

TC-IM Project 1543:

**Calibration guides
for accredited laboratories
in EURAMET member
countries**

27th TC-IM Meeting
15 March 2022
Online-Meeting

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TC-IM Project 1543



Calibration Guides for accredited laboratories in EURAMET member countries

Project Description

The use of harmonised and validated calibration guidelines increases the reliability of services provided by calibration laboratories in EURAMET member countries. Furthermore, it facilitates the accreditation process for these laboratories as by the use of a method described in a regional or national standard a validation of the method by the laboratory itself is not required.

EURAMET calibration guides are widely used within this community, but they only cover a limited range of calibration services. In many countries NMIs are supporting calibration laboratories by developing additional guides at a national level, however the mechanisms and specific issues, needs and opportunities for further support by the EURAMET TCs are not generally known to the EURAMET community. A cross-country cooperation in the development of calibration guides is only happening in a very few cases and is at an initial stage.

General Objective:

Support the development and provision of calibration guidelines in EURAMET member countries, and possibly beyond, by cooperation between national providers of guidelines and EURAMET TCs.

Specific Objectives:

- Understand the mechanisms in EURAMET member countries by which the NMIs provide technical support to the accredited calibration laboratories of their countries, in particular in the development of calibration guides.

SUBJECTS

Interdisciplinary Metrology (IM)

COORDINATOR

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COORDINATING INSTITUTE

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PARTICIPATING PARTNERS

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INFORMATION

REG. NO.
1543

COLLABORATION TYPE
Consultation

STATUS
in progress

STARTING
2021-06-01

PROPOSED COMPLETION
2023-12-31

TC-IM Project 1543



Specific Objectives:

- Understand the mechanisms in EURAMET member countries by which the NMIs provide technical support to the accredited calibration laboratories of their countries, in particular in the development of calibration guides.
- Get an overview on the situation of calibration guides in EURAMET member countries: existing guides/new guides under development/need for new guides
- Analyse and describe the possibilities for cooperation between national initiatives and EURAMET TCs in the development and provision of calibration guides.
- Harmonisation of the structure of calibration guides, to facilitate their use in different EURAMET member countries.
- Identify stakeholder organisations and analyse possibilities and benefits of cooperation.
- Achieve NABs recognition of validated EURAMET calibration guides for the accreditation of calibration laboratories.
- Establish a European pool of calibration guidelines.

Activities / status



	Working Package	Who	Status
1	Questionnaire to EURAMET members	WoS, all	Survey was carried out, 26 responses Results to be presented at TC-IM meeting
2	Questionnaire to / discussion with TCs with published CalGuides	DoC, all	Survey was carried out, 14 responses Results to be presented at TC-IM meeting
3	Cooperation with stakeholder organisations: <ul style="list-style-type: none"> • Identify stakeholders • Existing guides? 	RoG, all	First draft overview on stakeholders and guides was prepared To be further discussed once we have the country responses from A1 (and A2)
4	Discussion with EA on “validated” EURAMET CalGuides, address NAB’s		later
5	Prepare guidance for EURAMET CalGuides Role and cooperation of TCs and JRPs in the development of new CalGuides	JuV, MiD input from all	A guidance document is in preparation in cooperation with TCCs and Secretariat
6	Mechanism for enhancing the pool of validated EURAMET CalGuides		later
7	Repository of CalGuides on EURAMET website		later

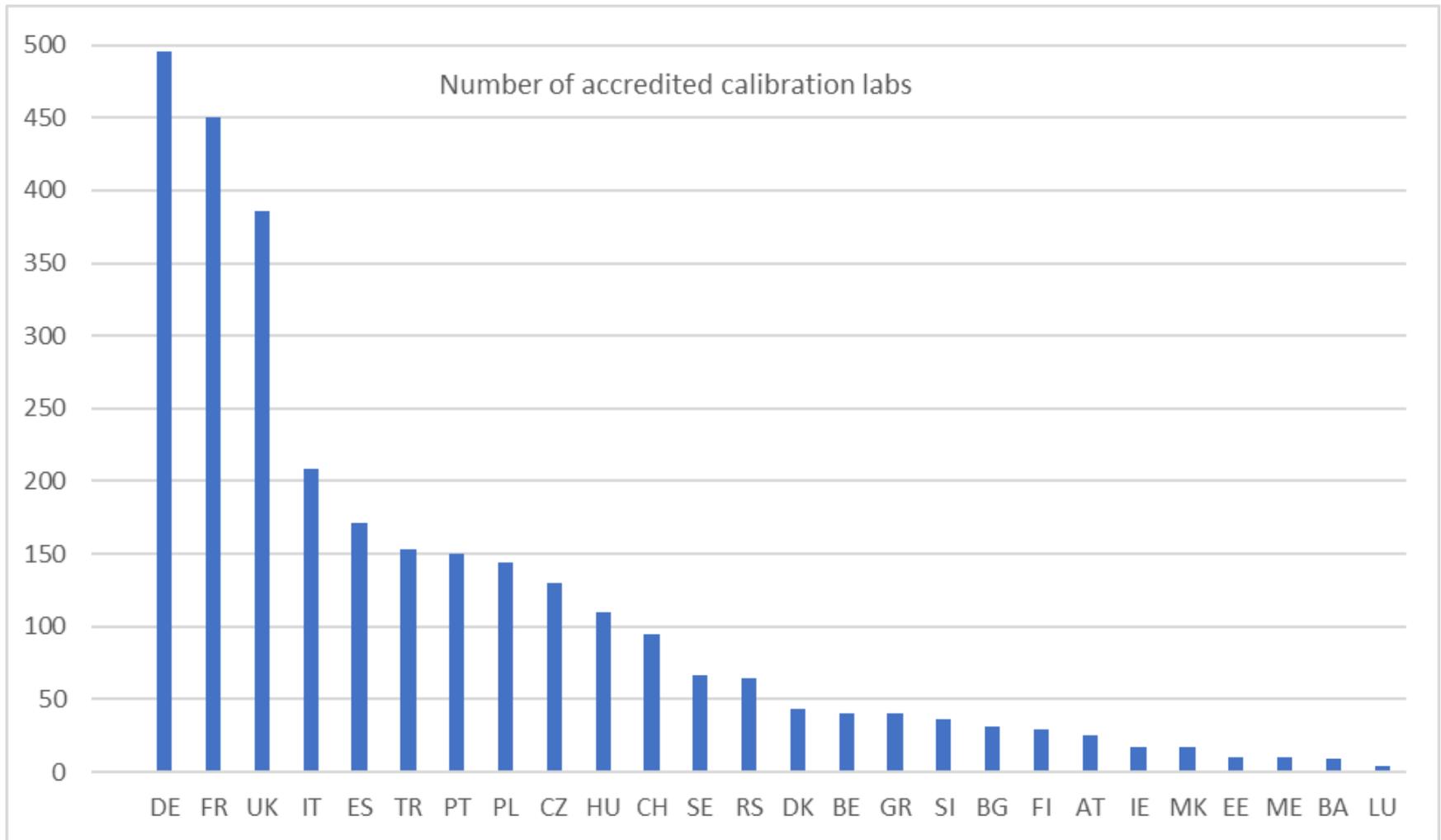
Objectives



- 1) Understand the mechanisms in EURAMET member countries on how the NMIs provide technical support to the accredited calibration laboratories of their countries, in particular in the development of calibration guides.
- 2) Get overview on the situation of calibration guides in EURAMET member countries:
existing guides / new guides under development / need for new guides

- Questionnaire was open from 19 Jan to 21 Feb 2022
- 26 countries responded (2/3 of members):
AT, BA, BE, BG, CH, CZ, DE, DK, EE, ES, FI, FR, GR,
HU, IE, IT, LU, ME, MK, PL, PT, RS, SE, SI, TR, UK

Number of accredited calibration laboratories In the country



National organisation / forum / platform collectively representing the accredited calibration labs?

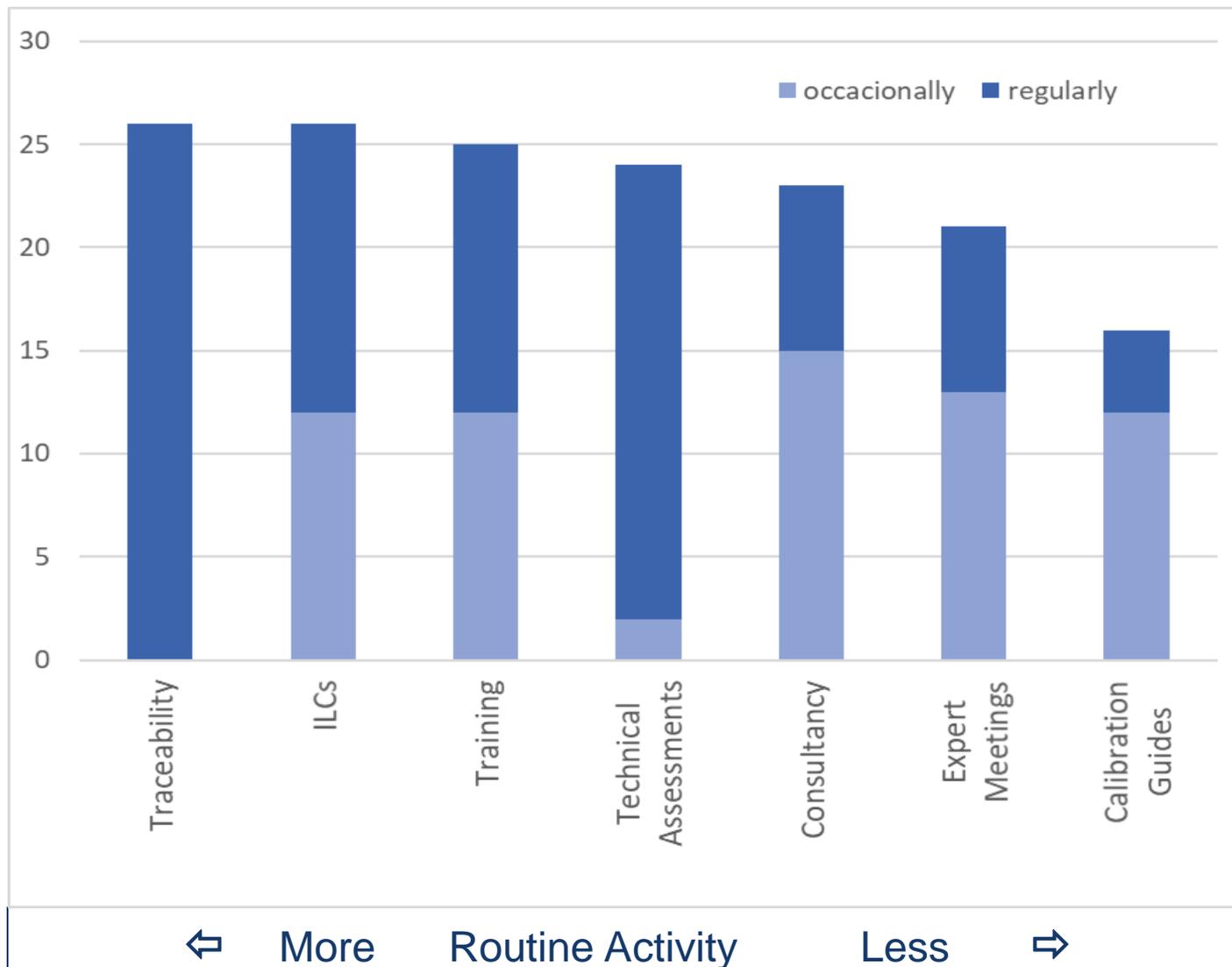


Organisation	# Countries
Specific organisation	5
EUROLAB-national	9
National Accreditation Body	6
none	7

- In 5 countries there is a specific organization to coordinate the cooperation of ACLs
- In several countries the NAB or EUROLAB-ntl has a dedicated committee to support ACLs

		Specific organisation	
CZ	CKS	Czech Calibration Association	www.cks-brno.cz
DE	DKD	Deutscher Kalibrier-Dienst	www.ptb.de/cms/metrologische-dienstleistungen/dkd.html
HU	ASZEK	Akkreditált Szervezetek Klasztere	https://aszek.hu
IT	ALA	Associazione Laboratori Accreditati <i>and other organisations</i>	www.alaonline.it
UK	BMTA	British Measurement and Testing Association	www.bmta.co.uk

Kind of support which the NMI/DI is giving to accredited calibration laboratories?



Are EURAMET calibration guides used in the country?



	Countries
Yes = 22	In most countries
No = 4	FR, HU, MK, SE

Which Guides are used?

- Typically, all or most of the EURAMET CalGuides are listed

By which organisation?

- Accredited Calibration Labs -> in almost all countries
- NAB in the accreditation process -> explicitly mentioned in a few cases (AT, DE, GR)
- Calibration Labs may have internal procedures based on EURAMET Guides
- NMI / DIs -> in some cases
- Industry
- Manufacturers of measuring instruments (CG 18)

National pool of Calibration Guides existing?



Country	CZ	DE	ES	FR	UK
# Guides		30	77	40	15

5b) Which guides are typically used for the accreditation of calibration labs, if there is no national pool of guides?

Guides	Countries
EURAMET CGs	BA, BE, BG, CH, DK, EE, GR, ME, PL, RS, TR
OIML recommendations	BA, BE, DK, MK, PL
International standards (sometimes adopted)	EE, ME, PL, PT, SE
Own internal procedures	EE, HU, PL, PT
Guides from other countries (DE, US, UK, ...)	EE, ME, RS
ILAC	BG, PL
EUROLAB guides & cookbooks	CH

EURACHEM
was not mentioned

Need for further guides in the country?



- Most countries have some need
- Answers are quite diverse
- Most frequent answer: “detailed analysis would be needed”

Next steps



1) Understand better the support given to accredited calibration labs by

- specific organisations for calibration labs (CZ, DE, HU, IT, UK)
- EUROLAB-national (AT, BE, BG, CH, DK, GR, PL, PT, TR)
- NAB (BA, ES, FI, FR, ME, RS)

2) Provide information on national calibration guides to all EURAMET members

- List of guides, titles translated to English
- Provide weblinks on EURAMET website

Objectives

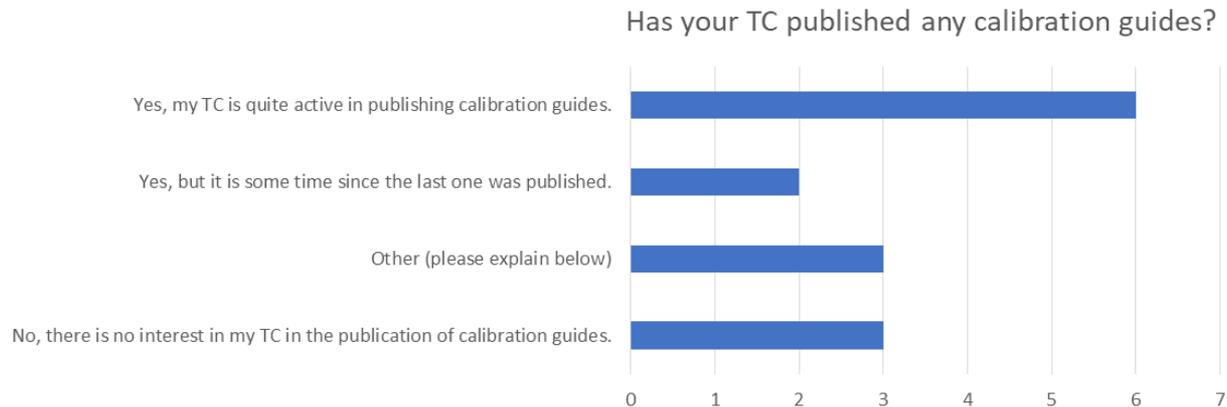


- Mechanisms for developing CalGuides?
Use of national guides as input?
- Use of EURAMET CalGuides in the member countries?
- Who else is using the EURAMET CalGuides?
Support in identifying stakeholders
- Needs for new CalGuides?

Summary of results

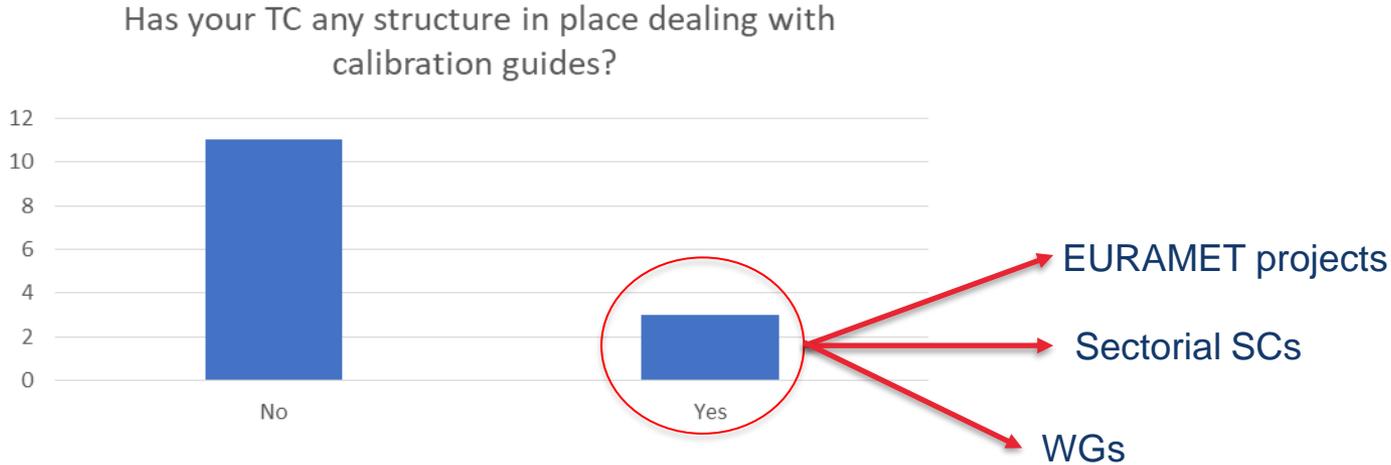


14 responses from TCs and several SCs



- Reasons to not develop calibration guides: good international recommendations (ISO, BIPM, etc..)
- However some TCs such as TC-TF does not rule out to do it in the future. Some SCs such as liquid flow are discussing the need

Summary of results



How the TCs identify the need for developing guides?

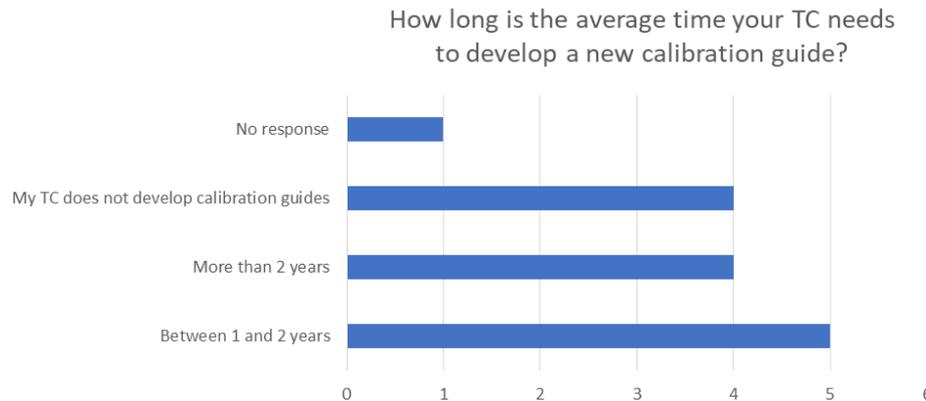
- Discussions within different technical committees: CCs, CC-WGs, TCs SCs...
- Direct request of NMIs
- Feedback from calibration laboratories

Summary of results



When a TC/SC identifies a need to develop a calibration guide?

- They are developed by an interested group of people in the majority of the cases or
- Within an EMPIR project



In a few cases national calibration guides or guides developed by other RMOs have been used as basis for a EURAMET guide.

Summary of results



Implementation of the EURAMET calibration guides :

- Several TCs declare not to have any idea about the implementation of the guides by the different countries
- However, in general, it seems that the EURAMET calibration guides are fostered by the NABs and used by the accredited labs and industry with a few exceptions.
- Some TCs advise on the need for promotion from the NMIs in their countries.
- In most cases the EURAMET guides are used beyond EUROPE

Other comments received:

“I encourage the production of calibration guides within EURAMET, it's essential.”

“The development is generally very labor intensive. And it seems to me that nowadays resources at NMIs are lacking to sometimes even maintain the guides. Writing a new one or major revisions without external funding seems totally illusionary.”

“This is fundamental for Metrology”

Project TC-IM 1543: Next Steps



- Understand better the support given to accredited calibration labs
- Provide lists on national calibration guides on EURAMET website
- Analysis of stakeholder organisations and relevant guides provided by them
- Analyse in cooperation with TCs
 - the need for further calibration guides
 - the opportunities to make wider use of the national pools as input for new EURAMET calibration guides
- Progress / conclude guidance for EURAMET calibration guides by Secretariat + TCCs

ANNEXES

**National
organisations / fora / platforms
to collectively represent the
accredited calibration laboratories**

Czech Republic



Czech Calibration Association

www.cks-brno.cz sekretar@cks-brno.cz

A majority of accredited calibration labs are members in the Czech Calibration Association, a member of EUROCAL - it protects their interests, organizes conferences and trainings etc. CMI is permanently represented in their Board by Mr. Klenovsky.

There is a local e.V. called Czech Metrology Society developing for a long time calibration procedures, e.g.

<https://www.spolky-csvts.cz/cms/content/kalibracni-postupy-neprodejne-ke-stazeni> .
<https://www.spolky-csvts.cz/cms/content/kalibracni-postupy-k-prodeji>

They are only in the Czech language and of variable quality - some are rather old, some a good, often being obsolete as the time is running by. Calibration labs sometimes buy them or download them as the basis for development their own procedures.

Germany



Deutscher Kalibrier-Dienst – DKD

<https://www.ptb.de/cms/metrologische-dienstleistungen/dkd.html>

DKD is a technical body of PTB. It supports the metrological infrastructure, in particular the German calibration system, in terms of the dissemination of units according to § 6 of the Units and Time Act of Germany. The aim of the DKD is to ensure uniformity in metrology by participating in establishing technical regulations at national, European and international level. Accordingly, a major contribution lies in the preparation of DKD guidelines, mainly for calibration, unless suitable standards or guidelines already exist for the field in question. Members of the DKD are primarily German accredited calibration laboratories.

The main work is done in 13 technical committees (“Fach-Ausschüsse”) for the respective metrology areas, which are fora for knowledge transfer between experts from PTB and the accredited calibration laboratories. Their main activities are:

- Organisation of annual meetings, to discuss relevant topics and developments in metrology in general and in the specific area
- Elaboration of calibration guidelines
- Organisation of inter-laboratory comparisons
- Occasionally, organisation of training courses and seminars

Frequently, the same expert is representing PTB both in the EURAMET TC as in the respective DKD committee

Hungary



Akkreditált Szervezetek Klasztere – ASZEK (Cluster of Accredited Organisations)

<https://aszek.hu>

ASZEK was established in 2015 in order to improve the national accreditation practice, to provide technical support to the accredited labs, to assure forum for these labs and to perform international representation. ASZEK has 51 members.

ALPI – Associazione Laboratori e Organismi di Certificazione e Ispezione

<https://www.alpiassociazione.it/>

AIOICI – Associazione Italiana organismi indipendenti di certificazione e ispezione

<https://www.aioici.org/>

ALA – Associazione Laboratori Accreditati <https://www.alaonline.it/>

UNOA – Unione Nazionale Organismi Accreditati <http://www.unoa.it/>

CONFORMA – Associazione Organismi Certificazione Ispezione Prove Taratura

<https://www.associazioneconforma.eu/>

ASSOTIC Federazione nazionale delle associazioni operanti in ambito TIC – Testing, Inspection, Certification <https://www.assotic.it/>

Activities of this organisation:

CISQ – Comitato di coordinamento interassociativo Exchange information on issues of common interest, opinions possibly expressing shared positions, define communication contents, interventions and forms to third parties ALPI Network between laboratories, technical support. Training and information activities for members. CONFORMA Network between laboratories, technical support. UNOA Representation of the associated certification bodies at National and International Institutions and Accreditation Bodies; training and information activities for members. The national accreditation body, ACCREDIA, organises annual meetings with the conformity assessment bodies (accredited calibration and testing laboratories) . Those meetings are also a forum for information exchange, question and answers, etc."

United Kingdom



British Measurement and Testing Association – BMTA

www.bmta.co.uk

BMTA represents the measurement and testing community, provides opportunities to exchange information and views. Provides link to European bodies such as EUROLAB."