

**The Appendix is an integral part of
Certificate of Accreditation No. 135/2024 of 21/03/2024**

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

Výzkumný ústav pro hnědé uhlí a.s.
CAB number 1078, Testing Laboratory
tř. Budovatelů 2830/3, 434 01 Most

Testing laboratory locations:

- | | |
|---|------------------------------------|
| 1. Laboratory for Fuels, Waste and Water | tř. Budovatelů 2830/3, 434 01 Most |
| 2. Immission and Emission Measurement Laboratory | tř. Budovatelů 2830/3, 434 01 Most |
| 3. Rock Testing Laboratory | tř. Budovatelů 2830/3, 434 01 Most |
| 4. Technical Diagnostics Laboratory | tř. Budovatelů 2830/3, 434 01 Most |

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's website www.vuhu.cz/osvedceni-akreditace in the form „List of activities within the flexible scope of accreditation“.

The laboratory is qualified to carry out standalone sampling.

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

1. Laboratory for Fuels, Waste and Water

Tests:

Ordinal number ¹	Test procedure / method name	Test procedure / method identification ²	Tested subject	Degrees of freedom ³
1	Chemical and physical analysis of water and aqueous extracts waste and building materials			
1.1	Determination of pH by potentiometry	IMP 046/LACH (ČSN ISO 10523)	Water and aqueous extracts	A
1.2	Determination of total, dissolved and suspended solids and DIS by gravimetry	IMP 044/LACH (ČSN 75 7346; ČSN 75 7347; ČSN EN 15216; ČSN EN 872)	Water and aqueous extracts	A
1.3	Determination of electrical conductivity	IMP 047/LACH (ČSN EN 27888)	Water and aqueous extracts	A
1.4	Determination of dissolved oxygen by membrane electrode	IMP 049/LACH (ČSN EN ISO 5814)	Water and aqueous extracts	A
1.5	Determination of the inhibitory effect on the light emission of <i>Vibrio fischeri</i>	IMP 007/LPOV (ČSN EN ISO 11348-2)	Water and aqueous extracts	A
1.6	Determination of selected elements by ICP-OES method	IMP-005/LPOV (ČSN EN ISO 11885)	Water and aqueous extracts	A, B
1.7	Determination of anions by ion chromatography	IMP 055/LACH (ČSN EN ISO 10304-1; ČSN EN ISO 10304-3)	Water and aqueous extracts	A, B

**The Appendix is an integral part of
Certificate of Accreditation No. 135/2024 of 21/03/2024**

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

Výzkumný ústav pro hnědé uhlí a.s.
CAB number 1078, Testing Laboratory
tř. Budovatelů 2830/3, 434 01 Most

Ordinal number ¹	Test procedure / method name	Test procedure / method identification ²	Tested subject	Degrees of freedom ³
1.8	Determination of the chemical oxygen demand – COD _{Cr} (titration method)	IMP 048/LACH (ČSN ISO 6060)	Water and aqueous extracts	A
1.9	Determination of total cyanide by spectrophotometry	IMP 097/LPOV (ČSN 75 7415)	Water and aqueous extracts	A
1.10	Determination of biochemical oxygen demand by dilution method	IMP 050/LPOV (ČSN EN ISO 5815-1; ČSN EN 1899-2)	Water and aqueous extracts	A
1.11	Determination of ammonium by spectrophotometry	IMP 051/LACH (ČSN ISO 7150-1)	Water and aqueous extracts	A
1.12	Reserved			
1.13	Reserved			
1.14	Reserved			
1.15	Determination of mercury by AMA 254 analyzer	IMP 004/LACH, chap. 5.1 (ČSN 75 7440; manual to the AMA 254 analyzer)	Water and aqueous extracts	A
1.16	Determination of hydrocarbons C ₁₀ to C ₄₀ by GC - FID method	IMP 095/LPOV, chap. 6.2.1 (ČSN EN ISO 9377-2)	Water and aqueous extracts	A
1.17	Determination of AOX by coulometry	IMP 064/LPOV (ČSN EN ISO 9562)	Water and aqueous extracts	A
1.18	Determination of EOX by coulometry	IMP 092/LPOV – part 1.B (Mitsubishi TOX 300 manual)	Water and aqueous extracts	A
2	Analysis of solid fuels			
2.1	Determination of water content by gravimetry	IMP 073/LPOV (ČSN 44 1377; ČSN P CEN/TS 15414-1; ČSN EN ISO 18134-1; ČSN EN ISO 18134-3; ČSN EN ISO 21660-3)	Solid fuels	A
2.2	Determination of ash content by gravimetry	IMP 068/LPOV (ČSN ISO 1171; ČSN EN ISO 21656; ČSN EN ISO 18122)	Solid fuels	A
2.3	Reserved			
2.4	Determination of gross calorific value by calorimetry and calculation of net	IMP 072/LPOV	Solid and liquid fuels	A

**The Appendix is an integral part of
Certificate of Accreditation No. 135/2024 of 21/03/2024**

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

Výzkumný ústav pro hnědé uhlí a.s.
CAB number 1078, Testing Laboratory
tř. Budovatelů 2830/3, 434 01 Most

Ordinal number¹	Test procedure / method name	Test procedure / method identification²	Tested subject	Degrees of freedom³
	calorific value from the measured values	(ČSN ISO 1928; ČSN EN ISO 21654; ČSN EN ISO 18125; ČSN DIN 51900-1; ČSN DIN 51900-3)		
2.5	Determination of hydrogen, nitrogen, sulphur and carbon by combustion method with TCD detection	IMP 096/LPOV (ČSN ISO 29541; ČSN EN 15407; ČSN EN ISO 16948)	Solid fuels, combustion products	A, B
2.6	Determination of the content of water, volatile combustible matter and ash by thermogravimetric method by TGA analyzer	IMP 099/LPOV (ČSN 44 1377; ČSN ISO 1171; ČSN ISO 562)	Solid fuels, combustion products	A, B
2.7	Determination of volatile combustible matter by gravimetry	IMP 080/LPOV (ČSN ISO 562; ČSN EN ISO 22167; ČSN EN ISO 18123)	Solid fuels	A
2.8	Reserved			
2.9	Determination of ash fusibility in oxidation atmosphere	IMP 078/LPOV (ČSN ISO 540; ČSN P CEN/TS 15404:2007; ČSN EN ISO 21404)	Solid fuels, combustion products	A, B
2.10	Analysis of solid fuel ash by gravimetry	IMP 077/LPOV – 5.2.1, 5.2.7 (ČSN 44 1359)	Solid fuels, combustion products	A
2.11	Analysis of solid fuel ash by titration	IMP 077/LPOV – 5.2.2, 5.2.3, 5.2.5, 5.2.6 (ČSN 44 1358)	Solid fuels, combustion products	A
2.12	Analysis of solid fuel ash by spectrophotometry	IMP 077/LPOV – 5.2.4, 5.2.10 (ČSN 44 1358)	Solid fuels, combustion products	A
2.13	Analysis of solid fuel ash by ICP OES method	IMP 077/LPOV – 5.2.8, 5.2.9 (ČSN 44 1358)	Solid fuels, combustion products	A, B
2.14	Reserved			
2.15	Determination of the product yield of low temperature carbonization by gravimetry	IMP 083/LPOV (ČSN ISO 647)	Solid fuels	A
2.16	Reserved			
2.17	Determination of chlorine by coulometric titration	IMP 088/LPOV – part B (ČSN EN 14077; ČSN ISO 18806;	Solid fuels	A

**The Appendix is an integral part of
Certificate of Accreditation No. 135/2024 of 21/03/2024**

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

Výzkumný ústav pro hnědé uhlí a.s.
CAB number 1078, Testing Laboratory
tř. Budovatelů 2830/3, 434 01 Most

Ordinal number ¹	Test procedure / method name	Test procedure / method identification ²	Tested subject	Degrees of freedom ³
		CSN EN 15408; ČSN EN ISO 16994)		
2.18	Determination of fluorine content by ISE	IMP 089 (ČSN 44 1382:1993)	Solid fuels	A
2.19	Reserved			
2.20	Reserved			
2.21	Reserved			
2.22	Determination of mercury by AMA 254 analyser	IMP 004/LACH, chap. 5.2 (ČSN 75 7440; AMA 254 analyzer manual)	Solid fuels	A
2.23	Determination of selected elements by ICP-OES method	IMP 006/LPOV, chap. 6.1.1, 6.1.3, 6.1.4, 6.2.1, 6.2.2 (ČSN EN ISO 11885)	Solid fuels	A, B
3	Chemical analysis of rocks			
3.1	Determination of chlorine by coulometric titration	IMP 088/LPOV – part B (ČSN EN 14077; ČSN ISO 18806)	Rocks	A
3.2	Reserved			
3.3	Determination of aromatic hydrocarbons – benzene, toluene, xylenes, ethylbenzene by GC – FID method	IMP 013/LACH (ČSN EN ISO 15680; ČSN EN ISO 15009)	Rocks	A, B
3.4	Determination of fluorine by ISE	IMP 089/LPOV (ČSN 44 1382:1993)	Rocks	A
3.5	Determination of PCB congeners by GC – ECD method	IMP 040/LACH (ČSN EN 61619; ČSN EN 17322)	Rocks, waste, insulation liquids	A, B
3.6	Determination of chlorinated hydrocarbons trichloroethylene and tetrachloroethylene by GC - ECD method	IMP 058/LACH (ČSN 75 7550:1991; ČSN EN ISO 10301; ČSN EN ISO 15009; ČSN EN ISO 15680)	Rocks, sediments, sludge, waste	A, B
3.7	Determination of water content by gravimetry	IMP 056/LACH (ČSN ISO 11465; ČSN EN 12880)	Rocks, waste	A
3.8	Determination of free CaO by titration	IMP 063/LPOV (ČSN 72 2080, cl. 9.18)	Rocks, ash, granulates	A

**The Appendix is an integral part of
Certificate of Accreditation No. 135/2024 of 21/03/2024**

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

Výzkumný ústav pro hnědé uhlí a.s.
CAB number 1078, Testing Laboratory
tř. Budovatelů 2830/3, 434 01 Most

Ordinal number ¹	Test procedure / method name	Test procedure / method identification ²	Tested subject	Degrees of freedom ³
3.9	Determination of hydrocarbons C ₁₀ to C ₄₀ by GC - FID method	IMP 095/LPOV, chap. 6.2.2 (ČSN EN 14039)	Rocks and sludge	A
3.10	Reserved			
3.11	Reserved			
3.12	Determination of mercury by AMA 254 analyser	IMP 004/LACH, chap. 5.2 (ČSN 75 7440; AMA 254 analyzer manual,	Rocks	A
3.13	Determination of selected elements by ICP-OES method	IMP 006/LPOV, chap. 6.3 (ČSN EN ISO 11885)	Rocks	A, B
4	Waste			
4.1	Determination of hydrocarbons C ₁₀ to C ₄₀ by GC - FID method	IMP 095, chap. 6.2.2 (ČSN EN 14039)	Sludge, sediments, waste and combustion products	A
4.2	Determination of aromatic hydrocarbons – benzene, toluene, xylenes, ethylbenzene by GC – FID method	IMP 013/LACH (ČSN EN ISO 15009; ČSN EN ISO 15680)	Sludge, sediments, waste and combustion products	A, B
4.3	Determination of mercury by AMA 254 analyzer	IMP 004/LACH (AMA analyzer manual, ČSN 75 7440)	Sludge, sediments, waste and combustion products	A
4.4	Reserved			
4.5	Determination of chlorine by coulometry	IMP 088/LPOV – part B (ČSN EN 14077; ČSN ISO 18806)	Sludge, sediments, waste and combustion products	A
4.6	Reserved			
4.7	Determination of fluorine by ISE	IMP 089/LPOV (ČSN 44 1382:1993)	Sludge, sediments, waste and combustion products	A
4.8	Reserved			
4.9	Determination of EOX by coulometry	IMP 092/LPOV – Part 1.A (Mitsubishi TOX 300 manual)	Sludge, sediments, waste and combustion products	A
4.10	Determination of selected elements by ICP-OES method	IMP 006/LPOV, chap. 6.1.1, 6.1.4, 6.3 (ČSN EN ISO 11885)	Sludge, sediments, waste and combustion products	A, B

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 valid edition of the specified procedure is used (including any changes)

**The Appendix is an integral part of
Certificate of Accreditation No. 135/2024 of 21/03/2024**

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

Výzkumný ústav pro hnědé uhlí a.s.
CAB number 1078, Testing Laboratory
tř. Budovatelů 2830/3, 434 01 Most

³ 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.

Specification of the scope of accreditation:

Ordinal test number	Detailed information on activities within the scope of accreditation (determined analytes)
1.6	Al, Ag, As, B, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, Hg, K, Li, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Sn, Sr, Tl, V, Zn
1.7	F ⁻ , Cl ⁻ , Br ⁻ , I ⁻ , NO ₂ ⁻ , NO ₃ ⁻ , SO ₄ ²⁻ , PO ₄ ³⁻
2.10	SiO ₂ , SO ₃
2.11	Fe ₂ O ₃ , Al ₂ O ₃ , CaO, MgO
2.12	TiO ₂ , P ₂ O ₅
2.13	MnO, Na ₂ O, K ₂ O
2.23	Al, Ag, As, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Se, Sn, Sr, Te, Tl, Ti, V, Zn
3.5	PCB 28, PCB 52, PCB 101, PCB 118, PCB 138, PCB 153, PCB 180
3.13	As, Ba, Be, Cd, Co, Cr, Cu, Mo, Ni, Pb, Sb, V, Zn
4.10	Al, As, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, Pb, Sn, Ti, V, Zn

Specification of the scope of accreditation:

Ordinal test number	Detailed information on activities within the scope of accreditation (tested subject)
1.1 to 1.11, 1.15 to 1.18	Water: surface, waste, mine and ground Aqueous extract according to the Regulation No. 294/2005 Coll. and Regulation no. 273/2021 Coll.
2.1, 2.2, 2.4 to 2.13, 2.15, 2.17, 2.18, 2.22, 2.23	Solid fuels: coke, black coal, brown coal, lignite, alternative fuels, biofuels

**The Appendix is an integral part of
Certificate of Accreditation No. 135/2024 of 21/03/2024**

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

Výzkumný ústav pro hnědé uhlí a.s.
CAB number 1078, Testing Laboratory
tř. Budovatelů 2830/3, 434 01 Most

Sampling:

Ordinal number	Sampling procedure name	Sampling procedure identification ¹	Subject of sampling
1	Sampling of water by manual surface sampling	IMP 106.1/ZAL - part A (ČSN ISO 5667-4; ČSN EN ISO 5667-6)	Surface water
2	Sampling of waste and mine water by manual sampling	IMP 106.1/ZAL - part B (ČSN ISO 5667-10)	Waste and mine water
3	Sampling of water by manual underground sampling	IMP 106.1/ZAL - part C (ČSN ISO 5667-11)	Ground water
4	Sampling of liquids and pasty materials	IMP 106.1/ZAL - part D (MoE Guideline for waste sampling; 04/2008; 101 pages)	Liquids and pasty materials
5	Sampling of solid and bulk materials, aggregates	IMP 106.3/ZAL (ČSN 72 1008:1980; ČSN 01 5111; ČSN 72 1152; ČSN EN 932-1; ČSN EN 14899; MoE Guideline for waste sampling; 04/2008)	Solid and bulk materials, aggregates
6	Sampling of solid fuels	IMP 106.2/ZAL, procedure A (ČSN 44 1304; ČSN ISO 5069-1:1997; ČSN ISO 13909-3; ČSN EN ISO 21645; ČSN EN ISO 18135)	Solid fuels

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)

Specification of the scope of accreditation:

**The Appendix is an integral part of
Certificate of Accreditation No. 135/2024 of 21/03/2024**

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

Výzkumný ústav pro hnědé uhlí a.s.
CAB number 1078, Testing Laboratory
tř. Budovatelů 2830/3, 434 01 Most

Ordinal sampling number	Detailed information on activities within the scope of accreditation (subject of sampling)
6	Solid fuels: coke, black coal, brown coal, lignite, alternative fuels, biofuels

2. Immission and Emission Measurement Laboratory

Tests:

Ordinal number ¹	Test procedure / method name	Test procedure / method identification ²	Tested subject	Degrees of freedom ³
1-4	Reserved			
5	Air			
5.1	Reserved			
5.2*	Gravimetric determination of dustfall using sedimentation	IMP 109/LIEM (Government Regulation No. 350/2002 Coll., Annex No. 6, Part C)	Outdoor, indoor and workplace air	A, B
5.3*	Determination of total and respirable dust in air by gravimetry	IMP 107/LIEM, chap. 1 (ČSN EN 481; ČSN EN 689+AC; ČSN EN ISO 13137; ČSN ISO 7708; Government Regulation No. 361/2007 Coll.)	Workplace and non-workplace air	A, B
5.4*	Continuous measurement of the concentration of airborne dust (aerosol particles) PM ₁₀ and PM _{2.5} by SHARP 5030 analyzer	IMP 104.3/LIEM (ČSN EN 12341; ČSN EN 16450; Manual to SHARP 5030 by Thermo Fisher Scientific)	Outdoor and indoor air	A, B
5.5*	Continuous measurement of the concentration of airborne dust (aerosol particles) PM ₁₀ and PM _{2.5} by FIDAS 200 analyzer	IMP 104.4/LIEM (ČSN EN 12341; ČSN EN 16450; Manual to FIDAS by Palas GmbH)	Outdoor and indoor air	A, B
5.6*	Continuous measurement of the concentration of airborne dust (aerosol	IMP 104.2/LIEM (ČSN EN 12341; ČSN EN 16450;	Outdoor and indoor air	A, B

**The Appendix is an integral part of
Certificate of Accreditation No. 135/2024 of 21/03/2024**

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

Výzkumný ústav pro hnědé uhlí a.s.
CAB number 1078, Testing Laboratory
tř. Budovatelů 2830/3, 434 01 Most

Ordinal number ¹	Test procedure / method name	Test procedure / method identification ²	Tested subject	Degrees of freedom ³
	particles) PM ₁₀ and PM _{2,5} by FH 62 I-R analyzer	Manual to FH 62 I-R by Thermo ESM Andersen)		

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 valid edition of the specified procedure is used (including any changes)

³ 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.

Sampling:

Ordinal number	Sampling procedure name	Sampling procedure identification ¹	Subject of sampling
1 to 6	Reserved		
7	Sampling of total and respirable fraction of dust	IMP 106.4/LIEM (ČSN EN 481; ČSN EN 689+AC; ČSN EN ISO 13137; ČSN ISO 7708; GR No. 361/2007 Coll.)	Workplace and non-workplace air
8	Sampling of airborne dust by manual sampling	IMP 108/LIEM (ČSN EN ISO 13137)	Outdoor and indoor air
9	Sampling of dustfall	IMP 109/LIEM (GR No. 350/2002 Coll., Annex No. 6, part C)	Outdoor, indoor and working air

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)

**The Appendix is an integral part of
Certificate of Accreditation No. 135/2024 of 21/03/2024**

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

Výzkumný ústav pro hnědé uhlí a.s.
CAB number 1078, Testing Laboratory
tř. Budovatelů 2830/3, 434 01 Most

3. Rock Testing Laboratory

Tests:

Ordinal number ¹	Test procedure / method name	Test procedure / method identification ²	Tested subject	Degrees of freedom ³
1 - 5	Reserved			
6	Soils and building materials			
6.1	Determination of grain size	IMP 1/LTH (ČSN EN ISO 17892-4; ČSN EN 933-1; ČSN ISO 2591-1; ČSN 44 1340; ČSN ISO 1953; ČSN EN ISO 17827-2; ČSN 72 2080, cl. 11.3; ČSN 72 2071, cl. 11.3)	Soils, granulates, desulfurization products, aggregates, granular materials, solid fuels, black coal, solid biofuels, fluid ash, ash	A
6.2*	Inspection of the compaction of soils and backfills	ČSN 72 1006, Annex A, B, D	Soils, ash, granulates	A
6.3*	Determination of mass per unit volume	IMP 3/LTH (ČSN EN ISO 17892-2; ČSN 72 1010, cl. A, C, D1,)	Soils, ash, granulates	A
6.4	Determination of apparent density (specific gravity) of solid particles	IMP 4/LTH (ČSN EN ISO 17892-3; ČSN EN 1097-7; ČSN 72 2080, cl. 11.5; ČSN 72 2071, cl. 11.5)	Soils, granulates, aggregates, fluid ash, ash	A
6.5	Laboratory determination of moisture and water by	IMP 5/LTH (ČSN EN ISO 17892-1; ČSN EN ISO 18134-1;	Soils, ash, granulates solid fuels, aggregates, fluid ash, ash	A

**The Appendix is an integral part of
Certificate of Accreditation No. 135/2024 of 21/03/2024**

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

Výzkumný ústav pro hnědé uhlí a.s.
CAB number 1078, Testing Laboratory
tř. Budovatelů 2830/3, 434 01 Most

Ordinal number¹	Test procedure / method name	Test procedure / method identification²	Tested subject	Degrees of freedom³
	drying method by gravimetry	CSN P CEN/TS 15414-1; ČSN EN 1097-5; ČSN 72 2080, cl. 11.4; ČSN 72 2071, cl. 11.4)		
6.6	Determination of Atteberg limits	ČSN CEN ISO/TS 17892-12:2005	Soils	A
6.7	Laboratory determination of compactibility	ČSN EN 13286-2	Soils, ash, granulates	A
6.8	Laboratory determination of uniaxial compressive strength	IMP 8/LTH (ČSN CEN ISO/TS 17892-7:2005; ČSN EN 1926)	Soils, ash, granulates aggregates	A
6.9	Determination of mineralogical composition by X-ray diffractometry	IMP 9/LTH (Siemens D5000 manual)	Materials in powder form	A
6.10	Determination of shear strength parameters by torsion shear tester	IMP 11/LTH (ČSN CEN ISO/TS 17892-10: 2005)	Soils materials, ash, granulates	A
6.11	Determination of durability by sodium sulphate	ČSN 72 1176, p. III.A	Backfilling materials, aggregates, granulates, artificial aggregates, bound mixtures	A
6.12	Determination of permeability	IMP 10/LTH (ČSN CEN ISO/TS 17892-11: 2005)	Soils, ash, granulates	A
6.13	Determination of the bearing ratio CBR and IBI	ČSN EN 13286-47	Soils, ash, granulates	A
6.14	Determination of fluidity by flow table test	ČSN EN 12350-5	Building mixtures, backfilling materials	A
6.15	Determination of frost resistance	ČSN 73 6124-1 Annex A	Backfilling materials, aggregates, granulates, artificial aggregates, bound mixtures	A
6.16	Determination of water absorption	ČSN EN 1097-6	Backfilling materials, aggregates, granulates	A
6.17	Determination of compressive strength of test specimens	ČSN EN 12390-3; ČSN EN 13286-41	Backfilling materials building mixtures	A

**The Appendix is an integral part of
Certificate of Accreditation No. 135/2024 of 21/03/2024**

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

Výzkumný ústav pro hnědé uhlí a.s.
CAB number 1078, Testing Laboratory
tř. Budovatelů 2830/3, 434 01 Most

Ordinal number ¹	Test procedure / method name	Test procedure / method identification ²	Tested subject	Degrees of freedom ³
6.18	Determination of bulk density	ČSN EN 1097-3; ČSN EN ISO 17828; ČSN P CEN/TS 15401; ČSN 72 2080, cl. 11.2; ČSN 72 2071, cl. 11.2	Backfilling materials, aggregates, granulates, artificial aggregates, solid fuels, fluid ash, ash	A

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 valid edition of the specified procedure is used (including any changes)

³ 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.

Sampling:

Ordinal number	Sampling procedure name	Sampling procedure identification ¹	Subject of sampling
1 to 4	Reserved		
5	Sampling of solid and bulk materials, aggregates	IMP 106.3/ZAL (ČSN 72 1008:1980; ČSN 01 5111; ČSN 72 1152; ČSN EN 932-1; MoE Guideline for waste sampling, 04/2008)	Solid and bulk materials, aggregates
6	Sampling of solid fuels	IMP 106.2/ZAL, procedure B (ČSN 44 1308)	Solid fuels

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).

Specification of the scope of accreditation:

Ordinal test number	Detailed information on activities within the scope of accreditation (tested subject)
6	Solid fuels: coke, black coal, brown coal, lignite, alternative fuels, biofuels

**The Appendix is an integral part of
Certificate of Accreditation No. 135/2024 of 21/03/2024**

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

Výzkumný ústav pro hnědé uhlí a.s.
CAB number 1078, Testing Laboratory
tř. Budovatelů 2830/3, 434 01 Most

4. Technical Diagnostics Laboratory

Tests:

Ordinal number¹	Test procedure / method name	Test procedure / method identification²	Tested subject	Degrees of freedom³
1 - 6	Reserved			
7	Noise			
7.1*	Measurement of noise	ČSN EN ISO 9612	Working environment	A
7.2*	Measurement of noise	ČSN ISO 1996-1; ČSN ISO 1996-2	Non-working environment	A
7.3*	Measurement of sound power of noise sources	ČSN EN ISO 3744; ČSN EN ISO 3746; ČSN EN ISO 11201; ČSN EN ISO 11202; ČSN EN ISO 11204; Government Regulation No. 9/2002 Coll., Annex 3, excl. cl. 11	Machines and equipment	A
8	Machinery			
8.1*	Measurement of the balancing of giant machines	IMP 001/LTD	Mining and stowing giant machines, bucket wheel loaders	-

**The Appendix is an integral part of
Certificate of Accreditation No. 135/2024 of 21/03/2024**

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

Výzkumný ústav pro hnědé uhlí a.s.
CAB number 1078, Testing Laboratory
tř. Budovatelů 2830/3, 434 01 Most

Ordinal number ¹	Test procedure / method name	Test procedure / method identification ²	Tested subject	Degrees of freedom ³
8.2*	Measurement of safety equipment of giant machines	IMP 002/LTD	Mining and stowing giant machines, bucket wheel loaders, DPD equipment, mining equipment of floating machines	-

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 valid edition of the specified procedure is used (including any changes)

³ 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.

Abbreviations used:

AMA	– Advanced Mercury Analyser
AOX	– Adsorbable Organically Bound Halogens
CBR	– California Bearing Ratio
DPD	– Long-Distance Belt Transport
ECD	– Electron Capture Detector (Ni ⁶³)
EOX	– Extractable Organically Bound Halogens
FID	– Flame Ionization Detector
GC	– Gas Chromatography
COD	– Chemical Oxygen Demand
IBI	– Linear swelling index
IC	– Ion Chromatography
ICP/OES	– Inductively Coupled Plasma Optical Emission Spectrometry
IMP	– Internal guideline
ISE	– Ion Selective Electrode
LACH	– Analytical Chemistry Laboratory
LIEM	– Immission and Emission Measurement Laboratory
LPOV	– Laboratory for Fuels, Waste and Water
LTD	– Technical Diagnostics Laboratory
LTH	– Rock Testing Laboratory
MoE	– Ministry of Environment
GR	– Government Regulation
PCB	– Polychlorinated biphenyls

**The Appendix is an integral part of
Certificate of Accreditation No. 135/2024 of 21/03/2024**

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

Výzkumný ústav pro hnědé uhlí a.s.
CAB number 1078, Testing Laboratory
tř. Budovatelů 2830/3, 434 01 Most

DIS – Dissolved Inorganic Salts
X-ray – X-ray
TCD – Thermal Conductivity Detector
UV – Ultraviolet
ZAL – Analytical Testing Laboratory