

NSUF 2005

NPL Environmental Comparison 2005

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NPL Environmental Comparison 2005

Timetable:

- | | |
|--|----------------|
| -Provisional date of sample despatch | September 2005 |
| -Provisional deadline for return of results | December 2005 |
| -Provisional date of meeting | January 2006 |
| -Provisional date of publication of the report | March 2006 |

Samples (I)

Type ABH (1-20 Bq/g; 20 g sample) and ABL (1-20 Bq/kg; 500 g sample)

Acidic solutions containing a mixture of alpha and beta emitting nuclides:

^{55}Fe , ^{89}Sr , $^{90}\text{Sr}/^{90}\text{Y}$, ^{238}U , ^{238}Pu , ^{239}Pu and ^{241}Am

Samples (II)

Type LB (100-500 Bq/kg; 500 g sample)

A basic solution containing a mixture of beta emitting nuclides:

^3H , ^{14}C and ^{35}S

Samples (III)

Type GH (1-20 Bq/g; 100 g sample) and GL (1-20 Bq/kg; 500 g sample)

Acidic solutions containing a mixture of eight to ten gamma emitting nuclides from the following candidate list:

${}^7\text{Be}$, ${}^{22}\text{Na}$, ${}^{46}\text{Sc}$, ${}^{54}\text{Mn}$, ${}^{56}\text{Co}$, ${}^{57}\text{Co}$, ${}^{58}\text{Co}$, ${}^{60}\text{Co}$, ${}^{65}\text{Zn}$, ${}^{85}\text{Sr}$, ${}^{88}\text{Y}$, ${}^{95}\text{Zr}$, ${}^{95}\text{Nb}$,
 ${}^{103}\text{Ru}$, ${}^{106}\text{Ru}/{}^{106}\text{Rh}$, ${}^{109}\text{Cd}$, ${}^{110\text{m}}\text{Ag}$, ${}^{113}\text{Sn}$, ${}^{124}\text{Sb}$, ${}^{125}\text{Sb}$, ${}^{133}\text{Ba}$, ${}^{134}\text{Cs}$, ${}^{137}\text{Cs}$,
 ${}^{139}\text{Ce}$, ${}^{141}\text{Ce}$, ${}^{144}\text{Ce}$, ${}^{152}\text{Eu}$, ${}^{154}\text{Eu}$, ${}^{155}\text{Eu}$, ${}^{153}\text{Gd}$, ${}^{160}\text{Tb}$, ${}^{166\text{m}}\text{Ho}$, ${}^{170}\text{Tm}$, ${}^{192}\text{Ir}$,
 ${}^{203}\text{Hg}$ and ${}^{207}\text{Bi}$

A few changes....

- Different ratio between the nuclides for the “high” and “low” samples
- Less information on the composition of the gamma emitter samples
- Less opportunity to change the results after submission
- NPL will “participate”
- Report published *after* the meeting
- Changes to the report

Changes to the report

Report will contain (or will have more information on):

- Other discrepancy tests than the u-test (e.g., outlier tests)
- Unweighted means
- Results per nuclide and per participant
- Source preparation and QA
- Detection techniques and yield tracers used by participants

Participation

Cost is £135 (excluding despatch) for the first sample and £100 (excluding despatch) for each subsequent sample.

Date orders due: 1 July 2005

To order please send purchase order to Maggie Tunnicliff

E-mail: radioactivity@npl.co.uk

Direct line: 020 8943 8600

Direct fax: 020 8943 8700