

INFORMATION ON 2026 PROFICIENCY TESTING (PT) PROGRAMMES

In 2026, the following proficiency testing programmes are scheduled. Their aim is to verify the quality of emission measurement laboratories, evaluate participant performance, and provide an opportunity for participants to learn from their participation in the PT and use the information obtained to improve the quality of their measurements.

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| PT scheme name | <p>ALME – OR – 01/26 part A: Determination of the concentration of selected gaseous components (CO, NO, SO₂) in gas mixture</p> <p>ALME – OR – 01/26 part B: Determination of the concentration of selected gaseous components (CO₂) in gas mixture;</p> <p>ALME – OR – 01/26 part C: Determination of the concentration of selected gaseous components (O₂) in gas mixture;</p> |
| Matrix | Nitrogen |
| Parameters | CO, NO, SO ₂ , O ₂ , CO ₂ |
| Date and Venue | <p>14. 9. – 18. 9. 2026, Hradec Králové EMPLA AG spol. s r.o., Za Škodovkou 305/5, 503 11 Hradec Králové, Czech Republic Minimum number of participants for the programme to take place – 5</p> |
| Activities provided by an external provider | Preparation of proficiency testing items (SIAD Czech spol. s r.o.) – CRM Measurement premises and equipment (EMPLA AG, spol. s.r.o.) |
| Sampling method PT item | <p>Direct sampling of the test item Gas mixture</p> |
| Range of values for PT items | <p>CO: 100 – 400 mg/m³; NO: 20 - 250 mg/m³; SO₂: 50 - 400 mg/m³, CO₂: 2 – 12 obj. % O₂: 5 - 16 obj. %,</p> |
| Specific conditions for item sampling | Developed sampling line |
| Analyses | <p>PT participants may use a test method or measurement procedure of their choice. Statistical evaluation of the proficiency testing and participant performance will be assessed using Z-scores for each measured parameter. A participant is considered successful if they meet the following in the relevant measurement section (gas component): $Z_i(Z'_i) \in \langle -2; 2 \rangle$</p> |
| Assigned Value | A robust estimate of the consensus value from participant results will be used to calculate the assigned value. |
| Recording of Results | <p>Results will be recorded on-site:</p> <ol style="list-style-type: none"> 1) In the form received by the participant after submitting the application, no later than 14 days before the start of the PT. 2) Electronically after logging in to the ALME website. |
| Deadline for Publication of Assigned Values | 15. 11. 2026 |

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| PT scheme name | ALME – OR – 02/26: Determination of the concentration of propane in gas mixture |
| Matrix | Synthetic air |
| Parameters | C ₃ H ₈ |
| Date and Venue | 14. 9. – 18. 9. 2026, Hradec Králové EMPLA AG spol. s r.o., Za Škodovkou 305/5, 503 11 Hradec Králové, Czech Republic Minimum number of participants for the programme to take place – 5 |
| Activities provided by an external provider | Preparation of proficiency testing items (SIAD Czech spol. s r.o.) – CRM Measurement premises and equipment (EMPLA AG, spol. s.r.o.) |
| Sampling method PT item | Direct sampling of the test item Gas mixture |
| Range of values for PT items | 10 - 150 mg/m ³ |
| Specific conditions for item sampling | Developed sampling line |
| Analyses | PT participants may use a test method or measurement procedure of their choice. Statistical evaluation of the proficiency testing and participant performance will be assessed using Z-scores for each measured parameter. A participant is considered successful if they meet the following: $Z_i(Z'_i) \in \langle -2; 2 \rangle$ |
| Assigned Value | A robust estimate of the consensus value from participant results will be used to calculate the assigned value. |
| Recording of Results | Results will be recorded on-site: 1) In the form received by the participant after submitting the application, no later than 14 days before the start of the PT. 2) Electronically after logging in to the ALME website. |
| Deadline for Publication of Assigned Values | 15. 11. 2026 |

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| PT scheme name | ALME – OR – 03/26: Determination of the concentration of ammonia in gas mixture |
| Matrix | Nitrogen |
| Parameters | NH ₃ |
| Date and Venue | 14. 9. – 18. 9. 2026, Hradec Králové EMPLA AG spol. s r.o., Za Škodovkou 305/5, 503 11 Hradec Králové, Czech Republic Minimum number of participants for the programme to take place – 5 |
| Activities provided by an external provider | Preparation of proficiency testing items (SIAD Czech spol. s r.o.) – CRM Measurement premises and equipment (EMPLA AG, spol. s.r.o.) |
| Sampling method PT item | Assembly of complete sampling apparatus Gas mixture |
| Range of values for PT items | 5 - 80 mg/m ³ |
| Specific conditions for item sampling | Developed sampling line. Two samplings of 30 liters of gas will be enabled. |
| Analyses | PT participants may use a test method or measurement procedure of their choice. Statistical evaluation of the proficiency testing and participant performance will be assessed using Z-scores for each measured parameter. A participant is considered successful if they meet the following: $Z_i(Z'_i) \in \langle -2; 2 \rangle$ |
| Assigned Value | A robust estimate of the consensus value from participant results will be used to calculate the assigned value. |
| Recording of Results | Results will be recorded and sent by 14 October 2026: 1) In the form received by the participant after submitting the application, no later than 14 days before the start of the PT. 2) Electronically after logging in to the ALME website |
| Deadline for Publication of Assigned Values | 15. 11. 2026 |

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| PT scheme name | ALME – OR – 6/26: Determination of mass flowrate of solid pollutants in gas stream including flow velocity and mass concentration |
| Matrix | Air |
| Parameters | Particulate matter concentration, Average flow velocity, Mass flow rate |
| Date and Venue | 14. 9. - 25. 9. 2026, Ostrava-Poruba VŠB-VEC, 17. listopadu 2172/15, 708 00 Ostrava-Poruba, Czech Republic Minimum number of participants for the programme to take place – 5 |
| Activities provided by an external provider | Preparation of proficiency testing items (VEC, VŠB-TUO) Measurement premises and equipment (VEC, VŠB-TUO) |
| Sampling method PT item | Measurement of the mean velocity in the profile – grid measurement of velocities in the measurement profile using velocity probes. Dust concentration (TSP) – isokinetic sampling from a dusty environment followed by gravimetric evaluation. Mass flow – is calculated from the dust concentration, mean velocity, and the cross-sectional area of the measurement profile. Dust particles |
| Range of values for PT items | The mass flow rate can be set in the range of 25 to 2500 g/h. Mean flue gas velocity in the pipe in the range of 8 to 14 m/s. Dust concentration (TSP) in the range of 20 to 30 (referred to 0°C and 101.325 kPa). |
| Specific conditions for item sampling | A dusty environment is prepared in a pipe with a length of approximately 7 m. The dusty environment with defined parameters is formed approximately 1 m after the start of the pipe and ends at its completion. Two measurement stations are located on this pipe, where the defined indicators can be determined. |
| Analyses | PT participants may use a test method or measurement procedure of their choice. Statistical evaluation of the proficiency testing and participant performance will be assessed using Z-scores for each measured parameter. For each of the three measured quantities (mass flow, flow velocity, and mass concentration), three Z(Z')-score values will be calculated, totaling nine Z-scores (or Z'-scores). In the case of a successful result, all Z(Z')-score values must fall within the interval: $Z_i(Z'_i) \in \langle -2; 2 \rangle$. |
| Assigned Value | For the calculation of assigned values, a robust estimate of the consensus value from the deviations of individual laboratory results against the provided reference values will be used. |
| Recording of Results | Results will be recorded and sent by 25 October 2026: 1) In the form received by the participant after submitting the application, no later than 14 days before the start of the PT. 2) Electronically after logging in to the ALME website |
| Deadline for Publication of Assigned Values | 15. 11. 2026 |

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| PT scheme name | ALME – OR – 10/26: Determination of the concentration of gaseous hydrogen chloride in gas mixture |
| Matrix | Nitrogen |
| Parameters | HCl |
| Date and Venue | 14. 9. – 18. 9. 2026, Hradec Králové EMPLA AG spol. s r.o., Za Škodovkou 305/5, 503 11 Hradec Králové, Czech Republic Minimum number of participants for the programme to take place – 5 |
| Activities provided by an external provider | Preparation of proficiency testing items (SIAD Czech spol. s r.o.) – non-CRM Measurement premises and equipment (EMPLA AG, spol. s.r.o.) |
| Sampling method PT item | Direct sampling of the test item Gas mixture |
| Range of values for PT items | 10 - 40 mg/m ³ |
| Specific conditions for item sampling | The participant shall assemble their own sampling line. Two samplings of 30 liters of gas will be enabled. |
| Analyses | PT participants may use a test method or measurement procedure of their choice. Statistical evaluation of the proficiency testing and participant performance will be assessed using Z-scores for each measured parameter. A participant is considered successful if they meet the following: $Z_i(Z'_i) \in \langle -2; 2 \rangle$ |
| Assigned Value | A robust estimate of the consensus value from participant results will be used to calculate the assigned value. |
| Recording of Results | Results will be recorded and sent by 14 October 2026: 1) In the form received by the participant after submitting the application, no later than 14 days before the start of the PT. 2) Electronically after logging in to the ALME website |
| Deadline for Publication of Assigned Values | 15. 11. 2026 |

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| PT scheme name | ALME – OR – 11/26: Determination of the concentration of water vapour (H₂O) in gas |
| Matrix | Air |
| Parameters | H ₂ O |
| Date and Venue | 14. 9. - 25. 9. 2026, Ostrava-Poruba VŠB-VEC, 17. listopadu 2172/15, 708 00 Ostrava-Poruba, Czech Republic Minimum number of participants for the programme to take place – 5 |
| Activities provided by an external provider | Preparation of proficiency testing items (VEC, VŠB-TUO) Measurement premises and equipment (VEC, VŠB-TUO) |
| Sampling method PT item | Direct sampling of the test item, direct measurement of the test item. Water vapor. |
| Range of values for PT items | Water vapor concentration in wet gas 8 – 12 vol. % Gas volume flow rate 1 – 5 dm ³ /min |
| Specific conditions for item sampling | Assembly of the complete sampling apparatus. Hygrometer probe diameter maximum 22 mm, probe length minimum 80 mm if the probe is permanently connected to the display unit, probe temperature resistance minimum 80 °C. |
| Analyses | PT participants may use a test method or measurement procedure of their choice. Statistical evaluation of the proficiency testing and participant performance will be assessed using Z-scores for each measured parameter. Two corresponding Z(Z')-scores are calculated for each laboratory. A laboratory is considered successful if it satisfies the following for both Z(Z')-scores: $Z_i(Z'_i) \in \{-2; 2\}$ |
| Assigned Value | For the calculation of assigned values, a robust estimate of the consensus value from the deviations of individual laboratory results against the provided reference values will be used. |
| Recording of Results | Results will be recorded and sent by 25 October 2026: 1) In the form received by the participant after submitting the application, no later than 14 days before the start of the PT. 2) Electronically after logging in to the ALME website |
| Deadline for Publication of Assigned Values | 15. 11. 2026 |