

ANNUAL REPORT

of Chairperson of TC 1.9 “Ionising radiation and radioactivity”

GENERAL INFORMATION ABOUT COOPERATION IN SUBJECT FIELD

Comparison activity is going on as the main TC direction.

THE CMC REVIEW

Review of CMCs has been made in framework of the project 175/RU/99 “A status of a measurement standard base in the field of ionizing radiation and radioactivity for the countries-members of COOMET” (S. Korostin, VNIIFTRI).

In the framework of the inter-regional reviewing SIM and EURAMET CMCs (EUROMET.RI.8.2007 - CIEMAT, SMU, IFIN) were reviewed.

THE PROJECT FULFILLMENT

169/UA/98 – Rn-222 volume activity in air measurement means comparison COOMET.RI(II)-S1.Rn-222. (V. Sklyarov, NSC IM).

The next NMIs participated in the project: NNC IM (Ukraine), BelGIM (Belarus), VNIIFTRI (Russia), VNIIM (Russia), PTB (Germany), RMTC (Latvia).

The comparison is completed. The final report is published in the KCDB BIPM and “Metrologia Technical Supplement (Metrologia, 2009, 46, Tech. Suppl., 06006)

318/RU/04 Regional key comparison of national measurement standards of the Kerma in air for the energy of gamma radiation Co-60 COOMET.RI(I)-K1 (L. Buermann, PTB)

The next NMIs participated in the project: VNIIM (Russia), BelGIM (Belarus), PTB (Germany), RMTC (Latvia), SMU (Slovakia), CHPR(Cuba). The comparison is completed. Because of BIPM.RI(I)-K1 already completed, the final report will be sent to CCRI(I) for approval.

319/Ru/04 “Comparison measurements of radionuclide volume sources” COOMET.RI(II)-S2.Cs-137, COOMET.RI(II)-S2.Eu-152 и COOMET.RI(II)-S2.Sr/Y90 (S. Korostin, VNIIFTRI)

The next NMIs participated in the project: NNC IM (Ukraine), BelGIM (Belarus), VNIIFTRI (Russia), PTB (Germany), NCM (Bulgaria), CETIC-DMR (Cuba), MoE-ISR (Israel), SMU(Slovakia), RMTC (Latvia). At the present time the measurements is completing and report Draft A for presentation to 6th TC 1.9 Meeting in progress. The draft of COOMET document “Guidelines for data evaluation of COOMET supplementary comparison” was tested with the comparisons. It was found that some of the results are scattered too high and reasons of it are not clear. On the other hand results of the COOMET.RI(II)-S2.Eu-152 comparison was good consistency. Draft B of the COOMET.RI(II)-S2.Eu-152 was approved on the TC meeting (20-21 November 2008, NSC IM Ukraine) . It was agreed that the comparison supports calibration capabilities for reference volume sources and measurement capabilities of the environment radiation control. Draft B of the COOMET.RI(II)-S2.Eu-152 is approving via e-mail. The Draft A of the COOMET.RI(II)-S2.Sr/Y90 should be finished this year.

359/RU/06 Standardization of Am-241 radionuclide solution COOMET.RI(II)-K2.Am-241 (I.Kharitonov, VNIIM)

The next NMIs participated in the project: VNIIM (Russia), BelGIM (Belarus), CENTIS-DMR (Cuba). The final report is published in the KCDB BIPM and “Metrologia Technical Supplement » (Metrologia, 2007, 44, Tech. Suppl., 06001, Metrologia, 2007, 44, Tech. Suppl., 06007).

386/RU/07 “Standardization of Cs-137 radionuclide solution (key comparison COOMET.RI(II)-K2.Cs-137)” (coordinator – I. Kharitonov, VNIIM)

The next NMIs participated in the project: VNIIM (Russia), BelGIM (Belarus), CENTIS-DMR (Cuba). The final report is published in the KCDB BIPM and “Metrologia Technical Supplement » (Metrologia, 2008, 45, Tech. Suppl., 06005).

423/RU/08 “Standardization of Eu-152 radionuclide solution (key comparison COOMET.RI(II)-K2.Eu-152)” (coordinator – I. Kharitonov, VNIIM)

The next NMIs participated in the project: VNIIM (Russia), BelGIM (Belarus), CENTIS-DMR (Cuba). Comparison in progress.

NEW COMPARISONS

In accordance with TC decision the next projects were proposed:

- 389/RU/07 “Comparison of the well-type ionization chamber (IC) calibrations factors for the medical radionuclides (“Dosecalibrators”)” (S. Korostin, VNIIFTRI)
- 445/DE/08 “Comparison of the national standards of air kerma for Cs-137 at protection level” (L. Buermann, PTB)
- 446/DE/08, 447/DE/08 “Comparison of the national standards of air kerma for low-energy x-rays” (L. Buermann, PTB)
- 410/UA/07 “COOMET Regional comparisons of National standards of gamma-radiation Co-60 absorbed dose to water” (N. Kravchenko, NSC IM)
- 462/RU/09 “Comparison of the calibration factors neutron response/fluence for the standard neutron sources: Am-Be, Cf-252, Cf-252 in the sphere Ø30 cm filled with D₂O” (N. Moiseev, VNIIM)

TC RECOMMENDATION FOR FUTURE ACTIVITY

TC Meeting (20-21 November 2008, NSC IM Ukraine) recommended to start new project in 2009:

«Development of the recommendation for gamma-spectrometers software attestation” (Suggested coordinator – NSC IM)

«Development of the concepts “verification” and “calibration” of the devices for activity measurements” (Suggested coordinator – VNIIFTRI)

TC 1.9 MEETING

7th TC 1.9 Meeting took place 20-21 November 2008 (NSC IM Ukraine).

8th TC 1.9 Meeting is preliminary scheduled in Autumn 2006 in Kishinev, Moldova.

Prof. Vladimir Yarina
TC 1.9 Chairperson
Dr. Sergey Korostin
TC 1.9 Secretary