

**The Appendix is an integral part of
Certificate of Accreditation No. 598/2021 of 11/11/2021**

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

ORLEN UniCRE a.s.
Analytical Chemistry Testing Laboratory
Revoluční 1521/84, Ústí nad Labem–centrum, 400 01 Ústí nad Labem

Testing laboratory locations:

- | | | |
|----|-----------------------|--|
| 1. | Ústí nad Labem | Revoluční 1521/84, 400 01 Ústí nad Labem |
| 2. | Litvínov | Záluží 1, 436 70 Litvínov |

1. **Ústí nad Labem**

Tests:

Ordinal number ¹	Test procedure/method name	Test procedure/method identification ²	Tested object
1	Determination of mercury by AAS method using AMA 254	SOP-31 (ČSN 75 7440)	Waste waters, aqueous extracts ³ , soils, composts, sludges, sediments, solid wastes
2	Determination of HCl emissions by spectrophotometry	SOP-91 (ČSN EN 1911)	Absorption solutions
3	Determination of ammonia emissions by spectrophotometry	SOP-94 (ČSN 83 4728-4)	Absorption solutions
4	Determination of fluorine emissions by spectrophotometry	SOP-95 (ČSN 83 4752-2:1990, ČSN 83 4752-4:1990, ČSN P CEN/TS 17340)	Absorption 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 Aqueous extracts according to ČSN EN 12457-4.

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2. Litvínov

Tests:

Ordinal number ¹	Test procedure/method name	Test procedure/method identification ²	Tested object
1	Determination of polycyclic aromatic hydrocarbons (PAH) by HPLC method with fluorescence detection ³	SOP-L1/4A (ČSN EN ISO 17993, ČSN EN 16181)	Soils, sludges, solid wastes
2	Determination of polycyclic aromatic hydrocarbons (PAH) by HPLC method with ultraviolet detection ⁴	SOP-L1/4B (ČSN EN 16181)	Soils, sludges, solid wastes
3	Simulated distillation of medium and high boiling petroleum fractions	SOP-L1/3 (ASTM D6352, ASTM D7169)	Liquid and solid petroleum products
4	Determination of C, H, S, N by Flash 2000 elemental analyzer	SOP-L3/2 (ČSN ISO 29541, Flash 2000 Operation Instructions)	Liquid and solid petroleum products, used catalysts
5	Determination of low nitrogen content by combustion method with chemiluminescence detection	SOP-L3/4 (ASTM D4629)	Liquid and solid petroleum products
6	Determination of impurities by IMR-MS ⁵ and purity of hydrogen by calculation from measured values	SOP-L4/1A (ČSN ISO 14687)	Hydrogen fuel (gas)
7	Determination of water content by resonance method	SOP-L4/1B (ČSN ISO 14687)	Hydrogen fuel (gas)

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- ³ naphthalene, phenanthrene, anthracene, fluoranthene, pyrene, benzo[a]anthracene, chrysene, benzo[b]fluoranthene, benzo[k]fluoranthene, benzo[a]pyrene, benzo[g,h,i]perylene, indeno[1,2,3,-ed]pyrene, acenaphthene, fluorene, dibenzo[a,h]anthracene
- ⁴ acenaphthylene
- ⁵ acetylene, ethylene, ethane, propylene, butane, pentane, benzene, toluene, xylenes, carbon disulfide, methyl mercaptan, ethyl mercaptan, hydrogen sulfide, carbonsulfide, bromoform, tetrachloroethylene, 1,2-dichloroethane, trichloroethylene, trichloromethane+dichlorobromomethane, dichloromethane, HCl

Explanations:

Simulated distillation – gas chromatography with flame ionization detection

IMR-MS – Ion Molecular Radio Mass Spectrometry

HPLC – High Performance Liquid Chromatography

AAS – Atomic Absorption Spectrophotometry