
Korea Research Institute of Standards and Science
P.O. Box 102, Yuseong, Daejeon 305-600, Republic of Korea

Contribution to the 17th Meeting of CCRI(Section II), May 28 – 30, 2003

1. Research Activities
   - **Standardization of Radionuclides** :
     - Activity measurements of P-32, Tl-204 by CIEMAT/NIST method.
     - Activity measurement of Zn-65, Cr-51, I-131, Ir-192 by $4 \pi \beta-\gamma$ coincidence counting and digital coincidence counting techniques.
     - Activity measurement of I-125 by photon-photon coincidence counting.
     - Activity measurement of Pu-238 by $\alpha-\gamma$ coincidence counting.
     - Emission-rate measurement of Cl-36 area source (100 mm x 100 mm) by using a multi-wire proportional counting system.
   - **Development of equipments and facilities** :
     - Radon calibration facility.
     - Characteristic evaluation of radon calibration chamber.
     - Development of pulse ionization chamber system for radon measurement.
     - TDCR (Triple to Double Coincidence Ratio) system.
     - Characteristic study of the system (H-3, P-32, Tl-204)
     - $\beta$(LS) - $\gamma$ coincidence counting system. (In progress)
     - Construction of detection unit.
     - Comparison study with $4 \pi \beta$(PPC)-$\gamma$ coincidence counting
     - $4 \pi \beta-\gamma$(Ge) coincidence counting. (In progress)
     - Construction of detection unit. (HP Ge : 130 % Relative Efficiency)

2. International Activities.
   - BIPM intercomparison : Pu-238, P-32, Tl-204, Zn-65, Ir-192, I-125
   - APMP intercomparison : Cl-36 area source (Pilot lab. : NMIJ/Japan)
   - Submission of KRISS CMCs to JCRB
- CMC review for other RMOs
- Participation of APMP/TCRI meeting

3. Laboratory Services
- Dissemination of radioactivity CRMs. (130 CRMs / y)
- Technical consultation to the industry.
- Calibration and test services for radiation detectors and radionuclides.
- Technical training for radiation workers.

4. Future Work
- Development of radioactivity CRMs for medical use and environmental activity measurements.
- Development of radon and radon progeny measurement techniques and calibration of radon detectors.
- Standardization of radionuclides (Cs-137, Ce-139, Sn-113, Mn-54, Sr-85, Co-56, Cs-134, Tc-99m, Hg-203, Na-22)
- Improvement of digital coincidence counting technique.
- Development of performance evaluation techniques for radiation detectors.

5. Others
- KRISS was reviewed about technical competence in the field of ionizing radiation by 3 experts from abroad in order to meet the technical requirements of ISO 17025. (May 14-17, 2002)

6. Publications