

Sample Information Reporting Form

Version 1.1

January 2024

<https://www.npl.co.uk/products-services/radioactivity/environmental-pte>

Dear Participant,

NPL ENVIRONMENTAL RADIOACTIVITY PROFICIENCY TEST EXERCISE 2023/2024 – SAMPLE AND REPORTING INFORMATION

Thank you for participating in the 2023/2024 Environmental Radioactivity Proficiency Test Exercise (PTE). Please treat the proficiency test samples in the same manner as the majority of the samples you routinely measure. If you are using the exercise for method development or validation, please state this when submitting results so that this may be considered.

Electronic Reporting Forms can be found on the NPL website at:

<https://www.npl.co.uk/products-services/radioactivity/environmental-pte>

Please ensure that your reporting units are:

Bq g⁻¹ for AB, B1 and GH
Bq kg⁻¹ for A1 and GL

Please adhere to the following rules when entering data into the Reporting Form:

- Enter your Laboratory Code (not the name of your organisation) in the cell indicated – if you have not been allocated a Laboratory Code, please contact NPL;
- Enter Activity per Unit Mass and Uncertainties as numerical values only – **do not type in the units – these are included automatically**;
- If you do not wish to submit a value for a particular radionuclide, **do not delete the zeros from the cell** (our analysis program reads zero as 'no data submitted');
- Do not edit or modify the form in any way, as this may result in data not being included in the final data evaluations.

Please return the completed Reporting Forms to pte@npl.co.uk by **May 31st 2024**. A procedure enabling you to appeal against the assessment of your performance is available.

Please do not disclose your measurement results to third parties until the final version of the NPL report has been issued.

REFERENCE DATE

Activity per unit mass should be reported with a reference date of **2023-06-01 12:00 UTC**. The date is stated in the format YYYY-MM-DD.

FURTHER INFORMATION

Any queries, or requests for additional information should be emailed to PTE@npl.co.uk

TIMETABLE

The timetable for the 2023/2024 NPL Environmental PTE is as follows:

Deadline for submission of results	31st of May 2024
Report to be issued	August 2024
Discussion forum at CARM 2024	November 2024 (Provisional)

SAMPLE TYPES

Sample Type*	Radionuclides	Activity per Unit Mass Range
Alpha Beta (AB)	H-3, Ni-63, Sr-90 and Am-241 in 20 g of 2 M HNO ₃ (with 10 ppm Ni, Sr and Ce)	1 – 20 Bq g ⁻¹
Alpha One (A1)	Ra-226, Am-241 and Cm-244 in 500 g of 2 M HNO ₃ (with 10 ppm Sr and Ce)	5 – 100 Bq kg ⁻¹
Beta One (B1)	H-3, C-14 and Cl-36 in 500 g of 0.01 M NaOH (with 10 ppm Na ₂ CO ₃)	0.1 – 1 Bq g ⁻¹
Gamma High (GH)	Na-22, Co-60, Ba-133, Cs-137, and Eu-155 in 100 g 1 M HNO ₃ (with 10 ppm Na, Co, Ba, Cs and Eu)	1 – 50 Bq g ⁻¹
Gamma Low (GL)	Mn-54, Zn-65, Ce-139 and Pb-210 in 500 g of 1 M HNO ₃ (with 10 ppm Mn, Zn, Ce and Pb)	1 – 50 Bq kg ⁻¹

*Please note all samples are provided in HDPE bottles.

Please be aware that there are trace impurities of Ba-133 and Co-60 present in the gamma low sample type. The impurities may be measurable but are not reportable nuclides and do not appear on the reporting form.

We look forward to receiving your results.

Yours faithfully,

H. Thompkins

Heather Thompkins

(Delivery Manager of Nuclear Metrology Group's Measurement Services)