



The IAEA-TERC-2024-01 world wide proficiency test on the determination of anthropogenic and natural radionuclides in water, sediment, bauxite and contaminated surface samples

**Laboratory's Final Report
Laboratory Code: 2 (CuNo: 13949)
Total Pages (with cover): 7**



Data Summary Report

for the World Wide Proficiency Test IAEA-TERC-2024-01

Individual Data Summary Report for Laboratory Nr. 2

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Proficiency Test IAEA-TERC-2024-01 Data Summary Report

Created on 2024-09-07

Sample 01

Sample Code	Analyte	Measured by	Reported Value	Reported Uncertainty
1	gross_alpha	alpha	31.0	4.9
1	Po-210	alpha	10.4	1.2
1	Ra-226	alpha	12.4	1.5
1	gross_beta	beta	87	16
1	H-3	beta		
1	Bi-214	gamma	14.2	2.4
1	Eu-152	gamma	15.0	1.1
1	Na-22	gamma	19.6	1.9
1	Pb-210	gamma	10.8	1.8
1	Pb-214	gamma	13.3	1.2
1	Ra-226	gamma	13.5	1.4
1	U-235	ICP-MS		

Values and Uncertainties for Sample 01 (water) in Bq/kg, ICP-MS measurement in ng/g.

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Proficiency Test IAEA-TERC-2024-01 Data Summary Report

Created on 2024-09-07

Sample 03

Sample Code	Analyte	Measured by	Reported Value	Reported Uncertainty
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Values and Uncertainties for Sample 03 (sediment) in Bq/kg d.m.

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Proficiency Test IAEA-TERC-2024-01 Data Summary Report

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Sample 04

Sample Code	Analyte	Measured by	Reported Value	Reported Uncertainty
4	Ac-228	gamma	141	11
4	Bi-214	gamma	144	14
4	K-40	gamma		
4	Pb-210	gamma	151	11
4	Pb-212	gamma	129.7	8.1
4	Pb-214	gamma	155	11
4	Ra-224	gamma	132.5	8.3
4	Ra-226	gamma	154	12
4	Ra-228	gamma	141	11
4	Th-228	gamma	132.2	8.3
4	Th-232	gamma	133.7	8.1
4	Th-234	gamma	171	12
4	Tl-208	gamma	46.7	4.7
4	U-235	gamma	7.59	0.60
4	U-238	gamma	163	12

Values and Uncertainties for Sample 04 (bauxite) in Bq/kg. d.m.

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Sample 05

Sample Code	Analyte	Measured by	Reported Value	Reported Uncertainty
5	Sr-90	beta	3.39	0.57
5	Cs-134	gamma	7.54	0.42

Values and Uncertainties for Sample 05 (surface) in Bq/sample.

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IAEA-TERC-2024-01 Summary Tables

Labcode:2

Record	Labcode	Sample	Technique	Analyte	Reported Value	Uncertainty (k=1)	Unit
Rec. 0	2	1, water	alpha	gross_alpha	31.0	4.9	[Bq/kg]
Rec. 1	2	1, water	alpha	Po-210	10.4	1.2	[Bq/kg]
Rec. 2	2	1, water	alpha	Ra-226	12.4	1.5	[Bq/kg]
Rec. 3	2	1, water	beta	gross_beta	87	16	[Bq/kg]
Rec. 4	2	1, water	beta	H-3			[Bq/kg]
Rec. 5	2	1, water	beta	Pb-210			[Bq/kg]
Rec. 6	2	1, water	beta	Sr-90			[Bq/kg]
Rec. 7	2	1, water	gamma	Bi-214	14.2	2.4	[Bq/kg]
Rec. 8	2	1, water	gamma	Eu-152	15.0	1.1	[Bq/kg]
Rec. 9	2	1, water	gamma	Na-22	19.6	1.9	[Bq/kg]
Rec. 10	2	1, water	gamma	Pb-210	10.8	1.8	[Bq/kg]
Rec. 11	2	1, water	gamma	Pb-214	13.3	1.2	[Bq/kg]
Rec. 12	2	1, water	gamma	Ra-226	13.5	1.4	[Bq/kg]
Rec. 13	2	1, water	ICP-MS	total U			[ng/g]
Rec. 14	2	1, water	ICP-MS	U-235			[ng/g]
Rec. 15	2	1, water	ICP-MS	U-238			[ng/g]
Rec. 16	2	4, bauxite	gamma	Ac-228	141	11	[Bq/kg]
Rec. 17	2	4, bauxite	gamma	Bi-214	144	14	[Bq/kg]
Rec. 18	2	4, bauxite	gamma	K-40			[Bq/kg]
Rec. 19	2	4, bauxite	gamma	Pb-210	151	11	[Bq/kg]
Rec. 20	2	4, bauxite	gamma	Pb-212	129.7	8.1	[Bq/kg]
Rec. 21	2	4, bauxite	gamma	Pb-214	155	11	[Bq/kg]
Rec. 22	2	4, bauxite	gamma	Ra-224	132.5	8.3	[Bq/kg]
Rec. 23	2	4, bauxite	gamma	Ra-226	154	12	[Bq/kg]
Rec. 24	2	4, bauxite	gamma	Ra-228	141	11	[Bq/kg]
Rec. 25	2	4, bauxite	gamma	Th-228	132.2	8.3	[Bq/kg]
Rec. 26	2	4, bauxite	gamma	Th-232	133.7	8.1	[Bq/kg]
Rec. 27	2	4, bauxite	gamma	Th-234	171	12	[Bq/kg]
Rec. 28	2	4, bauxite	gamma	Tl-208	46.7	4.7	[Bq/kg]
Rec. 29	2	4, bauxite	gamma	U-235	7.59	0.60	[Bq/kg]
Rec. 30	2	4, bauxite	gamma	U-238	163	12	[Bq/kg]
Rec. 31	2	5, contaminated surface sample	beta	Sr-90	3.39	0.57	[Bq/sample]
Rec. 32	2	5, contaminated surface sample	gamma	Cs-134	7.54	0.42	[Bq/sample]

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