Progress Report on Radionuclide Metrology (2001-2003)

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Information for CCRI Section II Members

1. Activity measurement

Five radionuclides (^{65}Zn, ^{204}Tl, ^{134}Cs, ^{59}Fe, ^{99}Tc^{m}) have been standardized in the last two years. Calibration of the new ionization chamber (IG12) was carried on with these radionuclides.
The OMH participated IRS (SIR) program of BIPM with two radionuclides: ^{59}Fe and ^{99}Tc^{m}.
A calibrated HPGe gamma spectrometer was used for standardization of ^{99}Tc^{m} . This spectrometer has been calibrated with radioactive certified reference materials. These sources were traced to the primary activity standard of OMH.

2. International activities

The OMH participated in the BIPM CCRI(II) key comparisons ^{65}Zn and ^{204}Tl.
In the 2001-2002 years the laboratory participated in a low level activity concentration intercomparison organised by Austrian Research Centers Seibersdorf (GAMMARING 2001) . In this intercomparison the participants measured and evaluated low activity concentration of natural and artificial radionuclides using calibrated gamma spectrometers.

3. Legal metrology and the distribution of radioactive certified reference sources

In the last two years 236 radioactive certified reference materials (solid, liquid, large volume, large surface and gas) have been prepared and distributed.
The OMH carried out the periodical metrology supervision of 38 radionuclide calibrators and 230 pieces of surface contamination monitors in the last two years.

4. Publication

I.Csete, L. Szücs, A.Zsinka
Standardization of ^{89}Sr at the National Office of Measures. Applied Radiation and Isotopes 2002, 56 467-470

5. Future works

- Standardization of ^{85}Kr radionuclide.
- Participation in the key comparisons of BIPM CCRI(II) and IRS (SIR) program.