IFCC RELA EQA Scheme

Report

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Reference Institute for Bioanalytics
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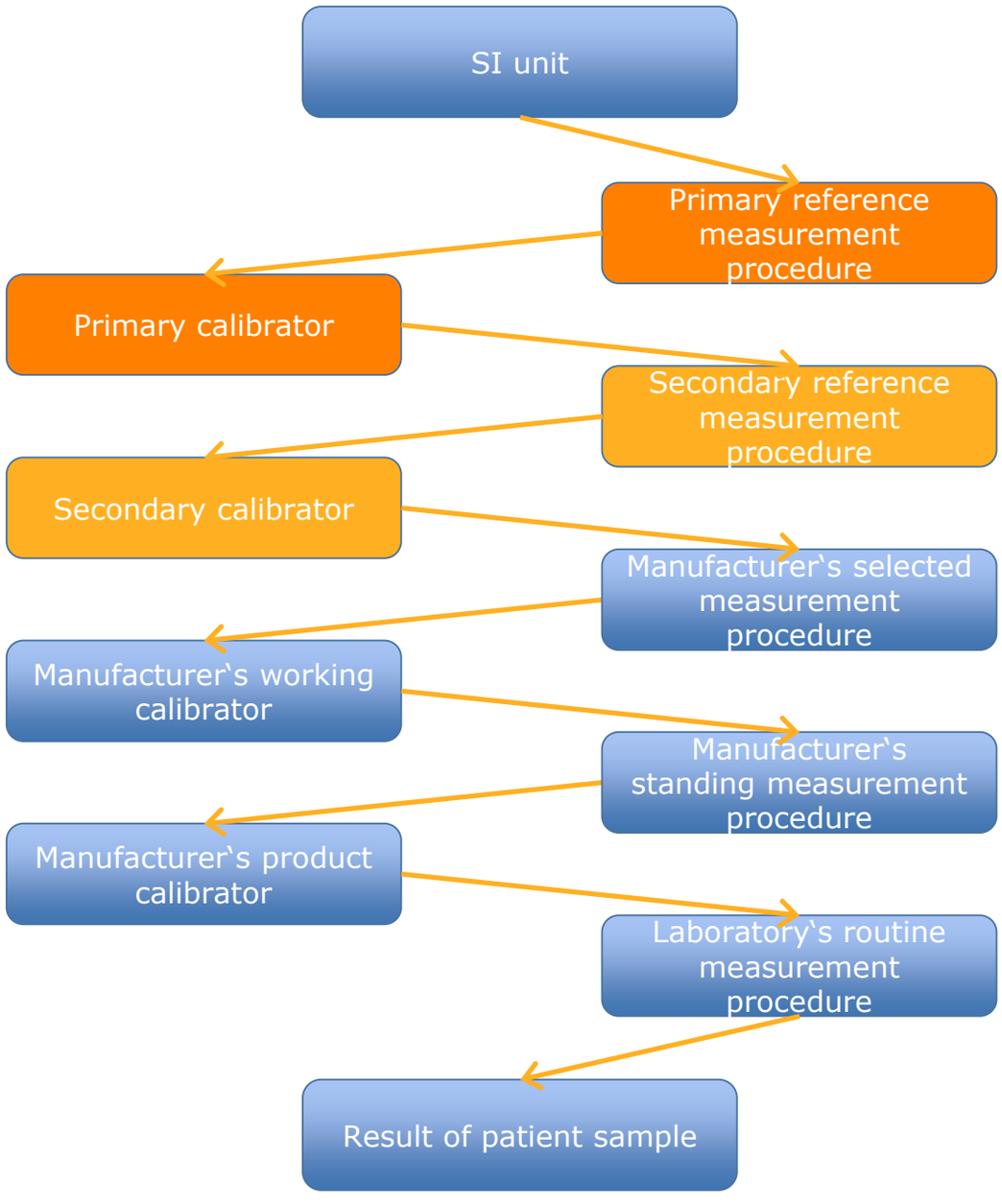
EQA for Calibration Laboratories



Calibration laboratories can demonstrate their competence.

Resultes of candidate reference measurement procedures can be compare to established RMP.

The EQA scheme can visualise the link between Calibration/Reference Laboratories in Laboratory Medicine and National Metrology Institutes.

Criteria for Listing a Reference Measurement Service

The laboratory has to make use of a reference measurement procedure approved according to ISO 15193 and reference materials approved according to ISO 15194.

The laboratory has to be accreditated according to ISO/IEC 17025 and ISO 15195.

The calibration laboratories have to verify their competence through collaborative surveys between laboratories working at the highest metrological level.

JCTLM DBWG-P-03-B2

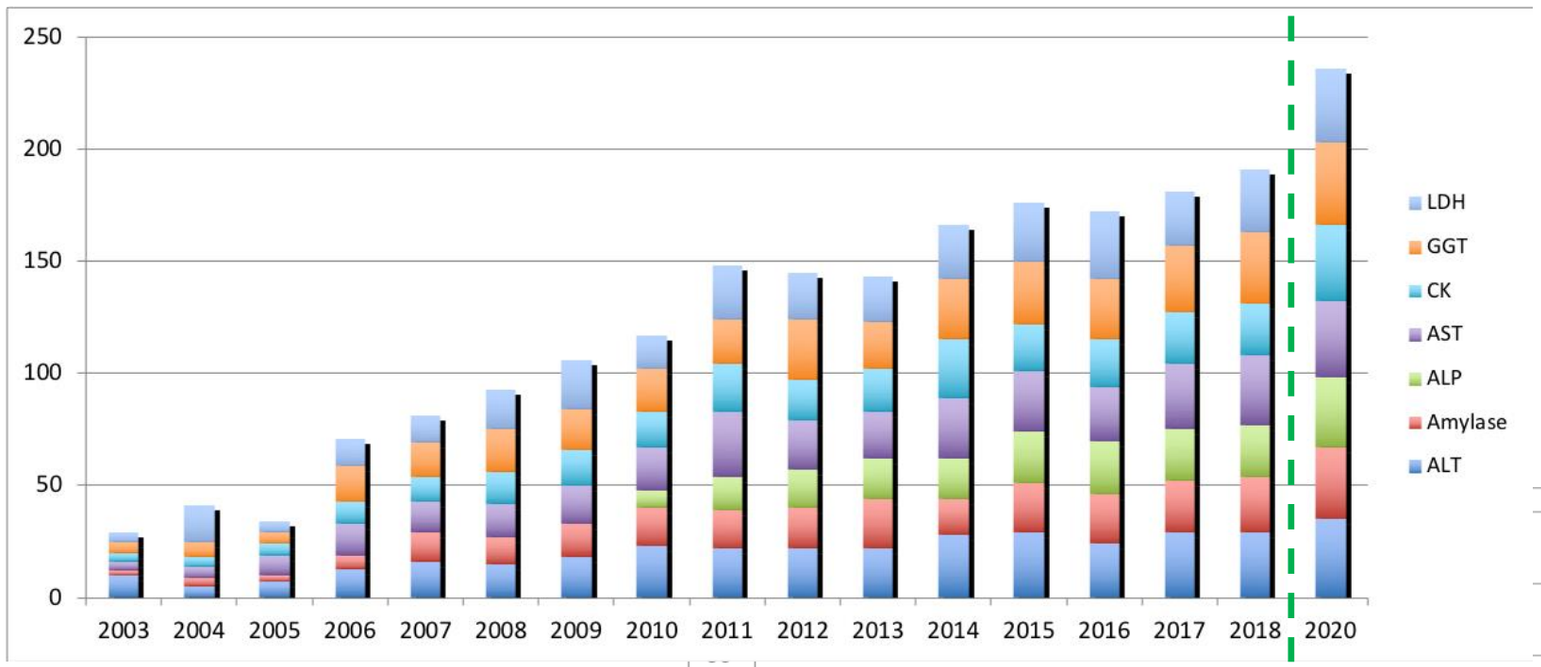
RELA – EQA for Calibration Labs

RELA – **RE**ference **LA**boratories in Laboratory Medicine

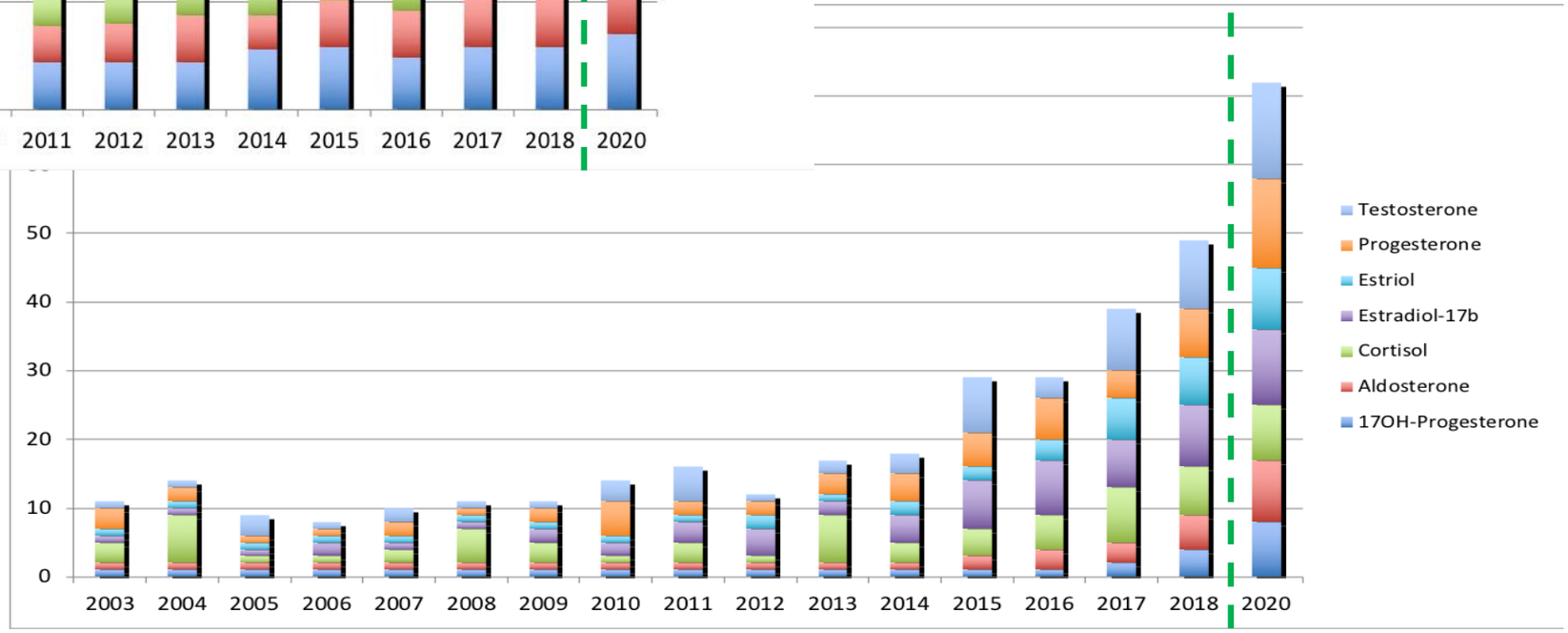
- RELA started in 2003.
- It’s an EQA scheme addressed to calibration laboratories and candidate laboratories.
- The advisory board of RELA is the IFCC C-TLM (Committee for Traceability in Laboratory Medicine).
- The survey is organised once per year.
- The programme comprises 36 different measurands.

Progress of RELA

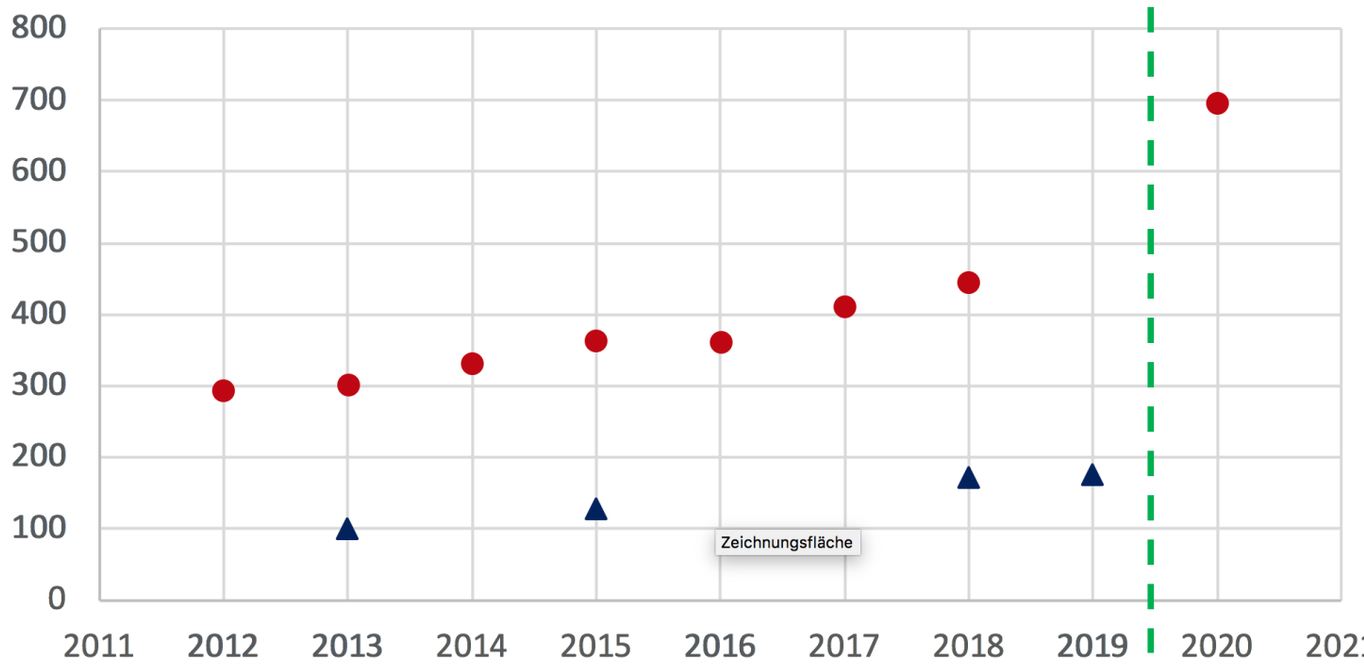
RELA results for enzymes



RELA results for hormones



RELA results and JCTLM



Number of published RELA results

Number of services listed in JCTLM DB

Currently, the services of 18 calibration laboratories are listed in the JCTLM database.

Since listing in the JCTLM-DB is a quality characteristic, the quality assurance criteria of the calibration laboratory should be appropriate.

Qualification of JCTLM listed services

6.1.3 The appropriate review team will ascertain **regular (at least annual) participation** of the candidate laboratory in interlaboratory comparisons ...

The results of the intercomparisons as well as the result of the individual laboratory related to its identity shall be made publicly available.

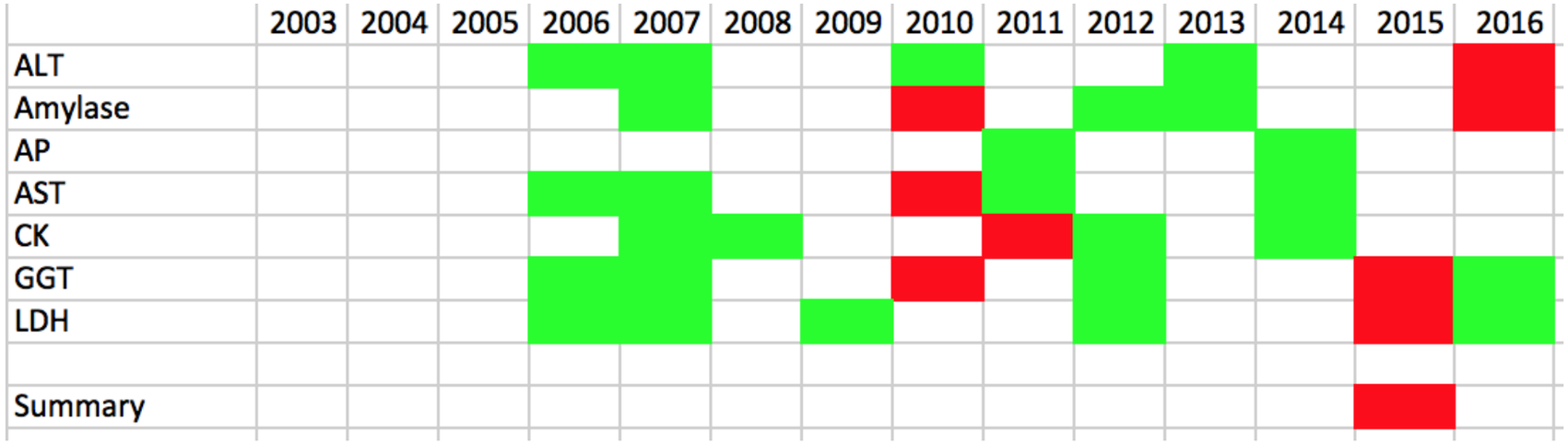
It is also **acceptable that a laboratory participates for another measurand of the same group of quantities** (e.g., metabolites & substrates, low-molecular hormones, therapeutic drugs, enzymes) provided the same principle of measurement - e.g., IDMS, kinetic spectrophotometry for enzyme activities - is applied.

However, a laboratory must participate for each listed measurand **at least once in a time period of three years**.

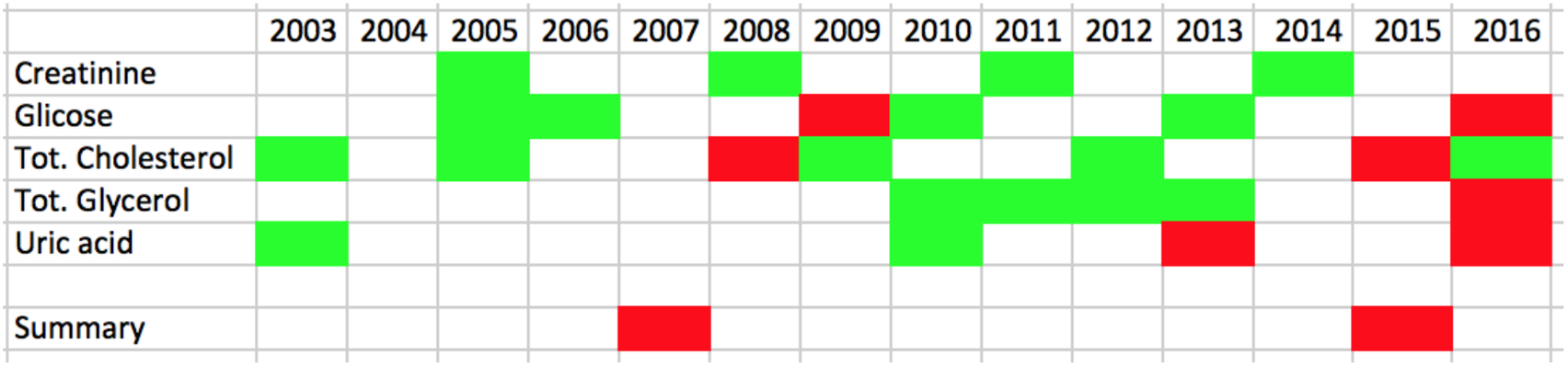
JCTLM DBWG-P-03-B2

Regular participation of JCTLM listed services

Lab A



Lab B



RELA - Homepage

External quality control for Reference Laboratories

Home -

Welcome

login

Registration/ Account

RELA in progress

order RELA 2020

enter RELA 2020 results

former RELA results

Choose year...
RELA 2003
RELA 2004
RELA 2005
RELA 2006
RELA 2007
RELA 2008
RELA 2009
RELA 2010
RELA 2011
RELA 2012
RELA 2013
RELA 2014
RELA 2015
RELA 2016
RELA 2017
RELA 2018

RELA - IFCC External Quality assessment scheme for Reference Laboratories in Laboratory Medicine

This site gives you all the information you will need for participating in the RELA scheme.

Time schedule for the annual surveys (may vary)

Announcement: September 1
Deadline for ordering: September 30
Shipment of samples: October 15
Deadline for transmission of results: April 15 (following year)
Reporting results to participants: May 15
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Please refer to the navigation area on the left to (for instructions see our new RELA web manual)
- register or log in
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The whole RELA process is described in detail in the **IFCC-RELA-EQAS procedure manual**.

Offered measurands:

Metabolites and substrates (META): total cholesterol, total glycerol, creatinine, uric acid, urea, glucose, total bilirubine
Electrolytes (ELEC): sodium, potassium, chloride, calcium, lithium, magnesium
Enzymes (ENZY): ALT, AP, AST, CK, LDH, GGT, amylase
Glycated hemoglobins (GLYC): HbA1c
Proteins (PROT): total protein
Hormones (HORM): aldosterone, cortisol, progesterone, testosterone, estradiol-17ß, estriol, 17-OH-progesterone
Thyroid hormones (THYR): total thyroxine (TT4), total tri-iodthyronine (TT3)
Therapeutic drugs (THER): digoxin, digitoxin, theophylline
Vitamins (VITA): 25-OH-vitamin D3
Hemoglobin (HEMO): total hemoglobin

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Choose year...

- ✓ All or choose Lab ...
- 001 - Referenzinstitut für Bio , Dr. C. Ritter-Sket
- 003 - Medizinische Hochschule , Dr. D. Grote-Koska
- 005 - Roche Diagnostics GmbH , Herrn Gernot Brunny
- 006 - UOC Patologia Clinica , CIRME-Prof. Mauro Panteg
- 008 - Physikalisch-Technische , Dr. Henrion, Dr. Rienitz
- 011 - Ref4U, Laboratory of Tox , Dr. Katleen Van Uytfangh
- 012 - Fundacion Bioquimica Arg , Raul Girardi
- 018 - National Center for Clin , Prof. Wenxiang Chen
- 019 - Reference Material Insti , Eri Shimizu
- 023 - BioSystems, S.A. , Dr. Petraki Munujos
- 024 - Children´ Hospital of Wi , Stanley F. Lo, Ph.D., DA
- 025 - Deputy Director , Dr. David Ducroq
- 027 - Instand e. V. , Dr. Patricia Kaiser
- 030 - Centers for Disease Cont , Uliana Danilenko, PhD
- 039 - Canadian EQA Laboratory , David W. Seccombe, MD, P
- 041 - Roche Diagnostics GmbH , Steffen Bossert-Reuther
- 046 - Clinical Enzymology Refe , Francesca Canalias
- 047 - Beijing Aerospace Genera , Hu Bin
- 048 - Biosino Bio-Technology a , Jiang lin
- 051 - Maccura Biotechnology Co , Sun Keqi
- 052 - Queen Beatrix Hospital , Cas Weykamp
- 054 - Shanghai Center for Clin , Ju Yi
- 055 - Reference Laboratory , Chi Shan
- 061 - Mindray Standardization , Wang Yingguo
- 063 - Beijing Leadman Biochemi , Chunlong Liu
- 065 - Clinical Laboratory of , Prof. Xianzhang Huang
- 073 - Department of clinical l , Runqing Mu
- 074 - Center of Laboratory Med , Prof. Shaoqin Ju
- 077 - Department of Laboratory , Rui Zhang
- 087 - MedicalSystem Biotechnol , Min Shen Ph.D.
- 094 - Service de Biochimie-Pha , Pr. Philippe Gillery
- 098 - Shanghai Kehua Bioengine , Yu Chen
- 103 - Reference Lab of Shangha , Zhou Xinghua
- 104 - Department of Reference , Wang Xiaojian
- 109 - Chemical Metrology Divis , LIU Qinde
- 115 - Beijing Institute of , BIMT
- 119 - Centro Laboratories , Dr. Ebru iihan Guner
- 121 - Korea CDC, , Chanik Cho
- 124 - Dirui Industrial Co., LT , Phoenix Huang
- 127 - Instand e. V. , Dr. Patricia Kaiser
- 132 - Roche Diagnostics GmbH , Dr. Matthias Appel
- 133 - Medizinische Hochschule , Dr. D. Grote-Koska

A 2018

Creatinine | show result plot

with limits of equivalence

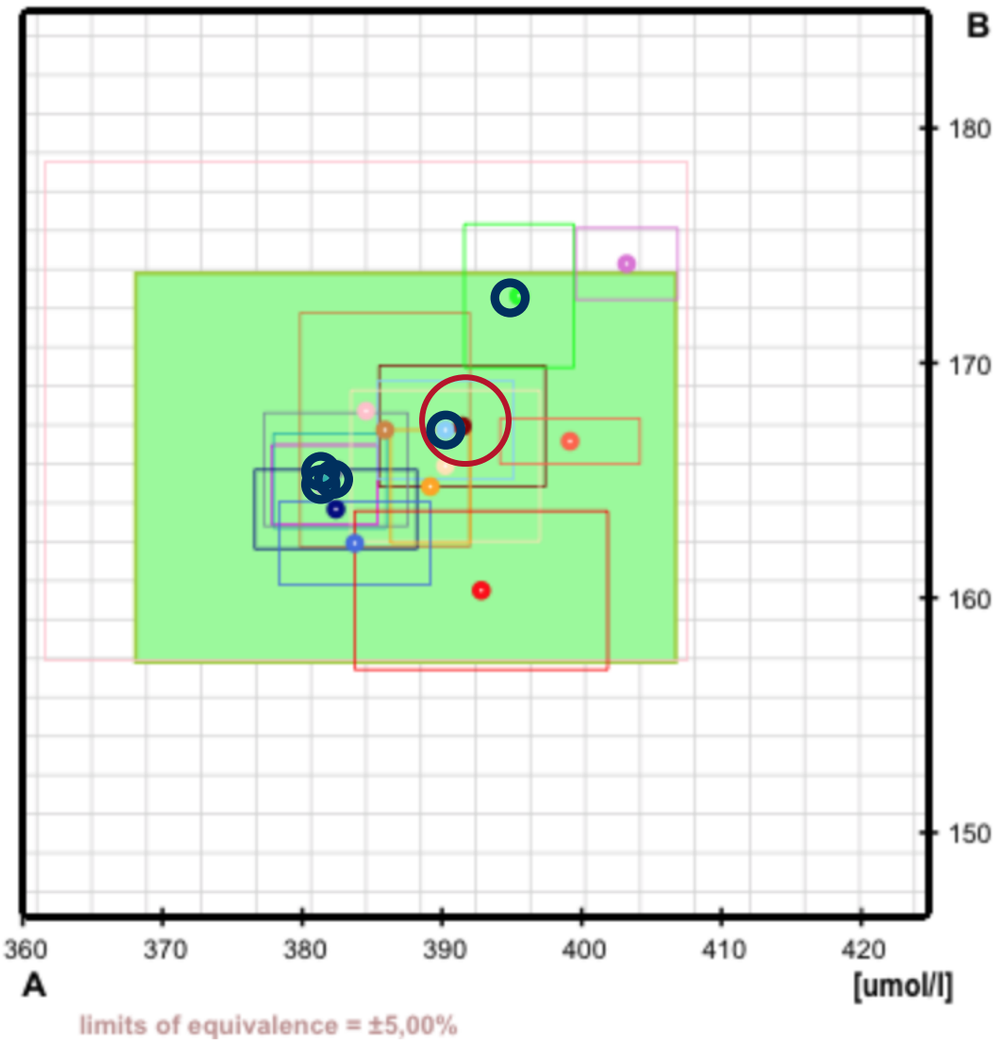
For highlighting a specific result please click on the corresponding result line.

Result lines printed in bold indicate JCTLM listed services.

Labcode	A	e.u. A	B	e.u. B	Method
1	**381.6**	**3.8**	**164.8**	**1.7**	**ID/GC/MS**
8	391.5	6	167.3	2.6	ID/LC/MS
12	386	6.13	167.1	4.98	Kinetic spectrophotometry
18	**395.6**	**3.86**	**172.9**	**3.05**	**ID/LC/MS/MS**
25	**390.3**	**4.8**	**167.1**	**2.1**	**ID/GC/MS**
27	**382**	**4**	**165**	**2**	**ID/GC/MS**
51	390.3	6.8	165.6	3.2	ID/LC/MS/MS
54	**382.4**	**5.1**	**165.5**	**2.4**	**ID/LC/MS/MS**
65	382.4	5.8	163.8	1.7	ID/LC/MS/MS
87	389.2	2.9	164.7	2.4	spectrophotometry
104	403.2	3.612	174.3	1.546	ID/LC/MS/MS
119	384.5	22.98	168	10.61	spectrophotometry
124	399.1	5.06	166.7	1	spectrophotometry
151	383.8	5.38	162.4	1.78	ID/LC/MS
					Kinetic

RELA 2018 - Creatinine

Creatinine



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151	383.8	5.38	162.4	1.78	ID/LC/MS
153	392.8	9.03	160.3	3.37	Kinetic spectroscopy

- JCTLM listed labs
- NMI

grey lines indicate a one-percent grid

e.u. - expanded uncertainty

www.rfb.bio

Link between NMI and Calibration Labs

RELA participation of NMIs:

RELA 2017

ELEC	Calcium, Chloride, Lithium, Magnesium, Sodium, Potassium
HORM	Cortisol
META	Urea
DRUG	Digoxin

RELA 2018

ELEC	Calcium (2x), Chloride
META	Creatinine, Total glycerol
DRUG	Digitoxin
GLYC	HbA1c

Further co-operations are planned (projects for enzymes and HbA1c)

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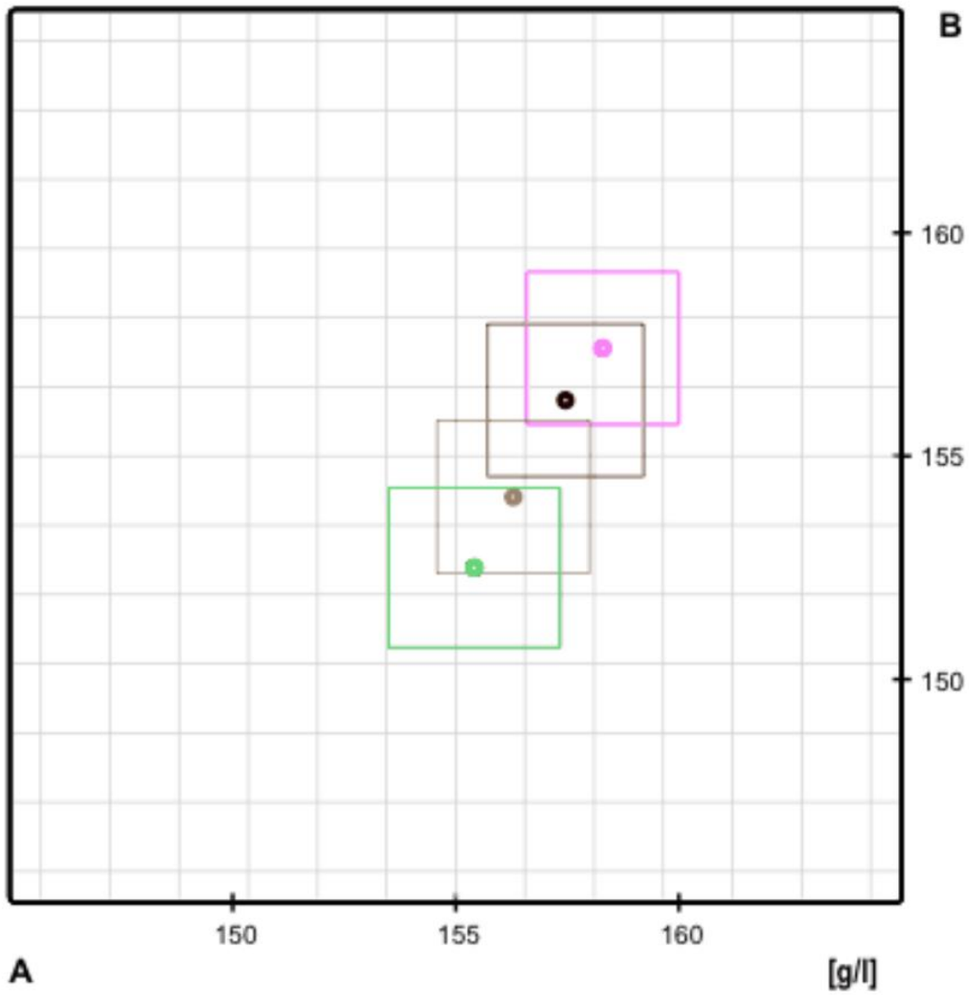
Hemoglobin (HEMO): total hemoglobin

Total Hemoglobin



ifcc International Federation of Clinical Chemistry and Laboratory Medicine

RELA 2018
04.09.19

LabCode	A	e.u.	B	e.u.	method
127	**158,3**	1,7	**157,4**	1,7	Spectrophotometry (DIN 58931:2010 HiC
133	**157,44**	1,73	**156,26**	1,72	spectrophotometry
154	**156,3**	1,7	**154,1**	1,7	spectrophotometry
155	**155,4**	1,9	**152,5**	1,8	Cyanide methemoglobin method

2 labs form China and

2 labs from Germany

6 orders for RELA 2020 ...

RELA – To all whom it may concern

The RELA surveys address:

- Calibration laboratories providing their service to organiser of external quality assessment schemes,
- Calibration laboratories of manufacturers,
- Candidate laboratories which are investigating a new analytical principle,
- Customers looking for support of calibration laboratories,
- JCTLM review teams,
- Auditors of accreditation bodies.

RELA 2018 → RELA 2020

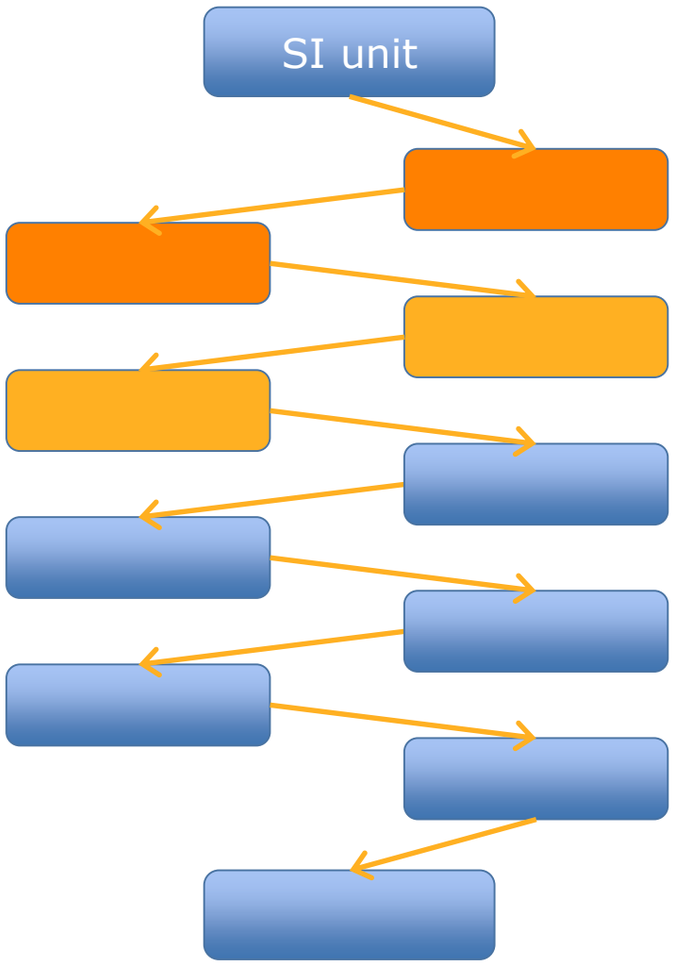
Due to requests of participants the naming of the survey has been changed:

So far: RELA **2018** → Year of survey start

From now on: RELA **2020** → Year of certificate issuance

The new method of counting should avoid any questions of accreditation bodies according to the latest certificate.

Summary and Outlook



RELA is an EQA scheme for calibration laboratories which supports them to demonstrate their competence.
All results are published and the website is of open access.

Scientific work is necessary to develop reference measurement systems for further measurands in laboratory medicine.
In parallel, the portfolio of RELA should be extended to support this process.

In addition, it has to be discussed how the data can be used to make a statement about the quality of the calibration laboratories.