr}) by spectrophotometry - HACH LANGE commercial analytical set	KP 31 – 263 SOP, (ČSN ISO 15705, HACH LANGE Manual)	Waste water, surface water ⁴ , underground water
4.5	Determination of biochemical oxygen demand after n days (BOD _n) - method for diluted samples	KP 31 - 202 IMP No. 2 C (ČSN EN ISO 5815-1)	Waste water, surface water ⁴ , underground water
4.6	Determination of biochemical oxygen demand after n days (BOD _n) - method for undiluted samples	KP 31 - 202 IMP No. 2 D (ČSN EN 1899-2)	Waste water, surface water ⁴ , underground water
4.7	Reserved		
4.8*	Determination of dissolved oxygen electrochemically	KP 31 - 202 IMP No. 2 F (ČSN EN ISO 5814)	Waste water, surface water ⁴ , underground water
4.9*	Determination of temperature	KP 31 - 202 IMP No. 2 G (ČSN 75 7342)	Waste water, surface water ⁴ , underground water
4.10	Determination of the sum of calcium and magnesium by titration, determination of magnesium by calculation	KP 31 - 202 IMP No. 2 H (ČSN ISO 6058, ČSN ISO 6059)	Waste water, surface water ⁴ , underground water
4.11	Determination of calcium by titration	KP 31 - 202 IMP No. 2 CH (ČSN ISO 6058)	Waste water, surface water ⁴ , underground water
4.12	Determination of acid neutralizing capacity (ANC _{4,5} and ANC _{8,3}) by titration	KP 31 - 202 IMP No. 2 I (ČSN EN ISO 9963 – 1)	Waste water, surface water ⁴ , underground water
4.13	Determination of chloride (Cl ⁻) by titration by argentometry	KP 31 - 202 IMP No. 2 J (ČSN ISO 9297)	Waste water, surface water ⁴ , underground water, aqueous extract
4.14	Determination of ammonia nitrogen (N-NH ₄) by distillation	KP 31 - 202 IMP No. 2 K (ČSN ISO 5664)	Waste water, surface water ⁴ , underground water
4.15	Determination of ammonium (NH ₄ ⁺), ammonia nitrogen (N-NH ₄) by spectrophotometry by HACH LANGE commercial analytical set	KP 31 – 264 SOP (ČSN ISO 7150 – 1, HACH LANGE manual)	Waste water, surface water ⁴ , underground water
4.16*	Determination of pH by potentiometry	KP 31 - 202 IMP No. 2 L (ČSN ISO 10 523)	Waste water, surface water ⁴ , underground water, aqueous extract



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Ordinal number ¹	Test procedure/method name	Test procedure/method identification ²	Tested object
4.17	Determination of nitrate (NO ₃ ⁻), nitrate nitrogen (N-NO ₃) by spectrometry, HACH LANGE commercial analytical set	KP 31 – 265 SOP (ČSN ISO 7890 – 3, HACH LANGE Manual)	Waste water, surface water ⁴ , underground water
4.18	Determination of total phosphorus (P _c), phosphate (PO ₄ ³⁻) by spectrophotometry, HACH LANGE commercial analytical set	KP 31 – 266 SOP (ČSN EN ISO 6878, HACH LANGE Manual)	Waste water, surface water ⁴ , underground water
4.19	Determination of nitrite (NO ₂ ⁻), nitrite nitrogen (N-NO ₂) by spectrophotometry, HACH LANGE commercial analytical set	KP 31 – 267 SOP (ČSN EN 26777, HACH LANGE Manual)	Waste water, surface water ⁴ , underground water
4.20*	Determination of conductivity by conductometry	KP 31 - 202 IMP No. 2 M (ČSN EN 27888)	Waste water, surface water ⁴ , underground water, aqueous extract
4.21	Determination of iron (Fe) by spectrophotometry	KP 31 – 268 SOP (ČSN ISO 6332)	Waste water, surface water ⁴ , underground water
5	Determination of coefficient of linear expansion	KP 31 – 274 IMP No. 5 (ČSN EN ISO 10545–8, ČSN 72 6031, ČSN 72 1083, ČSN EN 821–1, Netzsch Manual)	Ceramic materials
6*	Measurement of vibration	KP 31 – 261 SOP ČSN ISO 2631–1 ČSN EN ISO 5349–2, Guideline – MoE Bulletin No. 4/2013	Working environment

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 raw materials, products include raw materials and products of the silicate industry

⁴ surface water includes surface water for technological purposes



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Sampling:

Ordinal number	Sampling procedure name	Sampling procedure identification ¹	Sampled object
1	Waste water sampling (manual sampling and sampling using an automatic sampler)	KP 31 - 237 SOP (ČSN EN ISO 5667-1, ČSN EN ISO 5667-3, ČSN ISO 5667-10, ČSN EN ISO 5667-14)	Waste water, surface water ⁴ , underground water

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)

⁴ surface water includes surface water for technological purposes

Explanations and abbreviations:

KP
SOP
IMP
MoE Bulletin

Control procedure
Standard Operating Procedure
Internal method specification
Bulletin of the Ministry of Health

