


Accurate results for patient care


The Joint Committee for Traceability in Laboratory Medicine (JCTLM)



The JCTLM is a committee established by the BIPM, IFCC and ILAC in 2002 to support world-wide comparability, reliability and equivalence of measurement results in Laboratory Medicine for the purpose of improving health care and facilitating national and international trade in *in vitro* diagnostic devices

JCTLM partners include 56 organizations from 20 countries

National Metrology Institute	25%
EQAS provider	25%
Other	15%
IVD Manufacturer	10%
National & Regional organization	10%
National Laboratory Medicine Society	10%
Private Laboratory Organization	5%
National Accreditation Body	5%
Writing standards body	5%

Traceability in Laboratory Medicine

Accurate results for patient care

JCTLM listed Calibrators / Reference Methods

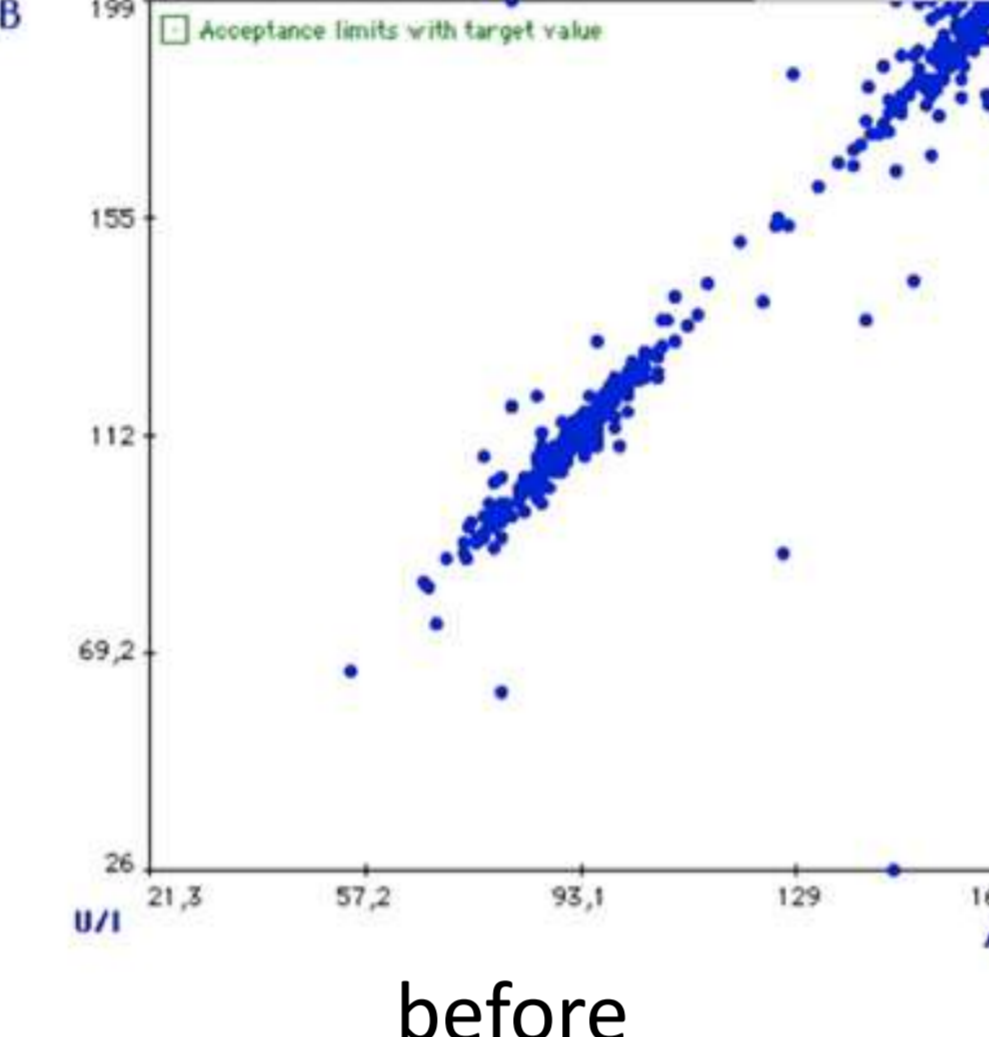
Manufacturer's Calibrator

End user's Calibrator

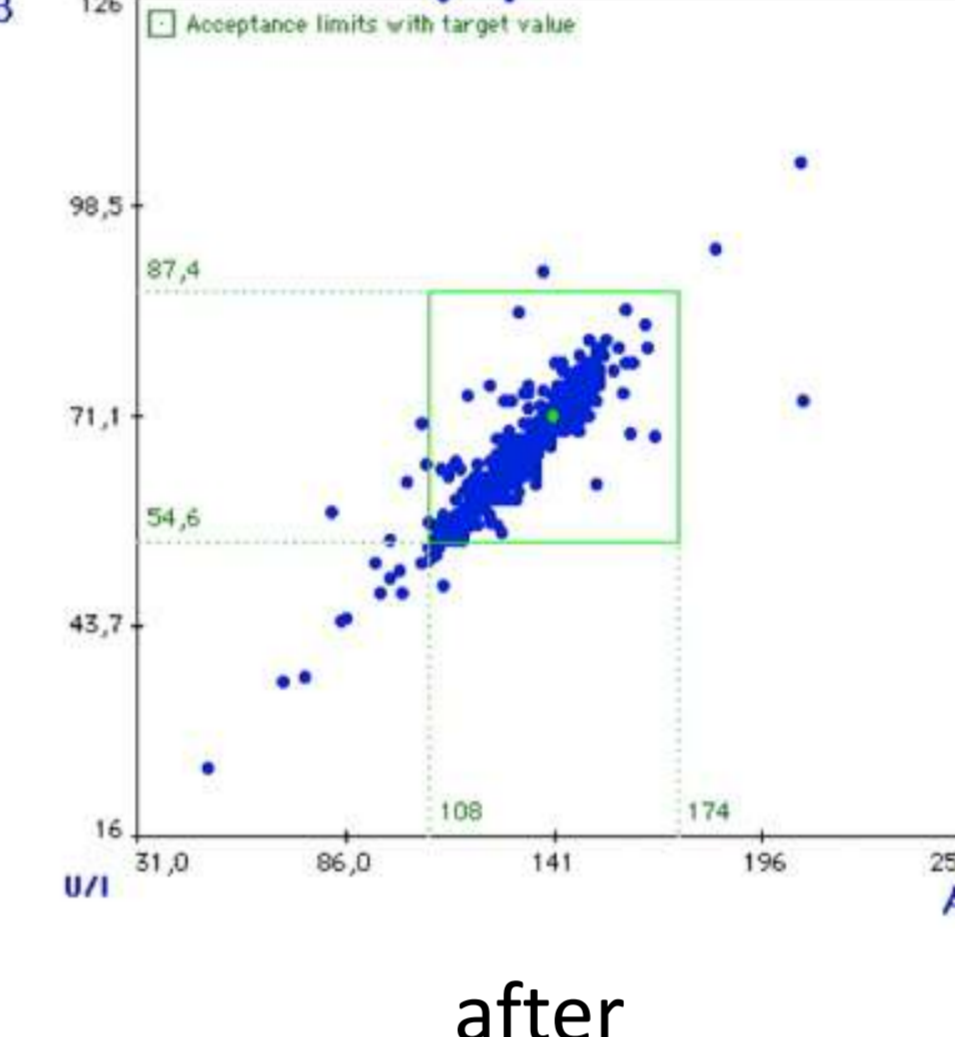
Measurement uncertainty (decreasing)

Specificity (increasing)

Accurate results for patient care
Impact of implementation of reference method for Enzyme (GGT)

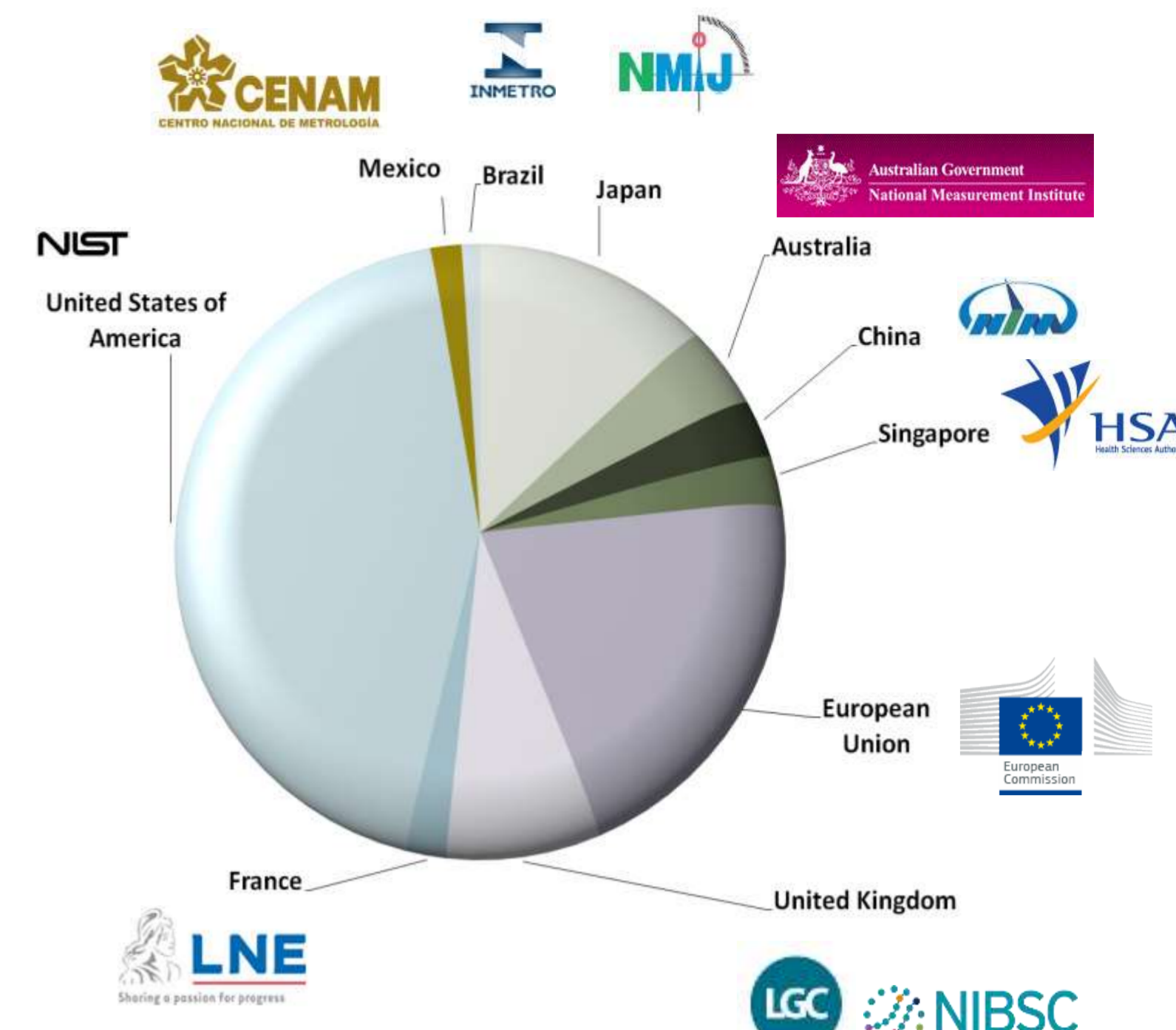


before



after

NMI's contributions to JCTLM Activities
Certified Reference Materials



Feedback from an IVD manufacturer (2018):
'JCTLM together with BIPM, IFCC and others indeed provided the right direction and path to accurate results for patient care, that our team firmly believes in and closely follows'

JCTLM Database of reference measurement systems

The JCTLM maintains a database of available higher order reference materials, reference measurement procedures, and laboratory measurement services originally required by the *in vitro* diagnostic industry to meet the ED 98/97/EC on *In Vitro* Diagnostic Medical Devices, and now replaced with a regulation.

<http://www.bipm.org/jctlm>

Analyte keyword search for reference materials, measurement methods/procedures and services

Type an analyte name in part or full, e.g. cholesterol

Refine search by analyte category: All

Refine search by matrix category: All

Please select your requirement:

- Higher-order reference materials
- Reference measurement methods/procedures
- Reference measurement services

University of Ghent reference method for glucose	
Applicable matrix(es)	lyophilized, fresh, or frozen human serum
Full description of technique(s)	ID/GC/MS
Quantity	Amount-of-substance concentration
Applicable range	1 mmol/l to 20 mmol/l
Expected uncertainty (level of confidence 95%)	1% to 2%
Reference(s)	Clin. Chem., 1993, 39, 1001-1006 Clin. Chem., 1993, 39, 993-1000 Eur. J. Clin. Chem. Clin. Biochem., 1996, 34, 853-860
Comparability assessment study(ies)	EUROMET 563
Comment(s)	The expanded uncertainty is relative
JCTLM DB identification number	NRMet 4

Database content

- 289 Materials
- 194 Methods
- 176 Services

Category	Materials	Methods	Services
Metabolites and Substrates	91	49	46
Electrolytes	30	41	21
Non-Peptide Hormones	23	37	26
Enzymes	4	7	68
Non-Electrolyte Metals	56	15	8
Proteins	31	23	8
Drugs	32	15	5
Vitamins and Micronutrients	11	10	2
Nucleic Acids	7	1	0
Blood Groupings	3	0	0
Blood cell counting	0	0	0
Coagulation Factors	0	0	0

JCTLM web portal on Traceability for Laboratory Medicine

The JCTLM formed a WG on Traceability: Education and Promotion in 2015 to produce educational materials to demonstrate and promote the value of traceability in laboratory medicine as a means to reduce between-method variability in the interests of improved clinical outcomes and patient safety.

<http://www.bipm.org/jctlm>

JCTLM Web portal launched in 2016 includes:

- Extensive and growing list of resources
- All resources are freely available
- Regular news updates
- Forms to apply for JCTLM membership and JCTLM auspices
- Direct access to the JCTLM Database

Examples of published information

RESOURCES

Glossary of terms and definitions : formal and well used

20 webinars on scientific concepts on metrological traceability and for trainees

Traceability in laboratory medicine: a driver for accurate results for patient care

Duration approx 20 min

Dr Graham Beattall | Jan 2017 | Open

Keywords: Accurate results, metrological traceability, global collaboration, JCTLM

PUBLICATIONS

Library of about 100 scientific publications on standardization for various health markets and review/presentations on traceability in laboratory medicine

DE GRUYTER

Opinion Paper

Graham H. Beattall*, Nannette Brouwer, Silvia Quirago and Gary L. Myers, prepared on behalf of the Joint Committee for Traceability in Laboratory Medicine

Traceability in laboratory medicine: a global driver for accurate results for patient care

DOI: 10.1515/med-2017-0040

Keywords: action plan, comparability, standardization, traceability.

MEETINGS

Organization of 20 JCTLM Symposia at international conferences

Organization of biennial JCTLM Members' and Stakeholders' Meeting

Approval of 20 meetings world-wide under the auspices of the JCTLM