2019 COOMET DIRECTORY

as of 10 of December, 2019



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Your questions or remarks concerning the material given in the Directory are welcome to coomet@belgim.by

The electronic version of the COOMET Directory is available:

- on the COOMET web-portal at www.coomet.net
- and on the COOMET website at www.coomet.org

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INFORMATION ABOUT COOMET

COOMET is a regional organisation originally establishing cooperation of national metrology institutions of the countries of Central and Eastern Europe. It was founded in June, 1991 and renamed in *Euro-Asian* **Cooperation of National Metrological Institutions** in May, 2000. COOMET is open for any metrology institutions from other regions to join as associate members.

Now the members of COOMET are metrology institutions from *Armenia, Azerbaijan, Belarus, China* (Associate Member), *Bosnia and Herzegovina* (Associate Member), *Bulgaria, Georgia, Germany* (Associate Member), *Kazakhstan, Kyrgyzstan, DPR of Korea* (Associate Member), *Cuba* (Associate Member), *Lithuania, Moldova, Russia, Romania, Slovakia, Tajikistan, Turkey* (Associate Member), *Uzbekistan* and *Ukraine*.

The objectives of COOMET are as follows:

- assistance in effective addressing the problems relating to uniformity of measures, uniformity
 of measurements and the required accuracy of their results;
- assistance in promoting cooperation of national economies and eliminating technical barriers in international trade;
- harmonisation of activities of metrology services of Euro-Asian countries with similar activities in other regions.

The basic activity of COOMET is cooperation in the following areas: measurement standards of physical quantities, legal metrology, quality management systems, information and training.

COOMET countries cooperate in the following subject fields: acoustics, ultrasound, vibration; electricity and magnetism; flow measurement; ionising radiation and radioactivity; length and angle; mass and related quantities; photometry and radiometry; physical chemistry; thermometry and thermal physics; time and frequency; reference materials; general questions concerning measurements (general metrology); legal metrology; quality management systems; information and information technology; training and raising proficiency level of experts; joint scientific research in the field of metrology.

In its activities COOMET is guided by the Memorandum of Understanding (MoU) and Rules of Procedure.

The supreme body of COOMET is *the COOMET Committee* consisting of Heads of national metrology institutions from COOMET Member Countries, or their representatives. The Committee organises and promotes cooperation. The Committee meets at least once a year.

The COOMET President is elected by the Committee from among its Members for a three year period with an option of one more term of office. The President provides **the COOMET Secretariat** by using resources of his/her own institution.

The President proposes candidates of **COOMET Vice-Presidents** from among the Members of the Committee for further approval by the Committee. The President, Vice-Presidents and Head of the COOMET Secretariat constitute **the COOMET President's Council**, which decides upon the COOMET policy, interacts with international and regional metrology organisations, coordinates cooperation in the period between the Committee meetings and distinguishes problems to be discussed at these meetings.

Organisation of work in the basic fields and directions of cooperation is the major task of *the Structural Bodies of COOMET (the Joint Committee, Technical Committees, and Quality Forum).*

The Joint Committee consists of the Chairmen of the Technical Committees on the types of measurements (Acoustics, Ultrasound, Vibration; Electricity and magnetism; Flow measurement; Length and angle; Mass and related quantities; Photometry and radiometry; Physical chemistry; Ionizing radiation and radioactivity; Thermometry and thermal physics; Time and frequency), as well as the Chairs of the Technical Committee on General questions concerning measurements (General Metrology) and the Technical Committee on Reference materials.

The Committee Members appoint their representatives to the Structural Bodies of COOMET (*Technical Committees, Quality Forum*), which become official Structural Bodies members. Those official Structural Bodies members propose a candidate for the position of *the Chairperson of a Structural Body* for its further approval by the COOMET Committee.

The Structural Bodies can establish **Subcommittees (SCs)** for working on routine tasks of cooperation and **Working Groups (WGs)** within corresponding SCs/TCs for carrying out specific work on COOMET projects.

The official languages for the COOMET meetings and documents are *Russian* and *English.* COOMET has no financial assets of its own.

By its scope of cooperation COOMET belongs to organisations of a multi-purpose type.

The activities of COOMET are carried out in line with *the Conception of Cooperation and Related Activities of COOMET* approved in 2005 and *COOMET Development Programmes* for a period of two or three years approved by the COOMET Committee.

An important prerequisite of COOMET effectiveness is the collaboration in all fields of activities. Jointly realised projects are the core elements of *the COOMET Working Programme*.

Nowadays the main attention is paid to the cooperation in the field of measurement standards, in particular to the implementation of the CIPM Arrangement on Mutual Recognition of National Measurement Standards and Calibration and Measurement Certificates Issued by National Metrology Institutes (CIPM MRA). Therefore, the majority of the COOMET projects are dedicated to the preparation of information on calibration and measurement capabilities (CMC), participation in key comparisons of national measurement standards organised by CIPM and organisation of regional comparisons of measurement standards, as well as creation and implementation of Quality Management Systems of the National Metrology Institutes and Designated Institutes of COOMET Member Countries.

The subjects of cooperation of COOMET Member Countries in the field of **legal metrology** encompasses a broad range of problems, starting with harmonisation of the national requirements in the area of legal metrology in the Member Countries and finishing with such applied problems as testing of software for measuring instruments, control of prepackages.

COOMET activities in the field of **information support and training** are also substantially related to the implementation of the CIPM MRA (e.g. in developing software for the CMC database and comparisons of measurement standards of the NMIs and Designated Institutes of COOMET Member Countries). It is also aimed at the exchange of training programmes for experts in the area of metrology, development of exchange programmes for experts in COOMET countries, determination of criteria for assessing scientific papers of young metrologists, etc. An important activity is the holding (once every two years) of the contest "The Best Young Metrologist of COOMET".

COOMET is a member of the Joint Committee of the Regional Metrology Organisations and the BIPM (JCRB), as well as keeps close relations with OIML according to the Agreement with the International Bureau of Legal Metrology (BIML) signed in 1993.

COOMET cooperates with the following Regional Metrology Organizations:

- European Association of National Metrology Institutes (EURAMET),
- Asia-Pacific Metrology Programme (APMP),
- Intra-African Metrology System (AFRIMETS),
- Inter-American Metrology System (SIM),
- GULF Association for Metrology (GULFMET).

Based on mutual interests, COOMET also cooperates with metrology organisations such as:

- European Cooperation in Legal Metrology (WELMEC),
- Asia-Pacific Legal Metrology Forum (APLMF),
- Euro Asian Council for Standardization, Metrology and Certification (EASC),
- National Conference of Standards Laboratories International (NCSLI),
- Interational Measurement Confederation (IMEKO).

COOMET is a joint forum of metrologists of Euro-Asian region, effectively working regional metrology organisation which successfully fulfils its tasks according to approved long term programmes. Cooperation within COOMET and its results allow its Member Countries to successfully solve metrological issues the national economies face under the conditions of market globalisation.



The National Metrology Institutions on behalf of which this Memorandum has been signed

considering

- the territorial proximity of the Countries and their mutual economic relations;
- the need to permanently improve metrological services for the benefit of economic and scientific relations;
- the similarity of their structures and the operational principles of their National Metrology Services;
- their combined experience and the results of their previous bilateral and multilateral cooperation;
- their willingness to more closely cooperate with international and regional metrology organisations

declare their intention to cooperate in the field of measurement standards of physical units, calibration, legal metrology, quality management systems, information technology and training in the field of metrology within the COOMET organisation given below.

Section 1 – COOMET Members

COOMET is an organisation for the Euro-Asian cooperation of National Metrology Institutions (from the countries of Central and Eastern Europe, Asia and nearby countries) and is open to the National Metrology Institutions of countries from other regions to join it.

Section 2 – COOMET Objectives

The objectives of COOMET are as follows:

- 1. To contribute to effectively solving problems of the uniformity of measures, uniformity and required accuracy of measurements.
- 2. To contribute to establishing closer cooperation between the national economies and removing technical barriers to international trade.
- 3. To harmonise the activities of Metrology Services on the basis of international arrangements.

Section 3 – COOMET Tasks

The tasks of COOMET are to strengthen the links between the National Metrology Institutions interested in solving common problems and to create effective mechanisms in order to:

- achieve compatibility of measurement standards and harmonise the requirements imposed on measuring instruments and methods for their metrological control;
- recognise the equivalence of national certificates authenticating the results of metrological activities;
- exchange information on the current status of National Metrology Services and their development;
- collaborate in developing metrological projects;
- promote the exchange of metrological services.

Section 4 – Principal fields of cooperation within COOMET

The principal fields of cooperation within COOMET include:

- realisation of the CIPM Arrangement on Mutual Recognition of National Measurement Standards and Calibration and Measurement Certificates Issued by National Metrology Institutes (CIPM MRA);
- establishment and maintenance of primary standards of units and scales of physical quantities;
- dissemination of units from primary standards to working measuring instruments;
- participation in the CIPM key comparisons of national measurement standards and carrying out of regional comparisons of measurement standards;
- development of new measurement methods and new types of high accuracy measuring instruments;
- solution of problems of general metrology, including problems of the theory of measurement and uncertainties, system of units, terminology;
- establishment of a system of gathering and dissemination of information on metrology and measurement techniques, information technology;
- definition, collection, evaluation and certification of reference data used in metrology;
- creation and use of reference materials of composition and properties of substances and materials;
- harmonisation of requirements for measuring instruments subject to metrological control, as well as methods for their testing taking into consideration international recommendations;
- preparation of conditions for mutual recognition of results of metrological control and metrological supervision;
- implementation of calibration and recognition of its results according to the rules and procedures set up by international organisations;
- creation and implementation of Quality Management Systems of National Metrology Institutes;
- training and raising proficiency level of experts;
- improvement of the activities of the Organisation and its structural bodies.

Section 5 – Structure of COOMET and working procedures

- 1. The COOMET body initiating and supporting cooperation is the Committee. It consists of the Heads of National Metrology Institutions of the COOMET Member Countries or persons appointed by them, one representative from each institution. The Committee ensures that the activity of COOMET is pursued in accordance with its objectives and contributes to accomplishing its tasks.
- 2. The Committee elects the President from among its Members, for a period of three years, with the eligibility to be re-elected for one subsequent term of office.
- 3. Each Committee Member accompanied by experts may take part in its meetings. Only Committee Members may vote.
- 4. The Committee may invite observers from other international or regional organisations to take part in their meetings.
- 5. The Committee meets as often as required but at least once per year.
- At the suggestion of the President, the Committee approves nominees for the positions of Vice-Presidents from among its Members. The President, Vice-Presidents and Head of the COOMET Secretariat form the President's Council, which develops the policy of cooperation within COOMET,

interacts with international and regional metrology organisations, organises cooperation between the Committee meetings and prepares questions to be considered at these meetings.

- 7. A year before scheduled election of a new COOMET President the COOMET Committee nominates a candidate which after mutual approval becomes a Member of the President's Council having a status of President Elect. After the expiry of a three year period of presidency the COOMET President keeps the status of Former President for one more year. At the end of this year the President Elect becomes an active COOMET President.
- 8. The Committee decides on its own Rules of Procedure and on those of other COOMET bodies.
- 9. As a rule the COOMET Secretariat is provided by the National Metrology Institute of the COOMET President.
- 10. The Secretariat assists the President and the President's Council in the management of COOMET and ensures contacts between the Committee Members, as well as between the Committee, structural and working bodies of COOMET.
- 11. Following the decision of the COOMET Committee the following COOMET Structural Bodies are established for the purpose of initiating work in the major fields and directions of cooperation: Joint Committees (JC), Technical committees (TC), Councils, Forums, etc.

The scope of their objectives, tasks and working and collaboration procedures is specified in relevant Provisions approved by the COOMET Committee.

Each COOMET Structural Body is headed by a chairperson appointed by the COOMET Committee for a period of 4 years with the possibility to prolong this period.

- 12. Structural Bodies may establish:
- Subcommittees (SCs) in order to address the permanent tasks of collaboration;
- Working Groups (WGs) within relevant SCs/TCs in order to carry out routine work on COOMET projects.
- 13. Terms of reference, head and staff of a SC are defined by the corresponding Technical Committee and approved by the COOMET Committee for a period of 3 years with possible prolongation of this period.
- 14. Organizational and financial matters are managed by structural and working bodies individually taking into account the hierarchy of the COOMET bodies.

National Metrological Institutions that are Members of COOMET may invite other institutions in their countries to cooperation, at their own discretion, for working on a project.

Section 6 – Languages

- 1. The languages of the Committee meetings are English and/or Russian.
- 2. Documents of wide dissemination to be received and sent by the Secretariat must be edited both in English and Russian.
- 3. Final reports written after completion of projects may be in English, French, German or Russian. The authors of the report are given the choice of a language sufficiently understood by those to whom they wish to convey their information or considerations.
- 4. In other cases, any language the cooperating partners consider adequate for their communication may be used.

Section 7 – Rights

In order to achieve the objectives of COOMET, each Member of the Organisation will have the following rights:

- to have access, upon agreement, to national standards of other Members of COOMET;
- to seek cooperation and assistance in solving metrological problems;
- to propose projects for joint work and participate in their implementation;
- to receive information on the results of activities of COOMET Bodies.

Section 8 – Obligations

In order to achieve the objectives of COOMET, each Member of the Organisation will accept the following obligations:

- to provide the Committee, upon its request and within reasonable limits, with information on projects carried out and planned in accordance with the scope of the COOMET activities;
- to provide COOMET Members with assistance and services upon mutual agreement;
- to participate in joint COOMET projects depending on its financial and technical resources, as well as its interest and competence;
- to maintain the confidentiality of any information on the results of type tests, verifications and calibrations of measuring instruments submitted by cooperating partners;
- to take into consideration the COOMET recommendations in the activity of its National Metrology Institutions and to promote the implementation of the results of COOMET projects in its country.

Section 9 – Cooperation with international and regional organisations

- 1. COOMET will make best use of the results of work of international metrology organisations:
- International Organisations within Metre Convention: General Conference on Weights and Measures (CGPM), International Committee for Weights and Measures (CIPM) and International Bureau of Weights and Measures (BIPM);
- International Organisation of Legal Metrology (OIML), International Committee for Legal Metrology (CIML) and International Bureau of Legal Metrology (BIML);
- International Laboratory Accreditation Cooperation (ILAC);
- International Accreditation Forum (IAF);
- International Measurement Confederation (IMEKO), etc.,
- as well as other organisations of interest to metrology such as ISO, IEC, CODATA, and will follow their recommendations in its activities.
- 2. COOMET intends to cooperate, as far as there is mutual interest, with regional metrology organisations:
- European Association of National Metrology Institutes (EURAMET),
- European Cooperation in Legal Metrology (WELMEC),
- European Cooperation for Accreditation (EA),
- Asia-Pacific Metrology Programme (APMP),

- Asia-Pacific Legal Metrology Forum (APLMF),
- Asia Pacific Laboratory Accreditation Cooperation (APLAC),
- Scientific & Technical Commission on Metrology (STCMetr) of Euro Asian Council for Standardization, Metrology and Certification (EASC),
- Intra-African Metrology System (AFRIMETS),
- Inter-American Metrology System (SIM), etc.

Section 10 – Validity of Memorandum

- 1. This Memorandum will come into operation on the date of its signing by at least four Signatories and remain open for further participants.
- 2. This Memorandum may be amended at any time by written agreement between at least three quarters of the Signatories.
- 3. If a Member on behalf of which this Memorandum has been signed, for any reason whatever, intends to terminate its participation in COOMET, it will notify the President of the COOMET Committee of this intention not later than six months in advance.
- 4. This Memorandum is concluded for a term of five years. Unless within this five year period revision or termination is proposed to the COOMET Committee by at least one third of the Signatories this Memorandum of Understanding will remain in effect for another five year period.

Section 11 – Limitations

- 1. Decisions of COOMET have an exclusively recommendatory nature.
- The Secretariat's activities are financed at the expenses of the Party presiding in the COOMET Committee. On a voluntary basis, other COOMET Members can render financial support to the Secretariat, the President's Council and other COOMET bodies for the implementation of specific tasks.
- 3. This Memorandum does not limit the rights and obligations of the COOMET Members arising from other bilateral or multilateral cooperation agreements.

Done in Warsaw on 12 June 1991

in English and Russian,

updated and amended at the 10th COOMET Committee Meeting in Almaty, Kazakhstan, on 25–26 May, 2000; at the 12th COOMET Committee Meeting in Havana, Cuba, on 6–7 May, 2002;

at the 15th COOMET Committee Meeting in Vilnius, Lithuania, on 8–9 September, 2005;

at the 16th COOMET Committee Meeting in Braunschweig, Germany, on 4–5 September, 2006,

at the 19th COOMET Committee Meeting in Baku, Azerbaijan, on 20–21 May, 2009;

at the 22th COOMET Committee Meeting in Cholpon-Ata, Kyrgyzstan, on 18–19 April, 2012.



RULES OF PROCEDURE

The Rules of Procedure listed below amend the description of the COOMET structure and activities which are part of the Memorandum of Understanding and were adopted in accordance with Article 8 Section 5 of the Memorandum and should promote the effective solution of cooperation problems in the shortest time possible according to established procedures using modern information technology and communication facilities.

MEMBERS OF COOMET AND MEMBERS OF COOMET COMMITTEE

- From each State only one National Metrology Institution on behalf of which the Memorandum of Understanding has been signed, may be a Member of COOMET.
- Each COOMET Member must inform the President about the name and address of its appointed Committee Member.
- The Committee shall elect its President by secret ballot, by a simple majority of votes.
- A COOMET Member not represented at two consecutive Committee meetings without giving the reasons for its absence shall be considered as having terminated its participation in COOMET.

Decision on the termination of participation of a COOMET Member in COOMET is to be made by open voting based on a simple majority of votes at the next COOMET Committee meeting.

2. COOMET PROJECTS

2.1. GENERAL

For each collaborative project a COOMET Project Form must be completed and sent to the Secretariat, which will arrange for its distribution to all Committee Members and to the head of the relevant SC/TC. This will enable all COOMET Members to keep themselves informed of areas of possible cooperation providing them with an opportunity to join cooperation.

Three separate forms are available 1:

PROPOSED COOMET PROJECT FORM

AGREED COOMET PROJECT FORM

COOMET PROJECT PROGRESS/FINAL REPORT FORM

Proposals for COOMET collaboration projects may be presented at any time. The collection of Agreed COOMET Projects will represent the working programme of COOMET.

The Committee Members will monitor the COOMET projects to ensure they are in agreement with COOMET aims and tasks and are conducted in accordance with the adopted procedures. The COOMET cooperation can be extended to involve institutions from non-member countries in the projects provided the participants of the cooperation agree.

Notes for the completion of the Forms are given in *Annexes 1-3* on pages 132-137.

2.2. SUBJECT FIELDS

The project should belong to one of the following subject fields:

- Acoustics, ultrasound, vibration;
- Electricity and magnetism;
- Flow measurement;
- Ionising radiation and radioactivity;
- Length and angle;
- Mass and related quantities;
- Photometry and radiometry;
- Physical chemistry;
- Thermometry and thermal physics;
- Time and frequency;
- Reference materials;
- General questions concerning measurements (General metrology);
- Legal metrology;
- Quality management systems;
- Information and information technology
- Joint scientific research.

2.3. PROPOSED COOMET PROJECT

The Proposer of a project shall fill in the form (Annex 1, see page 132), and send it to the COOMET Secretariat through the COOMET Committee Member of his/her country. The COOMET Secretariat shall register the project and distribute the form to the head of the relevant SC/TC, as well as to all COOMET Committee Members who will inform the Proposer and the COOMET Secretariat of their interest within a period of three months.

In case if COOMET Members show no interest in the fulfilment of the proposed project, it can remain in the list of proposed projects for up to one year.

2.4. AGREED COOMET PROJECT

Agreed COOMET Project Forms, Annex 2 (see page 134), is used when agreement has already been reached between a certain number of partners to undertake a specific collaborative project. It is only through the completion of this Form that COOMET Members will be advised of the agreement in question.

The Working Group set up for accomplishing the project shall be composed of the persons stated in the Form. The Coordinator of the Working Group shall be responsible for keeping the relevant SC/TC informed of the progress of the project.

Once completed the Agreed COOMET Project Form should be sent by the Coordinator to the head of the relevant SC/TC and to the COOMET Secretariat for distribution among the Committee Members and also for inclusion of the project in the COOMET Working Programme and data base.

Should any modification, e.g. of the composition of the Working Group or the scope of the project, be decided later, a revised Agreed Project Form shall be circulated.

In case of realising projects concerning the carrying out of comparisons related with the implementation of the CIPM MRA, the information in Box 6 in the form of the Agreed Project shall contain the following data in addition: comparison type, supported CMC, piloting NMI of the comparison, registration in the KCDB (except for the pilot ones).

2.5. COOMET PROJECT PROGRESS/FINAL REPORT

This Form, Annex 3 (see page 136), is used by Coordinators for reporting the progress on Agreed COOMET Projects, once a year.

A Final Report must be prepared when a Project has been completed.

In this Report the results obtained should be presented and possible applications stated. It is desirable to indicate the advantages of undertaking the work collaboratively through COOMET.

The Final Report is not deemed as a publication of the work.

Collaborators are encouraged to publish their work through usual channels, mentioning that it was undertaken within COOMET.

The Coordinator shall send the completed Final Report Form to the head of the relevant SC/TC and the COOMET Secretariat.

2.6. CANCELLATION OF COOMET PROJECTS

According to suggestions of the heads of SCs/TCs the COOMET Secretariat excludes the projects recognised as unpromising and obsolete from the Working Programme, however retaining the information about these projects.

3. Annual reports on the ACTIVITIES of COOMET bodies

- 3.1 A Coordinator of the WG dealing with the agreed COOMET projects sends annually the intermediate progress report on the project to the head of the relevant SC/TC by 15 January. The head of the SC/TC can address the Coordinator of the WG with a request to submit information on the progress with the project in a month time before the meeting of the SC/TC.
- 3.2 The head of the SC/TC prepares Annual Progress Report of the SC/TC and forwards it to the Chairperson of the relevant COOMET Structural Body 31 January.
- 3.3 Based on the reports of the SCs/TCs the Chairpersons of the COOMET Structural Bodies prepare reports on the activities of their COOMET bodies and forward them annually by 15 February to the COOMET Secretariat and represent them at the COOMET Committee meeting.
- 3.4 Annual reports of the Chairpersons of the COOMET Structural Bodies established to fulfil specific tasks within COOMET, should have the following Sections:
 - general characteristic of the cooperation in the corresponding field including information on specific activities and projects being carried out and on the participants involved in cooperation;
 - results of the last meetings of the COOMET Structural Bodies and subordinated SCs/TCs;
 - review of the projects completed and information on the use of the results obtained;

- problems of cooperation with international and regional organisations in the corresponding field of cooperation;
- activities for the implementation of international agreements (e.g., the Arrangement on Mutual Recognition of National Measurement Standards and Calibration and Measurement Certificates Issued by National Metrology Institutes, etc.);
- information on the prospective place and date for the following meetings of the COOMET Structural Bodies and subordinated SCs/TCs;
- proposals for the resolutions of the COOMET Committee meeting. The total volume of the report should not exceed three to five pages.
- 3.5 The COOMET Secretariat prepares Annual Report on COOMET activities based on the reports submitted by the Structural Bodies, and distributes it to the Committee Members annually by 15 March.

4. COMMITTEE MEETINGS / Convocation and procedure

4.1. The President will decide on the place and date of the meeting, taking into consideration the proposals formulated by the Committee Members during their last meeting.

4.2. The President shall notify about the meeting at least ten weeks in advance and also send the preliminary draft agenda with the request to inform the President about their amendments and more precise definitions within a three week period.

4.3. The draft agenda is distributed among the delegates at least four weeks in advance of the meeting.

4.4. The agenda shall be approved by the Committee at the beginning of the meeting.

4.5. A quorum will be constituted by more than half of the Committee Members.

4.6. The Committee will attempt to reach conclusions by consensus, whenever possible. If a compromise cannot be reached, the different points of view shall be recorded in the minutes.

4.7. A draft report of the Committee meeting shall be circulated by the Secretariat to all Committee Members within 3 months of the meeting. In order to speed up the realisation of the resolutions adopted at the Committee meeting, it is recommended to the COOMET Secretariat to prepare and distribute to the Committee Members the list of drafts of such resolutions at the end of the meeting. The approval of the minutes of the corresponding Committee meeting is performed through e-mail during 1 month after they were received from the COOMET Secretariat.

4.8. Between the meetings the Committee can discuss any questions by correspondence involving all Committee Members as well as solve problems of cooperation at the President's Council, the meetings of which are convened by the President as required, but not less than once a year between the COOMET Committee meetings.

4.9. Similar rules may be followed by all structural and working bodies of COOMET.

5. AMENDMENT OF RULES OF PROCEDURE

These Rules of Procedure can be amended only by the consent of at least half of the Committee Members.

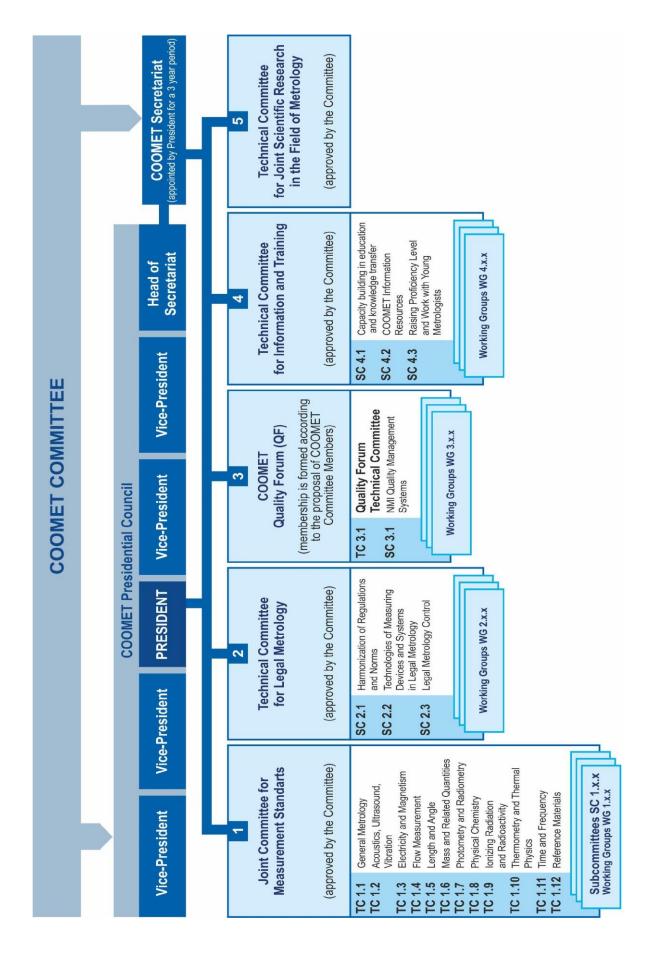
The Rules of Procedure were agreed during the first COOMET Committee Meeting, in Warsaw, on 12 June 1991, in English and Russian,

updated and amended at the 10th COOMET Committee Meeting in Almaty, Kazakhstan, on 25–26 May, 2000; at the 12th COOMET Committee Meeting in Havana, Cuba, on 6–7 May, 2002; at the 15th COOMET Committee Meeting in Vilnius, Lithuania, on 8–9 September, 2005, at the 16th COOMET Committee Meeting in Braunschweig, Germany, on 4–5 September, 2006, at the 18th COOMET Committee Meeting in Kharkov, Ukraine, on 15-16 May, 2008, at the 19th COOMET Committee Meeting in Baku, Azerbaijan, on 20–21 May, 2009, at the 20th COOMET Committee Meeting in Astana, Kazakhstan, on 21–22 April, 2010, at the 23th COOMET Committee Meeting in Nizhny Novgorod, Russia, on 5–6 June, 2013.

COOMET STRUCTURE



COOMET STRUCTURE





COOMET PRESIDENT AND SECRETARIAT



COOMET President

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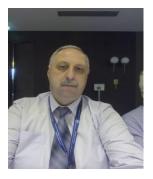
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COOMET PROECTS (NOTES FOR THE COMPLECTION OF FORMS)



PROPOSED COOMET PROJECT

PROPOSED PROJECT COOMET			
1 Reference No.:		2 Subject F	Field:
3 Field of cooperation:			
4 Partners:			
5 Subject:			
6 Description:			
7 Additional remarks:			
8 Proposer's Name:			
Address:			
Telephone: Fa	IX:	E-ma	il:
9 Proposer's signature:	10 Date:		11 Proposed starting date:
12 Signature of the COOMET Committee Member:			
Name:		Signature:	

Annex 1

PROPOSED COOMET PROJECT

Box 1 Reference No.

It will be given by the COOMET Secretariat.

Box 2 Subject Field

The subject field should be chosen from the list in item 2.2 of the Rules of Procedure.

Box 3 Field of cooperation

The field of cooperation should conform to one of the following

- comparisons;
- research;
- advice and training;
- traceability and calibration.

Box 4 Partners

Members of COOMET, who have already expressed their willingness to participate in the proposed cooperation, should be indicated by their initials. If specific institutions are involved, they should be indicated by full names together with the letters signifying their country (see ISO 3166-1981, code Alpha-2), i.e. BG, CS, DE, HU, PL, RO, SU, etc.

Box 5 Subject

The specific subject of the proposed cooperation should be defined in not more than 60 characters (including spaces).

Box 6 Description

Within the space provided a brief description of the proposed project should be given. Sufficient details should be provided for experts from other institutions so that they can assess their capabilities to join cooperation.

Box 7 Additional remarks

This box provides an opportunity for adding any additional remarks relevant to the proposed collaborative project, e.g. previous cooperation, advantages of implementation, etc.

Box 8 Proposer's name

The name, full postal address, fax numbers and e-mail of the person proposing the cooperation should be given.

Box 10 Date

The Form should be dated the day of signature.

Box 11 Proposed starting date

A proposed starting date should be given.



AGREED COOMET PROJECT

AGREED PROJECT COOMET			
1 Reference No.:		2 Subject Field:	
3 Field of cooperation:			
4 Working Group:			
5 Subject:			
6 Description:			
7 Additional remarks:			
8 Coordinator's name:			
Address:			
Telephone: Fa	x :	E-mail:	
9 Date project agreed:	10 Starting date	e: 11 Expected completion date:	
12 Coordinator's signature:		13 Date:	

AGREED COOMET PROJECT

Guidance on completion of **boxes 1, 2, 3 and 5, 6, 7** of the Agreed COOMET Project Form is the same as that on completion of the corresponding Boxes in the Proposed COOMET Project Form.

Box 4 Working Group

Names of experts forming the Working Group and names (or initials) of their institutions, as well as letters signifying their countries should be given.

Box 8 Coordinator's name, address, etc.

The person nominated by the Working Group as its Coordinator should be indicated.

Box 9 Date project agreed Ref. No. of proposal

Date on which an agreement was reached and the Reference No. of the Proposed COOMET Project should be given.

Box 10 Starting date

The date it has been agreed to start the project.

Box 11 Expected completion date

An expected completion date must be given. For permanent agreement (e.g. time service) "ON-GOING" should be entered.

Box 13 Date

The Form should be dated the day of signature.

FOR PROJECTS RELATED WITH COMPARISONS

Box 6 Description

A short description of the comparison with compulsory indication of the type of comparison, calibration and measurement capabilities (CMC) supported by the comparisons, as well as the piloting NMI of the comparison and registration in the KCDB (except for the pilot ones) should be given in this box.



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COOMET PROJECT PROGRESS/FINAL REPORT

COOMET PROJECT PROGRESS/FINAL REPORT			
1 Reference No.:	2 Subject Field:	:	
3 Field of cooperation:			
4 Working Group:			
5 Subject:			
6 Progress:			
7 Coordinator's name: Address:			
Telephone: Fax:	E-mail:		
8 Completion date:			
9 Coordinator's signature:	10	Date:	

COOMET PROJECT PROGRESS/FINAL REPORT

Boxes 1-5

The content of the corresponding Boxes in the Agreed COOMET Project Form should be reproduced.

Box 6 Progress

A brief description of the progress up to date should be entered in the space provided.

Box 7 Coordinator's name, address, etc.

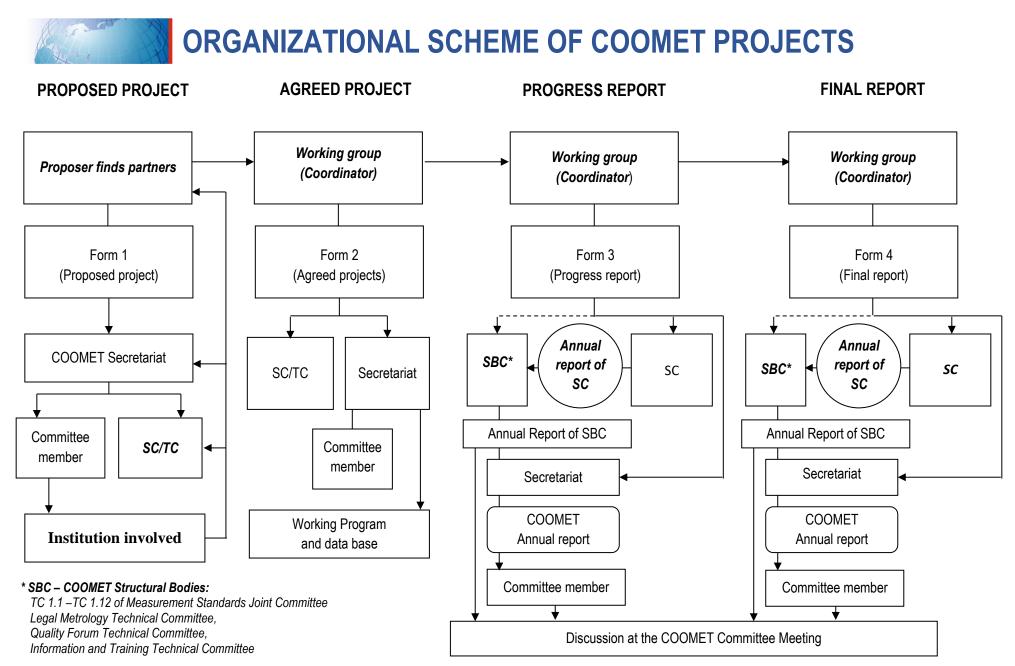
As in the Agreed COOMET Project Form.

Box 8 Completion date

If the progress of the project is being reported then an estimated completion date should be given. If the project has now been completed then the actual date of completion should be given. For permanent agreements "ON-GOING" should be entered.

Box 10 Date

The Form should be dated the day of signature.



A connection depicted by dotted line may be followed in cases of when there are no SC in a TC.

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TC 1.10 "Thermometry and Thermal Physics"	Т	Dr. Lilijana Gaidamovičiūtė	+370 5 216 9402 lilijana.gaidamoviciute@ftmc.lt	1
TC 1.11 "Time and Frequency"	TF	Dr. Rimantas Miškinis	+370 5 262 0194 rimantas.miskinis@ftmc.lt	1
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TC 3.1 "Quality Forum Technical Committee"	AQ	Ms. Irena Lazdauskaitė	+370 5 249 9182 irena.lazdauskaite@ftmc.lt	1
TC 4 "Information and Training"	IT TR	-	-	-

ADDRESSES OF ORGANIZATIONS

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MOLDOVA

Structural body & subject field		Contact person	Phone, E-mail	Address
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TC 1.2	AUV	-	-	-
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TC 1.5	L	Mr. Alexandr Mirza	+373 22 903 119	1
"Length and Angle"			dimensionale@inm.gov.md	
TC 1.6	М	Mr. Alexei Pianih	+373 22 903 139	1
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TC 1.7	PR	Mr. Anatoli Bescupschii	+373 22 903 141	1
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			Fizico chimice@inm.gov.md	
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TC 2 "Legal Metrology"	LM	Mr. Dumitru Dinu	+40 21 6134563 office@brml.ro	2
TC 3.1 "Quality Forum Technical Committee"	AQ	Mr. Dragos Boiciuc	+40 21 6343520 office@inm.ro	1
TC 4 "Information and Training"	IT TR	-	-	_

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	Fax:	+40 21 334 15 33				
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2. Romanian Bureau of Legal Metrology (BRML)

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TC 1.10 "Thermometry and Thermal Physics"	Т	Dr. Anatoly Pokhodun	+7 812 315 52 07 a.i.pokhodun@vniim.ru	1
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SLOVAKIA

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TC 1.4 "Flow Measurement"	F	Mr. Makovnik	+421 2 602 94 337 makovnik@smu.gov.sk	1
TC 1.5 "Length and Angle"	L	Mr. Roman Fíra	+421 2 602 94 232 <u>fira@smu.gov.sk</u>	1
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TC 1.8 "Physical Chemistry"	QM	Mrs. Miroslava Val'kova	+421 2 602 94 211 Valkova@smu.gov.sk	1
TC 1.9 "Ionising Radiation and Radioactivity"	RI	Mr. Krivošik	+421 2 602 94 208 krivosik@smu.gov.sk	1
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TC 1.3 "Electricity and Magnetism"	EM	Mr. Makhmadnazarzoda Khadiyatulloi Safar	+992 91 880 28 30 hadiy_93@mail.ru	1
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TC 1.10 "Thermometry and Thermal Physics"	Т	Mr. Ashurov Bakhtiyor	+992 918-75-64-79 <u>ashurov.73@yandex.ru</u>	1
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Structural body & subject field		Contact person	Phone, E-mail	Address
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TC 1.2 "Acoustics, Ultrasound, Vibration"	AUV	Dr. Enver Sadikoğlu	+90 262 679 5000 add. 2044 or 3101 Enver.sadikoglu@tubitak.gov.tr	2
TC 1.3 "Electricity and Magnetism"	EM	Mr. Mehedin Arifovic	+90 262 679 5000 add. 4200 Mehedin.arifovic@tubitak.gov.tr	1
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TC 1.9 "Ionising Radiation and Radioactivity"	RI	-	-	-
TC 1.10 "Thermometry and Thermal Physics"	т	-	-	-
TC 1.11 "Time and Frequency"	TF	Dr. Ramiz Hamid	+90 262 679 5000 add. 2020 Ramiz.hamid@tubitak.gov.tr	2
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Committee"				
TC 4	IT	Dr. Pavel Neyezhmakov	+38 057 700 34 22	1
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4. State Enterprise "Ivano-Frankivsk Research-and-Production Center for Standardization, Metrology and Certification" (SE "Ivano-Frankivskstandartmetrology")

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UZBEKISTAN

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"Acoustics, Ultrasound, Vibration"			/	·
TC 1.3 "Electricity and Magnetism"	EM	Mr Azamat Sayfiddinov	(+998 71) 1506507 a.sayfiddinov@nim.uz	1
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TC 1.8 "Physical Chemistry"	QM	Mr Nikita Shuvalov	(+998 71) 1506509 n.shuvalov@nim.uz	1
TC 1.9 "Ionising Radiation and Radioactivity"	RI	Mr Elyor Khikmatov	(+998 71) 1506510 e.khikmatov@nim.uz	1
TC 1.10 "Thermometry and Thermal Physics"	Т	Mr Diyor Zakhidov	(+998 71) 1506509 d.zakhidov@nim.uz	1
TC 1.11 "Time and Frequency"	TF	Mrs Lyubov Gazieva	(+998 71) 1502605 I.gazieva@nim.uz	1
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2. Uzbek Agency for Standardization, Metrology and Certification (Uzstandard Agency)

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INFORMATION ON THE ORGANIZATION OF METROLOGICAL ACTIVITIES OF COOMET MEMBER COUNTRIES





COOMET MoU year of signing:	2007
Area:	29,740 km ²
Population:	2.965 million

1. Law on metrology

Law of the Republic of Armenia of February 8, 2012 No. HO-22-N "Ensuring the Uniformity of Measurement".

2. Metrological infrastructure

The state management for ensuring the uniformity of measurements in the fields of legal metrology is implemented by the authorized body of metrology - **the Ministry of Economy of the Republic of Armenia**.

The Ministry of Economy of the Republic of Armenia

Minister of Economy: Tigran Khachatryan

Address:	5 M. Mkrtchyan str., 0010 Yerevan, Republic of Armenia
Telephone:	+374 011-59-71-10
Web:	http://www.mineconomy.am
E-mail:	secretariat@mineconomy.am

Main areas of activity:

- implementation of state policy development and coordination in the field of legal metrology;
- coordination of activities of the National Metrology Body;
- representation of the Republic of Armenia in international organizations;
- definition of the certificate form of measuring instrument type approval and the image of type approval mark;
- definition of the procedure for maintaining the type approval register;
- definition of the original image of the verification mark of measuring instrument;
- conducting administrative proceedings in the field of legal metrology;
- implementation of state control in the field of legal metrology;
- adoption and implementation of guidelines of the International Organization on Legal Metrology.

"National Institute of Metrology" CJSC, designated by the Government of the Republic of Armenia as a National Body of Metrology, implement the state policy in the field of metrology within its competence

Acting Director: Dr. Albert Babayan

Address:	49/4 Komitas ave., 0051 Yerevan, Republic of Armenia
Telephone:	+374 10 23 26 00
E-mail:	info@metrology.am
Web:	http://www.metrology.am

Main areas of activity:

- creation, maintenance, improvement of national standards of units of magnitude;
- ensuring comparability of national standards with the standards of the national institutes of metrology of other countries;
- membership of international and regional organizations within its competence;
- definition of standard sample certification procedure and implementation of standard sample certification;
- examining the metrological characteristics of the measuring instruments in operation;
- implementation of calibration work to ensure traceability;
- implementation of metrological certification of measurement methods in the field of legal metrology;
- type-approval of measuring instruments, definition of validity of type-approval certificate of measuring instrument;
- maintenance of the register of approved measuring instruments and standard samples;
- participation in accreditation activities of legal entities and individual entrepreneurs carrying out calibration of measuring instruments;
- carrying out verification of measuring instruments,
- in the area of ensuring the uniformity of measurements organization and implementation of training, specialization, training of personnel in the field of legal metrology, as well as training and accreditation of the personnel of calibration and testing laboratories in the above-mentioned field, and the provision of relevant certificates;
- implementation of metrological expertise of the draft technical regulations provided by the legal acts adopted in accordance with the international treaties of the Republic of Armenia ratified by the legislation of the Republic of Armenia.

3. National measurement standards

Currently, the measurement standards are being reissued.

4. Status of participation in Metre Convention

National Institute of Metrology CJSC is not a CIPM MRA signatory or a CGPM associate member.

5. Confirmations of recognition of QMS of NMIs (within COOMET)

-

6. State CMC data

-

7. OIML membership status



AZ	EK	BA	IJA	N	

COOMET MoU year of signing:	2007
Area:	86,600 km ²
Population:	9.981 million

1. Law on metrology:

Law of the Republic of Azerbaijan "About ensuring unity of measurements " of June 13, 2013 No. 686-IVQ.

2. Metrological infrastructure:

The Legal entity of public law "Azerbaijan Institute of Metrology" (AzMİ) established in accordance with the Decree of of the President of the Republic of Azerbaijan of February 10, 2017, № 1234 "About the additional measures connected with enhancement of management in the sphere of standardization, metrology, accreditation and protection of subjects of the patent law".

Acting General Director: Mr. Saleh Samadov

Address: Elchin Isagzadeh settlement, 7th Kondalan street, AZ1029, Baku, Azerbaijan

Web: www.metrology.gov.az

The main tasks and activities of the Azerbaijan Institute of Metrology:

- storage, application and improvement of national (state) standards of units of quantities;
- formation and development of the base of state standards;
- ensuring the transfer of units of quantities from state standards;
- ensuring traceability of national (state) standards to the international standards of units of quantities or national standards of units of quantities of other Member States of the Metric Convention;
- participation in the comparisons of national (state) standards in the framework of regional and international metrology organizations;
- implementation of activities in the field of ensuring the uniformity of measurements, performing work and providing services for calibration and verification of measuring instruments;
- conducting spectrometric analyzes to determine radionuclide composition in building materials, food and non-food products;
- testing of measuring instruments for the purpose of type approval, as well as attestation of test equipment;
- metrological examination of technical documentation;
- participation in the improvement of the legislative framework in the field of ensuring the uniformity of measurements;
- providing entrepreneurs with scientific and methodological assistance in metrological support of production and advice on metrology;
- the organization of improvement of professional skill and retraining of the staff, performing works in the field of metrology;
- implementation of other functions stipulated by the Charter of the Institute.

3. National measurement standards

http://metrology.gov.az/page/etalon/

4. Status of participation in the Metre Convention

Azerbaijan is an associate member of the CGPM since 2015.

Signatory of the Mutual Recognition Agreement (CIPM MRA): AzMI (January 28, 2015) NMI: AzMI

https://www.bipm.org/en/about-us/associates/az/

5. Confirmations of recognition of QMS of NMIs (within COOMET)

AzMi QMS confirmation of recognition: (ISO/IEC 17025): QSF-R53 until 31.01.2023

6. State CMC data

KCDB: <u>https://www.bipm.org/exalead_kcdb/exa_kcdb.jsp?_p=AppC&_q=Azerbaijan</u> COOMET database: <u>http://www.coomet.org/DB/com/index.htm?RU,CMC_RU,RU</u>

7. OIML membership status

OIML Corresponding Member

https://www.oiml.org/en/structure/members/memberslist_view?varCorresponding=1



COOMET MoU year of signing:	1992
Area:	207,600 km ²
Population:	9.483 million

1. Law on metrology

Law of the Republic of Belarus of September 5, 1995 No. 3848-XII "On Ensuring the Uniformity of Measurements" (as amended in 2014, subject to changes and additions).

2. Metrological infrastructure

The sate metrology service is headed by a national metrology body – State Committee for Standardization of the Republic of Belarus (Gosstandart of Belarus).

Chairperson:	Mr. Valentin Tataritsky
Address:	93 Starovilensky Trakt, 220053 Minsk, Republic of Belarus
Telephone:	+375 17 233 52 13
Fax:	+375 17 233 25 88
E-mail:	belst@gosstandart.gov.by
Web:	https://gosstandart.gov.by

The major activities are as follows:

- maintenance of the common policy on the matters regarding measurement assurance, as well as coordination of the implementation and development of the SAUM of the Republic of Belarus;
- establishment and maintenance of the state metrological service;
- submitting of proposals for application of units of measurement in the Republic of Belarus to the Council of Ministers of the Republic of Belarus;
- development of legal and other directives aiming at assuring the uniformity of measurements; determination of priorities in metrology development;
- organisation of the development and approval of national standards and other normative documents regulating the implementation of the SAUM;
- organisation of the publication and dissemination of technical standards and scientific-technical information in the field of metrology including reference data;
- setting requirements for national measurement standards and measurement standard, as well as rules of their development, approval, maintenance and use;
- type approval of imported and domestically produced measuring instruments;
- organisation and performance of metrological surveillance;
- coordination of the cooperation in the field of metrology at the international level; representation of the Republic of Belarus in the international metrology organisations and collaboration with national metrology organisations of other countries.

Gosstandart coordinates the activity of the following:

- Interindustry Commission of time and frequency and determination of the Earth rotation parameters,
- Interindustry Commission of reference substances and materials of composition and properties;
- Interindustry Commission of reference data of physical constants and properties of substances and materials.

National Metrology Institute - Belarusian State Institute of Metrology (BelGIM).

Director:	Dr. Valery Gurevich
Address:	93 Starovilensky Trakt, 220053 Minsk, Republic of Belarus
Telephone:	+375 17 233 55 01
Fax:	+375 17 288 09 38
E-mail:	info@belgim.by, coomet@belgim.by
Web:	http://www.belgim.by

The major activities of BelGIM are as follows:

- development of scientific-methodological and procedural basis of the system for assuring the uniformity of measurements of the Republic of Belarus (SAUM);
- coordination and performance of fundamental and practical research;
- development, maintenance and comparison of national measurement standards with the international measurement standards or national measurement standards of other countries;
- recognition of national measurement standards by other countries;
- reproduction of measurement units and their dissemination to the measurement standards at the level of metrology services of enterprises and accredited laboratories;
- development of a uniform scientific-technical policy in the field of metrology and assurance of the uniformity of measurements;
- development of technical directives, national and interstate written standards, measurement procedures and methodological documents in the field of metrology;
- development of the criteria for classification of devices as measuring instruments;
- carrying out of state type approval tests, verification, calibration and metrological evaluation of measuring instruments and other metrology related work;
- maintenance of the state register of national measurement standards of the Republic of Belarus and the state register of approved measuring instruments;
- carrying out of metrological evaluation of measurement procedures and calibration of test equipment;
- participation in the cooperation projects in the field of metrology at regional and international levels as a National Metrology Institute (NMI);
- participation in training and improving the professional skills of personnel engaged in metrology.

The State Metrology Service includes 15 regional metrology bodies of Gosstandart.

National information database of the Republic of Belarus in the field of ensuring the uniformity of measurements: <u>http://www.oei.by</u>

3. National measurement standards

56 national measurement standards. http://www.oei.by/section?id=65

4. Status of participation in the Metre Convention

Belarus is an associate member of the CGPM since 2003. The Mutual Recognition Agreement (CIPM MRA) is signed by: Gosstandart of the Republic of Belarus (January 28, 2015)

Designated Institute: BelGIM (Has the right to use the CIPM MRA logo since November 13, 2006) https://www.bipm.org/en/about-us/associates/by/

5. Confirmations of recognition of QMS of NMIs (within COOMET)

BelGIM QMS confirmation of recognition (ISO/IEC 17025): QSF-R40 until 10.05.2021 BelGIM QMS confirmation of recognition (ISO Guide-34): QSF-R41 until 10.05.2021

6. State CMC data

KCDB: <u>https://www.bipm.org/exalead_kcdb/exa_kcdb.jsp?_p=AppC&_q=belarus+&x=0&y=0</u> COOMET database: <u>http://www.coomet.org/DB/com/index.htm?RU,CMC_RU,RU</u>

7. OIML membership status

OIML Member state.

https://www.oiml.org/en/structure/members/contactmember_view?IDCountry=20&CountryName=BELARUS&is o=BY&M=1



BOSNIA and **HERZEGOVINA**

COOMET MoU year of signing:	2013 (associate member)	
Area:	51,197 km ²	
Population:	3.840 million	

1. Law on metrology

The Law on Metrology of Bosnia and Herzegovina (Official Gazette of Bosnia and Herzegovina No. 19/01).

2. Metrological infrastructure

Metrological infrastructure of Bosnia and Herzegovina:

- Institute of Metrology of Bosnia and Herzegovina (IMBIH);
- Two designated institutes (owners of national standards);
- Organizations working in the field of metrology;
- · Accredited calibration laboratories;
- Designated metrology laboratories and bodies (for example, calibration laboratories);
- Conformity assessment bodies for measuring instruments.

Institute of Metrology of Bosnia and Herzegovina (IMBIH) – representing National Metrology Institute in Bosnia and Herzegovina, directly responsible to the Council of Ministers of Bosnia and Herzegovina. IMBIH is responsible for the establishment of a comprehensive measuring system in Bosnia and Herzegovina with traceability to the International System of Units, SI.

Areas of IMBIH's work are:

- Scientific Metrology;
- Legal Metrology;
- Industrial Metrology.

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Web:	http://www.met.gov.ba

IMBIH's responsibilities regarding Scientific Metrology:

- Realization and maintenance of national measurement standards ensuring their traceability to the internationally recognized measurement standards realization of SI base and derived units;
- Establishment of distributed measurement system by appointing other legal entity for performing responsibilities of national measurement standard holder;
- Membership in RMOs and active participation in their activities;
- Promotion of metrology;
- To support research and development in all areas of metrology.

IMBIH's responsibilities regarding Legal Metrology:

- Issuance of bylaws in accordance with Law on Metrology;
- Supervision of the implementation of Law on Metrology;
- Nomination of laboratories dealing with verification;
- Nomination of bodies for conformity assessment (MID and NAWI);
- Nomination of bodies for control of prepacked products;
- Issuance and acceptance of Type approval.

IMBIH's Membership in International Organizations:

EMRP (European Metrology Research Programme) - Member since 2013
 EURAMET (European Association of National Metrology Institutes) - Member since 2009
 IAAO (International Association Assay Office) - Observer since 2010
 WELMEC (European cooperation in legal metrology) - Associate member since 2009

3. National measurement standards

http://met.gov.ba/Default.aspx?pageIndex=1&langTag=en-US.

4. Status of participation in the Metre Convention

Bosnia and Herzegovina is an associate member of the CGPM since 2011. Mutual Recognition Agreement (CIPM MRA) signatory: Institute of Metrology of Bosnia and Herzegovina (IMBIH) (June 15, 2011). (Has the right to use the CIPM MRA logo from August 10, 2012) Designated Institutions: In the field of chemistry, water, fresh water and polluted water Institut za vode d.o.o. Bijeljina (<u>IW</u>).

In the field of mass and related quantities, fluid flow, volumetric gas flow: KJKP Sarajevogas d.o.o. Sarajevo (<u>LABSAGAS</u>)

https://www.bipm.org/en/about-us/associates/ba/

5. Confirmations of recognition of QMS of NMIs (within COOMET)

Bosnia and Herzegovina receives its NMI QMS recognition within EURAMET.

6. State CMC data

Bosnia and Herzegovina publishes its CMC data within EURAMET. KCDB: https://www.bipm.org/exalead kcdb/exa kcdb.jsp? p=AppC& g=Bosnia%20and%20Herzegovina

7. OIML membership status

OIML Corresponding member.

https://www.oiml.org/en/structure/members/contactmember_view?IDCountry=27&CountryName=BOSNIA%20 AND%20HERZEGOVINA&iso=BA&M=2





COOMET MoU year of signing:	1991
Area:	110,994 km ²
Population:	7.365 million

"Law on measurements", effective from 09.11.2002, published in SG, issue 46/7.05.2002, last amended SG, Issue 12/6.2.2018.

2. Metrological infrastructure

The policy in the field of metrology is defined by the Council of Ministers of the Republic of Bulgaria on a proposal from the Minister of Economy. In the process of policy making the Minister of Economy is supported by the president of the Bulgarian Institute of Metrology and the president of the State Agency for Metrological and Technical Surveillance.

Ministers and heads of state bodies organize the activities to ensure traceability, accuracy and reliability of measurements in their legal entities.

The Bulgarian Institute of Metrology (BIM) is a legal entity to the Minister of Economy, at budget support. BIM has functions of the national metrology institute and national legal metrology authority.

The State Agency for Metrological and Technical Surveillance (SAMTS) is a legal entity to the Minister of Economy, at budget support, that is in charge of carrying out metrological surveillance according to the Law on measurements.

The Bulgarian Institute of Metrology (BIM)

Acting President: Mr. Paun Ilchev		
Address:	52-B, Blvd G.M.Dimitrov 1797 Sofia, Bulgaria	
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Fax:	+359 2 9702 777	
E-mail:	p.ilchev@bim.government.bg	
Web:	bim.government.bg	

Scientific metrology

- ✓ BIM through the Directorate General "National Centre of Metrology" (DG NCM):
 - establishes and maintains the national measurement standards of the Republic of Bulgaria;
 - organizes establishment and development of the national system of certified referent materials;
 - carries out metrological research and provides measurement-related services in areas of public, scientific and economic interest;
 - perfroms activities for international recognition of measurement results carried out in the country.

Legal metrology

In non-harmonized European legislation:

- ✓ BIM through the Directorate General "Measures and Measuring Instruments" (DG MMI):
 - carries out control of measuring instruments (type approval, initial and subsequent verifications);
 - carries out metrological expertise of measuring instruments.

✓ SAMTS through the Directorate General "Metrological Supervision":

- performs metrological supervision for compliance with the requirements of the Law on measurements;
- controls pre-packages and packaging designed as measuring vessels;
- authorizes bodies for initial and subsequent verifications of some categories of measuring instruments energy meters, gas meters, water meters, heat meters, etc.

In harmonized European legislation:

BIM is a Notified Body (Nr. 1957) for conformity assessment of non-automatic weighing instruments (NAWID) and some categories of measuring instruments (MID). Other bodies, notified by SAMTS, also exist.

Industrial metrology

Accredited private or public laboratories carry out calibration of measuring instruments.

Contacts:

Directorate General "National Centre of Metrology" (DG NCM) implements the BIM policy in the field of fundamental metrology.

General Director: Mr. Sasho Nedyalkov

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Telephone: +359 2 9702 703

Fax: +359 2 9702 777

E-mail: s.nedialkov@bim.government.bg

Directorate General "Measures and Measuring Instruments" (DG MMI) implements the BIM policy in the field of legal metrology.

General Director: Mr. Valentin Starev

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Fax: +359 2 9702 777

E-mail: v.starev@bim.government.bg

SAMTS:

President: Mr. Petar Gornovski

Address:	52A, G. M. Dimitrov Blvd., 1797 Sofia, BULGARIA
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DG MS, SAMTS

General Director: Mrs. Pavlina DanailovaAddress:13 Lachezar Stanchev St., 1797 Sofia, BULGARIATelephone:+359 2 986 22 66 / +359 2 9396 740Fax:+359 2 9396 701E-mail:Pavlina.Danailova@damtn.government.bg

3. National measurement standards

Bulgaria has 11 national standards.

http://bim.government.bg/uploaded/files/490-Registar-NE-04.10.2017.pdf

4. Status of participation in the Metre Convention

Member of the Metre Convention since 1911. Signatory of the Mutual Recognition Agreement (CIPM MRA): Bulgarian Institute of Metrology (October 14, 1999) (Has the right to use the CIPM MRA logo since September 12, 2006) https://www.bipm.org/en/about-us/member-states/bg/

5. Confirmations of recognition of QMS of NMIs (within COOMET)

Bulgaria receives its NMI QMS recognition within EURAMET.

6. State CMC data

Bulgaria publishes its CMC data within EURAMET. KCDB: <u>https://www.bipm.org/exalead_kcdb/exa_kcdb.jsp?_p=AppC&_q=bulgaria&x=14&y=9</u>

7. OIML membership status

OIML Member state.

https://www.oiml.org/en/structure/members/contactmember_view?IDCountry=33&CountryName=BULGARIA&i so=BG&M=1



COOMET MoU year of signing:	2016 (assoc
Area:	9.634 millior
Population:	1.4 billion

2016 (associate member) 9.634 million km² 1.4 billion

1. Law on metrology

Metrology Law of People's Republic of China (Amended Oct.26, 2018).

2. Metrological infrastructure

All activities in the field of metrology in China is regulated by the **Metrology Law of the People's Republic of China**, which is adopted at the 12th Meeting of the Standing Committee of the Sixth National People's Congress and promulgated by Order No. 28 of the President of the People's Republic of China on September 6, 1985, and effective as of July 1, 1986. This Law is formulated to strengthen the metrological supervision and administration, to ensure the uniformity of the national system of units of measurement and the accuracy and reliability of the values of quantities, so as to contribute to the development of production, trade and science and technology, to meet the needs of socialist modernization and to safeguard the interests of the state and the people.

The **State Administration for Market Regulation of P. R. China (SAMR)** is the ministerial, administrative organ directly under the State Council of the People's Republic of China in charge of the following duties:

- To conduct comprehensive supervision and management of the market;
- To execute uniform registration of market economic operators and strengthen and information transparency and sharing mechanism to organized integrated market surveillance enforcement and undertake ante-monopoly law enforcement, so as to normalize and maintain the market order;
- To organize the fulfilment of the national quality strategy, promoting industry quality advancement, promoting imported food safety and supervising the special equipment safety as well;
- To be responsible for the building up national systems and infrastructure of measurement, standards, testing, certification and accreditation;
- In addition, SAMR is also be entrusted to oversee the newly restated State Drug Administration and newly restructured State Bureau of Intellectual Property.

The **Department of Metrology of SAMR** is responsible for metrology administration.

Contact person: Zheng Huaxin

Address:	No.9 Madiandonglu Haidian District, Beijing, 100088 P. R. China
Telephone:	86-10-82261849
Fax:	86-10-82260131
E-mail:	the email system is under development currently

Founded in 1955, **National Institute of Metrology of the People's Republic of China (NIM)** is a nonprofit research organization under the State Administration for Market Regulation of P. R. China (SAMR). It is China's national metrology institute (NMI) and the state-level technical center for legal metrology. It stays at the top of China's traceability chain.

As of December 2018, NIM has about 1000 staff members. NIM has two campuses. The Hepingli Campus focuses on R&D in traditional areas and service provision and is NIM's customer service center. The Changping Campus focuses on cutting-edge research that has a high requirement on laboratory conditions.

3. National measurement standards

As of December 2018, NIM maintains 128 national primary standards and 359 national measurement standards.

4. Status of participation in the Metre Convention

Member of the Metre Convention since 1977. Signatory of the Mutual Recognition Agreement (CIPM MRA): NIM (October 14, 1999), has the right to use the CIPM MRA logo from November 27, 2006.

Applied Institute: Hangzhou Applied Acoustics Research Institute (HAARI) (from January 1, 2013) <u>https://www.bipm.org/en/about-us/member-states/cn/</u>

A representative of NIM (Dr Y. Duan) is a member of CIPM (since 2010). NIM has representatives in 10 BIPM Consultative Committees.

5. Confirmations of recognition of QMS of NMIs (within COOMET)

China receives its NMI QMS recognition within APMP.

6. State CMC data

China publishes its CMC data within APMP. KCDB: <u>https://www.bipm.org/exalead_kcdb/exa_kcdb.jsp?_p=AppC&_q=china&x=6&y=6</u>

7. OIML membership status

OIML Member state.

https://www.oiml.org/en/structure/members/contactmember_view?IDCountry=44&CountryName=P.R.%20CHI NA&iso=CN&M=1



COOMET MoU year of signing:	1991 (associate member)	
Area:	110,860 km ²	
Population:	11.1 million	

(up-to-date information was not provided to the COOMET Secretariat)

2. Metrological infrastructure

(up-to-date country information has not been submitted to the COOMET Secretariat - information from the Catalog-2018 is given)

The National Research Institute on Metrology (INIMET) of Cuban National Bureau of Standards as NMI, is the institution responsible for measurement standards and scientific metrology. It is in charge of the following main activities:

- to implement, improve, maintain and compare, at the international level, the Cuban national measurement standards and transfer their values to secondary standards;
- to carry out research and scientific-technical development in the field of metrology;
- to calibrate working standards and instruments of secondary laboratories;
- to carry out pattern evaluation of measurement instruments;
- to participate in the elaboration of standards and technical regulations for verification and calibration of measuring instruments;
- to educate and train specialists for legal metrology and industrial calibration laboratories.

Director:	Mr. Nelson Villalobos Hevia
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relephone.	+557 002 05 507 +557 005 90 02
Fax:	+537 867 69 66
E-mail:	villalobos@inimet.cu
Web:	http://www.inimet.cubaindustria.cu/

The Centro de Isótopos (CENTIS) is the designated laboratory in the field of Radioactivity. CENTIS belongs to the Agency of Nuclear Energy and Advanced Technologies of the Ministry for Science, Technology and Environment (CITMA). The main objective of this center is the production and R&D of radiopharmaceuticals, RIA kits and radioactive labelled compounds for the Cuban Health System as well as to perform specialized technical services and application of Nuclear Techniques to solve economical national problems, including those related to metrology of ionizing radiation. The Department of Radionuclides Metrology of the Centro de Isótopos, the CENTIS-DMR, is responsible for the establishment, developing, conservation, custody and diffusion of National Standards of Radionuclide Activity units (Becquerel). CENTIS-DMR is the scientific and methodological warrantor for achieving the traceability to these standards of the radioactivity measurements performed at national level.

Director: Dr. Jorge C. Cruz Arencibia

Address:Ave. Monumental y Carretera La
San Jose de las Lajas, MayabequeTelephone:+537 682 95 24Fax:+537 866 98 21E-mail:jcruz@centis.edu.cuWeb:www.centis.cu

The Centro de Protección e Higiene de las Radiaciones (CPHR) is a designated laboratory mainly responsible for the dosimetry standards in the field of ionizing radiation. The Dosimetry Laboratory of the CPHR performs the following obligations:

• to maintain traceability in Cuba to the international measurement system through implementing and improving national standards and calibrating measuring instruments;

Rada, Km 31/2

- to participate in comparison exercises of the standards at international level;
- to carry out research and scientific-technical development in the field of ionizing radiation metrology;
- to provide education to specialists and users in the field of radiation measurements.

Director:	MSc. Gladys Mercedes López Bejerano
Address:	Carretera Cantera La Victoria II, km 2 ½, e/Monumental y Final, Municipio Guanabacoa. La Habana, Republic of Cuba
Telephone:	+537 7 682-7271, 7 682-0514 (Internacional) +537 7 682-9571, 7 682-4891, +537 7 682-4892
Fax: Email: Web:	+537 682-9573 gladys@cphr.edu.cu <u>http://www.cphr.edu.cu/</u>

The institutions responsible for Legal Metrology are:

a) Cuban National Bureau of Standards (NC) that is responsible for the development of metrology and legal metrology and performs the functions of the central steering body of state administration in the field of metrology.

The main tasks and activities of the NC in the field of metrology are:

- elaboration and realisation of state policy in metrology;
- preparation of laws and decrees referring to metrology;
- steering of metrology in the state in the scope given by the Law on Metrology, including subordinate metrological institutions and Legal Metrology Service;
- methodical activity and supervision of activities in metrology;
- representation of the Republic of Cuba in the international metrological associations.

General Director: Dr. Nancy Fernández Rodríguez

Director of Metrology Department: Mr. Fernando Arruza Rodríguez

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 Telephone:
 +537 682 95 24

 Fax:
 +537 682 78 50

 E-mail:
 nc@ncnorma.cu, arruza@ncnorma.cu

 Web:
 http://www.nc.cubaindustria.cu

b) Territorial Centres of Metrology (TCM) which

are subordinate institutions of NC. These institutions are charged with the following main activities:

- to verify the legal measurement instruments;
- to calibrate the working standards of measurement units (for industry);
- to calibrate the ordinary measuring instruments for customers;
- to carry out the pattern evaluation of measuring instruments.

TCM laboratories were accredited by ONARC according to ISO IEC 17025 standard.

c) The other institutions in the field of legal metrology are **Metrological Laboratories** (Industry). These institutions (established in factories or other organisation) are calibration laboratories. NC authorises some of them for verification of the specified kinds of legal measuring instruments, if necessary.

The calibration of ordinary measuring instruments is performed by more than 170 calibration laboratories, established in the framework of industry or other organisations.

3. National measurement standards

(up-to-date information was not provided to the COOMET Secretariat)

4. Status of participation in the Metre Convention

Cuba is an associate member of the CGPM since 2000. Signatory of the Mutual Recognition Agreement (CIPM MRA): National Bureau of Standards of the Republic of Cuba (NA) (June 18, 2001)

Designated Institutions:

• Center of Isotopes (CENTIS), Havana

(Has the right to use the CIPM MRA logo from August 12, 2011)

Center for the Protection and Hygiene of Radio Emission (CPHR), Havana

- (Has the right to use the CIPM MRA logo from March 8, 2011)
- National Research Institute of Metrology (INIMET), Havana

https://www.bipm.org/en/about-us/associates/cu/

5. Confirmations of recognition of QMS of NMIs (within COOMET)

INIMET QMS confirmation of recognition (ISO/IEC 17025): QSF-R56 until 04.10.2023 CENTIS QMS confirmation of recognition (ISO/IEC 17025): QSF-R55 until 04.10.2023 CPHR QMS confirmation of recognition (ISO/IEC 17025): QSF-R57 until 04.10.2023 Note - INIMET, CENTIS and CPHR have established a quality system in accordance with ISO / IEC 17025 and the Mutual Recognition Agreement for national measurement standards and for calibration and measurement certificates issued by national metrology institutes. In 2008 this system was accredited by the National Accreditation Body (ONARC) of the Republic of Cuba and recognized by COOMET in accordance with the above international standard.

6. State CMC data

KCDB: <u>https://www.bipm.org/exalead_kcdb/exa_kcdb.jsp?_p=AppC&_q=cuba&x=9&y=14</u> COOMET database: <u>http://www.coomet.org/DB/com/index.htm?RU,CMC_RU,RU</u>

7. OIML membership status

OIML Member state.

https://www.oiml.org/en/structure/members/contactmember_view?IDCountry=55&CountryName=CUBA&iso=CU&M=1



DPR of KOREA

COOMET MoU year of signing:	2002 (as
Area:	109,890
Population:	22.6 milli

2002 (associate member) 109,890 km² 22.6 million

1. Law on metrology

The legislative basis of the DPRK in the field of metrology is the DPRK Metrology Act, adopted in 1993.

2. Metrological infrastructure

The institution responsible for standards, scientific metrology and calibration service is **Central Institute of Metrology (CIM)**.

Its main tasks are:

- maintenance and management of national standards for the measurement units of physical quantities;
- fundamental research in the field of metrology;
- development of national standards and reference measuring instruments;
- calibration and international comparison of various kinds of reference measuring instruments;
- pattern approval of measuring instruments;
- research for the establishment of law and regulations on metrology;
- train of the experts and dissemination of scientific and technical knowledge on metrology;
- international exchange in the field of metrology.

Director:	Mr. Jang Myong II
Address:	Sonsin-Dong No.1, Sadong District, Pyongyang, DPR of Korea
Telephone:	+850 2 381 86 49
Fax:	+850 2 381 44 80
E-mail:	pdk0301@163.com

The institution responsible for legal metrology is the **State Administration for Quality Management (SAQM)** responsible for the metrological works in the country. It is charged with the following main activities:

- to elaborate and realize the state policy in metrology;
- to define and register the measurement standards for the unification of measurement units and maintenance of their accuracy;
- to approve the measuring means;
- to accredit the self-calibration institution;
- to organize and carry out the inspection and supervision in the field of metrology;
- to elaborate the law, regulations and rules on metrology;
- to approve the guidelines to the calibration and pattern evaluation.

Acting President: Mr. Pak Song Guk,

Director of Metrology Department: Dr. Jo Hui Kon

Address: Inhung-Dong No.1, Moranbong District, Pyongyang, DPR Korea

Telephone:+ 850 2 18111 (ext. 381 8989)

Fax:+ 850 2 381 44 10

E-mail: <u>saqm@co.chesin.com</u>

Territorial Institutions of Calibration are the subordinate of SAQM. These institutions are charged with the following main activities:

- to maintain the working standards and reference instruments;
- to calibrate the ordinary measuring instruments belonging to the category of state calibration within the territory;
- to carry out the supervision and control on metrology;
- to give technical and administrative guidance to the self-calibration institutions within the territory.

3. National measurement standards

(up-to-date information was not provided to the COOMET Secretariat)

4. Status of participation in the Metre Convention

The DPRK is currently not a signatory to the CIPM MRA or an associate member of the CGPM, nor is it entitled to use the CIPM MRA logo.

5. Confirmations of recognition of QMS of NMIs (within COOMET)

6. State CMC data

7. OIML membership status

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COOMET MoU year of signing:	2006
Area:	69,700 km ²
Population:	3.7 million

"Product Safety and Free Movement Code", № 6157-IU

2. Metrological infrastructure

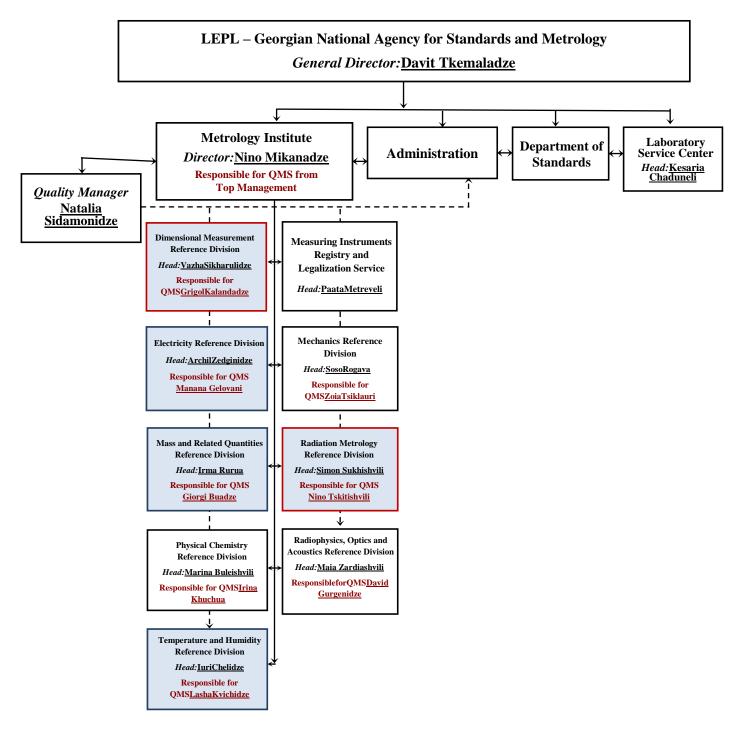
Metrology Institute of Georgia is a structural unit of Legal Entity of Public Law – **Georgian National Agency for Standards and Metrology (GEOSTM)**, which is in the system of the Georgian Ministry of Economy and Sustainable Development. Legal basis for providing uniformity of measurement in the country is Product Safety and Free Movement Code, which includes laws "About Provision Uniformity of Measurements", and also other laws related to Quality Infrastructure.

Objectives, functions, rights and obligations of the Agency are represented by:

- Reproduction of measurement units by means of measurement standards and reference measuring equipment, transfer of units in Georgia in order to provide uniformity of measurement on the country's territory;
- Participation in creation and development of measurement standards base for verification, calibration and type approval works of measuring equipment (including imported ones) in accordance with the Georgian legislation in force;
- Participation in forming and conducting state policy in the field of standardization and metrology and coordination of activities in these fields;
- Participation in forming of metrological system in accordance with the legislation Georgian in force;
- Participation in developing normative base for improving fields of uniformity of measurement;
- Organization and conduction of works on reproducing measurement units by means of measurement standards for providing uniformity of measurements on the whole territory of the country;
- Participation in works of developing scientific-methodic basis for developing system of uniformity of measurements;
- Organization of works related to standards registry, its management and provision of publication of standards list (registry);

MI activities covers works on:

- development, maintenance and improvement of measurement standards base;
- maintenance of registry of national (state) standards of Georgia;
- calibrations and measurements;
- verification;
- expert measurements;
- type approval, type registration of measuring instrument;
- maintenance of registry of type of measuring instrument;
- recognition of results of initial verification, etc.



Organizational Structure of the Agency (GEOSTM)

For 100% factor of availability of public information for the year 2014 (similarly like in 2012-2013) the Agency was awarded a certificate by the Institute for Development of Freedom of Information (IDFI).

Oragization management and contact details:

Georgian National Agency for Standards and Metrology (GEOSTM).

General Director: Mr. Davit Tkemaladze

Address:	Chargali Str., 67, 0178 Tbilisi, Georgia
Telephone:	+995 32 261 35 00, +995 32 261 25 30
Fax:	+995 32 261 35 00
E-mail:	geostm@geostm.ge
Web:	http://geostm.ge/

Director:Nino MikanadzeAddress:Chargali Str., 67, 0178 Tbilisi, GeorgiaTelephone:+995 32 261 77 57Fax:+995 32 261 35 00E-mail:nino_mikanadze@yahoo.com

3. National measurement standards

Number of national measurement standards: 17. http://geostm.ge/cms-images/etalonebi.pdf

4. Status of participation in the Metre Convention

Georgia is an associate member of CGPM since 2008.

Signatory of the Mutual Recognition Agreement (CIPM MRA): National Agency of Georgia for Standards and Metrology (GEOSTM) (June 17, 2008). (Has the right to use the CIPM MRA logo from June 3, 2014).

https://www.bipm.org/en/about-us/associates/ge/

5. Confirmations of recognition of QMS of NMIs (within COOMET)

GEOSTM QMS confirmation of recognition (ISO/IEC 17025): QSF-R58 until 04.10.2023.

6. State CMC data

KCDB: <u>https://www.bipm.org/exalead_kcdb/exa_kcdb.jsp?_p=AppC&_q=georgia&x=5&y=11</u> COOMET database: <u>http://www.coomet.org/DB/com/index.htm?RU,CMC_RU,RU</u>

7. OIML membership status

OIML Corresponding member. <u>https://www.oiml.org/en/structure/members/contactmember_view?IDCountry=80&CountryName=GEORGIA&is</u> <u>o=GE&M=2</u>



COOMET MoU year of signing:
Area:
Population:

1991 (associate member) 357,578 km² 83 million

1. Law on metrology

Units and Time Act (EinhZeitG) Date of first publication: 22 February 1985 Date of latest change: 18 July 2016.

2. Metrological infrastructure

1. The institution responsible for measurement standards and scientific metrology in Germany is the **Physikalisch-Technische Bundesanstalt (PTB).**

It is the National Metrology Institute providing scientific and technical services.

PTB's responsibilities are to achieve progress and ensure reliability in the field of metrology for the benefit of society, economy and science with research, measurement and consulting being its main activities.

Areas of PTB's work are:

- realization, reproduction and dissemination of the SI units;
- development of national measurement standards;
- determination of fundamental constants and exploitation of quantum effects for realizing the units;
- provision of traceable reference materials and determination of material properties;
- development of accurate and reliable measurement procedures;
- contribution to standardization and technology transfer by consulting and seminars;
- pattern evaluations, conformity assessment and consulting;
- metrology in commercial transactions, environmental, labor and radiation protection, medicine and safety engineering;
- cooperation in European and international metrology organizations as well as with metrology institutes around the world;
- technical cooperation with countries with emerging economies

President: Prof. Dr. Joachim Ullrich

Vice-President: Dr. Roman Schwartz

Member of Presidential Board: Dr. Jörn Stenger

Address: Bundesallee 100, 38116 Braunschweig, Germany

Telephone: +49 531 592 0

Fax: +49 531 592 9292

E-mail: Joachim.Ullrich@ptb.de Roman.Schwartz@ptb.de

Joern.Stenger@ptb.de

Web: <u>www.ptb.de</u>

2. Institutions responsible for legal metrology:

The basic principles of legal metrology are stipulated by the Units Act and the Measurement and verification Act, including the relevant implementing ordinances and additional regulations. The physical and technical basis of the units to be applied in official and commercial transactions is today's International System of Units (SI).

The tasks of legal metrology are distributed between the federal and the state authorities. PTB is responsible for type examination and conformity assessment of measuring instruments and traceability to national standards used by the verification authorities. The verification authorities of the sixteen federal states and the officially approved test centers for measuring instruments in the field of electricity, gas, water and heat are responsible for the individual testing of measuring instruments subject to mandatory verification.

Office of Consortium on Metrology and Verification at German Academy of Metrology (DAM)

Address:	Franz-Schrank-Str. 9, 80638 München, Germany
Telephone:	+49 89 17 901-333
Fax:	+49 89 17 901-386
E-mail:	dam@lmg.bayern.de

3. Institutions responsible for calibration service:

Calibrations are performed by the calibration laboratories accredited by the "Deutsche Akkreditierungsstelle GmbH (DAkkS)" founded by the German Government in Cooperation with the German Federation of Industry (BDI) The basis of the DAkkS (former DKD accreditation body) accredited calibration laboratories is the traceability of their reference standards to the national standards provided by the National Metrology Institute, the PTB or other National Metrology Institutes. Industrial laboratories and other institutes which, due to their trained personnel and equipment, are able to perform measurements with the required uncertainty and whose standards are traceable to the national standards of the PTB, are accredited as calibration laboratories. Accreditation is granted by DAkkS after assessment of the laboratories in accordance with the standard DIN EN ISO/IEC 17025. Membership of DAkkS in the European Cooperation for Accreditation (EA) and the International Laboratory Accreditation Cooperation (ILAC) ensures the recognition of the calibration certificates in all member countries worldwide. At present there are about 470 accredited calibration laboratories for electrical, magnetic, dimensional, mechanical, acoustical, fluid and optical quantities, as well as for chemical analysis, reference materials, time and frequency, ionizing radiation and radioactivity, temperature and humidity.

As PTB is responsible by law for the uniformity of measurement in Germany, the DKD (Deutsche Kalibrierdienst) was reestablished in May 2011 to represent a forum for information exchange and the elaboration of harmonized calibration guides. About 500 laboratories and individuals are members of the DKD, which is subdivided into 13 technical committees. DKD is a member of the EUROCAL, the European association of national associations of calibration laboratories. DKD closely cooperates with DAkkS to support the German calibration system.

Head of the department "Metrology | Constructions | Transport | Renewable Energy" of DAkkS: Dr. Heike Manke

 Address:
 Bundesallee 100, 38116 Braunschweig, Germany

 Telephone:
 +49 531 592 1900

 Fax:
 +49 531 592 1905

 E-mail:
 heike.manke@dakks.de

Chairperson of DKD: Dr. Peter Ulbig

 Address:
 Bundesallee 100, 38116 Braunschweig, Germany

 Telephone:
 +49 531 592 9090

 Fax:
 +49 531 592 9095

 E-mail:
 peter.ulbig@ptb.de

3. National measurement standards

https://www.ptb.de/cms/en/ptb/fachabteilungen.html

4. Status of participation in the Metre Convention

Member of the Metre Convention since 1875. Signatory of the CIPM MRA: Physikalisch-Technische Bundesanstalt (PTB) (14 of October, 1999) (Has the right to use the CIPM MRA logo from the 28 of November, 2006) Designated institutes:

- Bundesamt für Verbraucherschutz und Lebensmittelsicherheit (BVL), Berlin (Has the right to use the CIPM MRA logo from the 11 of November, 2016)
- Bundesanstalt f
 ür Materialforschung und -pr
 üfung (BAM), Berlin (Has the right to use the CIPM MRA logo from the 17 of January, 2008)
- Umweltbundesamt (UBA), Langen (Has the right to use the CIPM MRA logo from the 17 of August, 2007)

https://www.bipm.org/en/about-us/member-states/de/

5. Confirmations of recognition of QMS of NMIs (within COOMET)

Germany receives its NMI QMS recognition within EURAMET.

6. State CMC data

Germany publishes its CMC data within EURAMET. KCDB: <u>https://www.bipm.org/exalead_kcdb/exa_kcdb.jsp?_p=AppC&_q=germany&x=0&y=0</u>

7. OIML membership status

OIML Member state.

https://www.oiml.org/en/structure/members/contactmember_view?IDCountry=81&CountryName=GERMANY&i so=DE&M=1



COOMET MoU year of signing:	1998
Area:	2.717 million km ²
Population:	18.4 million

The Law of the Republic of Kazakhstan "On ensuring the unity of measurements" of June 7, 2000 N 53-II.

2. Metrological infrastructure

In the Republic of Kazakhstan, activities in the field of Metrology are regulated by The law "on ensuring the unity of measurements", which establishes legal, economic and organizational basis for ensuring the unity of measurements. The law is aimed at protecting the rights and legitimate interests of citizens and the economy of the Republic of Kazakhstan from the consequences of inaccurate measurements.

State management of activities to ensure the unity of measurements is carried out by the **Committee of** technical regulation and Metrology of the Ministry of industry and infrastructure development of the Republic of Kazakhstan (KTM MIIR RK).

The Chairman: Mr. Shakkaliev Arman Abayevich

Address:Reference center, Mangilik El str., 11, 010000, Nur-Sultan, Republic of KazakhstanTelephone:+7 (7172) 75 05 01

Web: www.memst.kz

In accordance with the Law of the Republic of Kazakhstan "on ensuring the unity of measurements" the main objectives of KTM are:

- formation and implementation of the state policy to ensure the unity of measurements;
- coordination of the metrological service of the Republic of Kazakhstan;
- the establishment of measurement units admitted for application;
- · organization of scientific research in the field of Metrology;
- establishment of rules of creation, approval, storage, use and comparisons of state measurement standards, improvement of measurement standard base of measurement units of the Republic of Kazakhstan;
- organization of comparison of the results of verification and calibration of measuring instruments;
- establishment of classification of state standards of units of quantities used in the territory of the Republic of Kazakhstan;
- determining the procedure for the development and approval of regulatory documents to ensure the uniformity of measurements;
- determination of General metrological requirements for measuring instruments, methods and results, methods of verification of measuring instruments;
- determination of the order of application, production and repair of measuring instruments;
- organization of the register of the state system of ensuring the unity of measurements;
- organization and conduct of state metrological control;
- representation of the Republic of Kazakhstan in international and regional Metrology organizations;
- organization of advanced training and retraining in the field of ensuring the unity of measurements.

The functions of The state scientific metrological center are performed by the **Republican state enterprise** "Kazakhstan Institute of Metrology" (RSE "KazInMetr").

General Director: Mr. Toktobek Tokanov

Address: Reference center, Mangilik El str., 11, 010000, Nur-Sultan, Republic of Kazakhstan

Telephone: +7 (7172) 28 29 99

E-mail: info@kazinmetr.kz

Web: <u>http://www.kazinmetr.kz</u>

RSE "KazInMetr" carries out:

- work aimed at the development of Metrology in the Republic, taking into account the state policy in the field of ensuring the unity of measurements;
- carrying out scientific, technical, practical, organizational and methodological works in order to improve the foundations of the state system of ensuring the unity of measurements of the Republic of Kazakhstan;
- creation and improvement of measurement standard base of measurement units of the Republic, the organization and carrying out of comparisons of measurement standards;
- participation in the improvement of the legislative and regulatory framework of the state system of ensuring the unity of measurements, harmonization of normative documents on Metrology with international requirements;
- testing of manufactured in the Republic and imported measuring instruments for compliance with the established requirements;
- information and regulatory support of organizations, institutions, enterprises and other consumers in the field of Metrology;
- professional development and retraining in the field of Metrology.

3. National measurement standards

Kazakhstan has 101 units of measurement standards and reference equipment, including 52 units of state measurement standards and 49 units of state working measurement standards.

https://kazinmetr.kz/standards/ge/

4. Status of participation in the Metre Convention

Member of the Metre Convention since 2008.

Signatory of the Mutual Recognition Agreement (CIPM MRA):

Republican State Enterprise "Kazakhstan Institute of Metrology" (RGP "KazInMetr") (January 6, 2006)

(Has the right to use the CIPM MRA logo from April 13, 2011).

https://www.bipm.org/en/about-us/member-states/kz/

5. Confirmations of recognition of QMS of NMIs (within COOMET)

RGP "KazInMetr" QMS confirmation of recognition (ISO/IEC 17025): №QSF-R50 until 27.08.2020 RGP "KazInMetr" QMS confirmation of recognition (ISO Guide-34): №QSF-R51 until 15.02.2022

6. State CMC data

KCDB: <u>https://www.bipm.org/exalead_kcdb/exa_kcdb.jsp?_p=AppC&_q=kazinmetr&x=0&y=0</u> COOMET database: <u>http://www.coomet.org/DB/com/index.htm?RU,CMC_RU,RU</u>

7. OIML Membership status

OIML Member state.

https://www.oiml.org/en/structure/members/contactmember_view?IDCountry=110&CountryName=KAZAKHST AN&iso=KZ&M=1

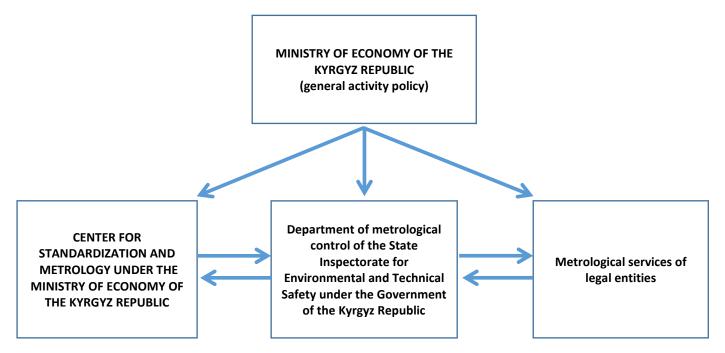




COOMET MoU year of signing:	2000
Area:	198,500 km ²
Population:	6.2 million

Law of the Kyrgyz Republic of July 9, 2014 №118 "On ensuring the unity of measurements".

2. Metrological infrastructure



State management activities to ensure traceability in the country is regulated by **The Ministry** of **Economy of the Kyrgyz Republic (ME KR)** in accordance with the law of the Kyrgyz Republic "On ensuring the Unity of Measurements" No. 118 from 09.07.2014.

The organizational structure of the National Metrology System consists of the Ministry of Economy of the Kyrgyz Republic, Center for Standardization and Metrology under the Ministry of Economy of the Kyrgyz Republic and Department for Metrological Control of the State Inspectorate for Environmental and Technical Safety under the Government of the Kyrgyz Republic.

The Ministry of Economy of the Kyrgyz Republic (ME KR)

Minister:	Mr. Pankratov Oleg
Address:	106 Chui Avenue, 720002 Bishkek, Kyrgyz Republic
Telephone:	+996 312 62 05 35 add. 266 – general dept.
	+996 312 62 41 73 – reception
	+996 312 62 05 35 add. 5003 – helpline
Fax:	+996 312 66 18 37
E-mail:	mail@mineconomgov.kg
Web:	http://mineconom.gov.kg

Major activities are as follows:

- development and implementation of State Policy on Ensuring Unity of Measurements;
- creates and maintains an integrated technical regulation information system in the Kyrgyz Republic;
- ensures the uniformity of measurements in the Kyrgyz Republic in accordance with international norms and rules;
- coordination of the Center for Standardization and Metrology;
- determination of units allowed for use;
- determination of the procedure for the development and approval of documents on ensuring the uniformity of measurements.

Center for Standardization and Metrology under the Ministry of Economy of the Kyrgyz Republic (CSM)

Director: Mr. Adanbaev Berdimamat

Address: 197 Panfilov Str., 720040 Bishkek, Kyrgyz Republic

Telephone: +996 312 62 37 90

Fax: +996 312 66 13 67

E-mail: <u>nism@nism.gov.kg</u>

The basic activities include:

- carrying out work to ensure the compliance of the measurement system with the International System
 of Units (SI) to strengthen the role of measurements and standards in the development of the
 republic's economy;
- storage and improvement of national standards of units, reproduction and transfer of dimensions of basic and derived units of the International System of Units (SI);
- provision of metrological services to business entities for calibration, verification, type approval of measuring instruments, certification of measurement procedures;
- approval of reference materials;
- maintaining the state register of measuring instruments and reference materials;
- carrying out work on the recognition of the results of metrological works in accordance with the international agreements entered into in accordance with the procedure established by law, to which the Kyrgyz Republic is a party;
- participation in the comparison of standards at the international, regional and national levels to ensure the international recognition of national standards and calibration and measurement certificates;
- participation in the work of granting and revoking the right to conduct testing of measuring instruments or certification of reference materials for the purpose of type approval or calibration of measuring instruments;
- implementation of research works in the field of metrology;
- the exchange of information in the field of ensuring the uniformity of measurements with international metrological organizations and national metrology bodies of other countries;

International cooperation of FMC in the field of metrology is carried out in the framework of:

- International Organization for Legal Metrology (OIML)
- Interstate Council for Standardization, Metrology and Certification (EASC);
- Interregional Association for Standardization (ISO);
- Euro-Asian cooperation of national metrological institutions (COOMET).

The structure of the state metrological service also includes 10 regional metrological centers.

Department for Metrological Control of the State Inspectorate for Environmental and Technical Safety under the Government of the Kyrgyz Republic

Head of Department:Mrs. Akhmedzhanova AinuraAddress:Panfilov Str., 197, 720040, Bishkek, Kyrgyz RepublicTelephone:+996 312 56 30 23 / +996 312 56 28 79 / +996 312 56 30 24E-mail:getiserver@mail.ru

Main activities:

- This organization is responsible of the release, condition and application of measuring instruments, including reference materials of the composition and properties of substances (materials), compliance with the requirements of regulatory legal acts in the field of ensuring the uniformity of measurements, in the field of state regulation, in accordance with the Law of the Kyrgyz Republic "On ensuring the uniformity of measurements";
- in case of revealing violations of the requirements of regulatory legal acts in the field of ensuring the uniformity of measurements:
 - in the prescribed manner shall issue instructions on the elimination of violations identified during the inspection and shall set a time limit for their elimination;
 - according to the results of the inspection, takes measures to eliminate the consequences of violations of the requirements of regulatory legal acts in the field of ensuring the uniformity of measurements;
 - in the cases stipulated by the regulatory legal acts of the Kyrgyz Republic, sends materials on violation of metrological rules and regulations to judicial and investigative bodies;
- oversees the correctness of the state register of measuring instruments and reference materials;
- makes to the ministries, departments and local governments proposals for the elimination of violations revealed during the inspection and improvement of the metrological provision of subordinated objects.
- supervises the requirements of the rules of manufacture of the State Flag of the Kyrgyz Republic and the State Emblem of the Kyrgyz Republic.

3. National measurement standards

www.nism.gov.kg

4. Status of participation in the Metre Convention

The Republic of Kyrgyzstan is currently not a signatory to the CIPM MRA or an associate member of the CGPM, nor is it entitled to use the CIPM MRA logo.

5. Confirmations of recognition of QMS of NMIs (within COOMET)

Accreditation in the German body, signatory to ILAC DAkkS. Accreditation certificate D-K-20448-01-00 (according to ISO/IEC 17025: 2005).

6. State CMC data

- 7. OIML membership status
- -





COOMET MoU year of signing:	1995
Area:	65,200 km ²
Population:	3.4 million

Law on Metrology of the Republic of Lithuania, the new version issued from 12 January 2018, Nr. XIII-982.

2. Metrological infrastructure

- 1. The Ministry of Economy and Innovation of the Republic of Lithuania (http://eimin.lrv.lt/en/).
- The Ministry according to the Law on Metrology, is responsible for the formation of metrology policy, coordination of uniformity of measurements in Lithuania, implementation of legal metrological regulations, as well as for exchange of information on notification of bodies with other EU member states.
- State Research Institute Centre for Physical Sciences and Technology (FTMC) NMI of Lithuania (<u>https://www.ftmc.lt/en/</u>).
- 3. Lithuanian Energy Institute DI (Designated Institute) for national standards (http://www.lei.lt).
- 4. Lithuanian Metrology Inspectorate (legal metrology) (<u>http://www.metrinsp.lt/2/</u>).

Performs the tasks of market surveillance for measuring instruments, which are under the metrological control, for prepackaged goods and measuring containers also for quantity of weighted, counted, measured and dosed products.

- 5. Verification and calibration of measuring instruments and standards are performed by the stock companies and private accredited laboratories, which are appointed by the Ministry of Economy and Innovation.
- 6. Lithuanian Standards Board (<u>http://www.lsd.lt/index.php?256157671</u>).

Lithuanian Standards Board is the budgetary institution of public administration functioning as National Standards Body (NSB) and within its competence taking part in establishing and implementing the policy of the Government of the Republic of Lithuania within the standardization field, carrying out other functions provided by the Laws and other legal acts of the Republic of Lithuania and taking active part in the activities of international and European standardization organizations by representing interests of Lithuanian economy.

7. Lithuanian National Accreditation Bureau (http://nab.lrv.lt/en/).

National Accreditation Bureau (LA) is responsible for accreditation of testing, calibration laboratories, certification bodies for products, personnel, quality and environmental management systems, inspection bodies, EMAS; to assess CABs to be notified by the Governmental authorities. Also LA is designated as GLP inspection and verification authority.

Metrology system in Lithuania

In 2014 structural changes of metrology system of the Republic of Lithuania were implemented.

The Ministry of Economy of the Republic of Lithuania (<u>http://www.ukmin.lt/web/en/</u>) was authorized by the Law on Metrology and Resolution of the Government of the Republic of Lithuania to form the policy of metrological support in Lithuania, to implement legal metrology regulations, to coordinate activities of the national metrology system, to be responsible for providing the uniformity of measurements in Lithuania. The Ministry also

exchanches information on the issues of verification of measuring instruments and work of notified bodies with competent bodies of other European Union member countries.

Under the Resolution of the Government of the Republic of Lithuania from 3 September 2014 State Research Institute Center for Physical Sciences and technology (FTMC) has been authorized to perform the functions of a National Metrology Institute. Functions of NMI at the Center are fulfilled by Metrology Department. In accordance with the Resolution of the Government of the Republic of Lithuania national laboratories are also authorized to create and maintain national measurement standards. Such an authorized national laboratory is the Lithuanian Energy Institute (LEI).

The national standards laboratories create, maintain, use and improve national standards, assure assignment of reproduced measurement quantities, maintain international traceability in the fields allocated to them and represent Lithuania in the activities of international metrological organizations in the scope of their competence. According to the Resolution of the Government of the Republic of Lithuania national measurement standards for units of measurement shall be created in view of the need and economical capabilities of the Republic of Lithuania and in compliance with the requirements of the Resolution.

Verification of measuring instruments is performed by institutions, metrology centres, individual accredited laboratories for certain types of measurements, which are appointed and authorized to verify such kind of measuring instruments by the Ministry of Economy of the Republic of Lithuania.

The Lithuanian Metrology Inspectorate (<u>http://www.metrinsp.lt/2/</u>) was established according to the Law on Metrology. The Inspectorate carries out metrological supervision of measing instruments, subject to legal metrology regulation, prepackages and volume of measuring containers, as well as of quantity of weighted, counted, measured and dosed products, maintains the register of types of measuring instruments.

At Kaunas University of Technology the Institute of Metrology KTU MI (<u>http://metrologija.ktu.edu/</u>) was established, tasks of which include training of specialists in metrology, as well as carrying out scientific research in the field of metrology.

There is a Technical Committee "Metrology" within the Lithuanian Standards Board. It's main responsibility is to draft written standards in the metrology field.

National Metrology Institute of Lithuania

Under the Resolution of the Government of the Republic of Lithuania State Research Institute Center for Physical Sciences and Technology (FTMC) is authorized to represent the NMI of Lithuania in international organizations CGPM, EURAMET and COOMET.

FTMC, as the National Metrology Institute, renewed in 2014 signing of CIPM MRA.

State Research Institute Center for Physical Sciences and technology (FTMC)

Director: Dr. Gintaras Valušis

Address:Savanorių avenue 231, LT-02300 Vilnius, LithuaniaTelephone:+370 5 264 9211Fax:+370 5 260 2317E-mail:info@ftmc.ltWeb:www.ftmc.lt

Metrology Department

Head of department: Dr. Evaldas Naujalis

Address:A. Goštauto str.11, LT-01108 Vilnius, LithuaniaTelephone:+370 5 261 2758Fax:+370 5 262 7123E-mail:evaldas.naujalis@ftmc.lt

The Metrology Department of the State Research Institute for Physical Sciences and Technology (FTMC) performs the functions of the Lithuanian NMI.

The Metrology Department of FTMC stores primary measurement standards of time and frequency, temperature, electrical units and ionizing radiation (radioactivity), performs work in the field of metrological measurements in chemistry.

Field of activity of the FTMC Metrology Department:

- performance of NMI functions;
- participation as a representative of Lithuanian NMI in the work of international organizations (CGPM, EURAMET and COOMET);
- coordination of functions;
- reproduction and transmission of SI units for measuring time and frequency, temperature, electrical units, ionizing radiation and metrological methods of chemistry;
- · research and development of national measurement standards;
- transfer of reference values of measurement units and chemical and metrological methods to metrological services and laboratories;
- development of measurement methods and calibration procedures;
- training and consultations on metrology;
- participation in the research work of the Center;
- cooperation with NMIs of other countries.

Lithuanian Energy Institute (LEI) – Designated Institute

Director:	Sigitas Rimkevičius
Address:	Breslaujos str. 3, LT-44403 Kaunas, Lithuania
Telephone:	+370 37 401 924
E-mail:	Sigitas.Rimkevicius@lei.lt
Web:	http://www.lei.lt

JSC Vilnius Metrology Center (VMC)

Address:	Dariaus ir Girėno str.23 LT-02189 Vilnius, Lithuania
Telephone:	+370 5 230 6276
Fax:	+370 5 230 6364
E-mail:	vmc@vmc.lt, v.martisiene@vmc.lt
Web:	http://www.vmc.lt

3. National measurement standards

1. FTMC has 7 neational measurement standards (https://www.ftmc.lt/en/).

Area: Time and frequency, Temperature, Electricity, Metrology in chemistry, Ionizing radiation (radioactivity), Mass, Length.

2. LEI has 5 national measurement standards (<u>http://www.lei.lt/main</u>). Area: Flow measurement, Pressure.

4. Status of participation in the Metre Convention

Member of the Metre Convention since 2015. Signatory of the Mutual Recognition Agreement (CIPM MRA): FTMC (April 12, 2001). (Has the right to use the CIPM MRA logo since November 17, 2014)

Designated Institutions:

- LEI (has the right to use the CIPM MRA since February 11, 2015) https://www.bipm.org/en/about-us/member-states/lt/

5. Confirmations of recognition of QMS of NMIs (within COOMET)

Lithuania receives its NMI QMS recognition within EURAMET.

6. State CMC data

Lithuania publishes its CMC data within EURAMET. KCDB: <u>https://www.bipm.org/exalead_kcdb/exa_kcdb.jsp?_p=AppC&_q=lithuania&x=77&y=14</u>

7. OIML membership status

OIML Correspondent member.

https://www.oiml.org/en/structure/members/contactmember_view?IDCountry=124&CountryName=LITHUANIA &iso=LT&M=2





COOMET MoU year of signing:	1997
Area:	33,700 km ²
Population:	3.567 million

Metrology Law No. 19 adopted in the Republic of Moldova on the 04th of March 2016.

2. Metrological infrastructure

According to the Law on metrology No. 19 adopted in the Republic of Moldova on the 04th of March2016, the authority responsible for the implementation of the policy in the field of metrology is the **Ministry of Economy** and **Infrastructure (Quality Infrastructure and Industrial Safety Department)** that is the **Central Metrology Authority.**

In the field of metrology, the ministry is complying with the provisions of the Law on metrology, enactments of the President of the Republic of Moldova, dispositions, orders, ordinances of the Government of the Republic of Moldova, international agreements and conventions signed by the Republic of Moldova.

The infrastructure of national system of metrology includes:

- Central Metrology Authority (CMA) central public administration body under the Government, responsible for the quality infrastructure - the Ministry of Economy and Infrastructure;
- Public Institution National Institute for Metrology;
- National Measurement Standards Database;
- National Technical Council on Metrology;
- Agency for Consumer's Protectionand Market Surveillance;
- Metrological departments of legal entities.

The **Ministry of Economy and Infrastructure** has the following attributions:

- Development and coordination of the implementation of the state policy in the field of metrology;
- Development of relevant legislation and participation in the development and approval of normative acts drafts for the purpose of assurance of measurement results traceability to the International System of Units (SI system);
- Approval of legal metrology regulations within its competence;
- Maintenance of National Registers of the National System of Metrology (national measurement standards, legal metrology regulations and authorized entities);
- Coordination of metrological activity of the central public administration branch bodies, both legal entities and individuals that perform activities in the field of metrology;
- Represents the Republic of Moldova in regional and international organizations of metrology together with the National Institute for Metrology;
- Designation of legal entities for verification of legal measuring instruments and for performing official measurements on the basis of certificate of accreditations issued by the national accreditation body;
- Approval of training programs in the field of metrology, including training programs for experts in the field of legal metrology, technical experts in metrology and verification officers.

The Public Institution National Metrology Institute (NIM) is a legal entity and performs its activity on the basis of regulations approved by the Central Metrology Authority and of regulations and provisions of the relevant national legislation. The National Institute for Metrology has the following attributions:

In the field of legal metrology:

- Preparation of normative documents on legal metrology (general regulations on legal metrology, rules on legal metrology and legislative procedures for performing measurements), harmonized with international and regional practice;
- Conduct of technical works in legal metrology (type approval, initial, regular and expert verifications of measurement instruments, official measurements, metrological expertise of draft normative documents etc.);
- Maintenance of the State Register of measuring instruments, permitted for use in the Republic of Moldova;
- Participation in the work of international and regional forums in the field of metrology in cooperation with CAM;
- Making and implementation of agreements on mutual recognition of measurement standards and certificates of calibration, issued by national metrology institutes, in accordance with the requirements of the International Committee for Weights and Measures (CIPM), as well as implementation of agreements made with other countries on mutual recognition of the results of type approval and results of verification of measuring instruments, used in the areas of public interest;
- Recognition of the results of metrological testing with the purpose of type approval of EU, measuring instrument verification of EU, performed in EU member states, and recognition of the corresponding certificates;
- State registration of legal entities and physical persons, carrying out activities on repair, installation and commissioning of legal measuring instruments, as well as legal entities and physical persons, manufacturing, importing and prepacking products, and legal entities, manufacturing/importing bottles, used as volumetric vessel.

In the field of general metrology:

- Implementation of the policy in metrology at the national level;
- Creation, development and maintenance of national measurement standards, keeping and transfer of legal units of measurement;
- Provision of traceability of measurements results by carrying out comparisons of national measurement standards at the regional and international level, calibration of national measurement standards;
- Training and upgrading of skills of specialists, performing works in the field of metrology;
- Preparation and expertise of draft normative and technical documents on ensuring the uniformity of measurements, harmonized with international and national documents of other countries in terms of metrological requirements.

Agency for Consumer's Protection and Market Surveillance was created by the Government Decision No. 936/31.07.2011, as a result of the reorganization of Main State Inspectorate for Market Surveillance, Metrology and Consumer Protection. The Agency for Consumer's Protection is a legal entity having legislative functions of metrological control and surveillance over the national internal market.

Metrological departments of legal entities.

The Metrological services of legal entities authorized by the national system of metrology to carry out works in the field of metrology, perform the functions of assurance of unity and accuracy of the measurements by performing verifications of legalized measurement instruments or/and official measurements.

Ministry of Economy and Infrastructure of the Republic of Moldova - Central Authority of Metrology Minister of Economy and Infrastructure: Mr. Vadim BRÎNZAN

Address:1, Piata Marii Adunari Nationale str. MD-2033, CHISINAUTelephone:+ 373 22 250 107Fax:+ 373 22 234 064E-mail:vadim.brinzan@mei.gov.mdWeb:www.mei.gov.md

State Secretary: Mrs. Ionela COSTACHI

Address:	1, Piata Marii Adunari Nationale str. MD-2033, CHISINAU
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Head of the Quality Infrastructure and Industrial Safety Department: Mr. Marian MAMEI

Address:	1, Piata Marii Adunari Nationale str. MD-2033, CHISINAU
Telephone:	+373 22 250 553
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Public Institution National Metrology Institute

General Director: Anatolie MELENCIUC

 Address:
 28, E. Coca str., MD 2064, CHISINAU

 Telephone:
 +373 22 903 100

 Fax:
 +373 22 903 111

 E-mail:
 office@inm.gov.md

Agency for Consumer's Protection and Market Surveillance

 Address:
 78, Vasile Alecsandri str., MD 2012, CHISINAU

 Tel:
 +373 22 501 980

 Fax:
 +373 22 501 981

 E-mail:
 consumator@apc.gov.md

3. National measurement standards

Moldova has 14 national measurement standards. https://mei.gov.md/sites/default/files/lista_etaloanelor_nationale_0.pdf

4. Status of participation in the Metre Convention

Moldova is an associate member of the CGPM since 2007. Signatory of the Mutual Recognition Agreement (CIPM MRA): Public Institution "National Institute of Metrology" (NIM) (November 14, 2007). (Has the right to use the CIPM MRA logo from April 22, 2016). https://www.bipm.org/en/about-us/associates/md/

5. Confirmations of recognition of QMS of NMIs (within COOMET)

NIM QMS confirmation of recognition (ISO/IEC 17025): QSF-R52 until 31.01.2023. Moldova receives its NMI QMS recognition within EURAMET (from 17.07.2019).

6. State CMC data

KCDB: <u>https://www.bipm.org/exalead_kcdb/exa_kcdb.jsp?_p=AppC&_q=moldova&x=18&y=8</u> COOMET database: <u>http://www.coomet.org/DB/com/index.htm?RU,CMC_RU,RU</u> Moldova publishes its CMC data within EURAMET (from 17.07.2019).

7. OIML membership status

OIML Corresponding member.

www.oiml.org/en/structure/members/contactmember_view?IDCountry=141&CountryName=MOLDOVA&iso=M D&M=2





COOMET MoU year of signing:	1991
Area:	237,500 km ²
Population:	21.5 million

The basic act establishing the national policy in the field of metrology is the Ordinance No. 20/1992 approved by the Law No. 11/1994. This document concerns the use of the units of measurement, the national system of measurement standards and the regime of the measuring instruments subject to the state metrological control.

2. Metrological infrastructure

(up-to-date country information has not been submitted to the COOMET Secretariat - information from the Catalog-2018 is given) The official body responsible for metrology in Romania is **the Romanian Bureau of Legal Metrology** (**BRML**), a public institution, with non-budgetary financing, subordinated to the Ministry of Industry and Trade. BRML coordinates the metrology activities at the national level and supervises the compliance with the legal metrology regulations throughout the country.

FUNDAMENTAL METROLOGY

The National Institute of Metrology (INM), with laboratories in Bucharest and Timisoara, provides the maintenance and development of the national measurement standards, their comparison with international measurement standards and measurement standards of other countries, dissemination of the measurement units to secondary standards, higher echelon calibration services, scientific research in metrology and other related fields. INM is a research institute, part of the BRML structure, which is financed mainly through services paid by customers, but also through contracts financed by the Ministry of Research and Technology.

National Institute of Metrology (INM)

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mirella.buzoianu@inm.ro
http://www.inm.ro

The activity of INM covers the major part of physical quantities (dimensional, mechanical, electromagnetic, thermal, optical, physical-chemical, ionising radiation, etc.). The primary standards realised at INM are assessed by BRML and declared as national standards through governmental decisions.

INM also performs calibrations, metrological verifications, pattern and conformity tests, high accuracy measurements, certification of reference materials, international cooperation; offers consultations, education and training in metrology; prepares calibration/verification procedures and publishes the technical quarterly journal METROLOGIE.

APPLIED METROLOGY

The set of activities aimed at assuring traceability of all measurements in industry and other areas – also known as industrial or technical metrology – is carried out mainly in the regional metrology laboratories belonging to BRML and in the laboratories of enterprises and factories.

LEGAL METROLOGY

According to the legislation in force in the field of metrology, the measuring instruments used in areas of public interest, such as trade, health, environment protection, etc. are submitted to the metrological control of the state. This control is exerted mainly through the authorisation of metrology laboratories and their personnel, through pattern approval of measuring instruments manufactured in Romania or imported, through initial and subsequent metrological verifications and through metrological surveillance.

BRML issues orders and regulations in the field of legal metrology, performs inspections and applies sanctions, represents Romania in the international organisations of legal metrology.

3. National measurement standards

Up-to-date country information has not been submitted to the COOMET Secretariat.

4. Participation to the Metre Convention

Member of the Metre Convention since 1884. Signatory of the Mutual Recognition Agreement (CIPM MRA): National Institute of Metrology (INM) (October 14, 1999). (Has the right to use the CIPM MRA logo from November 7, 2006)

Designated Institute: in the field of ionizing radiation - "Horia Hulubei" National Institute of Physical and Nuclear Engineering (IFIN-HH), Bucharest.

(Has the right to use the CIPM MRA logo since May 29, 2008)

https://www.bipm.org/en/about-us/member-states/ro/

5. Confirmations of recognition of QMS of NMIs (within COOMET)

Romania receives its NMI QMS recognition within EURAMET.

6. State CMC data

Romania publishes its CMC data within EURAMET. KCDB: <u>https://www.bipm.org/exalead_kcdb/exa_kcdb.jsp?_p=AppC&_q=romania&x=18&y=6</u>

7. OIML membership status

OIML Member state.

https://www.oiml.org/en/structure/members/contactmember_view?IDCountry=177&CountryName=ROMANIA& iso=RO&M=1



COOMET MoU year of signing:	1991
Area:	17,125 million km ²
Population:	146.7 million

1. Law on metrology

The Federal Law of the Russian Federation on Assuring the Uniformity of Measurements № 102-FL dated 26.06.2008 (as worded in Federal Laws N 242-FZ of 18.07.2011, N 347-FZ of 30.11.2011, N 133-FZ of 28.07.2012, N 338-FZ of 02.12.2013, N 160-FZ of 23.06.2014, N 254-FZ of 21.07.2014, N 233-FZ of 13.07.2015).

2. Metrological infrastructure

All activity on assuring the uniformity of measurements in Russia is based on the Law of the Russian Federation "On Assuring the Uniformity of Measurements", issued in 2008.

Realization of this Law, fulfilment of metrological functions and terms of reference are approved by Decrees of the President of the Russian Federation No. 314 of 9 March, 2004 and No. 649 of 20 May, 2004 and Government Directive No. 294 of 17 June, 2004 and are implemented by the Federal Agency on Technical Regulation and Metrology (Rosstandart) under the Federal Ministry of Industry and Energy (Minpromtorg of Russia).

Rosstandart administers the State metrology service, which comprises state scientific metrological centres (scientific and research metrology institutes) and bodies of the State metrology service in the teriitory of constituent entities of the Russian Federation (Centres for standardization, metrology and certification).

The Federal Agency on Technical Regulating and Metrology (Rosstandart)

Head:	Mr. Aleksey Abramov
Address:	Presnenskaya Naberezhnaya, 10, building 2, Moscow, Russia
Telephone:	+7 (495) 547-51-55
E-mail:	pr.abramov@gost.ru
Web:	<u>www.gost.ru</u>
Deputy Head:	Dr. Sergey Golubev
Address:	Presnenskaya Naberezhnaya, 10, building 2, Moscow, Russia
Telephone:	+7 (495) 547-52-00
E-mail:	golubev@gost.ru
Head of Metrology Department:	Mr. Dmitry Gogolev
Address:	Presnenskaya Naberezhnaya, 10, building 2, Moscow, Russia
Telephone:	+7 (495) 547-51-91
E-mail:	metrol@gost.ru

Rosstandart directs the work of the following:

- State Service of Time and Frequency and Determination of the Earth Rotation Parameters (SSTF);
- State Service of Reference Materials of the Composition and Properties of Substances and Materials (SSRM);
- State Service of Standard Reference Data of Physical Constants and properties of substances and materials (SSSRD)

State regulation is executed in the following forms:

- type approval of reference materials or type of measuring instruments;
- verification of measuring instruments;
- metrological examination;
- Federal state metrological supervision; (as amended by the Federal law of 18.07.2011 N 242-FL)
- certification of measurement procedures;
- accreditation of legal entities and self-employed entrepreneurs to perform work and (or) render services in the field of assurance of measurement uniformity.

The state metrological supervision is carried out over:

- observance of obligatory requirements in sphere of state regulation of assurance of measurement uniformity to measurements, measurement units and also to standards, standard reference material, measuring instruments during their release from manufacture, import on territory of the Russian Federation, sale and application on territory of the Russian Federation;
- availability and observance of the certified measurement procedures.

International cooperation in the field of metrology is performed with the following organizations:

- International Organization of Legal Metrology (OIML);
- International Bureau of Weights and Measures (BIPM);
- Euro-Asian Cooperation of National Metrological Institutions (COOMET);
- Asia-Pacific Legal Metrology Forum (APLMF);
- Interstate Council for Standardization, Metrology and Certification (EASC);
- The Eurasian Economic Community (EAEC);
- other international and regional organizations.

Metrology institutes of Russian Federation actively collaborate with national metrology centers of Germany, the USA, the United Kingdom, Slovakia, Japan, France, Korea, China, India, Belarus, Ukraine, Lithuania, etc.

A large part of activity regarding the development, improvement, maintenance and use of national measurement standards, as well as research in the field of metrology including elaboration of normative documents of measurement uniformity assurance is carried out by Metrology Institutes of Rosstandart, which are the centers of standards on the fixed types and areas of measurements. The majority of these institutes is specialized in specific fields of measurements and accredited as state test centers of measuring instruments and verification centers, as bodies on voluntary certification of measuring instruments.

All-Russian Scientific Research Institute for Metrology named after D.I. Mendeleev (VNIIM)		
Acting Director:	Mr. Anton Pronin	
Address:	19 Moscovsky Prospect, 190005 Saint-Petersburg, Russia	
Telephone:	+7 812 251 76 01	
E-mail:	info@vniim.ru	
Web:	http://vniim.ru/	

All-Russian Research Institute of Physical Technical and Radio Technical Measurements (VNIIFTRI)		
General Director:	Dr. Sergey Donchenko	
Address:	Mendeleevo, Solnechnogorsky District, 141570, Moscow Region, Russia	
Telephone:	+7 (495) 526-63-00	
E-mail:	director@vniiftri.ru	
Web:	http://vniiftri.ru/	

All-Russian Scientific Research Institute for Optical and Physical Measurements (VNIIOFI)

Director:	Mr. Andrey Baturin
Address:	46 Ozernaya Str., 119361 Moscow, Russia
Telephone:	+7 495 437 56 33
E-mail:	vniiofi@vniiofi.ru
Web:	http://vniiofi.ru/

All-Russian Scientific Research Institute for Metrological Service (VNIIMS)

Director:	Dr. Alexander Kuzin
Address:	46 Ozernaya Str., 119361 Moscow, Russia
Telephone:	+7 495 437 37 29
E-mail:	office@vniims.ru
Web:	http://vniims.ru/

The Ural Scientific Research Institute for Metrology (UNIIM)

Director:	Dr. Sergey Medvedevskikh
Address:	4 Krasnoarmeyskaya Str., 620000, Yekaterinburg, Russian Federation
Telephone:	+7 343 350 26 18
E-mail:	uniim@uniim.ru
Web:	http://uniim.ru/

All-Russian Scientific Research Institute for Flow Metering (VNIR)

Director:	Mr. Vladimir Solovyev
Address:	7a, 2nd Azinskaya Str., 420088, Kazan, Russia
Telephone:	+ 7 843 272 70 62
E-mail:	office@vniir.org
Web:	www.vniir.org

Siberian Scientific Research Institute for Metrology (SNIIM)

Director:Mr. Gennadiy ShuvalovAddress:47a, Dimitrova avenue, 630004, Novosibirsk, RussiaTelephone:+7 383 210 08 14E-mail:director@sniim.ruWeb:www.sniim.ru

3. National measurement standards

Russia has 162 primary standards. Information on all standards of the Russian Federation, as well as their distribution by measurement areas and State metrological research institutes is available at: https://fgis.gost.ru/fundmt/page/site/fundmetrology/dp/ws/registers#list=workspace://SpacesStore/44287589-67ec-4694-82c5-73cb14d3ecf7¤tPage=1¤tPageSize=25&

4. Participation in the Metre Convention

Member of the Metre Convention since 1875. Signatory of the Mutual Recognition Agreement (CIPM MRA): Rosstandard (October 14, 1999).

Representatives of metrology institutes of the Russian Federation participate in the work of all Consultative Committees of the international Bureau of weights and measures.

Designated institutions:

VNIIM is a signatory of the CIPM MRA and may use the CIPM MRA logo since October 13 2006. VNIIFTRI is a signatory of the CIPM MRA and may use the CIPM MRA logo since November 13 2006. VNIIOFI is a signatory of the CIPM MRA and may use the CIPM MRA logo since November 14 2006. VNIIMS is a signatory of the CIPM MRA and may use the CIPM MRA logo since November 07 2006. UNIIM is a signatory of the CIPM MRA and may use the CIPM MRA logo since December 10 2008. SNIIM is a signatory of the CIPM MRA and may use the CIPM MRA logo since November 19 2010. VNIIR is a signatory of the CIPM MRA and may use the CIPM MRA logo since November 19 2010. Russia has representatives in 10 BIMP Consultative Committees.

First Deputy Director for Science of FSUE "VNIIMS" (Doctor of Technical Sciences Fedor Bulygin) is a member of CIPM (since 2014)

https://www.bipm.org/en/about-us/member-states/ru/

5. Confirmations of recognition of QMS of NMIs (within COOMET)

VNIIM QMS confirmation of recognition (ISO/IEC 17025): QSF-R39 until 27.08.2020 VNIIOFI QMS confirmation of recognition (ISO/IEC 17025): QSF-R34 until 27.08.2020 VNIIFTRI QMS confirmation of recognition (ISO/IEC 17025): QSF-R36 until 27.08.2020 VNIIMS QMS confirmation of recognition (ISO/IEC 17025): QSF-R38 until 27.08.2020 SNIIM QMS confirmation of recognition (ISO/IEC 17025): QSF-R45 until 15.02.2022 UNIIM QMS confirmation of recognition (ISO/IEC 17025): QSF-R45 until 15.02.2022 VNIIR QMS confirmation of recognition (ISO/IEC 17025): QSF-R47 until 15.02.2022 VNIIM QMS confirmation of recognition (ISO Guide-34): QSF-R33 until 27.08.2020 VNIIOFI QMS confirmation of recognition (ISO Guide-34): QSF-R35 until 27.08.2020 UNIIM QMS confirmation of recognition (ISO Guide-34): QSF-R48 until 15.02.2022

6. State CMC data

As of February 22, 2019, the international database of calibration and measurement capabilities of BIPM assigned to the Russian Federation 1742 CMCs. Information about all CMC data of the Russian Federation, as well as their distribution by institutes and fields of measurement is available at: http://www.bipm.org/utils/common/pdf/KCDB_CMCs.pdf

KCDB: <u>https://www.bipm.org/exalead_kcdb/exa_kcdb.jsp?_p=AppC&_q=russian&x=8&y=9</u> COOMET database: <u>http://www.coomet.org/DB/com/index.htm?RU,CMC_RU,RU</u>

7. OIML membership status

OIML Member state.

https://www.oiml.org/en/structure/members/contactmember_view?IDCountry=178&CountryName=RUSSIAN% 20FEDERATION&iso=RU&M=1

The specialists of Russian NMIs participate in work of all OIML TCs/PCs. Russian Federation maintains the Secretariats of the following OIML TCs/PCs:

TC 10/SC 2 «Pressure gauges with elastic sensing elements» (VNIIMS);

TC 11/SC 1 «Resistance thermometers » (VNIIM);

TC 11/SC 3 «Radiation thermometers » (VNIIM);

TC 15 « Measuring instruments for ionizing radiations» (VNIIFTRI);

TC 15/SC 1 «Measuring instruments for ionizing radiations used in medical applications » (VNIIFTRI);

TC 17 «Instruments for physico-chemical measurements» (VNIIM);

- TC 17/SC 2 «Saccharimetry» (VNIIM);
- TC 17/SC 3 «pH-metry» (VNIIFTRI);
- TC 17/SC 4 «Conductometry» (VNIIM);
- TC 17/SC 5 «Viscosimetry» (VNIIM);
- TC 17/SC 6 «Gas analysis» (VNIIM);
- TC 18/SC 4 «Bio-electrical instruments» (VNIIOFI);
- TK 3/ITK 3 «Reference materials » (UNIIM);
- TK 7/ΠK 1 «Measuring instruments for length» (VNIIM);
- TK 9/ΠK 4 «Densities» (VNIIM).

The information about the participation of Russian Federation in OIML TCs/PCs work is available at: <u>https://www.oiml.org/en/tc-sc-pg/scinfo_view?idsc=41&sclabel=pH-</u> metry&idtc=17&tcnum=17&tclabel=Instruments%20for%20physico-chemical%20measurements&scnum=3



3LU	VANIA	

COOMET MoU year of signing:	1993
Area:	49,035 km ²
Population:	5.42 million

1. Law on metrology

(up-to-date country information has not been submitted to the COOMET Secretariat)

2. Metrological infrastructure

(up-to-date country information was not submitted to the COOMET Secretariat - information from the Catalog-2018 is given)

The institution responsible for national and other measurement standards and scientific metrology in Slovakia is the Slovak Institute of Metrology (SMU), which in accordance with the Law on Metrology is a state institution, responsible for the mentioned areas.

The Slovak Institute of Metrology (SMU) has been established in 1968 as the National Czechoslovak Institute of Metrology and has more than 47 years of experience. SMU fulfils tasks as the national metrology institution (NMI) for the Slovak Republic since 1st of January 1993. At the present time SMU is subsidized organization of the SOSMT.

Main tasks of SMU include:

- implementation, improvement, maintenance and comparison of Slovak national measurement standards of physical and technical quantities and their comparison at the international level, as well as transfer of units to secondary standards;
- representation of the Slovak Republic in international metrology organizations;
- scientific and research and technical development in the field of metrology;
- calibration of operating standards and measuring instruments;
- verification of measuring instruments, subject to verification;
- type testing of measuring instruments;
- supervision of creation of Slovak certified reference materials;
- development of technical standards, orders to the Law on Metrology, specifying technical requirements and methods for verification of measuring instruments, subject to verification, and testing for type approval;
- training and improvement of professional skills of employees in legal metrology, calibration centers and other employees, involved in technical measurements;
- certification of employees in metrology;
- conducting specialized and technical works in the field of accreditation and certification bodies.

General Director:	Mr. Roman Kováč
Address:	Karloveská 63, 842 55 Bratislava, Slovak Republic
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E-mail:	takacova@smu.gov.sk
Web:	http://www.smu.sk/

Slovak Office of Standards, Metrology and Testing (UNMS) as the central steering body of the state administration in the field of metrology.

The main tasks and activities of the UNMS in the field of metrology are:

- elaboration and realisation of the state policy in metrology;
- preparation of legislative and legal rules (acts and decrees) referring to metrology, standardisation and testing;
- steering of metrology in the state in the scope given by the Act on Metrology, including subordinate metrology institutions (Slovak Institute of Metrology (SMU), Slovak Standards Institute (SUTN), Technical Testing Institute (TSU), Slovak Legal Metrology (SLM), Slovak National Accreditation Service (SNAS) and Slovak Metrology Inspectorate (SMI));
- methodical supervision of metrological activities.

President of UNMS: Ms. Lucia Gocníková

Address:	Štefanovičova 3, P.O. Box 76, 810 05 Bratislava, Slovak Republic
Telephone:	+421 2 5249 6847, 8030
Fax:	+421 2 5249 1050
E-mail:	predseda@normoff.gov.sk
Web:	http://www.unms.sk/

Slovak Legal Metrology (SLM), non-profit organisation, the SLM is charged with the following main activities:

- verification of legally controlled measuring instruments;
- calibration of reference and working standards for industry;
- calibration of ordinary measuring instruments for customers;
- carrying out of pattern evaluation of measuring instruments;
- carrying out of interlaboratory comparisons.

General Director: Dr. Jaromír Markovič

Address:	31 Hviezdoslavova, 975 90 Banská Bystrica, Slovak Republic
Telephone:	+421 48 4719122 / +421 48 4719125
Fax:	+421 48 4719158
E-mail:	markovic@slm.sk
Web:	http://www.slm.sk/

Slovak Metrology Inspectorate (SMI) – a subordinate institution of the UNMS.

Its main task is to perform the state metrology supervision over the compliance with the Law on Metrology and Decrees and supervision over measuring instruments and measurements in the Slovak Republic.

Director: Mr. Ľudovít Koppan

Address:	Štefanovičova 3, 811 04 Bratislava, Slovak Republic		
Telephone:	+421 2 5262 2722, 2723		
Fax:	+421 2 455 25 473		
E-mail:	smi@normoff.sk		
Web:	http://www.smi.sk/		

Other institutions in the field of legal metrology are authorised bodies. These institutions are authorised by the UNMS SR for verification of specified types of legally controlled measuring instruments.

Organizations, responsible for calibration service

Calibration of operating instruments is mainly carried out by individual calibration laboratories, located at factories and other organizations. Some of these laboratories are accredited by the Slovak National Accreditation Service (SNAS) in accordance with ISO/IEC 17025. SMU and SLM also provide services on calibration of measuring instruments.

Slovak National Accreditation Service (SNAS)

(http://www.snas.sk/)

3. National measurement standards

(up-to-date country information has not been submitted to the COOMET Secretariat)

4. Status of participation in the Metre Convention

Member of the Metre Convention since 1922. Signatory of the Mutual Recognition Agreement (CIPM MRA): Slovak Metrology Institute (SMU) (October 19, 1999). (Has the right to use the CIPM MRA logo from March 13, 2007)

SMU has representatives in 5 BIPM Consultative Committees. https://www.bipm.org/en/about-us/member-states/sk/

5. Confirmations of recognition of QMS of NMIs (within COOMET)

Slovakia receives its NMI QMS recognition within EURAMET.

6. State CMC data

Slovakia publishes its CMC data within EURAMET. KCDB: <u>https://www.bipm.org/exalead_kcdb/exa_kcdb.jsp?_p=AppC&_q=slovakia&x=6&y=2</u>

7. OIML membership status

OIML Member state.

https://www.oiml.org/en/structure/members/contactmember_view?IDCountry=193&CountryName=SLOVAKIA &iso=SK&M=1





COOMET MoU year of signing:	2009
Area:	143,100 km ²
Population:	9 million

1. Law on metrology

Law of Republic of Tajikistan "About maintenance of unity of measurements".

2. Metrological infrastructure

Legal basis of maintenance of unity of measurements and the state metrological system is Constitution of Republic of Tajikistan, Law of Republic of Tajikistan "About maintenance of unity of measurements" No. 435 from May, 15th, 1997 (changes and additions No. 321 from July, 30th, 2007, No. 467 from December, 31st, 2008), and also other regulatory legal acts of Republic of Tajikistan.

The metrological service of Republic of Tajikistan consists of the State metrological service and metrological services of legal bodies.

The state metrological service is headed by Agency Tajikstandard and includes in itself bodies of the State metrological service in Gorno-Badahshansky autonomous region, republic areas, areas of republican submission and a city of Dushanbe.

The structure of the State metrological service includes 14 regional centers of Tajikstandard.

Activity on maintenance of functioning and development of the State metrological system carries out by Agency on Standardization, Metrology, Certification and Trade Inspection under the Government of the Republic of Tajikistan (Tajikstandard).

Director:Mr. Davlatzoda Kudrat KambarAddress:734018, Dushanbe, N. Karabaev Str., 42/2Telaphone:+992 37 233 68 69Fax:+992 37 233-44-99E-mail:info@standard.tjWeb:www.standard.tj

The competence of Tajikstandard concern:

- The organization of carrying out of basic researches in the field of metrology;
- The organization of creation and functioning of reference base;
- Definition of the general metrological requirements to means of measuring techniques, methods and results of measurements;
- The statement of types of measuring apparatuses;
- Definition of the general requirements concerning an order of carrying out of calibration and metrological certification of means of measuring techniques, working out of statutory acts, programs etc.;
- Inter-regional and inter-branch coordination of activity on maintenance of unity of measurements;

- Establishment of rules of creation, the statement, storage and application of the state standards of units of sizes;
- Definition of the general metrological requirements to means, methods and results of measurements;
- Realization of the state metrological control and supervision;
- A management of activity of the state metrological service and other metrological services of maintenance of unity of measurements;
- Participation in activity of the international metrological organizations.

The international cooperation of Tajikstandard in the field of metrology is carried out in frameworks:

- International Organization for Legal Metrology (OIML);
- Interstate Council for Standardization, Metrology and Certification (EASC);
- Inter-Regional Association for Standardization (IAS).

3. National measurement standards

There are about 50 initial and exemplary measuring instruments in the laboratories of Tajikistan, which are considered national standards of the republic.

4. Status of participation in the Metre Convention

Tajikistan is currently not a signatory to the CIPM MRA or an associate member of the CGPM, nor is it entitled to use the CIPM MRA logo.

5. Confirmations of recognition of QMS of NMIs (within COOMET)

-

6. State CMC data

-

7. OIML membership status



COOMET MoU year of signing:	2

Area: Population:

TURKEY

2014 (associate member) 783,100 km² 77 million

1. Law on metrology

Law No.3516 on Measurements and Calibration (1989).

2. Metrological infrastructure

TÜBITAK Ulusal Metroloji Enstitüsü (TÜBITAK UME), as the National Metrology Institute of Turkey, is responsible for the establishment and maintenance of national measurement standards as well as research and development activities in scientific metrology in Turkey.

TÜBITAK National Metrology Institute (TÜBITAK UME) is a research and development institute that operates under the umbrella of the Scientific and Technological Research Council of Turkey (TÜBİTAK), which is an affiliated institution of the Ministry of Science, Industry and Technology.

The institute aims to ensure the reliability of all measurements conducted in Turkey, to make provisions for the integration of these measurements into the international system and to develop existing and new measurement technologies, thereby establishing the national measurement system required for ensuring the accuracy of measurements used in commercial and industrial settings and which contributes to equity in national and international trade, increases in the quality of Turkish industrial products and enhances Turkey's scientific and technological development.

Director of TÜBITAK UME: Dr. Mustafa Çetintaş

Address:	TÜBİTAK Gebze Yerleskesi Baris Mah., Dr. Zeki Acar Cad. No. 1, 41470 Gebze Kocaeli, Turkey
Telephone:	+90 262 679 5000
Fax:	+90 262 679 5001
E-mail:	ume@tubitak.gov.tr
Web:	www.ume.tubitak.gov.tr

The main activities of TÜBİTAK UME can be summarized as follows:

- To establish and maintain national measurements standards in accordance with the SI Units.
- To ensure the traceability of national measurement standards to international standards and to disseminate traceability nationally through the provision of calibration services
- To support the other elements of the national measurement system through the provision of training, consultancy services, publications and other mechanisms and the organization of measurement intercomparisons and proficiency testing schemes.
- To produce and distribute certified reference materials to ensure the traceability of chemical measurements in Turkey
- To contribute to research and development in the areas of measurement techniques, calibration and measurement technologies at the international level.

• To represent Turkey at an international level in the field of metrology and to cooperate with international organizations and other national metrology institutes in order to fulfill the requirements of the Metre Convention and the CIPM Mutual Recognition Arrangement (CIPM MRA)

Under the terms of the CIPM Mutual Recognition Arrangement, TÜBİTAK UME has designated the Turkish Atomic Energy Agency (TAEK) to carry out the responsibility for establishing measurement standards and scientific metrology activities in the area of Ionizing Radiation. Similarly, the Marmara Research Center, Materials Institute - Underwater Acoustics Laboratory (MRC MI-UAL) has been designated in the area of underwater acoustics.

The General Directorate for Metrology and Standardization (GDMS) under the Ministry of Science, Industry and Technology (MSIT) is the authority for legal metrology in Turkey.

The General Directorate for Metrology and Standardization's duties were specified in the Decree Law on the Organization and Duties of the Ministry of Industry and Technology published in the Official Gazette no. 27598 dated 08/06/2011. The general framework for legal metrology activities is provided by the Law No. 3516 on Measures and Standards that went into effect on 21/01/1989 and Law No. 4703 on Preparation and Implementation of Technical Legislation Regarding Products dated 29/06/2001.

GDMS operates 7 regional metrology laboratories and 81 provincial verification bureaus. It is responsible for setting policy in the areas of legal metrology and standardization, specifying and applying mandatory standards and technical regulations in legal metrology and pre-packaging, conducting market surveillance and controls, designating and maintaining oversight of conformity assessment bodies and notified bodies in accordance with EU directives, control of measurement instruments used in trade, and the operation and supervision of public and private legal metrology laboratories. The practice of legal metrology in Turkey has undergone significant change in recent years as technical regulations have been harmonized with the EU within the scope of the ongoing membership negotiations with Turkey. Within this context, the GDMS has been responsible for the implementation of the Non-Automatic Weighing Instruments and Measurement Instruments Directives (NAWI and MID) of the EU.

General Director of GDMS:

Address:	Ministry of Industry and Technology, Mustafa Kemal Mah., Dumlupinar Bulvari 2151. Cadde No. 154, 06510 Cankaya Ankara, Turkey
Telephone:	+90 444 61 00
Fax:	+90 312 231 1694
E-mail:	info@sanayi.gov.tr

3. National measurement standards

TUBITAK UME maintains 126 primary level measurement standards as of early 2019.

http://www.ume.tubitak.gov.tr/

4. Status of participation in the Metre Convention

Member of the Metre Convention since 1875. Signatory of the Mutual Recognition Agreement (CIPM MRA): TÜBITAK UME (October 14, 1999) (Has the right to use the CIPM MRA logo from October 19, 2006) TÜBITAK UME has representatives in 7 BIPM Consultative Committees.

https://www.bipm.org/en/about-us/member-states/tr/

5. Confirmations of recognition of QMS of NMIs (within COOMET)

Turkey receives its NMI QMS recognition within EURAMET.

TUBITAK UME and authorized institutions (TAEK and MRC-MI-UAL) present their QMS within EURAMET TC-Quality. Earlier confirmations of recognition were received in 2013. In 2019, re-approval of the QMS is planned, in accordance with the requirements of the CIPM MRA.

6. State CMC data

Turkey publishes its CMC data within EURAMET. KCDB: <u>https://www.bipm.org/exalead_kcdb/exa_kcdb.jsp?_p=AppC&_q=turkey&x=6&y=2</u>

7. OIML membership status

OIML Member state.

https://www.oiml.org/en/structure/members/contactmember_view?IDCountry=217&CountryName=TURKEY&is o=TR&M=1





COOMET MoU year of signing:	1992
Area:	603,700 km ²
Population:	42,4 million

1. Law on metrology

The Law of Ukraine No. 1314-VII from 5 June 2014 "On Metrology and Metrological Activity".

2. Metrological infrastructure

The legislative framework of the metrology system of Ukraine is the Law "On Metrology and Metrological Activity".

The metrology system of Ukraine includes:

- National Metrology Service;
- legal and regulatory framework, including legislative acts, technical regulations and other legal and regulatory acts that govern the relations in the field of metrology and metrological activity;
- National Standards Base and the system of transferring the sizes of the units of measurement;
- system of voluntary accreditation of calibration laboratories, as well as the system of accreditation of testing laboratories and conformity assessment bodies;
- educational institutions, scientific and research institutions and organizations that disseminate knowledge and experience in the field of metrology and metrological activity.

The National Metrology Service includes:

- central executive body that ensures the formation of the state policy in the field of metrology and metrological activity;
- central executive body that realizes the state policy in the field of metrology and metrological activity;
- central executive body that realizes the state policy in the field of metrological supervision;
- scientific metrology centres;
- state enterprises in the field of the Ministry of Economic Development and Trade of Ukraine metrology centers;
- State Service of Universal Time and Reference Frequencies;
- State Service of Reference Materials of Composition and Properties of Substances and Materials;
- State Service of Reference Data on Physical Constants and Properties of Substances and Materials;
- metrology services of the central executive bodies, other state bodies, enterprises and organizations;
- bodies of conformity assessment of measuring instruments and verification laboratories.

All the activities on ensuring the functioning and development of metrology system are coordinated by the Ministry of Economic Development and Trade of Ukraine.

Minister of Economic Development and Trade of Ukraine: Mr. Stepan Kubiv

Address: 12/2 Grushevskogo Str., Kyiv, 01008, Ukraine

 Telephone:
 +38 044 528 92 27

 Fax:
 +38 044 528 90 14

E-mail: dtr@me.gov.ua, tnv@me.gov.ua

Web: www.me.gov.ua

One of the activities of the Ministry of Economic Development and Trade of Ukraine is to provide the development and realization of the state policy in the field of technical regulation (standardization, metrology, certification, conformity assessment (confirmation), accreditation of conformity assessment bodies, quality management), including:

- provision of statutory regulation in the field of metrology and metrological activity;
- organization of conducting the fundamental researches in the field of metrology;
- provision of maintenance and improvement of the National Standards Base;
- development or participation in the development of the state scientific and scientific-technical programs related to ensuring the uniformity of measurements;
- representation and participation of Ukraine in the activities of international, European and other regional metrology organizations;
- exercising of other powers established by the laws and imposed on it by the acts of the Cabinet of Ministers of Ukraine.

SCIENTIFIC METROLOGY CENTRES

National Scientific Centre "Institute of Metrology" (NSC "IM")

General Director: Prof., Dr. Pavel Neyezhmakov

Address: 42 Mironositskaya Str., Kharkiv-2, 61002, Ukraine

Telephone: +38 057 700 34 09

Fax: +38 057 700 34 47

E-mail: <u>info@metrology.kharkov.ua</u>

Web: http://www.metrology.kharkov.ua/

NSC "Institute of Metrology":

- carries out the fundamental scientific and applied scientific researches in the field of metrology;
- participates in the development of state programs on metrology, concepts of these programs and the concept of development of metrology system in Ukraine;
- carries out the research and development works related to the creation, improvement, maintenance, comparison, use of the national standards, the establishment of the systems of transferring the sizes of the of units of measurements (providing metrological traceability with account for the needs of the national economy and international experience);
- participates in the drafting of technical regulations of other legal and regulatory acts, as well as the normative documents in the field of metrology and metrological activity;
- performs functions of the Head Center of the Service of Universal Time and Reference Frequencies;
- performs functions of the scientific and methodological center of the Service of Reference Materials of Composition and Properties of Substances and Materials;

- coordinates the scientific and metrological activity related to the measurements and calculations of time in the territory of Ukraine;
- provides intersectional coordination and scientific-methodological support on works on the development and use of reference materials of composition and properties of substances and materials;
- performs the works on conformity assessment of legally regulated measuring instruments to the technical regulations in case of its appointment as a conformity assessment body;
- carries out the verification of legally regulated measuring instruments in operation according to the respective types and subtypes of measurements, which have internationally recognized calibration and measurement capabilities, and/or with the use of national standards, provided the empowerment to carry out the verification of the relevant measuring instruments;
- maintains and uses the national standards of the units of physical quantities in the types and subtypes of measurements assigned to it;
- carries out the calibrations of measuring instruments used in and/or out of the field of legally regulated metrology;
- carries out the measurements in the field of legally regulated metrology;
- develops measurement, verification and calibration techniques;
- provides the management of the information fund of national standards and reference materials appropriate for use in verification of legally regulated measuring instruments;
- provides cooperation with the international metrology organizations;
- ensures the activity of the national secretariats of international, intergovernmental and regional metrology organizations: CGPM, EASC, COOMET, EURAMET.

The State Enterprise "All-Ukrainian State Research and Production Center for Standardization, Metrology, Certification and Consumers' Rights Protection" (SE "Ukrmetrteststandard")

General Director: Mr. Dmitry Sabatovich

Address: 4 Metrologichna Str., Kyiv, 03680, Ukraine

Telephone: +38 044 526 52 29

Fax: +38 044 526 42 60

E-mail: <u>ukrcsm@ukrcsm.kiev.ua</u>

Web: http://www.ukrcsm.kiev.ua

SE "Ukrmetrteststandard":

- performs the coordination functions and methodical management of metrology service;
- is the scientific and methodological center of the Service of Reference Data on Physical Constants and Properties of Substances and Materials;
- provides the management of the register of approved types of measuring instruments of Ukraine;
- participates in the development of state programs on metrology, concepts of these programs and the concept of development of metrology system in Ukraine;
- carries out the research and development works directed on the creation, improvement, maintenance, comparison, use of the national standards, the establishment of the systems of transferring the sizes of the of units of measurements (providing metrological traceability with account for the needs of the national economy and international experience);
- participates in the drafting of technical regulations of other legal and regulatory acts, as well as the normative documents in the field of metrology and metrological activity;

- performs the works on conformity assessment of legally regulated measuring instruments to the technical regulations as a conformity assessment body;
- carries out the verification of legally regulated measuring instruments in operation;
- maintains and uses the national standards of the units of physical quantities in the types and subtypes
 of measurements assigned to it;
- carries out the calibrations of measuring instruments used in and/or out of the field of legally regulated metrology;
- carries out the measurements in the field of legally regulated metrology;
- develops measurement, verification and calibration techniques;
- provides cooperation with the international metrology organizations;
- ensures the activity of the national secretariat of International Organizations of Legal Metrology OIML.

The State Enterprise "Scientific-Research Institute for Metrology of Measurement and Control Systems" (DP NDI "Systema")

Director: Dr. Vasiliy Parakuda

Address: 6 Kryvonosa Str., Lviv, 79008, Ukraine

 Telephone:
 +38 032 239 92 00

Fax:+38 032 235 84 49

E-mail: office@dndi-systema.lviv.ua

Web: https://www.dndi-systema.lviv.ua/

DP NDI "Systema":

- carries out fundamental and applied research in the field of acoustic, hydroacoustic and ultrasonic measurements related to the creation, enhancement, storage and application of national standards, the establishment of the size of the transmission systems of measurement units;
- coordinates and carries out scientific-methodical support of works on maintenance of unity of measurements in the field of acoustic measurements;
- coordinates the scientific and metrological activities relating to metrological support of measurement and control systems;
- serves as the secretariat of the National Technical Committee for Standardization in the field of quality management;
- participates in the drafting of technical regulations of other legal acts and normative documents in the field of metrology and metrological activity;
- performs conformity assessment legally regulated funds measuring technique with the technical regulations in the appointment of its conformity assessment body;
- carries out research and development work related to the creation, storage, operation and improvement of national standards of Ukraine;
- carries out verification of legally controlled measuring devices, in service and the respective types of measurements subspecies the use of national standards, provided authorize to conduct verification of the relevant assets;
- carries out calibration of measuring instruments used in the field and/or outside the scope of legally regulated metrology;
- cooperates with international organizations on metrology.

The State Enterprise "Ivano-Frankivsk Scientific and Production Center for Standardization, Metrology and Certification" (SE "Ivano-Frankivskstandartmetrology")

General Director: Dr. Ivan Saevych

Address: 127, Vovchynetska Str., Ivano-Frankivsk, 76006, Ukraine

 Telephone:
 +38 03425 3 56 17

Fax: +38 03425 3 02 00

E-mail: dcsms@if.ukrTelephone:net

Web: http://www.ifdcsms.com.ua

SE "Ivano-Frankivskstandartmetrology":

- carries out the fundamental scientific researches in the field of metrology, as well as the works related to the development and implementation of the state programs on metrology and conception of development of the metrological system of Ukraine in the field of measurements of gas volume and volume flow rate;
- carries out the applied scientific researches and scientific research works related to the creation, improvement, maintenance, comparison, and use of the national primary and secondary standards, the establishment of the systems of transferring the sizes of the of units of measurements;
- coordinates and carries out the scientific-methodological support of works on maintenance of uniformity of measurements in the field of measurements of gas volume and volume flow rate;
- carries out the conformity assessment of the measuring instruments;
- carries out the calibrations and verifications of the measuring instruments;
- carries out the measurements in the field of legally regulated metrology;
- provides the management of the information fund in the field of measurements of gas volume and volume flow rate;
- participates in the international cooperation on the measurements of gas volume and volume flow rate.

3. National measurement standards

Number of national measurement standards of Ukraine – 73. http://www.me.gov.ua/Documents/List?lang=uk-UA&id=cb9e4355-668e-4170-89afce23d4e0857e&tag=NatsionalnaEtalonnaBaza

4. Status of participation in the Metre Convention

Member of the Metre Convention since 2018.

Signatory of the Mutual Recognition Agreement (CIPM MRA):

Ministry of Economic Development and Trade of Ukraine (October 14, 2003).

Designated Institutions:

- NSC "Institute of Metrology" (Has the right to use the CIPM MRA logo since March 23, 2007).
- SE "Ukrmetrteststandard" (Has the right to use the CIPM MRA logo from August 17, 2007).
- SE "Ivano-Frankivskstandartmetrology" (Has the right to use the CIPM MRA logo from December 11, 2013).
- DP NDI "Systema" (Has the right to use the CIPM MRA logo from July 30, 2007).

https://www.bipm.org/en/about-us/member-states/ua/

The General Director of NSC "Institute of Metrology" (Prof., Dr. Pavel Neyezhmakov) is a CIPM member (since 2018).

5. Confirmations of recognition of QMS of NMIs (within COOMET)

NSC "Institute of Metrology" QMS confirmation of recognition (ISO/IEC 17025): QSF-R44 until 10.05.2021. SE "Ukrmetrteststandard" QMS confirmation of recognition (ISO/IEC 17025): QSF-R42 until 10.05.2021. DP NDI "Systema" QMS confirmation of recognition (ISO/IEC 17025): QSF-R46 until 10.05.2021. SE "Ivano-Frankivskstandartmetrology" QMS confirmation of recognition (ISO/IEC 17025): QSF-R54 until 04.10.2023.

SE "Ukrmetrteststandard" QMS confirmation of recognition (ISO Guide-34): QSF-R43 until 10.05.2021.

6. State CMC data

KCDB: <u>https://www.bipm.org/exalead_kcdb/exa_kcdb.jsp?_p=AppC&_q=ukraine&x=10&y=12</u> COOMET database: <u>http://www.coomet.org/DB/com/index.htm?RU,CMC_RU,RU</u>

7. OIML membership status

OIML Correspondent member.

https://www.oiml.org/en/structure/members/contactmember_view?IDCountry=222&CountryName=UKRAINE&i so=UA&M=2



COOMET MoU year of signing:	2004
Area:	447,400 km ²
Population:	33 million

1. Law on metrology

The Law of the Republic of Uzbekistan "On Metrology" adopted in December 28, 1993, No. 1004-XII.

2. Metrological infrastructure

The metrological service of the Republic of Uzbekistan consists of the state metrological service and metrological services of legal entities.

The state metrological service, headed by the Uzbek Agency for Standardization, Metrology and Certification (Uzstandard agency), includes the bodies of the state metrological service in the Republic of Karakalpakstan, regions and Tashkent city.

Uzstandard Agency

The main tasks of the Uzstandard Agency are:

- ensuring the practical implementation of the Laws of the Republic of Uzbekistan "On Standardization", "On Metrology", "On Certification of Products and Services", "On Conformity Assessment" and other normative legal acts in the field of technical regulation, standardization, metrology, certification and accreditation;
- implementation of a unified state policy in the field of standardization, metrology, certification, accreditation of quality improvement and product competitiveness based on the application of international standards, including the quality management system;
- ensuring the functioning and development of standardization systems, the uniformity of measurements, certification, accreditation and dissemination of scientific and technical information in these areas, as well as their harmonization with international, inter-state and national systems of foreign countries;
- implementation of measures to ensure the rights of consumers to comply with the requirements for safety and quality of products, works, services and protection from negative consequences of inaccurate measurement results;
- organization of work on training and professional development of personnel in the field of standardization, metrology certification and accreditation;
- creation, functioning and development of a national accreditation system;
- ensuring objectivity and impartiality when deciding on the accreditation of legal entities.

General Director: Mr Dilshod Sattarov

Address:333 A, Farobiy street, Almarae district, 100174, Tashkent city, Republic of UzbekistanTelephone:+998 71 2020011Web:www.standart.uzE-mail:uzst@standart.uz

Uzbek National Institute of Metrology (UzNIM)

In accordance with the Decree of the President of the Republic of Uzbekistan, in April 2017, at Uzstandard agency, Uzbek National Institute of Metrology State Enterprise (UZNIM) was established on the basis of the existing Center of National Standards State Institution, Center on Rendering of Metrological Services State Enterprise and metrology units of Research Institute for Standardization, Metrology and Certification State Institution.

Director: Mr Akbarjon Daminov

Address:333 A, 333 B, Farobiy street, Almarae district, 100174, Tashkent city, Republic of UzbekistanTelephone:+998 71 1502600

Reception: +998 71 1502603

- Web: www.nim.uz
- E-mail: info@nim.uz

The main tasks and directions of activity of UzNIM:

- implementation of measures to improve and develop the National measuring standard base of the Republic of Uzbekistan;
- maintenance of measurement standards, measuring instruments of the highest accuracy, their comparison at the international level, and storage and transfer of units of quantities;
- development of normative documents for ensuring the uniformity of measurements, implementation of international treaties on mutual recognition of metrological control results;
- implementation of metrological control and scientific research in the field of metrology.

3. National measurement standards

Number of national measurement standards: 12. <u>http://nim.uz/ru/o-nas/etalony/</u>

4. Status of participation in the Metre Convention

Uzbekistan is an associate member of the CGPM since 2018. Signatory of the Mutual Recognition Agreement (CIPM MRA): SE "UzNIM" (November 12, 2018) https://www.bipm.org/en/about-us/associates/uz/

5. Confirmations of recognition of QMS of NMIs (within COOMET)

6. State CMC data

7. OIML membership status

OIML Corresponding member.

https://www.oiml.org/en/structure/members/contactmember_view?IDCountry=228&CountryName=UZBEKIST AN&iso=UZ&M=2

ADDITIONAL INFORMATION



COOMET PUBLICATIONS

COOMET Documents

N⁰	Document title	Registration number	Remarks
1.	COOMET Memorandum of Understanding	COOMET D1/2012	
2.	COOMET Rules of Procedure	COOMET D2/2013	
3.	Memorandum on cooperation in development and application of reference materials of composition and properties of substances and materials within COOMET	COOMET D3/2008	Project 28/RU-a/92 381/BY/07
4.	Document COOMET Publications. Classification, Development, Approval and Registration. General Provisions	COOMET D4/2014	Project 264/BY-a/02
5.	Document Model Regulations for COOMET Structural Bodies	COOMET D5/2010	Project 248/BY-a/02
6.	Document Procedure for Maintaining COOMET Website. General Provisions	COOMET D6/2013	Project 251/BY-a/02
7.	Document Regulation on Awarding the Distinguished Title "Honorary Metrologist of COOMET"	COOMET D7/2019	-
8.	Document Criteria and Procedure of Admission for New COOMET Members	COOMET D8/2006	-
10.	Document COOMET Web Portal.General Provisions and maintenance	COOMET D10/2013	Project 500/UA-a/10
11	Document The Procedure of Using the COOMET Logo	COOMET D11/2016	

COOMET Recommendations

N⁰	Recommendation title	Registration number	Remarks
1.	Recommendation Typical Procedure for Testing Vibration-Measuring Transducers (Vibration Pick-Ups)	COOMET R/AUV/1:1995	Project 49/RU-a/92
2.	Recommendation Interstate Hierarchical Chain for Time and Frequency Measuring Instruments	COOMET R/TF/2:1995	Project 16/RU-a/92
3.	Recommendation Requirements to Time and Frequency Measuring Equipment Produced by the COOMET Member Countries Required for Mutual Recognition of the Results of National Metrological Verifications and Certifications	COOMET R/TF/3:1995	Project 16/RU-a/92
4.	Recommendation Order of Joint Development, Recognition and Registration of Reference Materials within COOMET	COOMET R/RM/4:2008	Project 132/RU-a/95 374/RU/06
5.	Recommendation Contents and Rules of Drawing Up Documents for RM Developed within COOMET	COOMET R/RM/5:2010	Project 151/RU-a/96 414/UA/08
6.	Recommendation Register of Reference Materials of Composition and Properties of Substances and Materials Developed within COOMET. Fundamentals	COOMET R/RM/6:1910	Project 413/KZ/07
7.	Recommendation Procedure of Inner Inter-Regional Review of Calibration and Measurement Capabilities of COOMET National Metrology Institutes and Inter-Regional Review of Institutes of Other Regional Metrology Organisations	COOMET R/GM/7:2006	
8.	Recommendation Layout, Presentation, Drawing Up and Contents of Measuring Instrument Type Specifications for National Register of Measuring Instruments	COOMET R/LM/8:2002	Project 207/BY/00

COOMET Recommendations (continuation)

Nº	Recommendation title	Registration number	Remarks
9.	RecommendationRecommendations on the evaluation of quality management systems of National metrology institutes/Designated institutesAnnex 1 Criteria for the recognition of the quality management systems in COOMET NMIs/DIsAnnex 2 (Annex A) Recommendations on giving an oral presentation at the COOMET Quality Forum of the quality management systems of National 	COOMET R/AQ/9:2019	Project 230/SK/01
10	Recommendation Software for Measuring Instruments. General Technical Specifications	COOMET R/LM/10:2004	Project 213/BY/00
11	Recommendation Regulations for Comparison of Measurement Standards from the National Metrology Institutes of COOMET	COOMET R/GM/11:2017	Project 668/RU/15
12	Recommendation Rules of Maintaining of Foregoing COOMET Programme of Comparisons	COOMET R/GM/12:2015	Project 630/RU/13
13	Recommendation Rules and Procedure for the evaluation of the quality management systems of National metrology institutes/Designated institutes Annex A Recommendations on giving an oral presentation at the COOMET Quality Forum of the quality management systems of National metrology institutes/Designated institutes (NMI/DI QMS) Annex B Recommendations on preparing a written presentation at the COOMET Quality Forum of the quality management systems of National metrology institutes/ Designated institutes (NMI/DI QMS) Annex 1 Application for a peer review of the NMI/DI quality management system (form) Annex 3 Recommendations for on-site visits by peers and selection criteria for on-site visit peer reviewers (document CIPM 2007-25) Annex 4 Plan for a peer review of the NMI/DI quality management systems Annex 5 Nonconformance protocols (forms) Annex 6 Reports of a technical expert and auditor for peer review of the QMS NMI/DI (forms) Annex 9 COOMET Confirmation of Recognition of QMS (form) Annex 10 Annual report on the NMI/DI QMS (form) Annex 11 Recommendations for the preparation of an annual report on the NMI/DI QMS	COOMET R/AQ/13:2019	Project 230/SK/01
14	Recommendation Guidelines for Data Evaluation of COOMET Key Comparisons	COOMET R/GM/14:2016	Project 336/RU/05
15	Recommendation Rules of Completing the Form of Calibration Certificates Issued by National Metrology Institutes within the CIPM MRA	COOMET R/GM/15:2007	Project 301/UA-a/03
16	Recommendation Recommendation for Acceptance of Certified Reference Materials into Appendix C of the CIPM MRA	COOMET R/RM/16:2007	Project 290/RU-a/03

COOMET Recommendations (continuation)

N≌	Recommendation title	Registration number	Remarks
17	Recommendation Guidelines for Issuing Certificate of Participant of COOMET CRM Interlaboratory Certification	COOMET R/RM/17:2011	Project 349/BY-a/05 496/BY-a/10
18	Recommendation Procedure of the International Competition "The Best Young Metrologist of COOMET"	COOMET R/GM/18:2013	Project 335/UA/05
19	Recommendation Guideline on COOMET supplementary comparison evaluation	COOMET R/GM/19:2016	Project 302/RU/04
20	Recommendation State system for ensuring the uniformity of measurements. Scales of Measurements. Terms and Definitions	COOMET R/GM/20:2009	Project 287/RU/03
21	Recommendation Use of concepts "error of measurement" and "uncertainty of measurement". General principles materials	COOMET R/GM/21:2011	Project 347/RU/05
22	Recommendation Form and content of COOMET certificate for reference materials for composition and properties of substances and materials	COOMET R/RM/22:2013	Project 558/RU-a/12
23	Recommendation "PROCEDURE of organization and publishing the data about calibration and measuring services of COOMET national metrological institute on COOMET web resources"	COOMET R/GM/23:2014	Project 404/RU/07
24	Recommendation "Educational programs and practical training programs of experts of National Metrological Institutes cooperating in COOMET"	COOMET R/IT/24:2014	Project 541/RU-a/11 391/RU-a/07
25	Recommendation "Procedure for recognizing technical devices as measuring instruments"	COOMET R/LM/25:2015	Project 523/BY/11
26	Recommendation "GENERAL REQUIREMENTS FOR THE COMPETENCE OF VERIFICATION LABORATORIES"	COOMET R/LM/26:2015	Project 491/UA/10
27	Recommendation "Procedure for preparing certificates of training, study visits and up-skilling within the framework of COOMET"	COOMET R/IT/27:2015	Project 597/BY/13
28	Recommendation "Standard program for testing the software of measuring instruments"	COOMET R/LM/28:2016	Project 425/BY/08
29	Recommendation "The Content and Procedure of Work on Reference Material Comparison within COOMET"	COOMET R/RM/29:2016	Project 498/RU/10
30	Recommendation "Procedure for completing the Form of COOMET database for COOMET reference materials"	COOMET R/RM/30:2016	Project 543/AM/11
31	Recommendation "Calibration techniques. General requirements"	COOMET R/GM/31:2016	Project 422/RU-a/08
32	Recommendation "Calibration of measuring instruments. Algorithms of processing measurement results and uncertainty evaluation"	COOMET R/GM/32:2017	Project 420/RU-a/08
33	Recommendation "Calibration of platinum resistance thermometers by comparison method"	COOMET R/T/33:2018	Project 633/KG/14

COOMET Programs

Nº	Program title	Registration number	Remarks
1	COOMET PROGRAM COOMET Development Programme for 2017-2019	COOMET P1/2017	
2.	COOMET PROGRAM COOMET Program of comparisons	COOMET P2/2019	Updated annually
3.	COOMET PROGRAM Work program of TC 2 "Legal Metrology" for 2019-2020	COOMET P3/2019	Elaborated by TC2
4.	COOMET PROGRAM Work Program of TC 4 "Information and Training" for 2018-2020	COOMET P4/2018	Elaborated by TC4
5.	COOMET PROGRAM Programme of joint CRM development within COOMET	COOMET P5/2018	Project 186/RU/99

COOMET Informational materials

N⁰	Informational material title	Registration number	Remarks
1.	Normative Documents Regulating the Questions of RM Production and Use, Analytical Overview (based on information provided by COOMET contact persons for RM)	COOMET I/RM/1:2001	Project 185/RU/99
2.	Register of Certified Reference Materials of Composition and Properties of Substances and Materials Developed within COOMET	COOMET I/RM/2:2018	TC 1.12 Secretariat is maintaining and updating the Register
3.	Survey of Technical Requirements in the Field of Legal Metrology in COOMET Member Countries	COOMET I/LM/3:2003	Project 204/DE-a/00
4.	Analysis of the Problem of Introduction of the Guide to the Expression of Uncertainty in Measurement in COOMET Member Countries	COOMET I/GM/4:2005	Project 279/RU-a/03
5.	Analysis of Cooperation Projects within APLMF and Preparation of Proposals for Cooperation of COOMET with this RMO in the Field of Legal Metrology	COOMET I/LM/5:2005	Project 307/RU-a/04
6.	Review National Educational Systems in the Field of Metrology in COOMET Member Countries	COOMET I/TR/6:2005	Project 270/BY-a/03
7.	Methodology for uncertainty evaluation of measurement results obtained by data processing software	COOMET I/IT/7:2016	Project 399/RU-a/07
8.	Overview on the progress with prepackages control in COOMET member countries	COOMET ILM/8:2019	Project 602/BY/13
9.	Metrological supervision performed by metrological services of legal entities. General principles	COOMET ILM/9:2019	Project 667/RU/15



COOMET COMMITTEE MEETINGS

N⁰	Date	Country and City	Participants (representatives of national, international and regional organizations)
1	13–14 November, 1991	POLAND (Warsaw)	BG, CS, CU, DE, HU, PL, RO, SU
2	2–3 June, 1992	POLAND (Warsaw)	BG, CS, CU, DE, HU, PL, RO, RU, UA
3	17–19 March, 1993	GERMANY (Berlin)	BG, BY, DE, PL, RO, RU, SK, UA, LT, BIML, EURAMET
4	19–20 April, 1994	SLOVAKIA (Bratislava)	BG, BY, DE, PL RO, RU, SK, UA, LT, BIML
5	4–5 April, 1995	SLOVAKIA (Bratislava)	BG, BY, DE, PL, RO, RU, SK, UA, HU, CZ, BIPM, EURAMET, BIML
6	10–12 April, 1996	BULGARIA (Sofia)	BG, BY, DE, LT, PL, RO, RU, SK, UA, BIPM, BIML, EURAMET, WELMEC
7	23–25 April, 1997	GERMANY (Braunschweig)	BY, BG, DE, LT, PL, RO, RU, SK, UA, MD, EE; BIML, EURAMET, WELMEC
8	12–13 May, 1998	BELARUS (Minsk)	BY, BG, DE, LT, MD, PL, RU, SK, UA BIPM, STC
9	12–13 May, 1999	RUSSIA (Moscow)	BY, BG, DE, KZ, LT, MD, PL, RU, SK, UA
10	25–26 May, 2000	KAZAKHSTAN (Almaty)	BY, DE, KZ, KG, CU, MD, PL, RU, SK, UA, YU, UZ
11	25–26 April, 2001	MOLDOVA (Chisinau)	BY, DE, KZ, KG, LT, CU, MD, RU, RO, SK, UA
12	6–7 May, 2002	CUBA (Havana)	BY, DE, LT, CU, RU, RO, SK, UA; BIML
13	29–30 April, 2003	UKRAINE (Yalta)	BY, BG, DE, KP, LT, CU, MD, RU, SK, UA
14	27–28 May, 2004	BULGARIA (Albena)	BY, BG, DE, KZ, KP, LT, CU, MD, RU, UZ, UA; BIML
15	8–9 September, 2005	LITHUANIA (Vilnius)	BY, BG, DE, LT, MD, RU, SK, UZ, UA
16	4–5 September, 2006	GERMANY (Braunschweig)	BY, BG, CZ, DE, GE, KG, KZ, LT, MD, RU, SK, UA, UZ; CIPM, OIML, BIML, APMP, EURAMET
17	24–25 April, 2007	BELARUS (Minsk)	AM, AZ, BY, BG, DE, GE, KG, KZ, LT, RU, SK, UA, UZ; BIPM, BIML, EURAMET, WELMEC, APMP, EASC
18	15–16 May, 2008	UKRAINE (Kharkov)	AM, AZ, BY, CU, DE, RU, SK, UA, UZ; BIML, EURAMET
19	20–21 May, 2009	AZERBAIJAN (Baku)	AZ, BY, BG, CU, DE, GE, KG, LT, MD, RU, SK, UA, UZ; BIML, EURAMET, NCSLI, WELMEC
20	21–22 April, 2010	KAZAKHSTAN (Astana)	AZ, AM, BY, KG, KZ, LT, RU, SK, TJ, UA, UZ; APMP
21	27–28 April, 2011	ARMENIA (Yerevan)	AM, BY, CU, DE, GE, KG, KZ, LT, MD, RU, RO, SK, UA, UZ; CIML, BIML, BIPM, WELMEC
22	18–19 April, 2012	KYRGYZSTAN (Cholpon-Ata)	AZ, AM, BY, DE, GE, KZ, KG, LV, RU, SK, TJ, UZ, UA, BIML, BIPM, EURAMET, APMP
23	5–6 July, 2013	RUSSIA (Nizhny Novgorod)	AZ, AM, BA, BY, DE, HR, KG, KZ, LT, MK, RU, SK, TJ, UZ, UA BIML, BIPM
24	16–17 April, 2014	RUSSIA (Ekaterinburg)	AZ, AM, BY, DE, KG, KZ, RU, SK, TJ, TR, UZ, UA, BIML, BIPM
25	27-28 May, 2015	TAJIKISTAN (Khujand)	AZ, AM, BY, DE, GE, KZ, KG, MD, RU, TJ, TR, UZ, UA, CN, USA, BIML, BIPM
26	20-21 April, 2016	ARMENIA (Erevan)	AM, BY, CN, CU, DE, KG, GE, KZ, RU, SK, TJ, UZ, UA, BIML, BIPM
27	27-28 April, 2017	BELARUS (Minsk)	AZ, AM, BY, BA, CN, CU, DE, GE, KZ, KG, LT, MD, RU, SK, TJ, UZ, UA, OIML, BIPM, EEC

N⁰	Date	Country and City	Participants (representatives of national, international and regional organizations)
28	11-12 April 2018	BOSNIA and HERZEGOVINA (Sarajevo)	AZ, AM, BY, BA, CN, CU, DE, GE, KZ, KG, LT, MD, RU, SK, TR, UZ, UA, OIML, BIPM, APMP, EURAMET
28	3-4 April 2019	GERMANY (Dresden)	AM, BY, BA, CN, CU, DE, GE, KZ, KG, LT, MD, RU, SK, TJ, UZ, UA, TM OIML, BIPM, APMP, EURAMET, WELMEC

Country codes:

AM – Armenia	CZ – Czech Republic	LT – Lithuania	TM - Turkmenistan
AZ – Azerbaijan	DE – Germany	D – Moldova	UA – Ukraine
BA – Bosnia and Herzegovina	EE – Estonia	PL – Poland	US - USA
BG – Bulgaria	GE – Georgia	RO – Romania	UZ – Uzbekistan
BY – Belarus	HU – Hungary	RU – Russia	YU – Yugoslavia
CN – China	KG – Kyrgyzstan	SK – Slovakia	
CU – Cuba	KP – DPR of Korea	TJ – Tajikistan	
CS – Czechoslovakia	MKZ – Kazakhstan	TR - Turkey	

Acronyms for the names of COOMET Member Countries NMIs and DIs

A go nov "I leatondard"	Linhakiatan	Ushak Agapay for Standardination, Matrolagy and Cartification
Agency "Uzstandard"	Uzbekistan	Uzbek Agency for Standardisation, Metrology and Certification
AzMi BAM	Azerbaijan	Legal entity of public law "Azerbaijan Institute of Metrology"
	Germany	Bundesanstalt für Materialforschung und –prüfung
BelGIM	Belarus	Belarussian State Institute of Metrology
BIM	Bulgaria	Bulgarian Institute of Metrology
BRML	Romania	Romanian Bureau of Legal Metrology
	Cuba	Center of Isotopes
CJSC "NIM"	Armenia	Closed Joint Stock Company "National Institute of Metrology"
CIM	DPR of Korea	Central Institute of Metrology
CPHR	Cuba	Center for Protection and Hygiene of the Radiations
CSM	Kyrgyzstan	Center for Standardization and Metrology under the Ministry of Economy of the Kyrgyz Republic
DAkkS	Germany	Deutsche Akkreditierungsstelle GmbH
DG MMI	Bulgaria	General Directorate "Measures and Measuring Instruments"
DG MSv	Bulgaria	Directorate General "Metrological Supervision"
DG NCM	Bulgaria	General Directorate "National Centre of Metrology"
DKD	Germany	(former) Deutscher Kalibrierdienst
DP "Ivano-Frankivskstandart-	Ukraine	State enterprise "Ivano-Frankivsk Research-and-Production
metrologija"		Center for Standardization, Metrology and Certification"
DP NDI "Systema"	Ukraine	State Enterprise "Scientific Research Institute for Metrology of
		Measurement and Control Systems"
FTMC	Lithuania	State Scientific Research Institute Center for Physical Sciences and Technology
GDMS	Turkey	The General Directorate for Metrology and Standardization
GeoStM	Georgia	Georgian National Agency for Standards and Metrology
Gosstandart of Belarus	Belarus	State Committee for Standardization of the Republic of Belarus
HAARI	China	Hangzhou Applied Acoustics Research Institute
IMBIH	Bosnia and	The Institute of Metrology of Bosnia and Herzegovina
	Herzegovina	
INIMET	Cuba	National Research Institute on Metrology
INM	China	National Institute of Metrology
INM	Romania	National Institute of Metrology
INM	Moldova	National Metrology Insitute
nstitute ISTL	Ukraine	International School of Technical Legislation and Quality Management
KTM	Kazakhstan	Committee of technical regulation and Metrology
KTU MI	Lithuania	Metrology Institute at Kaunas Technology University
LEI	Lithuania	Lithuanian Energy Institute
LMET	Germany	Thuringian State Bureau for Metrology and Verification
MEMST	Kazakhstan	The Committee of Technical Regulation and Metrology
		of the Ministry of Industry and New Technologies
		of the Republic of Kazakhstan
NC	Cuba	Cuban National Bureau of Standards
NICPV	Russia	Center for Surface and Vacuum Research
NIMS MEAP KR	Kyrgyzstan	National Inspection to the Metrological Supervision under the Ministry of Economy of the Kyrgyz Republic
NSC "IM"	Ukraine	National Scientific Centre "Institute of Metrology"
MEAP KR	Kyrgyzstan	The Ministry of Economy of the Kyrgyz Republic
PINMI	Moldova	Public Institution National Metrology Institute
PTB	Germany	Physikalisch-Technische Bundesanstalt
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Rosstandart	Russia	Federal Agency on Technical Regulation and Metrology of the Russian Federation
RSE "KazInMetr"	Kazakhstan	Republic State Enterprise "Kazakhstan Institute of Metrology"
SAMR	China	State Administration for Market Regulation
SAMIS	Bulgaria	State Agency for Metrological and Technical Surveillance
SAQM	DUIYana DPR of Korea	
SE "Ukrmetrteststandard"	Ukraine	State Administration for Quality Management State Enterprise "All-Ukrainian State Scientific and Research
SE OKIMELILESISIANUAIU	UKIAIIIE	Centre of Standardization, Metrology, Certification and Consumer
		Protection"
SKS RSE "KazInMetr"	Kazakhstan	South-Kazakhstan Subsidiary of Republic State Enterprise
SKS KSE Kaziliweu	Nazakiislaii	"Kazakhstan Institute of Metrology"
SLM	Slovakia	Slovak Legal Metrology
SMI	Slovakia	Slovak Legal Metology Slovak Metrology Inspectorate
SMU	Slovakia	Slovak Institute of Metrology
SNAS	Slovakia	Slovak Institute of Metrology Slovak National Accreditation Service
SNIM	Russia	
		Siberian State Scientific Research Institute of Metrology
SRISMC	Uzbekistan	Scientific Research Institute of Standardization, Metrology and Certification
SSRM	Russia	State Service of Reference Materials of the Composition and
		Properties of Substances and Materials
SSTF	Russia	State Service of Time and Frequency and determination of Earth
		rotation parameters
SSSRD	Russia	Standard Reference Data of Physical Constants and properties of
		substances and materials
SUTN	Slovakia	Slovak Standards Institute
Tajikstandard	Tajikistan	Agency on Standardization, Metrology, Certification and
		Trade Inspection under the Government of the Republic of Tajikistan
TSU	Slovakia	Technical Testing Institute
TUBITAK UME	Turkey	National Metrology Institute
UNIIM	Russia	Urals Scientific Research Institute of Metrology
UNMS	Slovakia	Slovak Office of Standards, Metrology and Testing
UzNIM	Uzbekistan	Uzbek National Institute of Metrology
VMC	Lithuania	Vilnius Metrology Centre
VNIIFTRI	Russia	All-Russian Scientific Research Institute of Physico-Technical
		Measurements
VNIIFTRI ESB	Russia	East-Siberian branch of the National Research Institute of
		Physicotechnical and Radio Engineering Measurements
VNIIFTRI FEB	Russia	Far East branch of the National Research Institute of
		Physicotechnical and Radio Engineering Measurements
VNIIFTRI KB	Russia	Kamchatka branch of the National Research Institute of
		Physicotechnical and Radio Engineering Measurements
VNIIM	Russia	All-Russian Scientific Research Institute of Metrology
		named after D.I. Mendeleev
VNIIMS	Russia	All-Russian Scientific Research Institute of Metrological Service
VNIIOFI	Russia	All-Russian Scientific Research Institute of Optical and
		Physical Measurements
VNIIR	Russia	All-Russian Scientific Research Institute of Flowrate Measurement
WKS RSE "KazInMetr"	Kazakhstan	Western-Kazakhstan Subsidiary of Republic State Enterprise
		"Kazakhstan Institute of Metrology"

Acronyms for the names of international and regional metrology organizations

AFRIMETS	Intra-African Metrology System
APLAC	Asia Pacific Laboratory Accreditation Cooperation
APLMF	Asia Pacific Legal Metrology Forum
APMP	Asia Pacific Metrology Programme
BIML	International Bureau of Legal Metrology
BIPM	International Bureau of Weights and Measures
CODATA	Committee on Data for Science and Technology
EA	European Cooperation for Accreditation
EASC	Euro-Asian Council for Standardization, Metrology and Certification
EURAMET	European Association of National Metrology Institutions
EUROCAL	European Cooperation of accredited calibration laboratories
IEC	International Electrotechnical Commission
ILAC	International Laboratory Accreditation Cooperation
ISO	International Organisation for Standardization
JCRB	Joint Committee of Regional Metrology Organisations and BIPM
NCSLI	National Conference of Standards Laboratories International
OIML	International Organisation of Legal Metrology
SIM	Inter-American Metrology System
STCMetr	Scientific &Technical Commission on Metrology of Euro-Asian Council for Standardization, Metrology and Certification
WELMEC	Western Europe Legal Metrology Cooperation