

MEMORANDUM OF UNDERSTANDING

BETWEEN

THE ISTITUTO NAZIONALE DI RICERCA METROLOGICA (INRiM)

AND

THE SLOVAK INSTITUTE OF METROLOGY (SMU)

CONCERNING COOPERATION IN THE FIELD OF METROLOGY

In order to provide a mechanism for scientific and technological cooperation in metrology, INRiM of the Italian Republic and SMU of the Slovak Republic, hereby agree to pursue scientific and technical cooperation in metrology and related measurement science and technology in accordance with this Memorandum of Understanding (hereinafter referred to as the "MoU").

Article I. Objectives

The objective of this MoU is to strengthen relations between INRiM and SMU (hereinafter referred to as the "Parties") and to provide a framework for the exchange of scientific and technical knowledge and the augmentation of scientific and technical capabilities of the Parties.

Article II. Cooperative Activities

Forms of cooperative activities under this MoU may include, but are not limited to, areas of mutual interest such as:

1. Assignment of guest scientists for periods to be agreed upon;
2. Exchange of technical and scientific information including reference data;
3. Cooperative research projects, carried out partially in each institution;
4. Bi-lateral comparison of measurement standards;
5. Participation in seminars, workshops and training courses of the other party;
6. Cooperation in programmes supporting institutes from developing economies;

7. Training possibilities to develop metrology capabilities, by the research activity of students enrolled in PhD in Metrology organized by INRIM and the Politecnico of Torino
8. Other activities as may be agreed upon

Article III. Source of Funding and Personnel

Cooperative activities under this MoU shall be subject to the availability of funds and personnel of the Parties. The terms of financing for each activity shall be agreed upon in writing by the Parties before the commencement of activities. When the Parties consider it pertinent or necessary to obtain resources for the projects derived from this MoU they will be allowed to request resources from cooperating sources.

Article IV. Activities

Both parties shall appoint a person responsible for the coordination of the activities. Whenever more than the exchange of technical information or exchange visits of individuals are planned, such activities shall be described in an Annex to this MoU which shall set forth as appropriate to the activity, a work plan, staffing requirements, cost estimates, funding sources, intellectual property rights, publications and other undertakings, obligations, or conditions not included in this MoU. In case of any inconsistency between the terms of this MoU and the terms of an Annex hereto, the terms of this MoU shall prevail.

Article V. Intellectual Property

- A. Either Party shall be free to use any scientific and technical information created or furnished in the course of cooperative activities under the MoU for its own internal research and development purposes. Any commercial use of such information shall be the subject of a separate agreement to be negotiated by the Parties on a project-by-project basis. The information may not be disclosed to any third party without the prior written consent of the Party that supplied the information
- B. The publication, patenting and other applications of outcomes developed in the course of cooperative activities under this MoU shall be subject to prior written agreement between the Parties.
- C. Provisions of Article V of this MoU shall survive and continue in full force and effect after abrogation, termination or expiration of this MoU.

Article VI. Entry into Force and Termination

This MoU shall enter into force after having been signed by both parties and remain in force for five (5) years, unless terminated earlier by either Party upon ninety (90) days' written notice to the other party. This MoU may be modified or extended by written agreement of the parties. The termination of this MoU shall not affect the

validity or duration of projects under this MoU that are initiated prior to such termination.

This MoU shall enter into force upon signature of the duly authorised representatives of the Parties.

Done in duplicate in English with each of the copies being equally authenticated by their duly authorised.

FOR THE ISTITUTO NAZIONALE DI
RICERCA METROLOGICA OF THE
ITALIAN REPUBLIC

FOR THE SLOVAK INSTITUTE OF
METROLOGY OF THE SLOVAK
REPUBLIC

Massimo Inguscio
President

Arpad Gonda
Director General

Date: 25-6-2015

Date: 08.06.2015

Witnesses:

For INRIM _____

For SMU _____

Annex 1: Collaboration in the Field of Conductivity and Humidity

Subject

Traineeship in the field of Conductivity and Humidity

Partners

INRIM: ) for Conductivity

INRIM: ) for Humidity

SMU:  for Conductivity and Humidity

Background & Aim of Proposed Collaboration

- INRIM has a long-established experience in the field of conductivity and humidity.
- SMU hopes to expand its scientific and technical cooperation in these fields.
- The cooperation between the parties will pursue the objective of training a young researcher from SMU to allow him:
 - to become acquainted with the work of INRIM in the field of primary measurements of electrolytic conductivity and humidity, to study of evaluation of measurements and uncertainties, to discuss about error sources of measurement
 - to become acquainted with working procedures and to get experience in working on primary standards of electrolytic conductivity and humidity
 - to make contact with staff of INRIM in the field of conductivity and humidity measurements
 - to become acquainted with the work of INRIM in the field of preparation of certified reference materials of electrolytic conductivity and to gain experience in the field of measure of humidity in solid materials (e.g. wood, grain..)

As for the conductivity, following the activity on reference measurement systems and commonly used technical procedures, INRIM proposes the involvement of the trainee in a study on accurate methods of electrolytic conductivity for determining the migration of silver nanoparticles from food contact materials.

Form of Cooperation

- INRIM will provide a traineeship programme of two months at INRIM laboratories in Turin for a young researcher from SMU

Financial Arrangement

- INRIM will provide to the trainee a grant of 500 €/month
- SMU shall bear all other expenses for the stay of the trainee at INRIM (travel, subsistence, etc.)

Annex 2: Collaboration in the Field of Thermometry

Subject

Traineeship in the field of Thermometry

Partners

INRIM:

INRIM:

INRIM:

SMU:

Background and aim of Proposed Collaboration

- INRIM has a long-established experience in the field of thermometry
- SMU hopes to expand its scientific and technical cooperation in these fields.
- The cooperation between the parties will pursue the objective of training a young researcher from SMU to allow him to become acquainted with the work of INRIM in the field of thermometry. In particular, the traineeship programme will include the following topics:
 - fixed point measurements
 - development of fixed points
 - standard platinum resistance thermometers: calibration procedures and measurement problematic
 - realisation of the ITS-90 up to Ag point
 - base metal and noble metal thermocouples: calibration and measurements
 - calibration of industrial thermometers (industrial platinum resistance thermometers, liquid in glass thermometers, digital system thermometers)
 - acoustic methods for temperature measurements

Forms of Cooperation

- INRIM will provide a traineeship programme of two months at INRIM laboratories in Turin for a young researcher from SMU

Financial Arrangement for Collaboration under This Project

- INRIM will provide to the trainee a grant of 500 €/month
- SMU shall bear all other expenses for the stay of the trainee at INRIM (travel, subsistence, etc.)