

New NPL Projects on the Measurement of Air Filters and Surfaces

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First project – aim:

To calculate ratios of true to ‘apparent’ activity for some ‘real’ α -contaminated air filters and summarise in an NPL Report

- True activities from radiochemical analysis
- Apparent activities from direct gross alpha or alpha spec

- Draft report to be presented to IRMF in May 2009

Filters project (cont.)

- **Would you like to see data for:**
 - **any specific instruments?**
 - **any particular filter types / sizes?**
- **What other data would be useful?**
 - **estimate of filter weight gain?**
 - **other?**
- **Have any similar studies already been done?**
- **Any offers of filters?**

Second project – aim:

For various surface types, measure effect on monitor response of:

- i. Adsorption of activity (over time) into a porous surface
- ii. Attenuation by layers (of, e.g., plastic) on a non-porous surface

(Perhaps also look at migration of activity into layers of paint in next NMS programme)

Surfaces project – possibilities:

Nuclides	Surfaces	Monitors	Layers	Count-rate
^{239}Pu ^{241}Am ^{60}Co ^{36}Cl ^{14}C Others?	Concrete Wood Brick Steel (or other non-absorbent) Others?	Around 5 different types - which?	Plastic Al Others?	Of the order of 100 cps

Surfaces project (cont.)

- **Again, any similar studies already done?**
- **Late 2008 – Initial report on attenuation factors**
- **Report to IRMF May 2009**
- **Late 2010– Updated report including adsorption characteristics**

Any feedback, please, to: julian.dean@npl.co.uk - thank you