Status of comparison on radioactivity measurement on APMP/TCRI

APMP TCRI

May, 2012

Activity (RI(II)) – Key Comparisons

Comparison ID	Measurand	Decay Scheme Groups	Pilot lab.	Participating institutes	Current status
APMP.RI(II) -K2.Ho-166m	Activity of radionuclide Ho-166m, 1999	4πβγ BG	NMIJ	CNEA, INER, KRISS, LNMRI, NMIJ, NIM	Approved for Equivalence and published (May.2003)
APMP.RI(II) -K2.Y-88	Activity of radionuclide Y-88, 2000	4πexγ EG	NMIJ	ANSTO, BARC, CNEA, INER, KRISS, LNMRI, NIM, OAP, MINT, P3KRBiN	Approved for Equivalence and published (Aug. 2004)
APMP.RI(II) -K2.Co-58	Activity of radionuclide Co-58, 2000	4πexγ EG	NMIJ	BARC, CNEA, INER, KRISS, LNMRI, NIM, NMIJ	Approved for Equivalence and published (Feb.2003)
APMP.RI(II) -K3.F-18	Calibration factors using absolute standards of F-18, 2001	4πβγ BG	INER	INER, NPL	Approved for Equivalence and published (Jun.2005)

Activity (RI(II)) – Key Comparisons

Comparison ID	Measurand	Decay Scheme Groups	Pilot lab.	Participating institutes	Current status
APMP.RI(II)-K2.Cr-51	Activity of radionuclide Cr-51, 2004	4πexγ EG	NMIJ	NMIJ, VNIIM	Approved for Equivalence and published (Oct.2005)
APMP.RI(II)-K2.Ce-139	Activity of redionuclide Ce-139, 2004	4πexγ EG	NMIJ	INER, KRISS, NMISA, NIM, NMIJ, VNIIM	Approved for Equivalence and published (Sep.2005)
APMP.RI(II)-K2.Cs-134	Activity of radionuclide Cs-134, 2005	4πβγ BG	NMIJ	CNEA, INER, KRISS, LNMRI, NMIJ, NIM	Approved for Equivalence and published (Sep.2007)
APMP.RI(II)-K2.Ba-133	Activity of radionuclide Ba-133, 2006	4πexγ EG	NMIJ	ANSTO, BARC, INER, INST, KRISS, NIM, NMIJ, NMISA, OAP, P3KRBiN	Approved for Equivalence and published (Oct.2009)

Activity (RI(II)) – Key Comparisons

Comparison ID	Measurand	Decay Scheme Groups	Pilot lab.	Participating institutes	Current status
APMP.RI(II)-K2.I-131	Activity of radionuclide I-131, 2008	4πβγ BG	NMIJ (8 lab.)	ANSTO, BATAN, BARC, INER, KRISS, NMIJ, OAP	Draft B in progress
APMP.RI(II)-K2.Fe-59	Activity of radionuclide Fe-59, 2012-2013	4πβγ BG	NMIJ (5 lab.)	INER, KRISS, NIM, , NMIJ, OAP	Protocol in preparation

Activity (RI(II)) – Supplementary Comparisons

Comparison ID	Measurand	Pilot lab.	Participating institutes	Current status
APMP.RI(II)-S1.Cl-36	Surface emission rate of charged particles from a Cl-36 standard source, 1999 - 2002	NMIJ (7 lab.)	INER, KRISS, NIST, NMISA, NMIJ, PTB, VNIIM	Approved for Equivalence and published (2012)
APMP.RI(II)-S2.Ho-166m	Relative ionization chamber calibration factors to Ho-166m sealed source, 2003 - 2004	NMIJ (7 lab.)	ANSTO, BARC, NMISA, INER, KRISS, NMIJ, OAP	Measurements completed
APMP.RI(II)-S3.Cs…?	Radioactivity measurement of Cs-134 and Cs-137 in Brown rice	NMIJ	…..	Plan to distribute the sample in June, 2013

Future Plan

Radionuclides for detectors calibration

Be-7, Na-22, Na-24, Sc-46, Cr-51, Mn-54, Fe-55, Co-56, Co-57, Co-58, Fe-59, Co-60, Zn-65, Ge/Ga-68, Se-75, Sr-85, Y-88, Nb-94, Ru-106,Cd-109, Sn-113, Ba-133, Cs-134, Cs-137, Ce-139, Ce-141, Eu-152, Eu-154, Gd-153, Ho-166m, Hg-203, Am-241

Radionuclides for medical purposes

C-11, F-18, P-32, P-33, Cl-36, Ar-41, Cu-64, Ga-67, Ge/Ga-68,Sr-89, Y-90, Mo-99, Tc-99m, Ru-103, In-111, I-124, I-125, Xe-133, Sm-153, Ho-166, Yb-169, Lu-177, Re-186, Re-188, Ir-192, Au-198, Tl-201,

Thanks for you attention!