

Biennial activity report from JCTLM Member organizations

All JCTLM Members are invited to attend the Members' and Stakeholders' Meeting, which is held once every two years, and submit a report of their activities in support of traceability in laboratory medicine over the preceding period.

For that purpose this template document provides guidance to JCTLM Members for drafting their biennial activity report. Organizations are invited to provide the information below for submission to the Executive Committee.

Organization Name: NMIJ/AIST

JCTLM Member status: National and Regional Member

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Period covered: 2022 – 2023

1. Major achievement(s) in support of standardization in laboratory medicine

(Please describe what activities your organization has undertaken related to the implementation of reference measurement systems in laboratory medicine during the last two years, including but not limited to information on: the production of certified reference materials; the development of reference measurement methods; or the establishment of calibration (reference) measurement services. Outline the measurement area(s)/measurands covered, and provide a listing of the relevant technical/scientific publications.)

○NMIJ/AIST has produced following CRMs.

Certification of new CRM

CRM 6210-a Amyloid β

Certification of next lot CRM:

CRM 6205-b Deoxyribonucleic Acid (DNA) Solutions for Quantitative Analysis (1 ng/ μ L, 600-bp)

CRM 6022-b Glycine

CRM 6024-b L-Histidine

Related publication

S. Shibayama, S. Fujii, K. Inagaki, T. Yamazaki, M. Yoshioka, S. Matsukura, A. Sasaki, T. Suyama, N. Noda, Y. Sekiguchi, A. Takatsu, Development of certified reference material NMIJ CRM 6205-a for the validation of DNA quantification methods: accurate mass concentrations of 600-bp DNA solutions having artificial sequences, *Anal. Bioanal. Chem.*, 41, 6091-6100 (2019), doi: [10.1007/s00216-019-01992-y](https://doi.org/10.1007/s00216-019-01992-y).

M. Kato, T. Yamazaki, H. Kato, S. Eyama, M. Goto, M. Yoshioka, A. Takatsu, Development of high-purity certified reference materials for 17- proteinogenic amino acids by traceable titration methods, *Anal. Sci.*, 31(8), 805-814 (2015), doi ; <https://doi.org/10.2116/analsci.31.805>

○CCQM Comparisons Related to Healthcare:

NMIJ is coordinating the following study:

- CCQM-P222: Number concentration measurement of particles for cellular analysis (co-pilot lab: PTB)

NMIJ participated in the following comparison studies.

- CCQM-K181 SARS-CoV2 RNA Quantification
- CCQM-K177 Quantification of human growth hormone in serum
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2. Planned activity(ies) in support of standardization in laboratory medicine

(Please outline R&D project(s) and/or programme(s) planned by your organization in the next two years including information on: new measurement area(s)/measurands of interest for your organization; new CRMs and renewals of materials; development of methods (new measurands and improved measurement technique/principle); and extensions of your calibration measurement service(s) portfolio.)

○NMIJ/AIST is planning to produce following CRMs.

Planned next lot CRM:

CRM 6019-b L -Tyrosine

CRM 6026-b L -Glutamic acid

CRM 6027-b L -Aspartic acid

Related publication

M. Kato, T. Yamazaki, H. Kato, S. Eyama, M. Goto, M. Yoshioka, A. Takatsu, Development of high-purity certified reference materials for 17- .proteinogenic amino acids by traceable titration methods, *Anal. Sci.*, 31(8), 805-814 (2015), doi ; <https://doi.org/10.2116/analsci.31.805>

3. Promoting traceability in laboratory medicine

(Please describe activities your organization has undertaken during the last two years for promoting traceability in laboratory medicine including but not limited to a listing of your publication(s), presentation(s) and other communication(s) on traceability at international and national conferences or congresses, or other forums for clinical laboratory medicine)

N/A

4. Reference laboratory networks /collaborations focusing on developing /implementing reference measurement systems

(Please describe your participation in laboratory networks, forums or professional/technical committees linked to reference measurements system development/implementation, and contributions to JCTLM Working Group activities.)

T. Kinumi is working at JCTLM WG review team for Proteins (2019FY-)

5. Open questions and suggestions to be addressed by JCTLM

(Suggestions on issues related to standardization and metrological traceability that should be considered by the JCTLM)

N/A

Note: The information of this report will be accessible publicly on the relevant JCTLM Members webpage, unless the author of the report states otherwise. In the case the organization does not authorize the publication of the report in part or full, the author will add a statement to clarify which part(s) of the report will /will not be rendered public.