



Proficiency Testing Group

proficiency testing provider no. 7014 accredited by ČIA
in accordance with ČSN EN ISO/IEC 17043:2010

Information on proficiency testing programme: interlaboratory comparison of solid fossil fuels in 2019

Dear employees of testing laboratories,

We would like to invite you to our proficiency testing programme PT/COAL/A,S,Q,C,H,N,V/2019. This programme is designed as interlaboratory comparison. The proficiency testing programme is focused on testing laboratories performing solid fossil fuel tests, eg. brown coal (HU), black coal (ČU) and coke. The objective of PT is to demonstrate the proficiency of accredited and non-accredited laboratories, including verification of used measurement uncertainties.

Proficiency Testing Group, ORGREZ, a.s. is a PT provider no. 7014 accredited by ČIA in accordance with ČSN EN ISO/IEC 17043:2010. Testing laboratories have the opportunity to participate in accredited PT programme in accordance with ČSN EN ISO/IEC 17043 organized by provider who proved the compliance by accreditation. In May 2017, the Multilateral Agreement on European Accreditation (EA MLA) was concluded in the field of accreditation of proficiency testing providers and their acknowledgement abroad. Besides the accreditation body of the Czech Republic eleven other representatives of accreditation bodies of European countries signed this agreement.

Proficiency testing programme

The object of PT/COAL/A,S,Q,C,H,N,V/2019 is determination of

- ash,
- sulphur content,
- gross calorific value (higher heating value, higher calorific value, upper heating value),
- carbon content,
- hydrogen content,
- nitrogen content and
- volatile matter.

In case of sufficient interest (at least 7 laboratories) the programme will be extended **beyond the scope of accreditation** by determination of

- chlorine content and
- mercury content.

Laboratories can use any method which they normally use. Separate evaluation of results by methods is possible provided there are enough results/laboratories. Methods will be commented otherwise.

It is not obligatory to determine all characteristics analysed in the programme.

Tested entries

Tested entries will be set of six analytic samples of solid fossil fuels, four brown coals one black coal and one coke. These samples will be prepared in accredited testing laboratory. All sample sets will be verified for homogeneity. After finishing testing by laboratories, stability will be verified for randomly selected sets of samples. The analyses for homogeneity and stability will be performed in accredited testing laboratory.

PT programme organisation

- Six samples (about 25 g each) will be distributed via postal service together with detailed instructions and forms for test results. It is possible to arrange different way of sample delivery.
- The instructions and result form can be found on the website:
<http://www.orgrez.cz/en/services/proficiency-testing/>.
- In case of not receiving samples in time according to the schedule, please contact the proficiency testing provider.
- The samples will be named with unique numeric codes to prevent unfair cooperation or result falsification.
- Every laboratory will receive only one set of samples and can report one set of results only.
- Laboratories will receive digital draft of final report on PT programme to comment.
- Every laboratory will receive one printed copy of final report, certificate of participation, individual evaluation and one set of referential samples (six samples – about 50 g each).

Time schedule

Application of the laboratories	to 17. 2. 2019
Sample preparation and distribution	to 7. 4. 2019
Testing and results delivery	to 5. 5. 2019
Statistical analysis of results and delivery of report draft (in pdf)	to 23. 6. 2019
Commenting of draft report	to 30. 6. 2019
Distribution of final report and of certificate of participation	to 14. 7. 2019
Time limit for appeal	to 11. 8. 2019

Applications

The only criterion for taking part is to send a complete application, agreement to the rules in application form and the participation of a minimum of 7 laboratories. Please send the signed application to the Proficiency Testing Group in Most (SZZ address) or send an email to szz@orgrez.cz.

The application to the proficiency testing programme can be found in the attachment or on the website: <http://www.orgrez.cz/en/services/proficiency-testing/>.

The price for taking part in the proficiency testing programme PT/COAL/A,S,Q,C,H,N,V/2019 is **14 700,-** CZK without VAT. The price for content of chlorine evaluation is **999,-** CZK, the price for content of mercury evaluation is **999,-** CZK. Payment in EUR will be charged according to the current CZK / EUR exchange rate on the invoice date. The price also includes a set of reference material with weight cca 50 g. The price for additional reference material is **590,-** CZK without VAT per sample. The participant will pay the fee to the provider after receiving invoice, which will be sent after final report on proficiency testing.

Bank account data:

Raiffeisenbank a.s. Hvězdova 1716/2b, 140 78 Praha 4
CZK account: 5014033535/5500 IBAN: CZ2655000000005014033535
EUR account: 5014033543/5500 IBAN: CZ0455000000005014033543

Our ID (IČ) and VAT ID (DIČ) are found in the document footer. Due to the billing write the final date of this programme, i.e. 11. 8. 2019 or later in your order, please.

Evaluation

In accordance with the requirements of ČSN EN ISO/IEC 17 043, statistical methods with z score (or z' score) evaluation will be used to evaluate the performance of the laboratory according to ČSN ISO 13528:2015. As the assigned value, an appropriate robust average value will be used to characterize the given distribution of the values of the participants' results. Horn's procedure will be used in case of small number of laboratories. Differences will further be compared with standardized reproducibility values:

- **ČSN ISO 1171** – Solid mineral fuels – Determination of ash
- **ČSN ISO 1928** – Solid mineral fuels – Determination of gross calorific value by the bomb calorimetric method and calculation of net calorific value
- **ČSN ISO 19579** – Solid mineral fuels – Determination of sulfur by IR spectrometry
- **ČSN ISO 29541** – Determination of total carbon, hydrogen and nitrogen content – Instrumental method
- **ČSN ISO 562** – Hard coal and coke – Determination of volatile matter
- **ČSN ISO 5071-1** – Brown coals and lignites – Determination of the volatile matter in the analysis sample – Part 1: Two-furnace method
- **ČSN 44 1393** – Black and brown coals. Determination of mercury content
- **ČSN ISO 587** – Solid mineral fuels: Determination of chlorine using Eschka mixture.

Results of PT programme evaluation

The results will be included in the summarizing final report. They will be presented with code numbers given to the individual laboratories. Besides this every laboratory will receive Certificate on participation in the proficiency testing programme, including a separate evaluation for each laboratory.

Wishing you successful cooperation on behalf of the Proficiency Testing Group

Mgr. Jan Pomahač – Head of the Proficiency Testing Group
Bc. Bohuslava Kroupová – Coordinator of the Proficiency Testing Group
Ing. Štěpán Klimeš – Quality manager of the Proficiency Testing Group

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