

Lab	$x_i$	$U_i$	Technique	z score	$\zeta$ score	Unc
L01	0.47	0.19	AAS	0.18	0.16	c
L02	0.49	0.11	ICP-MS	0.43	0.64	a
L03	0.46	0.11	ICP-MS	0.06	0.09	a
L04	0.422	0.063	ICP-MS	-0.40	-1.04	a
L05	0.49	0.07	ICP-MS	0.43	1.00	a
L06	0.47	0.04	ICP-MS	0.18	0.74	a
L07	0.4	0.08	ICP-MS	-0.67	-1.37	a
L08	0.562	0.083	ICP-MS	1.31	2.57	a
L09	0.518	0.026	ICP-MS	0.77	4.64	a
L10	0.447	0.125	ICP-MS	-0.10	-0.13	a
L11	0.717	0.057	ET-AAS	3.20	9.11	a



European  
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### JRC Mission

As the science and knowledge service of the European Commission, the Joint Research Centre's mission is to support EU policies with independent evidence throughout the whole policy cycle.

European Commission  
Joint Research Centre (JRC)

Tel.: +32 (0)14 571 201

E-mail: [JRC-F5-CONFERENCES@ec.europa.eu](mailto:JRC-F5-CONFERENCES@ec.europa.eu)



EU Science Hub  
[ec.europa.eu/jrc](http://ec.europa.eu/jrc)



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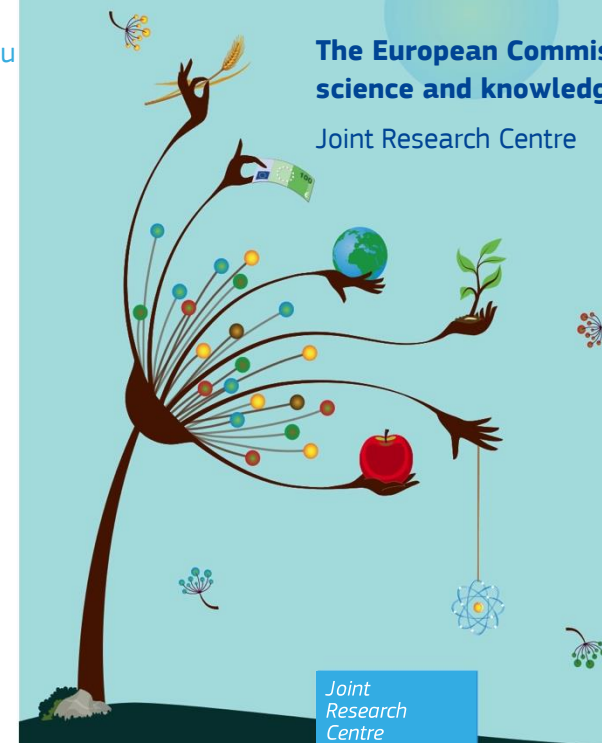
## Training course - Announcement

### Implementing ISO/IEC 17043 'General requirements for proficiency testing'

25 – 26 February 2019

The European Commission's  
science and knowledge service

Joint Research Centre



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Research  
Centre

## Aim

- This course will provide participants the opportunity to get familiar with the design, operation and assessment of proficiency testing (PT).
- It should enhance the capability of laboratories in the proper selection of adequate proficiency tests and reliable PT providers as well as facilitating own PT activities.
- Experiences of implementing ISO/IEC 17043:2010 will be shared by a PT provider accredited by the Belgian accreditation body (BELAC).

## Who should attend?

- Proficiency testing providers who wish to comply with the ISO /IEC 17043 requirements.
- Auditors who need to assess the correct design, operation, data analysis, and reporting of proficiency testing schemes accordingly to ISO/IEC 17043.
- Laboratories participating in proficiency testing rounds who wish to correctly interpret their performance score and any advice or educational feedback from the PT provider, and act accordingly.

## Prerequisites

- A postgraduate level in science and basic knowledge of concepts such as measurement uncertainty evaluation, metrological traceability and general analytical measurements are needed.
- Knowledge of basic statistical concepts (e.g. mean, standard deviation, robust statistical methods) are required to make full use of the exercises.
- Ability to discuss and interact in English.

## Contact

European Commission  
Joint Research Centre  
Directorate "Health, Consumers and Reference Materials"  
Retieseweg 111  
B-2440 Geel – Belgium  
Tel.: +32 (0)14 571 201

E-mail: [JRC-F5-CONFERENCES@ec.europa.eu](mailto:JRC-F5-CONFERENCES@ec.europa.eu)

## Topics tackled

### Concepts and Terminology

- Explanation of concepts and definitions to ensure a common understanding.

### Technical requirements

- Design of proficiency testing schemes;
- Personnel;
- Equipment, accommodation and environment.

### Test item - Selection and preparation

- Material selection;
- Processing;
- Ensuring adequate homogeneity and stability;
- Statistical design.

### Test item – Value assignment

- Approaches for value assignment;
- Metrological traceability of assigned values;
- Associated measurement uncertainty.

### Operation of proficiency testing schemes

- Handling and storage of test items;
- Test item distribution;
- Instruction to participants.

### Data analysis and performance evaluation

- Performance scores and calculations;
- Dealing with variation among methods or procedures;
- Providing advice and educational feedback to participants.;
- Reporting;
- Follow-up.

### Management requirements

- Organisation;
- Management system;
- Document control

### Intensive practice

This course strongly emphasises the practical application of theoretical concepts and general standardized requirements. To this end, each lecture is accompanied by exercises during which the concepts are put into practice.

## Practical Information

### Timing

The course will start on 25 February 2019 at 9:00h and end on 26 February 2019 at 12:30h.

### Accommodation

The JRC will make reservations in a close-by hotel.

### Transfers

Transfers will be organised:

- from the airport /train stations on arrival,
- from the hotel to the JRC and back to the hotel,
- from the JRC to the airport/train stations .

### Location

European Commission  
Joint Research Centre  
Directorate "Health, Consumers and Reference Materials"  
Retieseweg 111, 2440 Geel, Belgium

### Registration

Please register online via the [Registration for Events module](#). If you are using this application for the first time you will need to create a user account. Otherwise, please log in with your credentials, browse to the event under Geel. The meeting is called "Training Course Implementing ISO/IEC 17043, requirements for proficiency testing".

The number of participants is limited to approximately 20. Registrations will be handled on a "first come, first served" basis. If you have any questions with regard to registration, please feel free to contact our Secretariat on [JRC-F5-CONFERENCES@ec.europa.eu](mailto:JRC-F5-CONFERENCES@ec.europa.eu)

**Deadline for registration:** 25 January 2019

This training course is free of charge.

Accommodation and lunches / dinner costs are not included. Accommodation costs have to be paid directly to the hotel.