

12 May 2010

Laboratories measuring gross and net calorific value

Subject

Proficiency test SYKE 5/2010

Gross and net calorific value of fuels

Proficiency test SYKE 5/2010

Finnish Environment Institute (SYKE) will organise the proficiency test for measurement of gross and net calorific value of fuels (coal and peat). We invite you to take part in the proficiency test.

We are expecting about 70-80 (maximum number of participants 150) laboratories to participate in the test.

SYKE is the Proficiency Testing Provider No. PT01 accredited by the Finnish Accreditation Service (www.finas.fi). The proficiency testing service in SYKE conforms to the requirements of the Guide ISO/IEC 43-1:1997. The organising of tests for measurement of gross and net calorific value is included in the accreditation scope.

1 General information

Organizing laboratory: Finnish Environment Institute (SYKE), Laboratories, Hakuninmaantie 6, Fl 00430 Helsinki, Finland

Fax:

+358 9 448 320

E-mail:

proftest@environment.fi (primarily this e-mail)

mirja.leivuori@ymparisto.fi kaija.a.korhonen@ymparisto.fi

Contact person:

Mirja Leivuori, coordinator in this PT, mobile +358 40 756 4748

Kaija Korhonen, substitute of coordinator, mobile +358 40 724 8729

Analytical experts:

Minna Rantanen, Ramboll Analytics LTD, Finland (subcontractor)

Finnish Environment Institute (SYKE), Laboratories

2 Samples

We will distribute two fuel samples, which are as follows:

- Peat, about 50 g
- Coal, about 50 g

Preparation and testing of samples will be performed with subcontractors.

3 Registration

Please, return the registration form on our website www.environment.fi/syke/proftest not later than 30 June 2010. The registration form (Appendix 1) can also be sent by e-mail to the address proftest@environment.fi or by fax to the number +358 9 448 320.

In the registration form should clearly mark the visiting address of the participant laboratory for the sample delivery.

4 Transportation

The samples will be distributed on <u>14 September 2010</u>. Samples should be arrived within 3-7 days. If samples are not arrived on 20 September 2010 or samples are broken/missing, please contact to the provider: Mirja Leivuori +358 40 756 4748, Markku Ilmakunnas +358 400 963 991, Keijo Tervonen +358 400 963 997 or Kaija Korhonen +358 40 724 8729.

5 Measurements

The samples should be kept dry and at the room temperature before measurements. Moisture content of the analysis sample should be measured first after storing samples one day on the measuring laboratory. Samples have to homogenate before measurements and store in dry place at room temperature.

Measurands are as follows:

Sample	Sample type	Measurements	
B1	Peat	Gross and net calorific value, C, S, N, H, moisture	
		content of the analysis sample (Mad), ash content	
K1	Coal	Gross and net calorific value, C, S, N, H, moisture content of the analysis sample (M _{ad}), ash content	

The results will be reported in dry weight basis. Additionally, participants shall be estimated/calculated the emission factor for the both samples. The total moisture contents as received (M_{ar}) will be given by SYKE for the both samples. The samples will be measured using the normal analytical protocols of participating laboratory.

6 Results and reporting

The results for proficiency test should be reported to SYKE **not later than 7 October 2010**. With the results are required to report also measuring uncertainties for used analytical methods.

The preliminary result lists will be distributed to the participants in week 42 (2010) and the final report will be published on the SYKE website in the end of February 2011 (www.environment.fi/syke/proftest). The printed version of the report can be ordered as well (Appendix 1). Additionally, some of the data will be confidentially handled in the EA-working groups (the EA LC WG ILC in Testing) due to the joint working within this proficiency test.

7 Assigned values and the evaluation of the results

The robust mean value of the participants' results will be used as the assigned value in measurement of the samples. Evaluation of a laboratory performance will be based on z score. The preliminary target values of the total standard deviation for proficiency assessment will be informed in the sample letter.

8 Confidentiality

The results of the participants will be treated anonymous.

9 Costs

The costs depend on the number of the ordered samples. The participation to the proficiency test will be charged totally maximum 550 €. The price is subjected to VAT (22 %).

The basic cost is 250 € and the costs of each sample are as follows:

Sample	Cost/sample
Coal	150 €
Peat	150 €

We will send out the invoice after delivering the lists of the preliminary results. Additionally, the paper copy of final report will cost 10 €, if participant will to have it.

Do not hesitate to ask if you need further information.

Sincerely Yours,

Miria Leivuori

Head of unit, Coordinator

Kaija Korhonen

Chemist, substitute of coordinator

Appendix 1. Registration form.

Registration form

We will participate in the proficiency test SYKE 5/2010 as follows:

Analyte	Sample code B1 (Peat)*	e/ Participation K1 (Coal)*
Gross calorific value	☐ Yes	☐ Yes
Net calorific value	□ Yes	□ Yes
C content	□ Yes	□ Yes
S content	□ Yes	□ Yes
H content	☐ Yes	□ Yes
N content	□ Yes	□ Yes
Moisture content of the analysis sample (M _{ad})	□ Yes	□ Yes
Ash content	□ Yes	□ Yes
Additional information to take into account (for e	example extra sa	ımples):
Laboratory		
Contact person		
Visiting address		
Invoicing address		
Phone	Fax	
E-mail		_
VAT-number		
Invoice reference number (if required)		
Order number (if required)		
ls your laboratory accredited for the measureme Comment, if needed:	nts? 🗆 Yes 🗆 N	No .
If yes, by which accreditation body?		
By which way did you get the information from tl ☐ by the accreditation body of yo ☐ by the provider of the PT		
We want to have a printed report (10 €) ☐ Yes		

Please, return this form <u>not later than 30 June 2010</u> on our website: www.environment.fi/syke/proftest

Or by e-mail to: proftest@environment.fi or by Fax to the number: +358 9 495 913

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