

**Report of SIM Laboratories to the CCRI (section II, measurement of radionuclides)
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Activity (section II):

Comparisons Several comparisons have had SIM participation in the last two years, and are listed in the table below (except for SIR submissions). Of particular note are the ^{85}K and ^{54}Mn comparisons which not only had SIM participation, but also had participant (specifically, NIST) submissions to the SIR, permitting potential correlation points for the KCRVs of these two nuclides. NRC Canada, although not currently in a position to participate in the measurement of radionuclides, was also a participant in the comparison (the determination of calibration factors of the NPL secondary standard radionuclide calibrators using absolute standards of F-18) for ^{18}F . NIST has also submitted ^{109}Cd , ^{57}Co , ^{85}Kr , ^{88}Y , and ^{134}Cs to the SIR (there were no NIST submissions to the SIR in 2003 or most of 2004 due to problems with customs). CNEA is planning submissions to the SIR of ^{134}Cs (in May or June) and ^{152}Eu (in September), and NIST will likely send ^{137}Cs to the SIR also in September.

Comparison	Identifier	NIST	ININ	IRD	CNEA	SIR submission
Am-241	CCRI(II)-K2.Am-241	✓	✓	✓	✓	
Cl-36	APMP.RI(II)-S1.Cl-36	✓				
F-18	CCRI(II)-K3.F-18	✓		✓ (IPEN)		
I-125	CCRI(II)-K2.I-125(2)	✓	✓	✓		
Ir-192	CCRI(II)-K2.Ir-192		✓	✓	✓	
K-85	CCRI(II)-K2.Kr-85	✓		✓		NIST
Mn-54	CCRI(II)-K2.Mn-54	✓		✓		NIST
P-32	CCRI(II)-K2.P-32	✓ (2)		✓ (1 and 2)	✓ (1)	
Tl-204	CCRI(II)-K2.Tl-204	✓		✓	✓	
Y-90	CCRI(II)-K2.Y-90	✓				
Zn-65	CCRI(II)-K2.Zn-65			✓	✓	

Discussed proposals for future comparisons Discussions among SIM laboratories regarding comparisons of the proposed reference materials (seaweed, soils, and shellfish) has indicated that both NIST and IRD-LNMRI would participate; NIST is willing to pilot all three comparisons and provide materials for expansion of current participants (as noted in the proposed supplementary comparisons) to include IRD-LNMRI (and other interested parties). CNEA will not be able to participate in any of these comparisons to support their CMCs for reference materials. SIM laboratories have also expressed interest in participating in activity comparisons of ^{55}Fe , $^{99\text{m}}\text{Tc}$, and ^3H (NIST), ^{152}Eu (ININ), ^{201}Tl (ININ, IRD-LNMRI), ^{67}Ga (IRD-LNMRI) and ^{123}I (IRD-LNMRI).

Status of CMCs CMCs in activity have been accepted and posted from NIST, IRD-LNMRI and CNEA. ININ has modified its activity CMCs in response to comments from EUROMET and APMP and we are waiting for responses from EUROMET and APMP on their acceptance of those CMCs; latest versions of these CMCs have been resent to EUROMET and APMP for review, and will be submitted to the JCRB as soon as possible.

Quality Systems The QS for NIST is complete for services (SRMs currently underway), and NIST was able to self declare in October 2004. The ININ QS is still in progress and, to date, is about 60 % complete. The LNMRI Quality System has been implemented and was peer reviewed in 2004; approval was received by the SIM Quality System Task Force (SIM-QSTF) in 2004 (and an action plan prepared for 2004-2005). CNEA has received certification of accreditation by the Argentinean Accreditation Organism (OAA) for “Preparation and calibration of radioactive sources” and “Activimeter (activity measurements) calibration” (February 2005). In addition, they have had a peer review of coincidence methods by Dr. Garcia Toraños (CIEMAT, Spain).