

IAEA-TERC-2025-01 Worldwide Proficiency Test Exercise, Pie Charts, S-Shapes and Reported Results with Scores

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Contents

1 Description of Samples	1
1.1 Sample 1, Drinking Water (spiked)	1
1.2 Sample 2, Natural mineral water (non-spiked)	2
1.3 Sample 3, Soil	2
1.4 Samples 4, Vegetation	2
1.5 Samples 5, Simulated contaminated surface sample (white envelope)	2
1.6 Reference date for decay correction	3
1.7 Codes for analytical techniques in evaluation tables	3
2 Evaluation of Results	3
2.1 Evaluation of parameters with independently assigned target values	3
2.2 Evaluation of parameters without independently assigned target value (“intercomparison” approach)	4
3 Data Evaluation	5
3.1 Evaluation of activity concentrations of radionuclides and mass fractions by ICP-MS	5
3.2 Display of intercomparison values	158
4 Contributors to Evaluation and Report	176
5 Disclaimer	176

Abstract

The IAEA Terrestrial Environmental Radiochemistry (TERC) Laboratory provided the Worldwide Proficiency Test Exercise on the determination of anthropogenic and natural radionuclides in water, soil, vegetation and simulated contaminated surface samples.

1 Description of Samples

- Sample 1: Water spiked with naturally occurring and anthropogenic radionuclides
- Sample 2: Water sample containing environmentally occurring radionuclides
- Sample 3: Soil containing environmentally occurring radionuclides
- Sample 4: Vegetation containing environmentally occurring radionuclides
- Sample 5: Printed contaminated surface containing a mixture of Ba-133 and Sr-90

1.1 Sample 1, Drinking Water (spiked)

Drinking water was gravimetrically spiked with a known amount of a standard solution, prepared from individual solutions with a certified activity concentration of radionuclides. The batch of water was acidified to pH < 2 (0.05M HNO₃) for stabilization, and thoroughly mixed prior to bottling. Each bottle contains approximately 500 g of water.

The target values for activity concentration and corresponding uncertainties were assigned by formulation, and control measurements were performed by gamma-ray spectrometry, alpha-particle spectrometry and liquid scintillation counting.

1.2 Sample 2, Natural mineral water (non-spiked)

Natural mineral water was acidified to $\text{pH} < 2$ (0.05M HNO_3) for stabilization, and thoroughly mixed prior to bottling. Each bottle contains approximately 500 g of water.

The water contains naturally occurring radionuclides at low levels. Specifically, uranium is present at a mass fraction between 0.1 ng/g and 15 ng/g.

The water contains elevated mass concentrations of certain inorganic ions compared to typical drinking water, including:

- Calcium (Ca): between 100 and 500 mg/L
- Magnesium (Mg): between 20 and 200 mg/L
- Sulphate (SO_4): between 100 and 500 mg/L
- Sodium (Na): between 10 and 100 mg/L

The determination of target values and associated uncertainties of the radionuclides has been carried-out using alpha-particle spectrometry and ICP-MS.

1.3 Sample 3, Soil

Approximately 200 g of soil is provided for gamma-ray spectrometry measurement. The bottled samples were sterilized (25 kGy gamma dose) and the related irradiation certificate is available on the exercises website. It contains environmentally occurring radionuclides.

The determination of activity concentration target values and associated uncertainties of the radionuclides has been carried-out using high precision semiconductor gamma-ray spectrometry measurements in compliance with ISO/IEC 17025. The sample was characterized for gamma-emitting radionuclides only.

1.4 Samples 4, Vegetation

Approximately 100 g of vegetation sample is provided for gamma-ray spectrometry measurement. The bottled samples were sterilized (25 kGy gamma dose) and the related certificate is available on the PT website. It contains environmentally occurring radionuclides.

The determination of target values and associated uncertainties of the radionuclides has been carried-out using high precision semiconductor gamma-ray spectrometry measurements in compliance with ISO/IEC 17025. The samples are characterized for gamma-emitting radionuclides only.

1.5 Samples 5, Simulated contaminated surface sample (white envelope)

A set of printed canvas circles for contamination surface monitoring have been included in this proficiency test (Figure 1). They were prepared using an in-house printing technique. One blank sample of the same size, outlined with black ink (non-spiked) is also added for correction (Blank).

The simulated contaminated surface sample (purple) is printed with a combination of magenta ink (Sr-90) and blue ink (Ba-133), and the activity of both radionuclides should be reported (Sample 05).

The simulated contaminated surface sample (blue) is a QC sample (QC-1) and was spiked with a known activity of Ba-133 (see Table 1). The simulated contaminated surface sample (magenta) is a QC sample (QC-2) and was spiked with a known activity of Sr-90 (see Table 1).

The provided QC samples are intended to support the validation and/or calibration of measurement instruments to facilitate the determination of an unknown Sample 05.

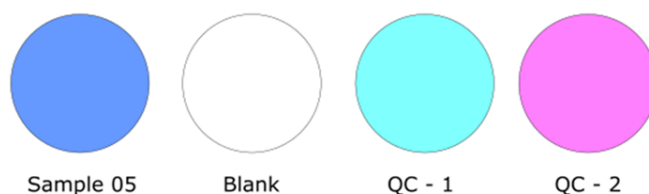


Figure 1. Simulated contaminated surface samples

Table 1. Radionuclide content in simulated contaminated surface QC samples.

Sample	Sr-90, Bq/sample	Ba-133, Bq/sample
QC - 1	-	$7.36 \pm 0.25^*$
QC - 2	$4.39 \pm 0.08^*$	-

* Uncertainty is expressed as a combined standard uncertainty with coverage factor $k=1$

1.6 Reference date for decay correction

The reference date for decay correction in all samples is 2025-01-01.

1.7 Codes for analytical techniques in evaluation tables

Due to the limited space available in the evaluation tables, the analytical techniques are abbreviated in the tables as shown in the following list:

- alpha: Alpha Spectrometry
- beta: Beta Counting
- gamma: Gamma-ray Spectrometry
- ICP-MS: Inductively Coupled Plasma Mass Spectrometry.

2 Evaluation of Results

The reported results were evaluated according to current IAEA procedures for proficiency testing. Reported results were compared to a target value. Criteria to evaluate each participant's performance take into consideration the relative bias of reported values (trueness) as well as the reported uncertainty of measurement (precision).

Target values were assigned independently for most parameters, either by formulation or characterization measurements. In case of results for gross-alpha and gross-beta activity concentrations, a consensus value from reported results was used.

2.1 Evaluation of parameters with independently assigned target values

Each reported result was evaluated according to the following steps:

The relative bias between the reported and the target value (the best estimate of the true value) is expressed by the following equation:

$$Bias_{relative} = \frac{Value_{reported} - Value_{target}}{Value_{target}} * 100\%$$

The relative bias was compared to the Maximum Acceptable Relative Bias (MARB) which is determined for each analyte, considering the radioanalytical methods, the level of radioactivity and the complexity of the analysis.

If $|Bias_{relative}| \leq MARB$, the result will be rated "Accepted (A)" for trueness.

Based on fit-for-purpose and good laboratory practice principles, the relative expanded uncertainty should cover the relative bias:

The P statistic is calculated using the below equation:

$$P = \sqrt{\left(\frac{u_{target}}{A_{target}}\right)^2 + \left(\frac{u_{reported}}{A_{reported}}\right)^2} * 100\%$$

The relative bias is then compared to the P value:

$$|Bias_{relative}| \leq k * P$$

where k is the coverage factor, $k = 2.58$ corresponding to a confidence level of 99%.

When the above criterion is fulfilled, the reported result is not significantly different from the target values considering the uncertainties associated with both values. The reported uncertainty of measurement is large enough to cover the bias of the result.

In addition, the P statistic is compared to the MARB.

$$P \leq MARB$$

When this criterion is fulfilled, the measurement uncertainty is not overestimated and fit-for-purpose in relation to the MARB criterion of this PT exercise.

When both criteria related to the measurement uncertainty are fulfilled, the reported result is rated "accepted (A)" for precision (measurement uncertainty). The result is rated "Not Accepted (N)" for precision if either of the two conditions are not fulfilled.

The final score is assigned according to the detailed evaluation described above. The possible scores are listed below:

- "Accepted (A)" when both, trueness and precision were rated "Accepted"
- "Not Accepted (N)" when the trueness rating is "Not Accepted"
- "Warning (W)" when the trueness rating is "Accepted" but the precision rating is "Not Accepted"

A z score is provided in addition to above mentioned parameters due to requests by several participants.

$$z = \frac{Value_{reported} - Value_{target}}{\sigma_{PT}}$$

Where σ_{PT} is the standard deviation for proficiency assessment. The standard deviation for proficiency assessment is determined for each analyte, considering the radioanalytical methods, the level of radioactivity and the complexity of the analysis. In case of independently assigned target values, it is connected to the MARB as follows:

$$\sigma_{PT} = \frac{MARB.Value_{target}}{3}$$

2.2 Evaluation of parameters without independently assigned target value (“intercomparison” approach)

When no independently assigned target value is available for a parameter, the consensus from all reported results from PT participants is applied as the target value. Robust statistical methods are applied to derive the target value and the robust standard deviation.

This approach was applied to gross alpha/beta measurement results.

The evaluation includes calculation of relative bias, z scores and ζ (zeta) scores according to the following steps:

The relative bias is calculated as described in Section 2.1.

A z score is calculated using the following general equation:

$$z = \frac{Value_{reported} - Value_{target}}{\sigma_{PT}}$$

Where σ_{PT} is the standard deviation for proficiency assessment.

In this case, the standard deviation for proficiency assessment is the robust standard deviation of the population.

Here, the z score provides information on the deviation of the reported value from the consensus value derived from participants' results, expressed in multiples of the (robust) standard deviation of the population.

It should be emphasized that a z score derived this way is a parameter which depends on the population of reported results, i.e. on the performance of participants.

The following criteria apply for performance ratings based on obtained z scores:

- $|z| \leq 2$... accepted (A)
- $2 < |z| < 3$... questionable (Q)
- $|z| \geq 3$... not accepted (N)

A ζ (zeta) score is calculated using the following general equation:

$$\zeta = \frac{Value_{reported} - Value_{target}}{\sqrt{(u_{reported})^2 + (u_{target})^2}}$$

The ζ score allows a combined assessment of the reported value and the reported uncertainty of measurement.

The following criteria apply for performance ratings based on obtained ζ scores:

- $|\zeta| \leq 2$... accepted (A)
- $2 < |\zeta| < 3$... questionable (Q)
- $|\zeta| \geq 3$... not accepted (N)

3 Data Evaluation

A total of 399 laboratories successfully reported data in the IAEA-TERC-2025-01 proficiency test exercise.

For each of the analytes evaluated, the target value, uncertainty ($k = 1$) and the MARB are listed. A pie chart showing the distribution of accepted, warning, not acceptable and not reported results, the graph showing all reported results, and a detailed table listing all evaluation results for the analyte (sorted by the laboratory code) are provided. The data points are coloured in blue, yellow and red, corresponding to the final score of "Accepted", "Warning", and "Not Accepted", respectively. The horizontal solid blue line indicates the target value. The dotted blue lines indicate the target value $\pm$ its combined uncertainty. The horizontal solid red lines indicate the upper and lower limit of the accepted value range, defined by the target value $\pm$ the maximum acceptable bias.

3.1 Evaluation of activity concentrations of radionuclides and mass fractions by ICP-MS

H-3 determination of activity concentration in Sample 1

Table 2. Target values

Parameter	Value
Activity concentration [Bq/kg]	46.8
Uncertainty [Bq/kg]	2.4
Maximum Acceptable Relative Bias [%]	30

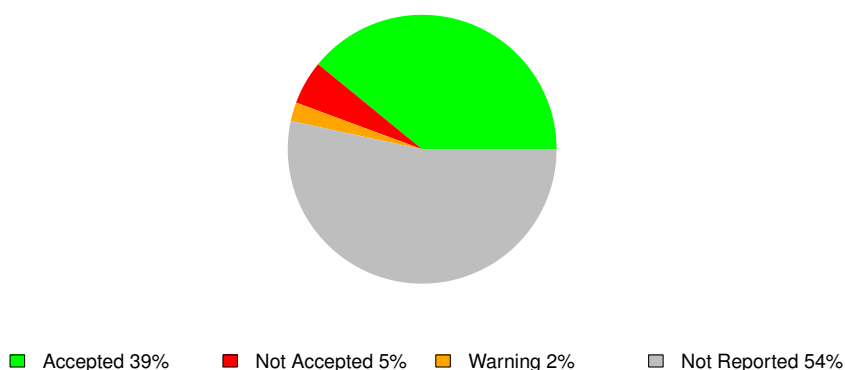


Figure 2. Percentage of Accepted vs. Warnings vs. Not Accepted vs. Not Reported results

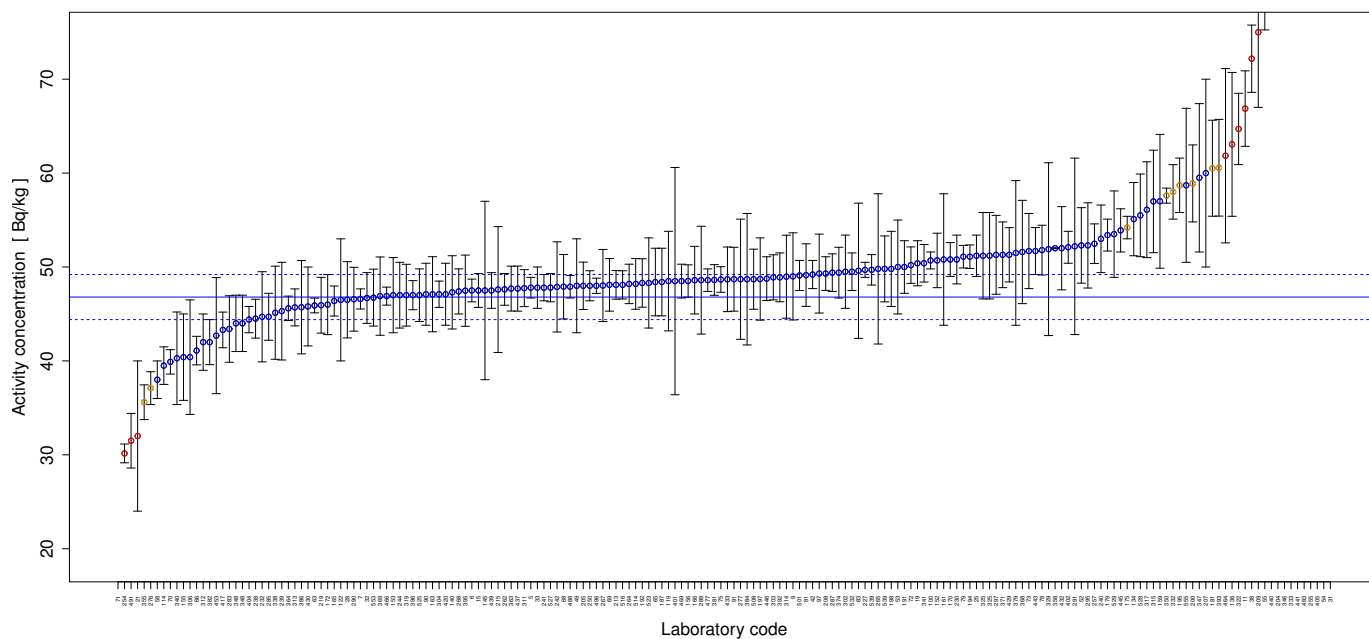


Figure 3. Reported results and evaluation parameters for H-3. Blue points represent accepted scores, whereas yellow and red represent warning and not accepted scores, respectively.

Table 3. Evaluation results for H-3 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
5	47.8	1.1	2.1	5.62	A	A	A
6	47.5	1.21	1.5	5.73	A	A	A
7	46.6	1.07	-0.4	5.62	A	A	A
9	49	4.64	4.7	10.77	A	A	A
11	66.87	4.02	42.9	7.90	N	N	N
15	47.5	1.8	1.5	6.38	A	A	A
19	50.4	2.4	7.7	7.00	A	A	A
21	32	8	-31.6	25.52	N	A	N
25	51.2	2.2	9.4	6.69	A	A	A
28	46.51	4.06	-0.6	10.12	A	A	A
31	266	12.1	468.4	6.85	N	N	N
32	46.7	2.7	-0.2	7.73	A	A	A
33	47.8	2.2	2.1	6.89	A	A	A
38	72.18	3.58	54.2	7.13	N	N	N
42	49.2	1.5	5.1	5.97	A	A	A
49	48	5	2.6	11.61	A	A	A
52	52.3	4.02	11.8	9.24	A	A	A
53	50	5	6.8	11.24	A	A	A
54	237.2	7.5	406.8	6.02	N	N	N
55	77.7	2.45	66.0	6.02	N	N	N
58	38	2	-18.8	7.35	A	A	A
63	45.9	0.78	-1.9	5.40	A	A	A
65	48.4	3.6	3.4	9.03	A	A	A
66	41.1	1.5185	-12.2	6.32	A	A	A
68	47.9	3.43	2.4	8.81	A	A	A
69	48.1	2.8	2.8	7.76	A	A	A
70	39.9	1.3	-14.7	6.08	A	A	A
71	14.38	0.72	-69.3	7.17	N	N	N
72	50.2	1.94	7.3	6.42	A	A	A
73	51.7	4	10.5	9.28	A	A	A
75	48.67	1.36	4.0	5.84	A	A	A
78	51.8	2.65	10.7	7.24	A	A	A
79	51.1	1.2	9.2	5.64	A	A	A
81	49.14	3.33	5.0	8.50	A	A	A

Table 3. Evaluation results for H-3 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
83	49.6	7.2	6.0	15.40	A	A	A
90	47.1	3.3	0.6	8.68	A	A	A
91	48.7	3.4	4.1	8.66	A	A	A
97	49.3	4.2	5.3	9.94	A	A	A
100	50.7	0.9	8.3	5.43	A	A	A
114	39.5	2	-15.6	7.21	A	A	A
119	48.5	5.3	3.6	12.07	A	A	A
122	46.5	6.5	-0.6	14.89	A	A	A
134	55.1	3.9	17.7	8.74	A	A	A
136	63.06	7.66	34.7	13.19	N	N	N
140	47.3	3.9	1.1	9.71	A	A	A
145	47.5	9.5	1.5	20.65	A	A	A
152	50.7	2.9	8.3	7.68	A	A	A
153	47	4	0.4	9.94	A	A	A
155	40.4	4.6	-13.7	12.49	A	A	A
156	48.51	1.72	3.6	6.23	A	A	A
159	57	7.125	21.8	13.51	A	A	A
161	50.8	7	8.6	14.70	A	A	A
163	47.1	4	0.6	9.92	A	A	A
165	46.3775	1.5977	-0.9	6.18	A	A	A
166	48.6	3.6	3.9	9.01	A	A	A
170	50.8	1.8	8.6	6.23	A	A	A
172	46	3.2	-1.7	8.64	A	A	A
175	54.2	1.2	15.8	5.59	A	N	W
179	53.4	1.7	14.1	6.04	A	A	A
181	60.52	5.11	29.3	9.88	A	N	W
187	48.4	3.6	3.4	9.03	A	A	A
191	50	2.8	6.8	7.59	A	A	A
192	48.3	2.58	3.2	7.40	A	A	A
194	51.1	1.25	9.2	5.68	A	A	A
195	58.7	2.9	25.4	7.12	A	N	W
197	48.72	4.38	4.1	10.35	A	A	A
198	49.8	4	6.4	9.53	A	A	A
200	58.9	4.1	25.9	8.65	A	N	W
204	83	2	77.3	5.67	N	N	N
205	48	2.52	2.6	7.34	A	A	A
207	60	10	28.2	17.44	A	A	A
208	49.3	1.79	5.3	6.28	A	A	A
209	75	8	60.3	11.84	N	N	N
213	48.1	1.52	2.8	6.02	A	A	A
215	47.6	6.7	1.7	14.98	A	A	A
219	45.93	2.97	-1.9	8.25	A	A	A
227	49.7	0.8	6.2	5.37	A	A	A
230	50.8	2.6	8.6	7.25	A	A	A
232	44.7	4.8	-4.5	11.90	A	A	A
238	44.5	2.07	-4.9	6.92	A	A	A
239	45.3	5.2	-3.2	12.57	A	A	A
240	53	3.6	13.2	8.51	A	A	A
241	47.8	1.4	2.1	5.91	A	A	A
242	47.88	4.8	2.3	11.26	A	A	A
244	47	3.5	0.4	9.04	A	A	A
250	48	1.6	2.6	6.12	A	A	A
254	30.15	1	-35.6	6.11	N	N	N
255	103.64	5.3	121.4	7.24	N	N	N
257	52.48	2.11	12.1	6.52	A	A	A
262	47.62	1.69	1.8	6.24	A	A	A
264	48.2	2.1	3.0	6.73	A	A	A
265	49.8	8	6.4	16.86	A	A	A
267	48.03	3.84	2.6	9.50	A	A	A
268	47.4	2.4	1.3	7.21	A	A	A

Table 3. Evaluation results for H-3 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
276	37.1	1.75	-20.7	6.97	A	N	W
277	48.7	6.4	4.1	14.11	A	A	A
283	43.4	3.54	-7.3	9.63	A	A	A
285	44.7	2.5	-4.5	7.59	A	A	A
287	49.4	2	5.6	6.53	A	A	A
288	48.6	5.74	3.9	12.88	A	A	A
290	46.57	3.4	-0.5	8.92	A	A	A
291	52.2	9.396	11.5	18.72	A	A	A
295	52.3	4.54	11.8	10.08	A	A	A
297	51.3	4.2	9.6	9.66	A	A	A
302	49.5	3.9	5.8	9.40	A	A	A
303	48.9	2.4	4.5	7.10	A	A	A
304	47.1	1.4	0.6	5.93	A	A	A
306	40.4	6.1	-13.7	15.95	A	A	A
311	47.75	1.97	2.0	6.58	A	A	A
312	42	3	-10.3	8.79	A	A	A
313	45.7	1.97	-2.4	6.70	A	A	A
314	48.97	4.42	4.6	10.38	A	A	A
315	56.982	5.458	21.8	10.86	A	A	A
317	56.1	5.1	19.9	10.44	A	A	A
319	47	3.29	0.4	8.68	A	A	A
322	64.7	3.8	38.2	7.80	N	N	N
325	51.2	4.6	9.4	10.34	A	A	A
325	51.2	4.6	9.4	10.34	A	A	A
329	51.9	9.2	10.9	18.45	A	A	A
332	58	2.9	23.9	7.16	A	N	W
333	89.63	4.3	91.5	7.02	N	N	N
338	45.13	4.96	-3.6	12.13	A	A	A
340	40.28	4.93	-13.9	13.27	A	A	A
341	50.4	2	7.7	6.48	A	A	A
346	88	6.6	88.0	9.09	N	N	N
347	59.5	7.9	27.1	14.23	A	A	A
348	44	3	-6.0	8.53	A	A	A
348	44	3	-6.0	8.53	A	A	A
350	57.6	0.8	23.1	5.31	A	N	W
355	35.6	1.85	-23.9	7.30	A	N	W
358	52	0.05	11.1	5.13	A	A	A
363	47.7	2.39	1.9	7.17	A	A	A
364	45.6	1.3	-2.6	5.87	A	A	A
368	51.6	5.5	10.3	11.83	A	A	A
369	46.9	4.17	0.2	10.26	A	A	A
371	51.3	3.5	9.6	8.54	A	A	A
374	49.4	2.7	5.6	7.49	A	A	A
379	51.5	7.7	10.0	15.81	A	A	A
381	48.62	1.63	3.9	6.13	A	A	A
382	42	2.4	-10.3	7.68	A	A	A
384	48.7	7	4.1	15.26	A	A	A
386	45.72	4.97	-2.3	12.02	A	A	A
392	48.9	2.6	4.5	7.39	A	A	A
393	60.57	5.15	29.4	9.93	A	N	W
395	47.48	3.79	1.4	9.49	A	A	A
396	47	1.55	0.4	6.10	A	A	A
401	48.5	12.1	3.6	25.47	A	A	A
402	52.1	1.7	11.3	6.08	A	A	A
404	44.4	1.4	-5.1	6.02	A	A	A
405	128.4	4.3	174.4	6.12	N	N	N
417	43.3	1.9	-7.5	6.75	A	A	A
420	47.1	3.3	0.6	8.68	A	A	A
429	51.3	2.89	9.6	7.62	A	A	A
430	45.8	4.2	-2.1	10.51	A	A	A

Table 3. Evaluation results for H-3 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
432	52	4.43	11.1	9.94	A	A	A
433	48.69	3.44	4.0	8.73	A	A	A
437	47.7	2.4	1.9	7.18	A	A	A
439	47.5	1.9	1.5	6.50	A	A	A
440	82.628	1.947	76.6	5.64	N	N	N
441	92.4	5	97.4	7.46	N	N	N
443	51.7	2.5	10.5	7.05	A	A	A
445	53.9	2.3	15.2	6.67	A	A	A
446	48.76	2.33	4.2	7.01	A	A	A
453	42.69	6.18	-8.8	15.36	A	A	A
464	61.85	9.28	32.2	15.86	N	A	N
466	46.9	0.958	0.2	5.52	A	A	A
469	48.5	1.8	3.6	6.33	A	A	A
477	48.6	1.2	3.9	5.69	A	A	A
483	92.4	5	97.4	7.46	N	N	N
488	47.9	1.2	2.4	5.71	A	A	A
491	31.502	2.909	-32.7	10.56	N	N	N
496	48	0.81	2.6	5.40	A	A	A
501	49.1	1.6	4.9	6.08	A	A	A
508	48.7	3.2	4.1	8.34	A	A	A
514	48.2	2.7	3.0	7.59	A	A	A
516	48.1	1.5	2.8	6.00	A	A	A
523	48.3	4.8	3.2	11.18	A	A	A
525	47	2.8	0.4	7.86	A	A	A
527	47.8	1.5	2.1	6.01	A	A	A
528	55.5	4.4	18.6	9.44	A	A	A
529	53.5	4.6	14.3	10.01	A	A	A
532	49.5	2	5.8	6.53	A	A	A
539	49.7	1.62	6.2	6.08	A	A	A
539	49.8	3.51	6.4	8.72	A	A	A
553	46.74	3.03	-0.1	8.27	A	A	A
555	58.7	8.2	25.4	14.88	A	A	A

Na-22 determination of activity concentration in Sample 1

Table 4. Target values

Parameter	Value
Activity concentration [Bq/kg]	19.9
Uncertainty [Bq/kg]	1.2
Maximum Acceptable Relative Bias [%]	20

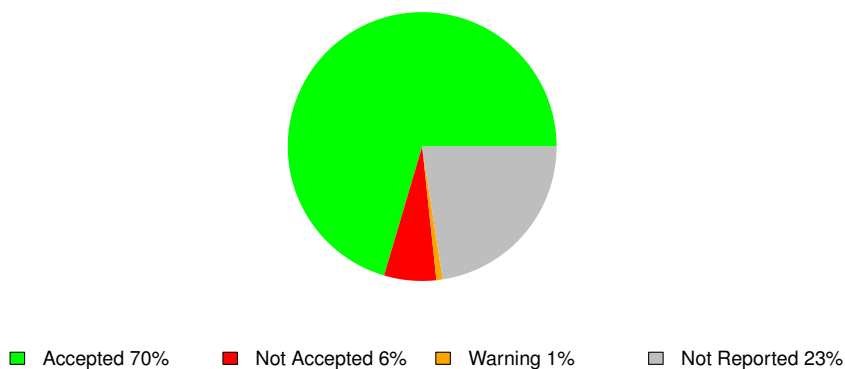


Figure 4. Percentage of Accepted vs. Warnings vs. Not Accepted vs. Not Reported results

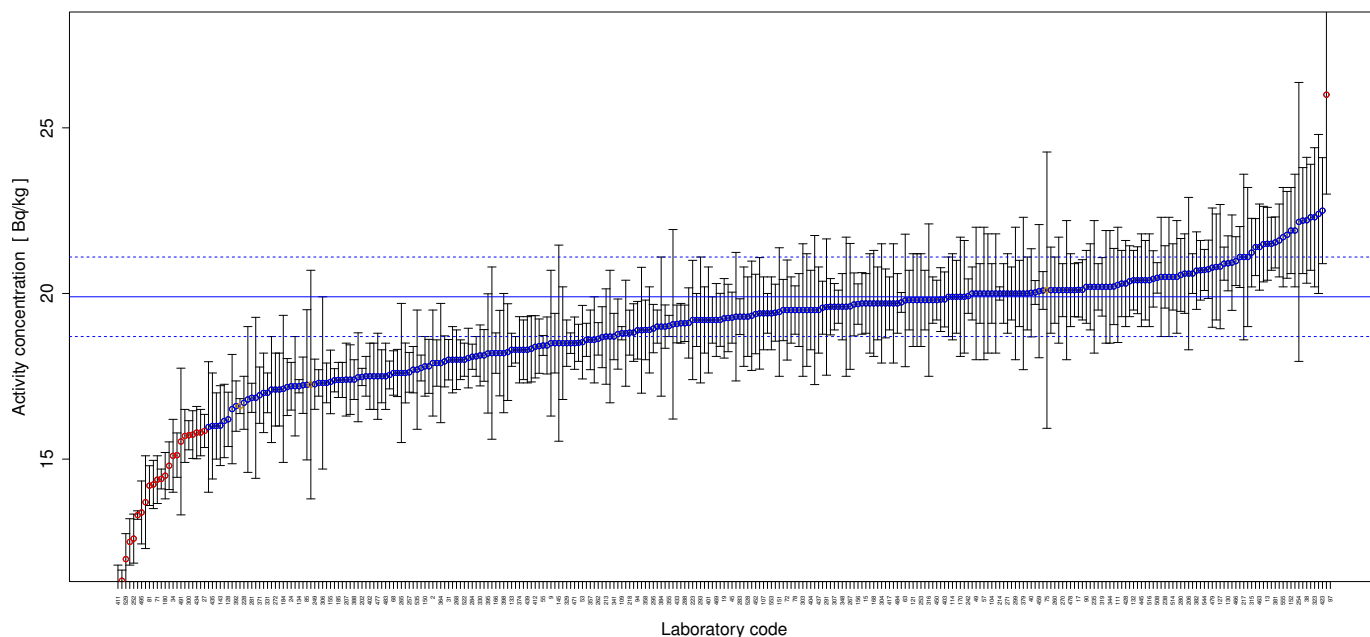


Figure 5. Reported results and evaluation parameters for Na-22. Blue points represent accepted scores, whereas yellow and red represent warning and not accepted scores, respectively.

Table 5. Evaluation results for Na-22 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
2	17.9	1.6	-10.1	10.78	A	A	A
8	21.77	1.31	9.4	8.52	A	A	A
9	18.5	2.2	-7.0	13.33	A	A	A

Table 5. Evaluation results for Na-22 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
11	19.7	0.93	-1.0	7.66	A	A	A
13	21.5	1.1	8.0	7.91	A	A	A
15	19.7	0.9	-1.0	7.57	A	A	A
17	20.11	0.82	1.1	7.28	A	A	A
19	19.25	1.2	-3.3	8.67	A	A	A
24	17.2	0.72	-13.6	7.34	A	A	A
25	20	0.8	0.5	7.24	A	A	A
27	15.85	0.5	-20.4	6.81	N	N	N
28	19.4	1.683	-2.5	10.57	A	A	A
31	18	0.61	-9.6	6.92	A	A	A
32	17.54	0.42	-11.9	6.49	A	A	A
34	15.1	1.1	-24.1	9.46	N	A	N
38	22.21	1.9	11.6	10.47	A	A	A
40	20.02	1.33	0.6	8.97	A	A	A
41	19.5	0.925	-2.0	7.67	A	A	A
42	19.9	1.2	0.0	8.53	A	A	A
45	19.27	0.77	-3.2	7.23	A	A	A
49	20	2	0.5	11.68	A	A	A
50	20	0.9	0.5	7.52	A	A	A
51	20.73	0.88	4.2	7.37	A	A	A
52	21.1	0.92	6.0	7.44	A	A	A
53	18.53	1.11	-6.9	8.50	A	A	A
55	18.43	0.3	-7.4	6.25	A	A	A
57	20	2	0.5	11.68	A	A	A
58	18	1	-9.6	8.20	A	A	A
60	17.2	1.5	-13.6	10.60	A	A	A
62	19.7	1.5	-1.0	9.71	A	A	A
63	19.79	2	-0.6	11.77	A	A	A
65	20	1.8	0.5	10.83	A	A	A
66	19.26	1.0175	-3.2	8.02	A	A	A
68	17.6	0.67	-11.6	7.13	A	A	A
69	19.20319	0.8	-3.5	7.33	A	A	A
70	18.5	0.9	-7.0	7.75	A	A	A
71	14.38	0.72	-27.7	7.84	N	N	N
72	19.5	1.51	-2.0	9.81	A	A	A
73	19.5	1	-2.0	7.92	A	A	A
74	19.3	1.94	-3.0	11.72	A	A	A
75	20.1	4.17	1.0	21.60	A	N	W
78	19.5	0.73	-2.0	7.10	A	A	A
79	14.4	0.3	-27.6	6.38	N	N	N
81	14.2	0.6	-28.6	7.36	N	N	N
82	17.38	0.35	-12.7	6.36	A	A	A
83	18.2	2.6	-8.5	15.51	A	A	A
85	17.243	2.267	-13.3	14.46	A	A	A
90	20.2	1.1	1.5	8.13	A	A	A
94	18.89	0.87	-5.1	7.59	A	A	A
97	95.5	5.6	379.9	8.41	N	N	N
100	19.11	1.06	-4.0	8.19	A	A	A
102	11.33	0.32	-43.1	6.66	N	N	N
104	20	0.9	0.5	7.52	A	A	A
105	19.8	0.9	-0.5	7.55	A	A	A
107	19.4	1.1	-2.5	8.28	A	A	A
109	18.8	0.2	-5.5	6.12	A	A	A
110	18.774407	1.05853	-5.7	8.26	A	A	A
111	20.26	1.74	1.8	10.49	A	A	A
113	19.07	2.86	-4.2	16.16	A	A	A
114	19.9	1.3	0.0	8.89	A	A	A
116	18.68	0.92	-6.1	7.79	A	A	A
119	18.89	1.9	-5.1	11.73	A	A	A
121	19.8	1.4	-0.5	9.29	A	A	A

Table 5. Evaluation results for Na-22 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
124	19.9	1.1	0.0	8.18	A	A	A
127	20.811281	1.875054	4.6	10.84	A	A	A
128	16.2	0.82	-18.6	7.87	A	A	A
130	20.91	0.83	5.1	7.22	A	A	A
132	20.4	0.9	2.5	7.47	A	A	A
133	18.3	0.5	-8.0	6.62	A	A	A
134	17.2	0.2	-13.6	6.14	A	A	A
139	17.6	0.712	-11.6	7.26	A	A	A
140	20.1	1.3	1.0	8.84	A	A	A
143	16.01079	1.205633	-19.5	9.65	A	A	A
145	18.5	2.96	-7.0	17.10	A	A	A
147	14.2341	0.7278	-28.5	7.91	N	N	N
150	17.8	0.9	-10.6	7.87	A	A	A
151	19.44	1.94	-2.3	11.66	A	A	A
152	21.9	1.3	10.1	8.46	A	A	A
154	20.6	1.2	3.5	8.38	A	A	A
155	17.33	0.96	-12.9	8.19	A	A	A
156	19.68	0.61	-1.1	6.78	A	A	A
158	16.8	2.2	-15.6	14.42	A	A	A
159	20.3	1	2.0	7.79	A	A	A
161	19.6	0.85	-1.5	7.43	A	A	A
165	19.57	0.8	-1.7	7.29	A	A	A
166	18.2	0.61	-8.5	6.90	A	A	A
168	19.7	1.6	-1.0	10.12	A	A	A
170	19.9	1.8	0.0	10.87	A	A	A
175	20.11	0.91	1.1	7.54	A	A	A
177	20.9	0.5	5.0	6.49	A	A	A
178	20.2	1.3	1.5	8.82	A	A	A
179	15.12	0.67	-24.0	7.48	N	N	N
180	14.5	0.7	-27.1	7.72	N	N	N
181	16.51	1.65	-17.0	11.67	A	A	A
183	17.23	0.85	-13.4	7.79	A	A	A
184	17.12	2.22	-14.0	14.30	A	A	A
185	17.39	0.53	-12.6	6.76	A	A	A
187	20	1.8	0.5	10.83	A	A	A
189	17.25	3.45	-13.3	20.89	A	N	W
191	20.5	1.8	3.0	10.65	A	A	A
194	14.8	0.72	-25.6	7.75	N	N	N
197	18.23	1.46	-8.4	10.03	A	A	A
198	20.5	1.7	3.0	10.25	A	A	A
200	19.1	0.6	-4.0	6.80	A	A	A
202	17.48	0.26	-12.2	6.21	A	A	A
203	17.1	1.6	-14.1	11.13	A	A	A
204	19	0.5	-4.5	6.58	A	A	A
206	20.6	2.3	3.5	12.69	A	A	A
207	17.4	1.1	-12.6	8.74	A	A	A
208	20.4	1.01	2.5	7.80	A	A	A
209	17	1.2	-14.6	9.28	A	A	A
211	15.74	0.72	-20.9	7.57	N	N	N
213	18.7	1.44	-6.0	9.78	A	A	A
214	20	0.2	0.5	6.11	A	A	A
217	21.1	2.5	6.0	13.29	A	A	A
218	18.8183	0.67876	-5.4	7.03	A	A	A
223	19.2	1.8	-3.5	11.15	A	A	A
224	18.5	1.7	-7.0	10.99	A	A	A
226	17.95	0.77	-9.8	7.40	A	A	A
227	19.4	0.6	-2.5	6.78	A	A	A
228	16.7	0.8	-16.1	7.70	A	A	A
230	18.6	0.5	-6.5	6.60	A	A	A
232	19.2	0.8	-3.5	7.33	A	A	A

Table 5. Evaluation results for Na-22 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
233	20.8	1.6	4.5	9.77	A	A	A
235	20.2	2	1.5	11.59	A	A	A
238	20.5	0.941	3.0	7.58	A	A	A
239	17.9	0.7	-10.1	7.19	A	A	A
241	20	0.9	0.5	7.52	A	A	A
242	19.92	0.52	0.1	6.57	A	A	A
247	16.151	1.108	-18.8	9.13	A	A	A
249	17.260534	0.757484	-13.3	7.46	A	A	A
250	19.8	1.4	-0.5	9.29	A	A	A
252	12.6	0.74	-36.7	8.42	N	N	N
253	19.8	1.4	-0.5	9.29	A	A	A
254	22.16	4.21	11.4	19.93	A	A	A
256	19.67	0.95	-1.2	7.73	A	A	A
257	17.62	0.6	-11.5	6.93	A	A	A
258	19.8	0.9	-0.5	7.55	A	A	A
260	20.1	1	1.0	7.82	A	A	A
261	17.5	0.6	-12.1	6.94	A	A	A
262	18.63	0.49	-6.4	6.58	A	A	A
264	20.1	1.6	1.0	9.99	A	A	A
265	17.6	2.1	-11.6	13.37	A	A	A
267	19.61	1.9	-1.5	11.41	A	A	A
268	18	0.9	-9.6	7.83	A	A	A
270	20.1	0.8	1.0	7.23	A	A	A
271	20	1.2	0.5	8.51	A	A	A
272	17.1	1.1	-14.1	8.82	A	A	A
274	17.6	0.903554	-11.6	7.92	A	A	A
276	19.7	1.1	-1.0	8.22	A	A	A
277	17.1	1.1	-14.1	8.82	A	A	A
278	20.1	2.1	1.0	12.06	A	A	A
279	20.2	0.7	1.5	6.95	A	A	A
280	20.56	1.1	3.3	8.06	A	A	A
281	16.85	0.44	-15.3	6.57	A	A	A
283	19.3	0.54	-3.0	6.65	A	A	A
284	18.09	0.38	-9.1	6.39	A	A	A
285	19.5	1.1	-2.0	8.26	A	A	A
286	17.7	0.7	-11.1	7.21	A	A	A
287	17.3	0.4	-13.1	6.46	A	A	A
288	19.1	0.55	-4.0	6.68	A	A	A
290	20	0.8	0.5	7.24	A	A	A
291	19.59	2.057	-1.6	12.11	A	A	A
292	18.1	0.6	-9.1	6.88	A	A	A
293	19.2	1.9	-3.5	11.59	A	A	A
294	18.7	2	-6.0	12.28	A	A	A
295	18.94	0.73	-4.8	7.16	A	A	A
297	18.33	1	-7.9	8.13	A	A	A
299	20	2	0.5	11.68	A	A	A
300	15.72	0.44	-21.0	6.65	N	N	N
303	19.5	2	-2.0	11.90	A	A	A
304	19.7	1.8	-1.0	10.95	A	A	A
306	17.3	2.6	-13.1	16.19	A	A	A
307	19.6	0.7	-1.5	7.01	A	A	A
310	22.3	1.6	12.1	9.37	A	A	A
311	17.8	0.815	-10.6	7.57	A	A	A
312	20	1	0.5	7.83	A	A	A
313	17.4	1.05	-12.6	8.53	A	A	A
314	18.51	0.56	-7.0	6.75	A	A	A
315	21.233	1.035	6.7	7.75	A	A	A
316	19.8	2.3	-0.5	13.09	A	A	A
318	20.03	0.36	0.7	6.29	A	A	A
319	20.2	0.883	1.5	7.45	A	A	A

Table 5. Evaluation results for Na-22 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
322	19.6	0.5	-1.5	6.55	A	A	A
323	22.3	2.1	12.1	11.18	A	A	A
325	19.7	1.04	-1.0	8.01	A	A	A
326	20.2	1.7	1.5	10.35	A	A	A
328	18.8	1.6	-5.5	10.43	A	A	A
329	18.5	0.7	-7.0	7.12	A	A	A
330	18.13	0.92	-8.9	7.88	A	A	A
331	17	0.6	-14.6	6.99	A	A	A
332	20.5	1.8	3.0	10.65	A	A	A
338	20.93	1.44	5.2	9.15	A	A	A
339	21.5	0.8	8.0	7.09	A	A	A
341	18.7	0.7	-6.0	7.10	A	A	A
344	20.2	1.7	1.5	10.35	A	A	A
346	18.13	0.78	-8.9	7.41	A	A	A
347	19.5	1.7	-2.0	10.60	A	A	A
348	19.6	1	-1.5	7.90	A	A	A
350	18.3	0.4	-8.0	6.41	A	A	A
351	19.2	1	-3.5	7.97	A	A	A
354	20.7	0.9	4.0	7.43	A	A	A
355	19.02	0.32	-4.4	6.26	A	A	A
356	20.6	0.6	3.5	6.70	A	A	A
357	18.6	0.9	-6.5	7.73	A	A	A
358	18.9	0.9	-5.0	7.68	A	A	A
363	19.8	0.7	-0.5	6.99	A	A	A
364	17.9	1.8	-10.1	11.73	A	A	A
368	18.2	1.29	-8.5	9.31	A	A	A
369	18.5	0.31	-7.0	6.26	A	A	A
371	16.93	0.85	-14.9	7.85	A	A	A
374	18.3	1	-8.0	8.14	A	A	A
376	21.4	0.86	7.5	7.25	A	A	A
379	20	2.3	0.5	12.99	A	A	A
381	21.54	0.77	8.2	7.01	A	A	A
382	20.69	1.17	4.0	8.27	A	A	A
384	19	2.1	-4.5	12.59	A	A	A
385	18.41	0.82	-7.5	7.50	A	A	A
386	16.85	2.43	-15.3	15.63	A	A	A
387	17.3	0.6	-13.1	6.96	A	A	A
388	17.4	0.6	-12.6	6.95	A	A	A
391	18.43	0.86	-7.4	7.62	A	A	A
392	16.6	0.76	-16.6	7.57	A	A	A
393	19.3	1.5	-3.0	9.84	A	A	A
395	18.19	1.8	-8.6	11.59	A	A	A
396	20.37	1.07	2.4	8.00	A	A	A
398	18.2	1.8	-8.5	11.58	A	A	A
401	19.2	1.6	-3.5	10.29	A	A	A
402	17.5	1	-12.1	8.31	A	A	A
403	19.82	0.83	-0.4	7.34	A	A	A
404	19.5	1.2	-2.0	8.62	A	A	A
405	15.7	0.8	-21.1	7.89	N	N	N
407	18.3	0.9	-8.0	7.78	A	A	A
408	20.09	0.57	0.9	6.66	A	A	A
410	21.1	2.1	6.0	11.64	A	A	A
411	9.3	2.5	-53.3	27.55	N	N	N
412	18.39	0.94	-7.6	7.91	A	A	A
414	20.44	0.85	2.7	7.33	A	A	A
417	19.7	0.8	-1.0	7.27	A	A	A
419	22.4	2.4	12.6	12.29	A	A	A
420	19.5	2.25	-2.0	13.02	A	A	A
421	19.6	2.1	-1.5	12.29	A	A	A
423	22.5	1.6	13.1	9.32	A	A	A

Table 5. Evaluation results for Na-22 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
425	20	1.1	0.5	8.16	A	A	A
426	19.327	1.65	-2.9	10.45	A	A	A
428	20.3	1.3	2.0	8.80	A	A	A
429	16.6	0.226	-16.6	6.18	A	N	W
433	19.08	0.57	-4.1	6.73	A	A	A
434	15.8	0.79	-20.6	7.83	N	N	N
435	16	1.6	-19.6	11.68	A	A	A
437	19.5	1.3	-2.0	8.99	A	A	A
439	18.3	1	-8.0	8.14	A	A	A
441	17.5	1	-12.1	8.31	A	A	A
443	19.2	0.7	-3.5	7.05	A	A	A
444	18.82	0.87	-5.4	7.60	A	A	A
445	20.4	1.4	2.5	9.14	A	A	A
446	18	0.6	-9.6	6.89	A	A	A
448	17.39	0.53	-12.6	6.76	A	A	A
450	19.8	0.6	-0.5	6.75	A	A	A
452	19.38	1.2	-2.6	8.64	A	A	A
453	19	0.654	-4.5	6.94	A	A	A
454	20.4	1.2	2.5	8.42	A	A	A
459	20.07	2.01	0.8	11.69	A	A	A
460	19.9	1.7	0.0	10.46	A	A	A
462	26	3	30.6	13.02	N	A	N
463	21.4	1.3	7.5	8.56	A	A	A
464	20.21	1.15	1.6	8.29	A	A	A
465	19.7	1.8	-1.0	10.95	A	A	A
466	20.976	0.7375	5.4	6.98	A	A	A
469	19.2	1.1	-3.5	8.32	A	A	A
471	18.5	0.79	-7.0	7.39	A	A	A
472	21.9	1.7	10.1	9.83	A	A	A
475	21.6	1.1	8.5	7.89	A	A	A
477	17.5	1.3	-12.1	9.57	A	A	A
478	20.1	1.1	1.0	8.14	A	A	A
479	20.78	1.8	4.4	10.55	A	A	A
482	17.5	0.8	-12.1	7.57	A	A	A
483	17.5	1	-12.1	8.31	A	A	A
484	19.7	0.9	-1.0	7.57	A	A	A
487	20.1	0.8	1.0	7.23	A	A	A
491	15.531	2.214	-22.0	15.48	N	A	N
492	18.05	0.9	-9.3	7.82	A	A	A
495	13.39	0.95	-32.7	9.31	N	N	N
496	17.75	0.39	-10.8	6.42	A	A	A
498	15.97	1.97	-19.8	13.73	A	A	A
499	13.7	1.4	-31.2	11.87	N	N	N
500	17.47	1.342	-12.2	9.77	A	A	A
501	16	1	-19.6	8.68	A	A	A
507	13.311	0.128	-33.1	6.11	N	N	N
508	20.47	0.46	2.9	6.44	A	A	A
509	19.73	0.3	-0.8	6.22	A	A	A
514	20.5	1	3.0	7.76	A	A	A
516	20.4	1.4	2.5	9.14	A	A	A
522	18	0.5	-9.6	6.64	A	A	A
523	15.8	0.7	-20.6	7.48	N	N	N
525	18.9	1.3	-5.0	9.15	A	A	A
527	18.6	1.3	-6.5	9.23	A	A	A
528	19.3	1.2	-3.0	8.66	A	A	A
529	11.98	0.77	-39.8	8.81	N	N	N
530	17.175	0.86	-13.7	7.84	A	A	A
532	19.81545	0.962996	-0.4	7.74	A	A	A
533	12.5	0.7	-37.2	8.23	N	N	N
535	17.7	1.8	-11.1	11.82	A	A	A

Table 5. Evaluation results for Na-22 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
536	22.2	1.6	11.6	9.40	A	A	A
537	21.49	1.14	8.0	8.03	A	A	A
539	19.42	0.86	-2.4	7.48	A	A	A
544	20.71	0.62	4.1	6.73	A	A	A
553	19.4	1.1	-2.5	8.28	A	A	A
555	21.7	1.5	9.1	9.17	A	A	A

Co-60 determination of activity concentration in Sample 1

Table 6. Target values

Parameter	Value
Activity concentration [Bq/kg]	35.6
Uncertainty [Bq/kg]	1.5
Maximum Acceptable Relative Bias [%]	20

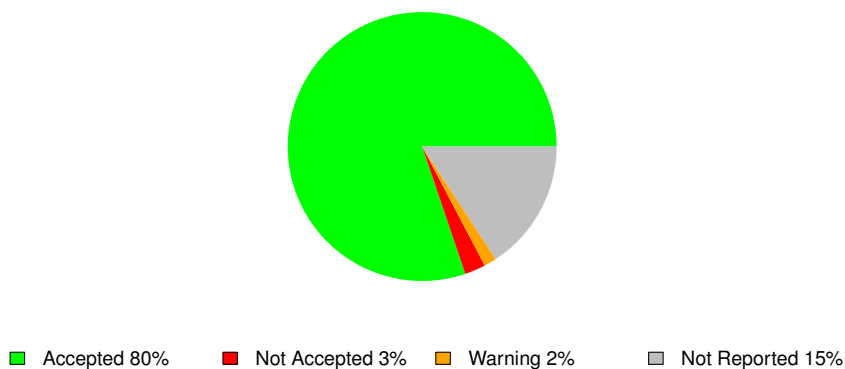


Figure 6. Percentage of Accepted vs. Warnings vs. Not Accepted vs. Not Reported results

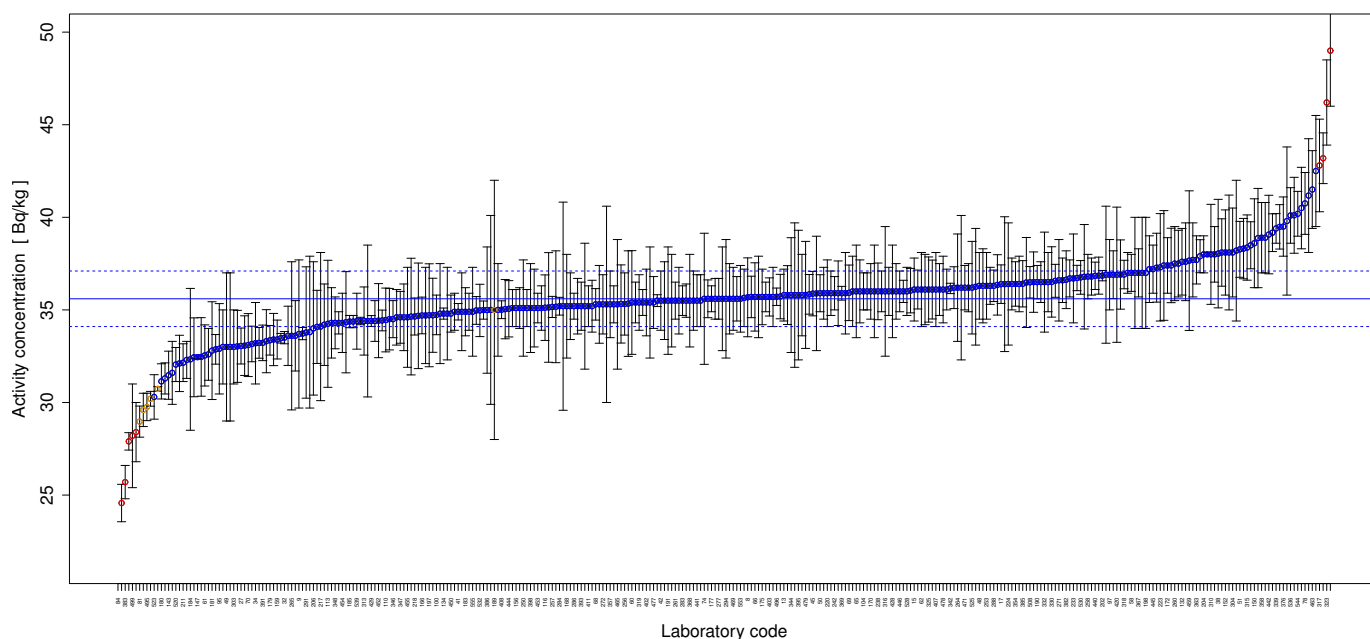


Figure 7. Reported results and evaluation parameters for Co-60. Blue points represent accepted scores, whereas yellow and red represent warning and not accepted scores, respectively.

Table 7. Evaluation results for Co-60 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
2	34.8	2.7	-2.2	8.83	A	A	A
8	35.68	2.13	0.2	7.31	A	A	A
9	33.7	4	-5.3	12.60	A	A	A

Table 7. Evaluation results for Co-60 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
11	36.5	1.63	2.5	6.14	A	A	A
12	34.68	2.85	-2.6	9.24	A	A	A
13	35.8	1.4	0.6	5.75	A	A	A
15	36.1	1.7	1.4	6.32	A	A	A
17	36.39	1.04	2.2	5.09	A	A	A
19	36	1.9	1.1	6.75	A	A	A
20	35.5	0.32	-0.3	4.31	A	A	A
21	33	2	-7.3	7.38	A	A	A
24	33.4	1.41	-6.2	5.96	A	A	A
25	34.9	1	-2.0	5.10	A	A	A
27	33.05	0.97	-7.2	5.13	A	A	A
28	35.89	3.089	0.8	9.58	A	A	A
31	35.7	1.12	0.3	5.25	A	A	A
32	33.5	0.33	-5.9	4.33	A	A	A
34	33.2	2.2	-6.7	7.85	A	A	A
35	34.333976	2.732651	-3.6	9.01	A	A	A
37	37	1.1	3.9	5.16	A	A	A
38	38.04	2.93	6.8	8.78	A	A	A
40	35.8	1.59	0.6	6.12	A	A	A
41	34.9	0.444	-2.0	4.40	A	A	A
42	35.5	1.6	-0.3	6.17	A	A	A
45	35.88	1.2	0.8	5.38	A	A	A
48	36.3	1.8	2.0	6.51	A	A	A
49	33	4	-7.3	12.83	A	A	A
50	35.9	1	0.8	5.05	A	A	A
51	38.27	1.51	7.5	5.77	A	A	A
52	36.1	1.05	1.4	5.12	A	A	A
53	35.72	1.2	0.3	5.39	A	A	A
55	33.72	0.33	-5.3	4.33	A	A	A
57	36.9	3.7	3.6	10.88	A	A	A
58	37	1	3.9	5.01	A	A	A
60	35.4	2.8	-0.6	8.96	A	A	A
61	32.54	1.65	-8.6	6.59	A	A	A
62	36.1	2	1.4	6.96	A	A	A
63	36.91	1.87	3.7	6.59	A	A	A
65	36	2.5	1.1	8.12	A	A	A
66	35.7	1.844	0.3	6.67	A	A	A
67	33.8	4.1	-5.1	12.84	A	A	A
68	35.3	0.85	-0.8	4.85	A	A	A
69	35.922155	1.5	0.9	5.93	A	A	A
70	33.1	1.7	-7.0	6.64	A	A	A
71	37.28	1.86	4.7	6.53	A	A	A
72	38.1	1.82	7.0	6.37	A	A	A
73	35.1	1	-1.4	5.09	A	A	A
74	35.6	3.54	0.0	10.80	A	A	A
75	35.32	2.11	-0.8	7.31	A	A	A
78	40.75	1.67	14.5	5.88	A	A	A
79	30.2	0.4	-15.2	4.42	A	N	W
80	36.723	0.6848	3.1	4.61	A	A	A
81	28.967	0.84	-18.6	5.11	A	N	W
82	34.99	0.49	-1.7	4.44	A	A	A
83	35	5.1	-1.7	15.17	A	A	A
84	14.97	1.07	-58.0	8.30	N	N	N
85	41.173	3.071	15.7	8.57	A	A	A
90	36	1.7	1.1	6.33	A	A	A
94	39.17	1.02	10.0	4.95	A	A	A
95	32.9	2.44	-7.6	8.53	A	A	A
97	36.9	1.9	3.6	6.65	A	A	A
100	34.73	1.07	-2.4	5.22	A	A	A
102	27.9	0.47	-21.6	4.54	N	N	N

Table 7. Evaluation results for Co-60 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
104	36	1	1.1	5.05	A	A	A
105	36	1	1.1	5.05	A	A	A
107	35.3	2.1	-0.8	7.29	A	A	A
109	34.4	0.2	-3.4	4.25	A	A	A
110	34.455758	1.722635	-3.2	6.54	A	A	A
111	35.34	2.85	-0.7	9.10	A	A	A
113	34.25	3.43	-3.8	10.86	A	A	A
114	35.7	2.2	0.3	7.47	A	A	A
116	35.12	1.77	-1.4	6.57	A	A	A
119	36.25	3.15	1.8	9.66	A	A	A
121	34.3	1.9	-3.6	6.96	A	A	A
124	37.7	2	5.9	6.77	A	A	A
127	37.399723	2.961246	5.1	8.97	A	A	A
128	32.46	2.12	-8.8	7.77	A	A	A
130	36.57	0.89	2.7	4.87	A	A	A
132	37.6	1.8	5.6	6.38	A	A	A
133	36.7	1	3.1	5.02	A	A	A
134	34.8	0.3	-2.2	4.30	A	A	A
139	35.6	1.02	0.0	5.10	A	A	A
140	35.5	2.1	-0.3	7.26	A	A	A
143	31.472226	1.299474	-11.6	5.90	A	A	A
145	35.2	5.62	-1.1	16.51	A	A	A
147	32.4487	0.07153	-8.8	4.22	A	A	A
150	38.6	2.4	8.4	7.51	A	A	A
151	36.39	3.64	2.2	10.85	A	A	A
152	38.1	2.3	7.0	7.36	A	A	A
154	36.3	2	2.0	6.94	A	A	A
155	33.6	1.6	-5.6	6.36	A	A	A
156	35.1	1	-1.4	5.09	A	A	A
158	33	4	-7.3	12.83	A	A	A
159	33.4	1.05	-6.2	5.26	A	A	A
161	35.9	1.4	0.8	5.74	A	A	A
165	36.85	1	3.5	5.01	A	A	A
166	34.7	0.99	-2.5	5.09	A	A	A
168	35.2	2.8	-1.1	9.00	A	A	A
170	36	1.5	1.1	5.93	A	A	A
172	37.4	1.5	5.1	5.82	A	A	A
175	35.7	1.5	0.3	5.95	A	A	A
177	35.6	0.7	0.0	4.65	A	A	A
178	34.9	2.1	-2.0	7.35	A	A	A
179	33.36	0.8	-6.3	4.85	A	A	A
180	31.14	0.95	-12.5	5.20	A	A	A
181	32.8	2.64	-7.9	9.08	A	A	A
183	34.9	1.3	-2.0	5.62	A	A	A
184	32.33	3.83	-9.2	12.57	A	A	A
185	34.37	0.33	-3.5	4.32	A	A	A
187	36	2.5	1.1	8.12	A	A	A
189	35	7	-1.7	20.44	A	N	W
190	36.5	0.9	2.5	4.88	A	A	A
191	35.5	2.9	-0.3	9.19	A	A	A
194	32.11	1.52	-9.8	6.34	A	A	A
197	34.71	2.78	-2.5	9.05	A	A	A
198	37	3	3.9	9.14	A	A	A
200	35.4	1.1	-0.6	5.24	A	A	A
202	36.85	0.28	3.5	4.28	A	A	A
203	34.7	2.6	-2.5	8.60	A	A	A
204	38	1	6.7	4.97	A	A	A
205	37.4	2.01	5.1	6.83	A	A	A
206	34	3.6	-4.5	11.40	A	A	A
207	34.2	2.2	-3.9	7.69	A	A	A

Table 7. Evaluation results for Co-60 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
208	36.2	1.13	1.7	5.24	A	A	A
209	35	2.5	-1.7	8.29	A	A	A
211	32.15	1.02	-9.7	5.27	A	A	A
213	34.5	1.66	-3.1	6.40	A	A	A
214	38	0.1	6.7	4.22	A	A	A
217	34.1	4	-4.2	12.46	A	A	A
218	34.64352	0.99937	-2.7	5.11	A	A	A
220	35.9	1.8	0.8	6.55	A	A	A
223	37.3	2.9	4.8	8.84	A	A	A
224	36.4	3.3	2.2	10.00	A	A	A
226	33.16	0.96	-6.8	5.11	A	A	A
227	35.1	1.1	-1.4	5.25	A	A	A
228	29.6	0.9	-16.9	5.20	A	N	W
229	34.083	1.9758	-4.3	7.17	A	A	A
230	35.7	0.8	0.3	4.77	A	A	A
232	35.9	1.2	0.8	5.38	A	A	A
233	36.7	2.4	3.1	7.78	A	A	A
235	35.5	2.5	-0.3	8.21	A	A	A
238	36	1.53	1.1	5.98	A	A	A
239	35.6	1.1	0.0	5.23	A	A	A
240	36.48	2.43	2.5	7.88	A	A	A
241	34.6	1.5	-2.8	6.05	A	A	A
242	35.9	0.9	0.8	4.90	A	A	A
247	33.03	1.944	-7.2	7.24	A	A	A
249	35.133278	2.960334	-1.3	9.42	A	A	A
250	35.1	2.6	-1.4	8.52	A	A	A
252	24.57	1.01	-31.0	5.89	N	N	N
253	36.3	1.8	2.0	6.51	A	A	A
254	36.79	2.82	3.3	8.75	A	A	A
256	35.32	1.68	-0.8	6.35	A	A	A
257	35.16	0.57	-1.2	4.51	A	A	A
258	36.8	1.2	3.4	5.33	A	A	A
260	37.5	2	5.3	6.80	A	A	A
261	35.5	1	-0.3	5.07	A	A	A
262	33.22	0.83	-6.7	4.90	A	A	A
264	36.2	2.9	1.7	9.05	A	A	A
265	33.6	4	-5.6	12.63	A	A	A
267	35.17	3.02	-1.2	9.56	A	A	A
268	35.5	1.8	-0.3	6.59	A	A	A
270	36.5	1.1	2.5	5.18	A	A	A
271	36.6	2.2	2.8	7.34	A	A	A
272	35.3	1.6	-0.8	6.19	A	A	A
274	35.9	1.743518	0.8	6.43	A	A	A
276	36.1	1.9	1.4	6.74	A	A	A
277	35.6	1.1	0.0	5.23	A	A	A
278	39.8	4	11.8	10.90	A	A	A
279	36.6	1.2	2.8	5.34	A	A	A
280	43.19	1.37	21.3	5.27	N	N	N
281	34.43	0.56	-3.3	4.52	A	A	A
283	35.5	0.8	-0.3	4.78	A	A	A
284	35.199	0.4797	-1.1	4.43	A	A	A
285	35.2	1.8	-1.1	6.63	A	A	A
286	35.2	0.7	-1.1	4.66	A	A	A
287	36.3	1	2.0	5.03	A	A	A
288	36.3	0.85	2.0	4.82	A	A	A
290	36	1.1	1.1	5.20	A	A	A
291	33.78	3.547	-5.1	11.31	A	A	A
292	34.9	1	-2.0	5.10	A	A	A
293	35.6	2.8	0.0	8.92	A	A	A
294	35.6	3.2	0.0	9.93	A	A	A

Table 7. Evaluation results for Co-60 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
295	36.04	1.2	1.2	5.37	A	A	A
296	36.9	1.29	3.6	5.47	A	A	A
297	37.5	1.8	5.3	6.39	A	A	A
299	37	3	3.9	9.14	A	A	A
300	31.3	0.84	-12.1	5.00	A	A	A
302	38.1	3.1	7.0	9.16	A	A	A
303	33	2	-7.3	7.38	A	A	A
304	38.1	2.4	7.0	7.58	A	A	A
306	35.3	5.3	-0.8	15.59	A	A	A
307	36.4	1.4	2.2	5.70	A	A	A
310	38	2.7	6.7	8.26	A	A	A
311	37.9	0.89	6.5	4.82	A	A	A
312	35.2	1.5	-1.1	5.99	A	A	A
313	34.4	1.84	-3.4	6.81	A	A	A
314	35.84	1.07	0.7	5.16	A	A	A
315	38.367	1.762	7.8	6.23	A	A	A
316	36	3.5	1.1	10.60	A	A	A
317	42.8	2.5	20.2	7.20	N	N	N
318	36.91	0.77	3.7	4.70	A	A	A
319	35.4	1.5	-0.6	5.98	A	A	A
322	35.4	0.7	-0.6	4.65	A	A	A
323	46.2	2.3	29.8	6.52	N	N	N
325	36.1	1.76	1.4	6.44	A	A	A
326	35.04	1.6	-1.6	6.21	A	A	A
328	34.8	2.5	-2.2	8.33	A	A	A
329	35.5	0.9	-0.3	4.92	A	A	A
330	36.51	1.9	2.6	6.70	A	A	A
331	32.3	1	-9.3	5.23	A	A	A
332	36.5	2.7	2.5	8.51	A	A	A
338	38.88	2.68	9.2	8.08	A	A	A
339	39.4	0.8	10.7	4.68	A	A	A
341	36.8	1	3.4	5.01	A	A	A
342	36.16	0.28	1.6	4.28	A	A	A
344	35.8	3.1	0.6	9.63	A	A	A
346	34.5	1	-3.1	5.11	A	A	A
347	34.6	1.4	-2.8	5.84	A	A	A
348	34.3	1.4	-3.6	5.87	A	A	A
350	34.3	0.6	-3.6	4.56	A	A	A
351	34.6	1.8	-2.8	6.69	A	A	A
354	36.4	1.2	2.2	5.35	A	A	A
355	33.47	0.26	-6.0	4.28	A	A	A
356	36	1.3	1.1	5.55	A	A	A
357	35.3	1.8	-0.8	6.61	A	A	A
358	38.9	1.9	9.3	6.45	A	A	A
363	37.7	1.3	5.9	5.44	A	A	A
364	38.2	3.8	7.3	10.80	A	A	A
367	37	1.3	3.9	5.49	A	A	A
368	35.5	2.5	-0.3	8.21	A	A	A
369	35.9	0.37	0.8	4.34	A	A	A
371	33.07	1.61	-7.1	6.44	A	A	A
374	37.2	1.8	4.5	6.42	A	A	A
376	39.5	1.6	11.0	5.84	A	A	A
379	34.4	4.1	-3.4	12.64	A	A	A
381	38.49	1.27	8.1	5.35	A	A	A
382	36.63	1.56	2.9	5.99	A	A	A
383	25.7	0.9	-27.8	5.48	N	N	N
384	35.8	3.9	0.6	11.68	A	A	A
385	36.41	1.25	2.3	5.44	A	A	A
386	34.99	3.41	-1.7	10.62	A	A	A
387	35.1	1	-1.4	5.09	A	A	A

Table 7. Evaluation results for Co-60 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
388	35.3	1	-0.8	5.08	A	A	A
391	33.22	0.96	-6.7	5.11	A	A	A
392	36.1	1.59	1.4	6.10	A	A	A
393	35.2	1.3	-1.1	5.60	A	A	A
395	35.8	3.5	0.6	10.65	A	A	A
396	36.35	1.63	2.1	6.15	A	A	A
398	35.1	2.4	-1.4	8.03	A	A	A
401	37.6	2.1	5.6	7.00	A	A	A
402	35.4	1.8	-0.6	6.60	A	A	A
403	35.7	1.03	0.3	5.11	A	A	A
404	35.6	1.9	0.0	6.80	A	A	A
405	31.6	1.7	-11.2	6.83	A	A	A
407	36.1	2	1.4	6.96	A	A	A
408	35.01	0.48	-1.7	4.43	A	A	A
410	35.2	3.4	-1.1	10.54	A	A	A
411	35.2	1.1	-1.1	5.25	A	A	A
412	35.65	1.55	0.1	6.05	A	A	A
414	36.4	1.5	2.2	5.89	A	A	A
417	35.2	1.4	-1.1	5.79	A	A	A
419	42.5	3	19.4	8.22	A	A	A
420	36.9	3.65	3.6	10.75	A	A	A
421	36.2	3.9	1.7	11.57	A	A	A
425	36.1	1.4	1.4	5.73	A	A	A
426	34.71	2	-2.5	7.14	A	A	A
428	36	2.5	1.1	8.12	A	A	A
429	34.4	0.292	-3.4	4.30	A	A	A
433	34.97	0.75	-1.8	4.73	A	A	A
434	32.87	0.8	-7.7	4.87	A	A	A
435	35.4	3	-0.6	9.46	A	A	A
437	35.1	2.1	-1.4	7.32	A	A	A
439	35.5	1.6	-0.3	6.17	A	A	A
440	36.84	0.74	3.5	4.67	A	A	A
441	35.5	1.4	-0.3	5.77	A	A	A
442	39.069747	2.121107	9.8	6.87	A	A	A
443	36	1.5	1.1	5.93	A	A	A
444	35.06	1.52	-1.5	6.05	A	A	A
445	37.2	1.3	4.5	5.47	A	A	A
446	36	1.1	1.1	5.20	A	A	A
448	34.37	0.33	-3.5	4.32	A	A	A
450	34.8	1	-2.2	5.10	A	A	A
452	34.42	2	-3.3	7.18	A	A	A
453	35.1	0.8	-1.4	4.79	A	A	A
454	34.3	1.6	-3.6	6.29	A	A	A
455	34.6	2.7	-2.8	8.87	A	A	A
459	37.66	3.77	5.8	10.86	A	A	A
460	37	3	3.9	9.14	A	A	A
462	49	3	37.6	7.43	N	N	N
463	41.5	2.1	16.6	6.58	A	A	A
464	38.31	1.63	7.6	5.99	A	A	A
465	35.3	3.5	-0.8	10.77	A	A	A
466	39.485	1.19915	10.9	5.19	A	A	A
469	35.6	1.7	0.0	6.37	A	A	A
471	36.2	1.2	1.7	5.36	A	A	A
472	40.5	2.2	13.8	6.87	A	A	A
475	38.9	1.9	9.3	6.45	A	A	A
477	35.4	1.4	-0.6	5.78	A	A	A
478	36.1	1.8	1.4	6.53	A	A	A
479	35.81	2.89	0.6	9.10	A	A	A
482	35.1	1.2	-1.4	5.43	A	A	A
483	35.5	1.4	-0.3	5.77	A	A	A

Table 7. Evaluation results for Co-60 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
484	36.1	1.1	1.4	5.20	A	A	A
487	36.2	1.3	1.7	5.54	A	A	A
490	36.5	1.6	2.5	6.08	A	A	A
495	29.76	0.74	-16.4	4.89	A	N	W
496	35.71	0.47	0.3	4.41	A	A	A
498	32.44	2.13	-8.9	7.80	A	A	A
499	28.2	2.8	-20.8	10.79	N	A	N
500	33.31	1.703	-6.4	6.63	A	A	A
501	35.6	1.2	0.0	5.40	A	A	A
506	32.6	1.4	-8.4	6.02	A	A	A
507	30.733	0.126	-13.7	4.23	A	N	W
508	36.49	0.85	2.5	4.81	A	A	A
509	36	0.6	1.1	4.53	A	A	A
514	38	1.5	6.7	5.77	A	A	A
516	35.8	2.2	0.6	7.45	A	A	A
520	32.05	0.92	-10.0	5.10	A	A	A
522	34.4	1.1	-3.4	5.29	A	A	A
523	30.3	1.2	-14.9	5.78	A	A	A
525	36.2	2.5	1.7	8.09	A	A	A
527	35.9	2.2	0.8	7.44	A	A	A
528	36	1.3	1.1	5.55	A	A	A
529	28.4	1.6	-20.2	7.04	N	N	N
530	36.755	0.91	3.2	4.89	A	A	A
532	34.970975	1.412865	-1.8	5.84	A	A	A
533	35.7	1.6	0.3	6.15	A	A	A
535	33.6	1.9	-5.6	7.05	A	A	A
536	40.1	1.5	12.6	5.63	A	A	A
537	40.11	2.05	12.7	6.62	A	A	A
539	34.39	1.51	-3.4	6.09	A	A	A
540	34.64	3.15	-2.7	10.02	A	A	A
544	40.19	1.21	12.9	5.18	A	A	A
553	35.6	1.8	0.0	6.58	A	A	A
555	34.9	2.4	-2.0	8.06	A	A	A

Sr-90 determination of activity concentration in Sample 1

Table 8. Target values

Parameter	Value
Activity concentration [Bq/kg]	39.5
Uncertainty [Bq/kg]	2.0
Maximum Acceptable Relative Bias [%]	30

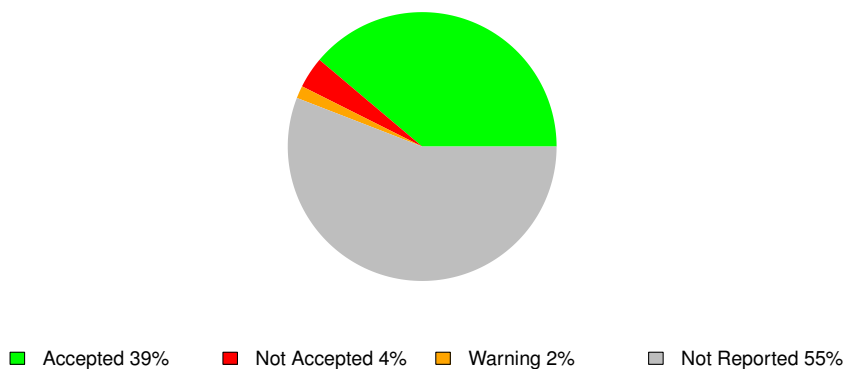


Figure 8. Percentage of Accepted vs. Warnings vs. Not Accepted vs. Not Reported results

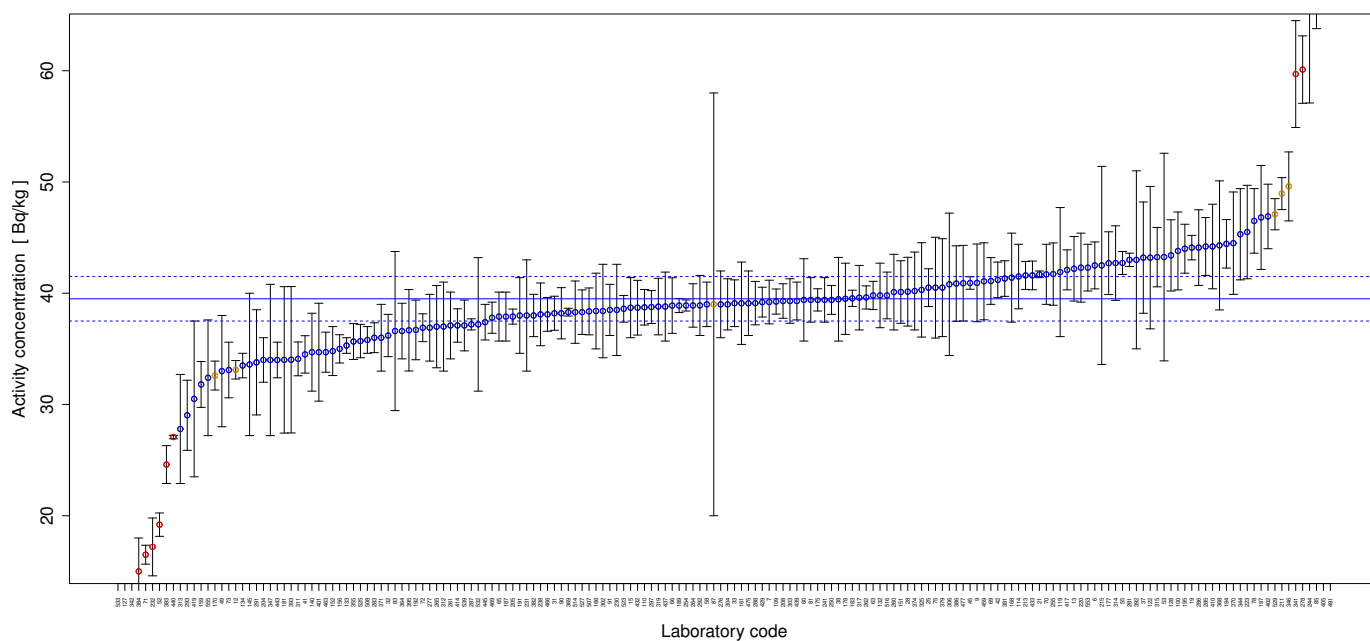


Figure 9. Reported results and evaluation parameters for Sr-90. Blue points represent accepted scores, whereas yellow and red represent warning and not accepted scores, respectively.

Table 9. Evaluation results for Sr-90 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
6	42.5	2.11	7.6	7.09	A	A	A
7	39.21	1.96	-0.7	7.12	A	A	A
9	40.93	3.49	3.6	9.92	A	A	A

Table 9. Evaluation results for Sr-90 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
12	33.12	0.83	-16.1	5.65	A	N	W
13	42.2	2.9	6.8	8.54	A	A	A
15	38.7	2.7	-2.0	8.62	A	A	A
19	44.1	1.1	11.7	5.64	A	A	A
21	41.7	0.3	5.6	5.11	A	A	A
25	40.5	1.7	2.5	6.58	A	A	A
28	40.14	3.09	1.6	9.21	A	A	A
31	38.2	1.53	-3.3	6.46	A	A	A
32	36.2	1.9	-8.3	7.29	A	A	A
33	39.1	2.1	-1.0	7.38	A	A	A
37	43.2	5	9.4	12.63	A	A	A
38	39.46	3.76	-0.1	10.79	A	A	A
41	34.5	1.68	-12.7	7.02	A	A	A
42	41.2	1.6	4.3	6.38	A	A	A
45	40.92	0.56	3.6	5.24	A	A	A
49	33	5	-16.5	15.98	A	A	A
52	19.2	1.05	-51.4	7.45	N	N	N
53	43.25	9.33	9.5	22.16	A	A	A
55	42.72	1.03	8.2	5.61	A	A	A
58	39	2	-1.3	7.21	A	A	A
60	39.4	3.7	-0.2	10.67	A	A	A
63	39.8	1.27	0.8	5.98	A	A	A
65	37.9	2.2	-4.0	7.70	A	A	A
66	38.89	2.496	-1.5	8.17	A	A	A
69	41.1	2.1	4.0	7.19	A	A	A
70	41.7	2.7	5.6	8.22	A	A	A
71	16.5	0.85	-58.2	7.22	N	N	N
72	36.9	1.25	-6.6	6.09	A	A	A
73	33.1	2.5	-16.2	9.09	A	A	A
75	40.5	4.53	2.5	12.28	A	A	A
78	46.5	2.9	17.7	8.03	A	A	A
81	39.4	2	-0.2	7.17	A	A	A
83	36.6	7.15	-7.3	20.18	A	A	A
85	74.737	10.957	89.2	15.51	N	N	N
90	38.2	2.3	-3.3	7.87	A	A	A
91	38.5	2.3	-2.5	7.83	A	A	A
100	43.8	3.5	10.9	9.46	A	A	A
109	39.25	1.13	-0.6	5.82	A	A	A
110	38.736326	1.597282	-1.9	6.53	A	A	A
114	41.5	2.9	5.1	8.63	A	A	A
119	41.9	5.8	6.1	14.74	A	A	A
122	43.2	6.4	9.4	15.66	A	A	A
127	8.7	0.7	-78.0	9.51	N	N	N
128	43.4	3.2	9.9	8.94	A	A	A
132	39.8	2.9	0.8	8.87	A	A	A
133	35.3	0.7	-10.6	5.44	A	A	A
134	33.5	1.1	-15.2	6.03	A	A	A
140	34.7	3.5	-12.2	11.29	A	A	A
145	33.6	6.4	-14.9	19.71	A	A	A
151	40.11	2.81	1.5	8.64	A	A	A
152	34.8	2.2	-11.9	8.10	A	A	A
156	35	1.27	-11.4	6.23	A	A	A
159	31.8	2.06	-19.5	8.22	A	A	A
161	39.1	3.7	-1.0	10.73	A	A	A
166	38.4	3.4	-2.8	10.20	A	A	A
168	41.4	4	4.8	10.91	A	A	A
170	32.6	1.3	-17.5	6.45	A	N	W
175	39.4	1	-0.2	5.66	A	A	A
177	42.7	2.82	8.1	8.32	A	A	A
178	39.5	3.2	0.0	9.55	A	A	A

Table 9. Evaluation results for Sr-90 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
181	34.01	6.58	-13.9	20.00	A	A	A
183	39.54	0.73	0.1	5.39	A	A	A
187	37.9	2.2	-4.0	7.70	A	A	A
189	38.89	0.63	-1.5	5.32	A	A	A
191	38	3.4	-3.8	10.28	A	A	A
192	36.7	2.68	-7.1	8.89	A	A	A
194	44.44	2.18	12.5	7.05	A	A	A
195	44	2.2	11.4	7.12	A	A	A
197	46.81	4.67	18.5	11.19	A	A	A
204	34	2	-13.9	7.76	A	A	A
205	37.9	0.677	-4.0	5.37	A	A	A
208	39.3	1.55	-0.5	6.42	A	A	A
211	48.953	1.438	23.9	5.85	A	N	W
213	41.6	1.26	5.3	5.90	A	A	A
215	42.5	8.9	7.6	21.54	A	A	A
220	42.3	3.1	7.1	8.91	A	A	A
223	45.5	4.2	15.2	10.53	A	A	A
230	38.5	4.1	-2.5	11.79	A	A	A
231	38	5	-3.8	14.10	A	A	A
232	17.2	2.6	-56.5	15.94	N	N	N
238	38.1	2.82	-3.5	8.97	A	A	A
241	39.4	2	-0.2	7.17	A	A	A
244	67.4	10.3	70.6	16.10	N	N	N
250	39.4	1.3	-0.2	6.04	A	A	A
254	38.9	0.5	-1.5	5.22	A	A	A
255	41.72	2.8	5.6	8.41	A	A	A
260	40.1	3.4	1.5	9.88	A	A	A
261	37.1	3	-6.1	9.54	A	A	A
262	39.62	1.04	0.3	5.70	A	A	A
264	38.9	1.95	-1.5	7.12	A	A	A
265	37	3.7	-6.3	11.21	A	A	A
276	39	3	-1.3	9.21	A	A	A
277	36.9	3	-6.6	9.58	A	A	A
278	60.1	3.03	52.1	7.15	N	N	N
281	43	0.6	8.9	5.25	A	A	A
283	36	1.34	-8.9	6.28	A	A	A
285	44.2	2.6	11.9	7.76	A	A	A
286	44.1	3.4	11.7	9.22	A	A	A
287	37.2	0.5	-5.8	5.24	A	A	A
288	39.11	1.95	-1.0	7.11	A	A	A
291	33.79	4.73	-14.5	14.89	A	A	A
292	38.9	2.7	-1.5	8.59	A	A	A
293	29.03	3.15	-26.5	11.97	A	A	A
297	38.76	1.48	-1.9	6.34	A	A	A
302	38.4	4.2	-2.8	12.05	A	A	A
303	39.3	2	-0.5	7.18	A	A	A
304	39	2.3	-1.3	7.77	A	A	A
306	40.8	6.4	3.3	16.48	A	A	A
311	34.1	1.52	-13.7	6.75	A	A	A
312	37	4	-6.3	11.94	A	A	A
313	27.8	4.901	-29.6	18.34	A	A	A
314	42.71	3.35	8.1	9.34	A	A	A
315	43.243	2.668	9.5	7.98	A	A	A
317	39.6	2.9	0.2	8.90	A	A	A
319	38.8	2.54	-1.8	8.28	A	A	A
325	40.3	4.24	2.0	11.68	A	A	A
341	59.7	4.8	51.1	9.50	N	N	N
342	13.4	0.27	-66.1	5.45	N	N	N
344	45.3	4.1	14.7	10.37	A	A	A
346	49.6	3.1	25.6	8.04	A	N	W

Table 9. Evaluation results for Sr-90 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
347	34	6.8	-13.9	20.63	A	A	A
355	35.66	1.61	-9.7	6.78	A	A	A
364	36.6	2.5	-7.3	8.50	A	A	A
368	44.3	5.8	12.2	14.04	A	A	A
369	38.3	0.35	-3.0	5.15	A	A	A
370	44.5	4.6	12.7	11.51	A	A	A
371	36	3	-8.9	9.75	A	A	A
374	40.2	3.5	1.8	10.07	A	A	A
379	40.5	4.4	2.5	11.99	A	A	A
381	41.32	1.6	4.6	6.37	A	A	A
382	38	1.9	-3.8	7.12	A	A	A
383	24.6	1.7	-37.7	8.57	N	N	N
384	15	3	-62.0	20.63	N	N	N
386	40.87	3.39	3.5	9.72	A	A	A
392	43	8	8.9	19.28	A	A	A
393	34.02	6.58	-13.9	19.99	A	A	A
395	36.67	3.66	-7.2	11.19	A	A	A
401	34.7	4.4	-12.2	13.65	A	A	A
402	46.9	2.9	18.7	7.99	A	A	A
405	75.8	6.1	91.9	9.51	N	N	N
410	44.2	3.8	11.9	9.98	A	A	A
414	37.1	1.5	-6.1	6.48	A	A	A
417	42.1	1.8	6.6	6.63	A	A	A
419	30.5	7	-22.8	23.50	A	A	A
429	39.2	1.34	-0.8	6.11	A	A	A
432	38.7	2.46	-2.0	8.13	A	A	A
433	41.6	1.29	5.3	5.94	A	A	A
437	38.8	3.1	-1.8	9.46	A	A	A
439	39.3	1.7	-0.5	6.66	A	A	A
440	27.073	0.153	-31.5	5.09	N	N	N
443	34	1.6	-13.9	6.91	A	A	A
445	37.4	1.6	-5.3	6.63	A	A	A
459	41.07	3.46	4.0	9.83	A	A	A
463	34.7	1.8	-12.2	7.25	A	A	A
466	38.1	1.52	-3.5	6.45	A	A	A
469	37.8	1.4	-4.3	6.27	A	A	A
475	39.1	2.9	-1.0	8.98	A	A	A
477	40.9	3.4	3.5	9.73	A	A	A
491	2063.089	16.755	5123.0	5.13	N	N	N
507	38.367	2.107	-2.9	7.47	A	A	A
508	35.8	1.2	-9.4	6.07	A	A	A
514	38.3	2.8	-3.0	8.89	A	A	A
516	39.8	2.1	0.8	7.31	A	A	A
523	38.6	1.2	-2.3	5.94	A	A	A
525	35.7	1.5	-9.6	6.58	A	A	A
527	38.3	2	-3.0	7.27	A	A	A
529	47.1	1.4	19.2	5.87	A	N	W
532	37.2	6	-5.8	16.91	A	A	A
533	3.71	0.52	-90.6	14.90	N	N	N
539	37.1	2.28	-6.1	7.96	A	A	A
553	42.3	2.1	7.1	7.09	A	A	A
555	32.4	5.2	-18.0	16.83	A	A	A

Ba-133 determination of activity concentration in Sample 1

Table 10. Target values

Parameter	Value
Activity concentration [Bq/kg]	34.3
Uncertainty [Bq/kg]	2.1
Maximum Acceptable Relative Bias [%]	20

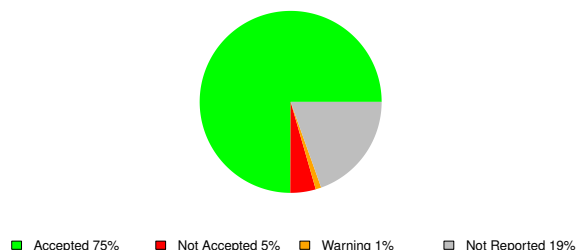


Figure 10. Percentage of Accepted vs. Warnings vs. Not Accepted vs. Not Reported results

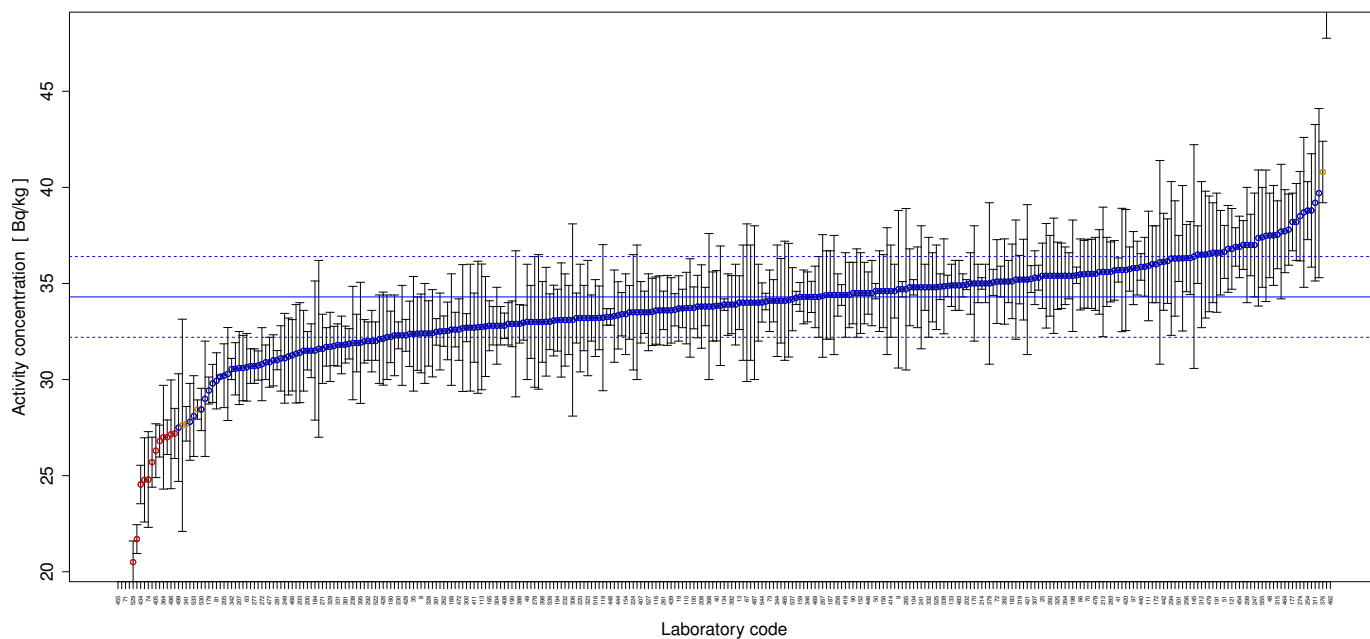


Figure 11. Reported results and evaluation parameters for Ba-133. Blue points represent accepted scores, whereas yellow and red represent warning and not accepted scores, respectively.

Table 11. Evaluation results for Ba-133 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
2	31.5	2.1	-8.2	9.05	A	A	A
8	32.4	2.05	-5.5	8.80	A	A	A
9	34.7	4.1	1.2	13.31	A	A	A
11	36.8	2.26	7.3	8.67	A	A	A
12	35.68	1.55	4.0	7.51	A	A	A
13	34	1.4	-0.9	7.38	A	A	A
15	34.8	2	1.5	8.40	A	A	A
17	35.48	1.76	3.4	7.88	A	A	A

Table 11. Evaluation results for Ba-133 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
19	33.7	1.7	-1.8	7.93	A	A	A
21	29	3	-15.4	12.02	A	A	A
24	33.1	2.97	-3.5	10.86	A	A	A
25	35.4	1.7	3.2	7.78	A	A	A
27	28.44	0.5	-17.1	6.37	A	N	W
28	34.13	2.957	-0.5	10.61	A	A	A
31	29.8	0.99	-13.1	6.97	A	A	A
32	26.8	0.83	-21.9	6.86	N	N	N
34	27.8	2	-19.0	9.45	A	A	A
35	32.380939	2.981851	-5.6	11.06	A	A	A
37	36.9	1	7.6	6.70	A	A	A
38	37.48	3.42	9.3	10.99	A	A	A
40	33.84	1.83	-1.3	8.17	A	A	A
41	35.7	0.628	4.1	6.37	A	A	A
42	33.2	1.3	-3.2	7.27	A	A	A
45	31.75	1.02	-7.4	6.91	A	A	A
48	37.5	2.2	9.3	8.48	A	A	A
49	33	3	-3.8	10.96	A	A	A
50	34.6	0.4	0.9	6.23	A	A	A
51	36.64	1.38	6.8	7.19	A	A	A
52	37.8	1.85	10.2	7.84	A	A	A
53	34	3	-0.9	10.74	A	A	A
55	31.86	0.79	-7.1	6.61	A	A	A
57	38.7	3.9	12.8	11.79	A	A	A
58	36	2	5.0	8.27	A	A	A
60	32.3	2.1	-5.8	8.93	A	A	A
61	49.64	1.88	44.7	7.20	N	N	N
62	33	1.9	-3.8	8.40	A	A	A
63	30.64	1.76	-10.7	8.40	A	A	A
65	34.4	2.3	0.3	9.07	A	A	A
66	35.47	1.8475	3.4	8.04	A	A	A
67	34	4.1	-0.9	13.52	A	A	A
68	32.9	1.1	-4.1	6.98	A	A	A
69	33.4957	1.4	-2.3	7.41	A	A	A
70	35.5	1.8	3.5	7.95	A	A	A
71	10.21	0.51	-70.2	7.90	N	N	N
72	35.1	2.18	2.3	8.72	A	A	A
73	34.1	1.6	-0.6	7.71	A	A	A
74	24.8	2.49	-27.7	11.76	N	A	N
75	38.8	2.95	13.1	9.76	A	A	A
78	39.7	4.4	15.7	12.66	A	A	A
79	30.7	0.9	-10.5	6.79	A	A	A
80	35.056	0.67896	2.2	6.42	A	A	A
81	29.933	1.46	-12.7	7.83	A	A	A
82	34.06	0.43	-0.7	6.25	A	A	A
83	31.6	4.6	-7.9	15.79	A	A	A
84	24.78	2.19	-27.8	10.75	N	N	N
85	33.725	2.56	-1.7	9.75	A	A	A
90	34.5	1.6	0.6	7.68	A	A	A
94	37	1.27	7.9	7.02	A	A	A
97	35.8	1.9	4.4	8.10	A	A	A
100	33.73	1.09	-1.7	6.92	A	A	A
102	21.7	0.75	-36.7	7.03	N	N	N
104	34.8	0.4	1.5	6.23	A	A	A
105	34.7	0.4	1.2	6.23	A	A	A
107	34.6	2.1	0.9	8.62	A	A	A
110	33.718864	1.860927	-1.7	8.24	A	A	A
111	35.91	2.85	4.7	10.02	A	A	A
113	32.74	3.27	-4.6	11.71	A	A	A
114	34.5	2.3	0.6	9.05	A	A	A

Table 11. Evaluation results for Ba-133 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
116	33.59	1.75	-2.1	8.04	A	A	A
119	33.22	3.8	-3.1	12.97	A	A	A
121	36.8	2.1	7.3	8.37	A	A	A
124	35	1.6	2.0	7.64	A	A	A
127	37.364749	3.53964	8.9	11.28	A	A	A
128	32.53	1.5	-5.2	7.66	A	A	A
130	33.4	1.13	-2.6	7.00	A	A	A
132	36.6	2.6	6.7	9.38	A	A	A
133	34.9	1.1	1.8	6.89	A	A	A
134	33.9	0.3	-1.2	6.19	A	A	A
139	35.7	3.21	4.1	10.88	A	A	A
140	34.8	2.1	1.5	8.60	A	A	A
143	27.196302	1.303109	-20.7	7.77	N	N	N
145	36.4	5.82	6.1	17.12	A	A	A
147	30.1467	0.0925	-12.1	6.13	A	A	A
150	33.6	1.8	-2.0	8.14	A	A	A
151	32.41	2.27	-5.5	9.30	A	A	A
152	34.5	2.1	0.6	8.63	A	A	A
154	33.4	2.1	-2.6	8.78	A	A	A
155	32.4	2.6	-5.5	10.09	A	A	A
156	34.6	1.9	0.9	8.22	A	A	A
158	34	3	-0.9	10.74	A	A	A
159	34.3	0.75	0.0	6.50	A	A	A
161	34.3	1.4	0.0	7.36	A	A	A
165	32.8	1.3	-4.4	7.29	A	A	A
166	35.87	1.53	4.6	7.46	A	A	A
168	32.6	2.9	-5.0	10.80	A	A	A
170	35	3	2.0	10.53	A	A	A
172	36	2	5.0	8.27	A	A	A
175	36.5	1.5	6.4	7.37	A	A	A
177	38.2	1.5	11.4	7.27	A	A	A
178	35.6	2.2	3.8	8.70	A	A	A
179	29.43	0.7	-14.2	6.57	A	A	A
180	32.22	1.34	-6.1	7.40	A	A	A
181	33.84	3.11	-1.3	11.04	A	A	A
183	35.11	1.94	2.4	8.25	A	A	A
184	31.51	3.62	-8.1	13.02	A	A	A
185	33.26	0.43	-3.0	6.26	A	A	A
187	34.4	2.3	0.3	9.07	A	A	A
189	27.62	5.52	-19.5	20.90	A	N	W
190	32.9	1.19	-4.1	7.11	A	A	A
191	36.6	3.1	6.7	10.45	A	A	A
194	33.09	1.61	-3.5	7.82	A	A	A
197	30.29	2.42	-11.7	10.07	A	A	A
198	35.4	2.9	3.2	10.23	A	A	A
200	31.5	1	-8.2	6.90	A	A	A
202	34.94	0.26	1.9	6.17	A	A	A
203	31.4	2.6	-8.4	10.30	A	A	A
204	35	1	2.0	6.76	A	A	A
205	30.2	1.66	-11.9	8.23	A	A	A
206	32.9	3.8	-4.1	13.07	A	A	A
207	30.6	1.9	-10.8	8.72	A	A	A
208	33.8	2.17	-1.5	8.87	A	A	A
211	35.75	1.15	4.2	6.92	A	A	A
213	35.6	3.37	3.8	11.27	A	A	A
214	35	0.3	2.0	6.18	A	A	A
220	33.2	2.8	-3.2	10.42	A	A	A
223	35.2	3.1	2.6	10.73	A	A	A
224	33.5	3	-2.3	10.85	A	A	A
226	30.56	1.36	-10.9	7.57	A	A	A

Table 11. Evaluation results for Ba-133 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
227	32.8	1	-4.4	6.84	A	A	A
228	33.9	1.6	-1.2	7.73	A	A	A
229	32.387	1.908	-5.6	8.50	A	A	A
230	32.3	0.7	-5.8	6.49	A	A	A
232	33.1	2.4	-3.5	9.49	A	A	A
233	32.2	2.2	-6.1	9.17	A	A	A
235	34.4	3.1	0.3	10.89	A	A	A
238	31.9	2.95	-7.0	11.09	A	A	A
239	31.7	1	-7.6	6.89	A	A	A
240	35.4	2.72	3.2	9.82	A	A	A
241	34.8	3.2	1.5	11.05	A	A	A
242	33.63	0.84	-2.0	6.61	A	A	A
247	37.002	2.7	7.9	9.53	A	A	A
249	31.107933	2.335043	-9.3	9.69	A	A	A
250	32.3	2.6	-5.8	10.11	A	A	A
252	17.52	0.85	-48.9	7.81	N	N	N
253	36.6	2.2	6.7	8.58	A	A	A
254	38.79	1.51	13.1	7.26	A	A	A
256	36.32	1.75	5.9	7.79	A	A	A
257	35.23	0.7	2.7	6.44	A	A	A
258	34.4	1.1	0.3	6.91	A	A	A
260	35.4	2.1	3.2	8.52	A	A	A
261	33.6	1	-2.0	6.81	A	A	A
262	32.52	0.79	-5.2	6.59	A	A	A
264	35.4	3	3.2	10.45	A	A	A
265	34.7	4.2	1.2	13.56	A	A	A
267	34.35	3.19	0.1	11.12	A	A	A
268	35.6	1.8	3.8	7.94	A	A	A
270	33.5	3.5	-2.3	12.11	A	A	A
271	31.6	1.8	-7.9	8.36	A	A	A
272	30.8	1.9	-10.2	8.69	A	A	A
274	38.5	2.32658	12.2	8.60	A	A	A
276	33.1	1.8	-3.5	8.19	A	A	A
277	30.7	0.9	-10.5	6.79	A	A	A
278	33	3.4	-3.8	11.98	A	A	A
279	34.8	1.2	1.5	7.03	A	A	A
281	31.01	0.5	-9.6	6.33	A	A	A
283	35.6	1.56	3.8	7.53	A	A	A
284	35.425	0.4268	3.3	6.24	A	A	A
285	33.2	1.7	-3.2	7.98	A	A	A
286	30.9	0.9	-9.9	6.78	A	A	A
287	34.1	1.1	-0.6	6.92	A	A	A
288	35	1	2.0	6.76	A	A	A
290	33	3.5	-3.8	12.25	A	A	A
291	32.72	3.436	-4.6	12.16	A	A	A
292	32	1	-6.7	6.87	A	A	A
293	32.1	2.3	-6.4	9.42	A	A	A
294	36.3	4	5.8	12.61	A	A	A
295	31.99	1.13	-6.7	7.07	A	A	A
297	31.9	1.5	-7.0	7.72	A	A	A
299	37	3	7.9	10.16	A	A	A
300	32.7	0.73	-4.7	6.52	A	A	A
303	32.5	2	-5.2	8.68	A	A	A
304	32.8	2	-4.4	8.64	A	A	A
306	33.1	5	-3.5	16.30	A	A	A
307	35.3	1.4	2.9	7.29	A	A	A
310	33.3	2.4	-2.9	9.46	A	A	A
311	39.2	4.07	14.3	12.05	A	A	A
312	36.5	3.8	6.4	12.08	A	A	A
313	33.6	1.82	-2.0	8.17	A	A	A

Table 11. Evaluation results for Ba-133 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
315	37.533	1.767	9.4	7.72	A	A	A
316	36.1	5.3	5.2	15.91	A	A	A
317	30.6	1.7	-10.8	8.27	A	A	A
318	34.83	0.67	1.6	6.42	A	A	A
319	35.2	1.26	2.6	7.09	A	A	A
322	35.1	0.8	2.3	6.53	A	A	A
323	33.2	3	-3.2	10.91	A	A	A
325	35.4	1.75	3.2	7.87	A	A	A
326	36.32	1.9	5.9	8.05	A	A	A
328	32.4	1.7	-5.5	8.06	A	A	A
329	31.7	1.8	-7.6	8.35	A	A	A
330	33.07	1.84	-3.6	8.27	A	A	A
331	31.8	1.1	-7.3	7.03	A	A	A
332	34.8	2.6	1.5	9.66	A	A	A
338	34.85	2.47	1.6	9.37	A	A	A
339	35.8	1.4	4.4	7.26	A	A	A
341	27.7	0.9	-19.2	6.93	A	N	W
342	30.55	0.55	-10.9	6.38	A	A	A
344	34.1	2.9	-0.6	10.48	A	A	A
346	34.3	1.3	0.0	7.20	A	A	A
347	32.38	1.7	-5.6	8.07	A	A	A
348	35.4	1.7	3.2	7.78	A	A	A
350	33.8	1	-1.5	6.80	A	A	A
351	31.1	1.7	-9.3	8.21	A	A	A
354	35.4	1.5	3.2	7.45	A	A	A
355	34.25	0.34	-0.1	6.20	A	A	A
356	34.8	1.8	1.5	8.01	A	A	A
357	32	1.6	-6.7	7.90	A	A	A
358	25.7	1.3	-25.1	7.94	N	N	N
363	32.6	0.9	-5.0	6.72	A	A	A
364	27	2.7	-21.3	11.73	N	A	N
367	27	0.9	-21.3	6.97	N	N	N
368	33.8	3.8	-1.5	12.80	A	A	A
369	34.4	0.54	0.3	6.32	A	A	A
371	33.21	1.66	-3.2	7.90	A	A	A
374	34.5	1.6	0.6	7.68	A	A	A
376	40.8	1.6	19.0	7.27	A	N	W
379	35	4.2	2.0	13.47	A	A	A
381	31.82	0.96	-7.2	6.83	A	A	A
382	35.1	2.22	2.3	8.80	A	A	A
384	32.7	3.3	-4.7	11.80	A	A	A
386	32.68	3.3	-4.7	11.81	A	A	A
387	32.8	1	-4.4	6.84	A	A	A
388	32.9	1	-4.1	6.84	A	A	A
391	32.48	0.69	-5.3	6.48	A	A	A
392	33.9	1.51	-1.2	7.57	A	A	A
393	33.52	1.75	-2.3	8.05	A	A	A
395	31.91	3.15	-7.0	11.62	A	A	A
396	31.34	2.56	-8.6	10.21	A	A	A
398	33	2.1	-3.8	8.83	A	A	A
401	35.2	2.1	2.6	8.55	A	A	A
402	36.5	3.3	6.4	10.92	A	A	A
403	36.16	2.2	5.4	8.63	A	A	A
404	33.8	1.8	-1.5	8.11	A	A	A
405	26.3	1.4	-23.3	8.11	N	N	N
407	33.5	1.6	-2.3	7.77	A	A	A
408	32.8	0.66	-4.4	6.44	A	A	A
410	34.6	3.3	0.9	11.33	A	A	A
411	32.7	1.8	-4.7	8.23	A	A	A
412	31	1.33	-9.6	7.48	A	A	A

Table 11. Evaluation results for Ba-133 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
414	34.6	2.4	0.9	9.25	A	A	A
417	34.6	1.4	0.9	7.34	A	A	A
419	34.4	2.2	0.3	8.85	A	A	A
420	35.7	3.15	4.1	10.74	A	A	A
421	35.2	3.9	2.6	12.66	A	A	A
423	38.2	2	11.4	8.06	A	A	A
425	33.2	1.2	-3.2	7.11	A	A	A
426	32.13	2.42	-6.3	9.71	A	A	A
428	33.9	2.1	-1.2	8.71	A	A	A
429	32.3	0.83	-5.8	6.64	A	A	A
433	34.87	0.56	1.7	6.33	A	A	A
434	24.54	1	-28.4	7.35	N	N	N
435	37.7	3.5	9.9	11.12	A	A	A
437	34.1	2.2	-0.6	8.89	A	A	A
439	33.6	1.7	-2.0	7.94	A	A	A
440	35.86	0.692	4.6	6.42	A	A	A
441	34.9	1.3	1.8	7.17	A	A	A
442	36.129187	2.522848	5.3	9.29	A	A	A
443	31.5	1.4	-8.2	7.57	A	A	A
444	33.34	1.75	-2.8	8.06	A	A	A
445	35.4	1.2	3.2	7.00	A	A	A
446	34.5	1.1	0.6	6.90	A	A	A
448	33.26	0.43	-3.0	6.26	A	A	A
450	35.1	1.1	2.3	6.88	A	A	A
452	32.76	2.6	-4.5	10.02	A	A	A
453	34.3	0.811	0.0	6.56	A	A	A
454	36.9	1.6	7.6	7.50	A	A	A
455	4.7	1.7	-86.3	36.68	N	N	N
459	33.01	2.83	-3.8	10.53	A	A	A
460	36.3	3	5.8	10.29	A	A	A
462	56	3	63.3	8.14	N	N	N
463	35.5	1.8	3.5	7.95	A	A	A
464	37.72	2.16	10.0	8.38	A	A	A
465	34.1	3.1	-0.6	10.96	A	A	A
466	31.261	1.85695	-8.9	8.53	A	A	A
469	34.3	1.6	0.0	7.70	A	A	A
471	33.7	1	-1.8	6.80	A	A	A
472	32.6	1.6	-5.0	7.85	A	A	A
475	34.4	1.7	0.3	7.87	A	A	A
477	30.9	1.3	-9.9	7.43	A	A	A
478	35.5	1.9	3.5	8.13	A	A	A
479	36.54	3.01	6.5	10.26	A	A	A
482	31.8	1.5	-7.3	7.73	A	A	A
483	34.9	1.3	1.8	7.17	A	A	A
484	33.5	1.1	-2.3	6.95	A	A	A
487	34	4	-0.9	13.26	A	A	A
491	7.152	0.432	-79.2	8.60	N	N	N
495	30.73	0.76	-10.4	6.60	A	A	A
496	32.96	0.91	-3.9	6.72	A	A	A
498	27.15	2.83	-20.9	12.09	N	A	N
499	27.5	2.8	-19.8	11.88	A	A	A
500	36.31	3.784	5.9	12.09	A	A	A
501	36.3	1.2	5.8	6.96	A	A	A
506	34	2	-0.9	8.49	A	A	A
508	35.3	0.65	2.9	6.39	A	A	A
509	34.9	0.6	1.8	6.36	A	A	A
514	37.5	2.6	9.3	9.25	A	A	A
516	33.2	2	-3.2	8.59	A	A	A
522	32	1	-6.7	6.87	A	A	A
523	31.2	2	-9.0	8.86	A	A	A

Table 11. Evaluation results for Ba-133 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
525	34.8	2.2	1.5	8.80	A	A	A
527	33.5	2	-2.3	8.55	A	A	A
528	34.3	2.1	0.0	8.66	A	A	A
529	20.5	1.1	-40.2	8.14	N	N	N
530	28.443	1.1	-17.1	7.24	A	A	A
532	33.797968	1.627087	-1.5	7.79	A	A	A
533	28.1	2.1	-18.1	9.66	A	A	A
535	34.5	1.7	0.6	7.86	A	A	A
536	37	1.6	7.9	7.50	A	A	A
537	34.18	1.64	-0.3	7.78	A	A	A
539	33.01	1.45	-3.8	7.54	A	A	A
544	34.01	1.02	-0.8	6.82	A	A	A
555	37.4	2.6	9.0	9.26	A	A	A

Cs-134 determination of activity concentration in Sample 1

Table 12. Target values

Parameter	Value
Activity concentration [Bq/kg]	24.6
Uncertainty [Bq/kg]	1.0
Maximum Acceptable Relative Bias [%]	20

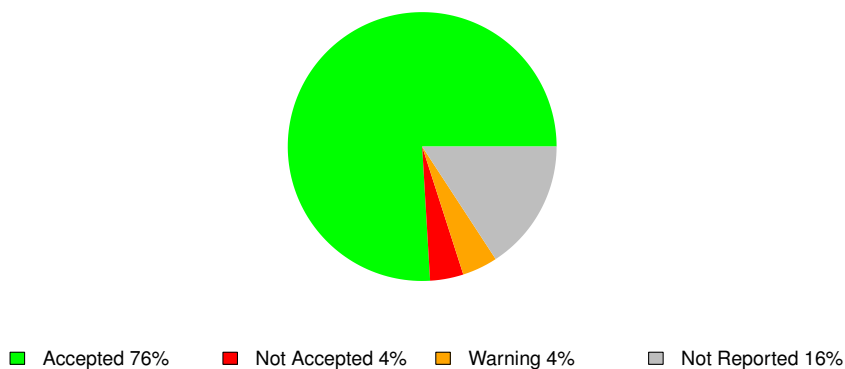


Figure 12. Percentage of Accepted vs. Warnings vs. Not Accepted vs. Not Reported results

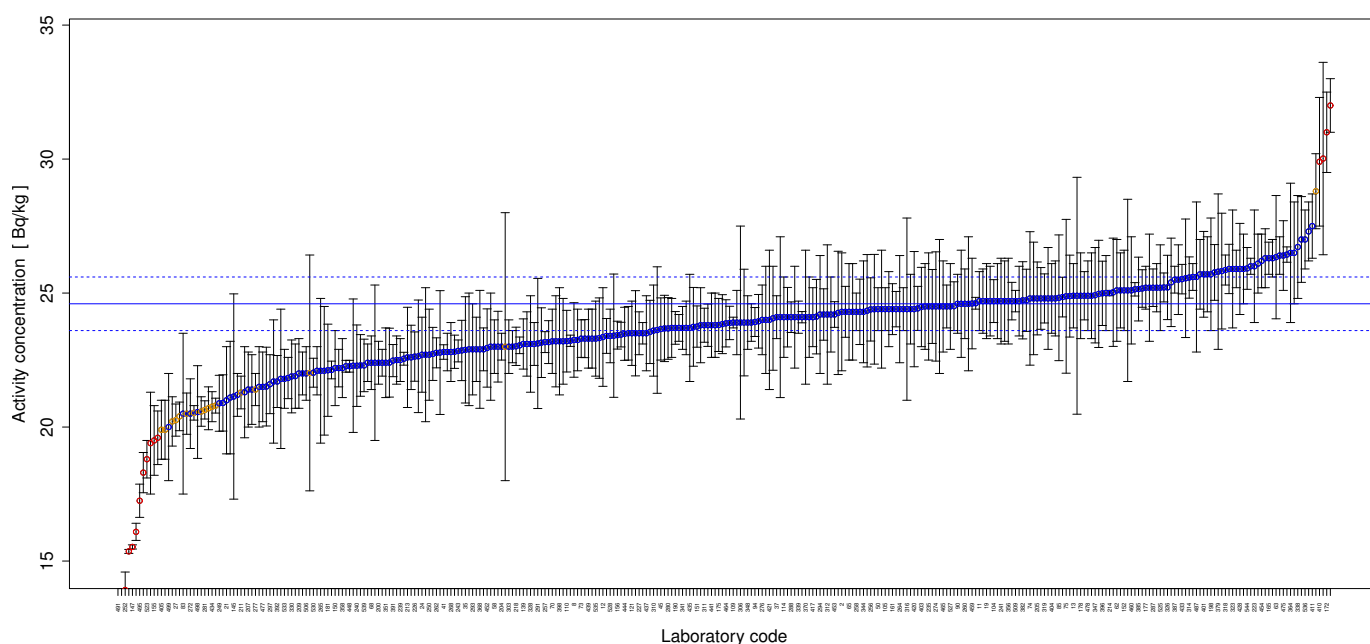


Figure 13. Reported results and evaluation parameters for Cs-134. Blue points represent accepted scores, whereas yellow and red represent warning and not accepted scores, respectively.

Table 13. Evaluation results for Cs-134 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
2	24.3	2.2	-1.2	9.92	A	A	A
8	23.25	1.39	-5.5	7.23	A	A	A
9	21.8	2.6	-11.4	12.60	A	A	A

Table 13. Evaluation results for Cs-134 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
11	24.7	1.1	0.4	6.03	A	A	A
12	23.36	1.84	-5.0	8.86	A	A	A
13	24.9	1.2	1.2	6.30	A	A	A
15	24.7	1.2	0.4	6.33	A	A	A
17	24.51	0.91	-0.4	5.51	A	A	A
19	24.7	1.4	0.4	6.98	A	A	A
20	22.13	0.33	-10.0	4.33	A	A	A
21	21	2	-14.6	10.36	A	A	A
24	22.7	1.4	-7.7	7.39	A	A	A
25	23.5	1	-4.5	5.88	A	A	A
27	20.26	0.6	-17.6	5.03	A	N	W
28	24.34	2.097	-1.1	9.53	A	A	A
31	22.4	0.7	-8.9	5.13	A	A	A
34	21.5	1.5	-12.6	8.07	A	A	A
35	22.880698	1.982866	-7.0	9.57	A	A	A
37	24.1	0.8	-2.0	5.25	A	A	A
38	25.82	2.16	5.0	9.30	A	A	A
40	23.84	1.1	-3.1	6.15	A	A	A
41	22.8	0.271	-7.3	4.24	A	A	A
42	23.7	1.1	-3.7	6.17	A	A	A
45	23.66	1.16	-3.8	6.37	A	A	A
48	24.7	1.3	0.4	6.65	A	A	A
49	23	2	-6.5	9.60	A	A	A
50	24.4	0.8	-0.8	5.22	A	A	A
51	25.77	1.04	4.8	5.73	A	A	A
52	24.3	0.95	-1.2	5.64	A	A	A
53	22.64	2.1	-8.0	10.13	A	A	A
55	22.55	0.24	-8.3	4.20	A	A	A
57	19.4	1.9	-21.1	10.60	N	A	N
58	23	1	-6.5	5.95	A	A	A
60	24.4	2.2	-0.8	9.89	A	A	A
62	25.1	1.9	2.0	8.59	A	A	A
63	26.34	2.3	7.1	9.63	A	A	A
65	24.3	1.8	-1.2	8.45	A	A	A
66	23.68	1.237	-3.7	6.62	A	A	A
67	24.1	3	-2.0	13.10	A	A	A
68	22.4	1	-8.9	6.04	A	A	A
69	23.94718	1	-2.6	5.83	A	A	A
70	23.2	1.2	-5.7	6.58	A	A	A
71	20.9	1.05	-15.0	6.46	A	A	A
72	24.9	4.42	1.2	18.21	A	A	A
73	23.3	0.7	-5.3	5.05	A	A	A
74	24.8	2.49	0.8	10.83	A	A	A
75	24.88	2.87	1.1	12.23	A	A	A
78	21.83	0.77	-11.3	5.38	A	A	A
79	21.2	0.8	-13.8	5.55	A	A	A
80	23.885	0.62281	-2.9	4.83	A	A	A
81	18.3	0.751	-25.6	5.78	N	N	N
82	23.05	0.31	-6.3	4.28	A	A	A
83	20.5	3	-16.7	15.19	A	A	A
85	24.824	2.346	0.9	10.29	A	A	A
90	24.6	1.1	0.0	6.04	A	A	A
94	23.92	0.54	-2.8	4.65	A	A	A
95	21.51	1.47	-12.6	7.95	A	A	A
97	25.1	1.4	2.0	6.90	A	A	A
100	23.74	1.47	-3.5	7.41	A	A	A
102	16.09	0.32	-34.6	4.53	N	N	N
104	24.7	0.8	0.4	5.20	A	A	A
105	24.4	0.8	-0.8	5.22	A	A	A
107	24.4	1.4	-0.8	7.03	A	A	A

Table 13. Evaluation results for Cs-134 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
109	23.9	0.2	-2.9	4.15	A	A	A
110	23.205703	1.150284	-5.7	6.41	A	A	A
111	24.06	1.94	-2.2	9.03	A	A	A
113	23.62	2.36	-4.0	10.79	A	A	A
114	24.1	1.5	-2.0	7.43	A	A	A
116	23.55	1.18	-4.3	6.45	A	A	A
119	22.4	2.9	-8.9	13.57	A	A	A
121	23.5	1.2	-4.5	6.53	A	A	A
124	24.7	1.4	0.4	6.98	A	A	A
127	25.55198	2.211405	3.9	9.56	A	A	A
128	23.5	1.59	-4.5	7.89	A	A	A
130	25.17	0.7	2.3	4.93	A	A	A
132	25.7	1.3	4.5	6.49	A	A	A
133	26.3	1.1	6.9	5.83	A	A	A
134	26	0.3	5.7	4.23	A	A	A
139	23.1	0.937	-6.1	5.74	A	A	A
140	23.8	1.4	-3.2	7.15	A	A	A
143	22.858359	1.124924	-7.1	6.38	A	A	A
145	21.14	3.83	-14.1	18.57	A	A	A
147	15.5265	0.0776	-36.9	4.10	N	N	N
150	22.2	1.4	-9.8	7.50	A	A	A
151	23.75	0.77	-3.5	5.20	A	A	A
152	25.1	1.5	2.0	7.23	A	A	A
154	25	1.4	1.6	6.92	A	A	A
155	19.5	1.3	-20.7	7.81	N	N	N
156	23.43	0.52	-4.8	4.63	A	A	A
158	21.1	2.1	-14.2	10.75	A	A	A
159	23.4	0.65	-4.9	4.92	A	A	A
161	24.4	0.95	-0.8	5.63	A	A	A
165	26.3	0.6	6.9	4.66	A	A	A
166	23	1.32	-6.5	7.03	A	A	A
168	24.8	2.1	0.8	9.39	A	A	A
170	23.1	1.2	-6.1	6.60	A	A	A
172	31	1.5	26.0	6.32	N	N	N
175	23.81	0.99	-3.2	5.81	A	A	A
177	25.2	0.8	2.4	5.16	A	A	A
178	24.9	1.6	1.2	7.60	A	A	A
179	20.58	0.55	-16.3	4.86	A	N	W
180	20.5	0.77	-16.7	5.53	A	N	W
181	22.12	1.72	-10.1	8.77	A	A	A
183	22.1	0.9	-10.2	5.75	A	A	A
184	22.29	2.49	-9.4	11.89	A	A	A
185	22.27	0.22	-9.5	4.18	A	A	A
187	24.3	1.8	-1.2	8.45	A	A	A
189	22.02	4.4	-10.5	20.39	A	N	W
190	23.7	0.61	-3.7	4.81	A	A	A
191	24.6	2	0.0	9.09	A	A	A
194	20.21	0.92	-17.9	6.10	A	N	W
197	24.97	2	1.5	8.98	A	A	A
198	25.7	2.1	4.5	9.13	A	A	A
200	22.4	0.8	-8.9	5.41	A	A	A
202	24.62	0.22	0.1	4.16	A	A	A
203	21.3	1.7	-13.4	8.96	A	A	A
204	23	0.5	-6.5	4.61	A	A	A
205	24.8	1.36	0.8	6.83	A	A	A
206	22.7	2.5	-7.7	11.74	A	A	A
207	21.4	1.4	-13.0	7.70	A	A	A
208	24.1	1.11	-2.0	6.14	A	A	A
209	22	1.3	-10.6	7.17	A	A	A
211	21.29	0.61	-13.5	4.97	A	N	W

Table 13. Evaluation results for Cs-134 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
213	22.6	1.87	-8.1	9.22	A	A	A
214	25	0.1	1.6	4.08	A	A	A
216	24.4	0.66	-0.8	4.88	A	A	A
217	25.1	3.4	2.0	14.14	A	A	A
218	23.01286	0.71458	-6.4	5.12	A	A	A
220	24.5	1.6	-0.4	7.69	A	A	A
223	26	2.1	5.7	9.04	A	A	A
224	22.9	2.1	-6.9	10.03	A	A	A
226	22.63	0.92	-8.0	5.75	A	A	A
227	23.5	0.8	-4.5	5.30	A	A	A
228	22.8	0.7	-7.3	5.09	A	A	A
229	22.404	1.2855	-8.9	7.03	A	A	A
230	23.5	0.4	-4.5	4.41	A	A	A
232	22.5	0.9	-8.5	5.70	A	A	A
233	25.2	2	2.4	8.92	A	A	A
235	24.5	2	-0.4	9.12	A	A	A
238	24.5	1.38	-0.4	6.95	A	A	A
239	22.5	0.8	-8.5	5.40	A	A	A
240	22.29	1.52	-9.4	7.94	A	A	A
241	24.7	1.6	0.4	7.65	A	A	A
242	25.21	0.54	2.5	4.59	A	A	A
243	22.841	0.409	-7.2	4.44	A	A	A
247	24.396	2.047	-0.8	9.32	A	A	A
249	20.887574	1.044196	-15.1	6.44	A	A	A
250	22.7	1.7	-7.7	8.52	A	A	A
252	13.92	0.67	-43.4	6.30	N	N	N
253	27	1.6	9.8	7.19	A	A	A
254	21.4	1.3	-13.0	7.31	A	A	A
256	24.39	1.18	-0.8	6.32	A	A	A
257	23.17	0.39	-5.8	4.40	A	A	A
258	24.3	0.7	-1.2	4.98	A	A	A
260	24.6	1.3	0.0	6.67	A	A	A
261	26.4	0.7	7.3	4.85	A	A	A
262	22.77	0.56	-7.4	4.75	A	A	A
264	24.4	2	-0.8	9.15	A	A	A
265	22.1	2.7	-10.2	12.88	A	A	A
267	24.26	2.3	-1.4	10.32	A	A	A
268	22.8	1.1	-7.3	6.31	A	A	A
270	24.6	2.5	0.0	10.95	A	A	A
271	24.7	1.5	0.4	7.31	A	A	A
272	20.5	1.3	-16.7	7.53	A	A	A
274	24.5	2.038535	-0.4	9.26	A	A	A
276	24	1.3	-2.4	6.77	A	A	A
277	21.4	0.6	-13.0	4.94	A	N	W
278	21.7	2.3	-11.8	11.35	A	A	A
279	24.4	0.8	-0.8	5.22	A	A	A
280	23.68	1.15	-3.7	6.33	A	A	A
281	20.64	0.34	-16.1	4.39	A	N	W
283	25.9	0.92	5.3	5.40	A	A	A
284	26.437	0.2863	7.5	4.21	A	A	A
285	23.9	1.2	-2.9	6.46	A	A	A
286	22.4	0.5	-8.9	4.64	A	A	A
287	25.2	0.7	2.4	4.92	A	A	A
288	24.1	0.57	-2.0	4.70	A	A	A
289	23	5	-6.5	22.12	A	N	W
290	24.5	2.5	-0.4	10.98	A	A	A
291	23.12	2.428	-6.0	11.26	A	A	A
292	26.3	0.7	6.9	4.86	A	A	A
293	22.9	1.7	-6.9	8.46	A	A	A
294	24.2	2.2	-1.6	9.96	A	A	A

Table 13. Evaluation results for Cs-134 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
295	23.17	0.8	-5.8	5.33	A	A	A
296	24.2	0.959	-1.6	5.68	A	A	A
297	21.6	1.1	-12.2	6.52	A	A	A
299	24	2	-2.4	9.27	A	A	A
300	23.3	0.71	-5.3	5.08	A	A	A
302	24.1	1.9	-2.0	8.87	A	A	A
303	23	1	-6.5	5.95	A	A	A
304	23.2	1.7	-5.7	8.38	A	A	A
306	23.9	3.6	-2.9	15.60	A	A	A
307	24.9	0.9	1.2	5.44	A	A	A
310	23.6	1.7	-4.1	8.27	A	A	A
311	23.8	0.635	-3.2	4.86	A	A	A
312	24.2	2.6	-1.6	11.49	A	A	A
313	22.3	1.15	-9.3	6.57	A	A	A
314	25.58	0.77	4.0	5.06	A	A	A
315	24.8	1.152	0.8	6.17	A	A	A
316	24.4	3.4	-0.8	14.52	A	A	A
317	24.2	1.4	-1.6	7.07	A	A	A
318	25.86	0.56	5.1	4.61	A	A	A
319	24.8	0.916	0.8	5.49	A	A	A
322	23.7	0.5	-3.7	4.58	A	A	A
323	25.9	2.2	5.3	9.42	A	A	A
325	24.3	1.22	-1.2	6.46	A	A	A
326	25.21	1.2	2.5	6.26	A	A	A
328	23.1	1.8	-6.1	8.79	A	A	A
330	21.89	1.36	-11.0	7.42	A	A	A
331	22.2	0.7	-9.8	5.14	A	A	A
332	24.8	1.9	0.8	8.67	A	A	A
338	26.72	1.92	8.6	8.26	A	A	A
339	24.1	0.6	-2.0	4.77	A	A	A
341	23.7	0.8	-3.7	5.28	A	A	A
342	25.14	0.25	2.2	4.18	A	A	A
343	23.9	1.99	-2.9	9.27	A	A	A
344	24.3	1.9	-1.2	8.81	A	A	A
346	22.81	0.62	-7.3	4.89	A	A	A
347	24.92	1.78	1.3	8.22	A	A	A
348	23.9	1	-2.9	5.83	A	A	A
350	19.6	1	-20.3	6.52	N	N	N
351	22.4	1.3	-8.9	7.09	A	A	A
354	25.2	0.9	2.4	5.41	A	A	A
355	23.22	0.21	-5.6	4.16	A	A	A
356	24.7	1.6	0.4	7.65	A	A	A
357	22.9	1.2	-6.9	6.63	A	A	A
358	22.2	1.1	-9.8	6.41	A	A	A
363	25.9	0.7	5.3	4.88	A	A	A
364	26.5	2.6	7.7	10.62	A	A	A
367	22	0.8	-10.6	5.45	A	A	A
368	22.9	2.2	-6.9	10.43	A	A	A
369	24.1	0.21	-2.0	4.16	A	A	A
370	24.1	2.5	-2.0	11.14	A	A	A
371	23.25	1.15	-5.5	6.40	A	A	A
374	24.4	1.3	-0.8	6.70	A	A	A
376	27.3	1.1	11.0	5.72	A	A	A
379	25.8	2.9	4.9	11.95	A	A	A
381	23.8	0.79	-3.2	5.25	A	A	A
382	24.73	1.44	0.5	7.10	A	A	A
383	26.1	1.1	6.1	5.86	A	A	A
384	22.1	2.4	-10.2	11.60	A	A	A
385	25.15	1.19	2.2	6.24	A	A	A
386	22.78	2.31	-7.4	10.92	A	A	A

Table 13. Evaluation results for Cs-134 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
387	25.5	0.5	3.7	4.51	A	A	A
388	25.6	0.5	4.1	4.51	A	A	A
391	22.48	0.6	-8.6	4.86	A	A	A
392	21.7	0.97	-11.8	6.04	A	A	A
393	25.4	1.65	3.2	7.66	A	A	A
395	23.41	2.3	-4.8	10.63	A	A	A
396	24.99	1.2	1.6	6.29	A	A	A
398	23.2	2	-5.7	9.53	A	A	A
401	25.7	1.6	4.5	7.44	A	A	A
402	24.1	1.5	-2.0	7.43	A	A	A
403	24.48	1.48	-0.5	7.29	A	A	A
404	24.8	1.3	0.8	6.63	A	A	A
405	19.9	1.1	-19.1	6.86	A	N	W
407	21.9	1.2	-11.0	6.82	A	A	A
408	23.45	0.46	-4.7	4.51	A	A	A
410	29.9	2.4	21.5	9.00	N	A	N
411	27.5	1.2	11.8	5.96	A	A	A
412	22.73	0.99	-7.6	5.96	A	A	A
414	24.8	1.4	0.8	6.96	A	A	A
417	24.1	1.1	-2.0	6.11	A	A	A
419	26.5	1.9	7.7	8.24	A	A	A
420	24.4	2.15	-0.8	9.70	A	A	A
421	24	2.6	-2.4	11.57	A	A	A
425	23.7	1	-3.7	5.86	A	A	A
426	23.32	1.5	-5.2	7.61	A	A	A
428	25.9	1.7	5.3	7.72	A	A	A
429	20.8	0.278	-15.4	4.28	A	N	W
433	25.52	0.55	3.7	4.60	A	A	A
434	20.76	0.56	-15.6	4.88	A	N	W
435	23.7	2	-3.7	9.37	A	A	A
437	23.5	1.4	-4.5	7.21	A	A	A
439	23.3	1.1	-5.3	6.23	A	A	A
440	20.398	0.534	-17.1	4.84	A	N	W
441	23.8	1.2	-3.2	6.48	A	A	A
443	25.9	1.3	5.3	6.46	A	A	A
444	23.48	0.99	-4.6	5.86	A	A	A
445	25.7	1.4	4.5	6.80	A	A	A
446	23.1	0.8	-6.1	5.34	A	A	A
448	22.27	0.22	-9.5	4.18	A	A	A
450	24.7	0.7	0.4	4.96	A	A	A
452	22.95	1.46	-6.7	7.55	A	A	A
453	24.2	0.479	-1.6	4.52	A	A	A
454	26.2	1	6.5	5.58	A	A	A
455	11.7	1.6	-52.4	14.27	N	N	N
459	24.61	1.69	0.0	7.98	A	A	A
460	25.1	2	2.0	8.95	A	A	A
462	32	1	30.1	5.13	N	N	N
463	28.8	1.4	17.1	6.34	A	N	W
464	23.87	0.88	-3.0	5.49	A	A	A
465	24.5	1.7	-0.4	8.04	A	A	A
466	24.428	0.822	-0.7	5.28	A	A	A
469	22.6	1.2	-8.1	6.69	A	A	A
471	22.9	0.8	-6.9	5.36	A	A	A
472	23.2	1.6	-5.7	8.01	A	A	A
475	26.4	1.3	7.3	6.39	A	A	A
477	21.5	1.3	-12.6	7.29	A	A	A
478	24.9	1.3	1.2	6.62	A	A	A
479	25.03	2.02	1.8	9.04	A	A	A
482	24.5	0.8	-0.4	5.21	A	A	A
483	23.8	1.2	-3.2	6.48	A	A	A

Table 13. Evaluation results for Cs-134 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
484	23.9	0.7	-2.9	5.01	A	A	A
487	25.6	2.8	4.1	11.67	A	A	A
490	23.3	1.1	-5.3	6.23	A	A	A
491	6.898	0.455	-72.0	7.75	N	N	N
492	23.15	1.3	-5.9	6.93	A	A	A
495	17.25	0.62	-29.9	5.43	N	N	N
496	20.53	0.27	-16.5	4.27	A	N	W
498	20.56	1.73	-16.4	9.34	A	A	A
499	20	2	-18.7	10.79	A	A	A
500	24.12	1.39	-2.0	7.05	A	A	A
501	20.7	0.8	-15.8	5.61	A	N	W
506	22	1	-10.6	6.10	A	A	A
507	15.36	0.074	-37.6	4.09	N	N	N
508	24.85	0.74	1.0	5.04	A	A	A
509	24.7	0.4	0.4	4.38	A	A	A
514	25.5	1.3	3.7	6.52	A	A	A
516	24.9	1.6	1.2	7.60	A	A	A
522	23	0.6	-6.5	4.83	A	A	A
523	18.8	0.7	-23.6	5.51	N	N	N
525	25.2	1.6	2.4	7.54	A	A	A
527	24.5	1.6	-0.4	7.69	A	A	A
528	23.4	1	-4.9	5.90	A	A	A
529	19.9	1.1	-19.1	6.86	A	N	W
530	22.028	0.54	-10.5	4.75	A	A	A
532	24.887096	1.528274	1.2	7.36	A	A	A
533	21.8	1.1	-11.4	6.48	A	A	A
535	23.3	1.4	-5.3	7.25	A	A	A
536	27	1.1	9.8	5.76	A	A	A
537	24.73	1.16	0.5	6.21	A	A	A
539	22.3	0.98	-9.3	5.99	A	A	A
540	30.02	3.59	22.0	12.63	N	A	N
544	25.92	0.78	5.4	5.06	A	A	A
553	24.7	1.3	0.4	6.65	A	A	A

Cs-137 determination of activity concentration in Sample 1

Table 14. Target values

Parameter	Value
Activity concentration [Bq/kg]	17.1
Uncertainty [Bq/kg]	0.7
Maximum Acceptable Relative Bias [%]	20

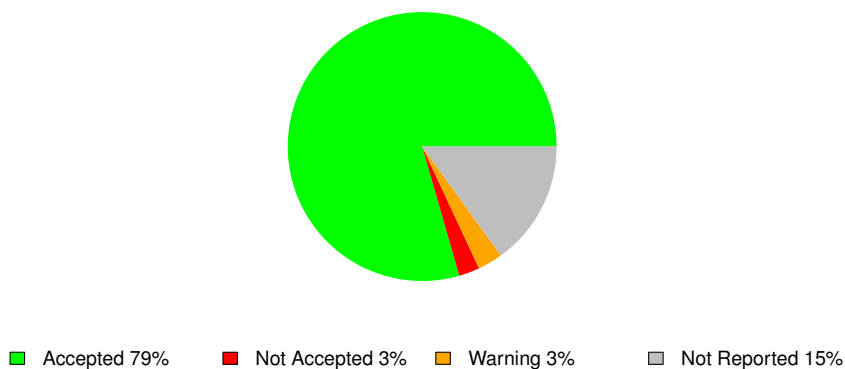


Figure 14. Percentage of Accepted vs. Warnings vs. Not Accepted vs. Not Reported results

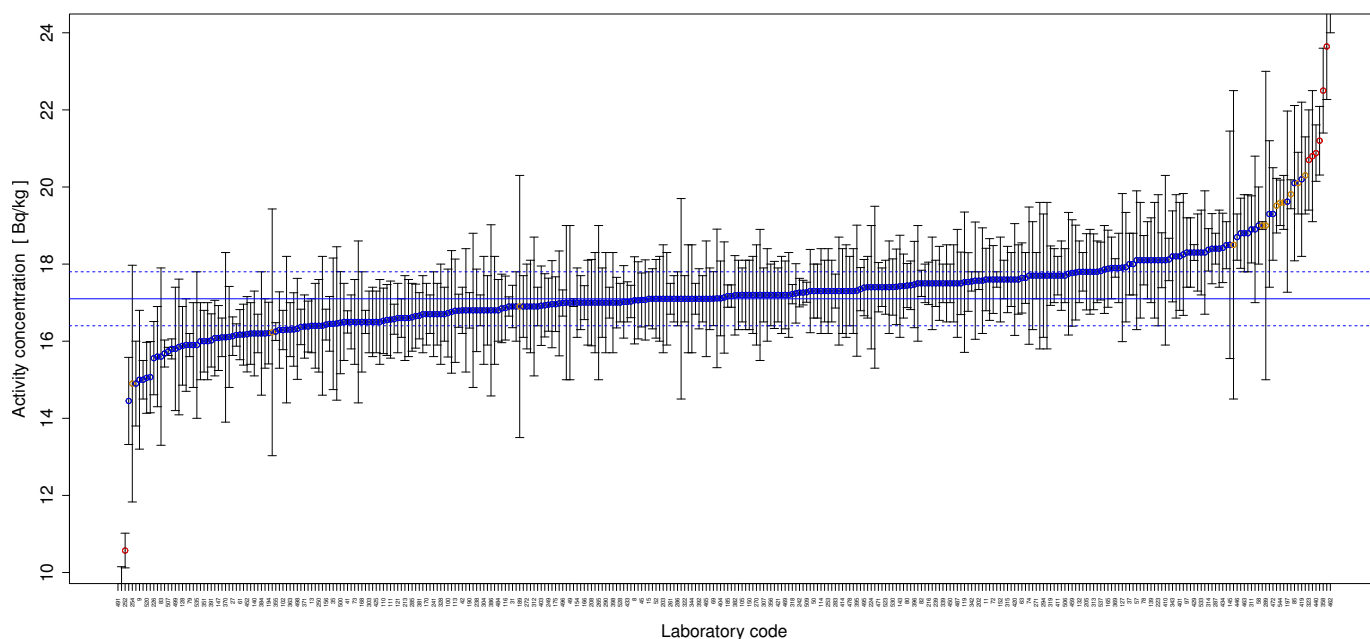


Figure 15. Reported results and evaluation parameters for Cs-137. Blue points represent accepted scores, whereas yellow and red represent warning and not accepted scores, respectively.

Table 15. Evaluation results for Cs-137 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
2	15.9	1.2	-7.0	8.59	A	A	A
8	17.06	1.13	-0.2	7.79	A	A	A
9	15	1.8	-12.3	12.68	A	A	A

Table 15. Evaluation results for Cs-137 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
11	17.6	0.81	2.9	6.16	A	A	A
12	16.96	1.13	-0.8	7.82	A	A	A
13	16.4	0.7	-4.1	5.91	A	A	A
15	17.1	0.7	0.0	5.79	A	A	A
17	17.6	1.06	2.9	7.28	A	A	A
19	16.7	1	-2.3	7.25	A	A	A
20	16.9	0.25	-1.2	4.35	A	A	A
21	17	2	-0.6	12.46	A	A	A
24	17.3	1.08	1.2	7.47	A	A	A
25	16.5	1	-3.5	7.31	A	A	A
27	16.13	0.5	-5.7	5.13	A	A	A
28	17.57	1.521	2.8	9.58	A	A	A
31	16.9	0.55	-1.2	5.23	A	A	A
32	15.68	0.35	-8.3	4.66	A	A	A
34	15.6	1.3	-8.8	9.28	A	A	A
35	16.450809	1.706696	-3.8	11.15	A	A	A
37	18	0.8	5.3	6.04	A	A	A
38	17.92	1.42	4.8	8.92	A	A	A
40	17.1	0.78	0.0	6.13	A	A	A
41	16.5	0.289	-3.5	4.45	A	A	A
42	16.8	0.6	-1.8	5.43	A	A	A
45	17.07	0.7	-0.2	5.79	A	A	A
48	17.2	0.9	0.6	6.64	A	A	A
49	17	2	-0.6	12.46	A	A	A
50	17.3	0.7	1.2	5.76	A	A	A
51	18.8	0.91	9.9	6.34	A	A	A
52	17.1	1.02	0.0	7.23	A	A	A
53	18.25	1.58	6.7	9.58	A	A	A
55	16.16	0.29	-5.5	4.47	A	A	A
57	18.1	1.8	5.8	10.75	A	A	A
58	19	1	11.1	6.67	A	A	A
60	16.4	1.1	-4.1	7.86	A	A	A
61	16.17	0.65	-5.4	5.74	A	A	A
62	17.5	1.5	2.3	9.50	A	A	A
63	17.64	0.91	3.2	6.59	A	A	A
65	18.1	1.5	5.8	9.24	A	A	A
66	16.85	0.8885	-1.5	6.68	A	A	A
67	16.3	1.9	-4.7	12.35	A	A	A
68	16.5	0.7	-3.5	5.90	A	A	A
69	17.10323	0.7	0.0	5.79	A	A	A
70	16.2	0.8	-5.3	6.41	A	A	A
71	16.65	0.83	-2.6	6.45	A	A	A
72	17.6	0.88	2.9	6.46	A	A	A
73	16.5	1.1	-3.5	7.82	A	A	A
74	17.7	1.78	3.5	10.86	A	A	A
75	16.23	3.2	-5.1	20.14	A	N	W
78	18.1	0.64	5.8	5.41	A	A	A
79	15.9	0.3	-7.0	4.51	A	A	A
80	17.443	0.57147	2.0	5.24	A	A	A
81	15.067	0.924	-11.9	7.37	A	A	A
82	17.5	0.34	2.3	4.53	A	A	A
83	15.6	2.3	-8.8	15.30	A	A	A
84	9.33	0.82	-45.4	9.70	N	N	N
85	20.099	2.014	17.5	10.82	A	A	A
90	17.4	0.8	1.8	6.16	A	A	A
94	16.45	0.71	-3.8	5.95	A	A	A
95	14.45	1.13	-15.5	8.83	A	A	A
97	18.3	0.9	7.0	6.40	A	A	A
100	16.73	1.14	-2.2	7.95	A	A	A
102	16.29	0.51	-4.7	5.15	A	A	A

Table 15. Evaluation results for Cs-137 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
104	17.3	0.7	1.2	5.76	A	A	A
105	17.2	0.7	0.6	5.77	A	A	A
107	16.9	0.9	-1.2	6.72	A	A	A
109	17	0.1	-0.6	4.14	A	A	A
110	16.527571	0.849356	-3.4	6.57	A	A	A
111	16.56	1	-3.2	7.30	A	A	A
113	16.79	1.34	-1.8	8.97	A	A	A
114	17.3	1.1	1.2	7.56	A	A	A
116	16.86	0.83	-1.4	6.40	A	A	A
119	17.53	1.82	2.5	11.16	A	A	A
121	16.6	0.9	-2.9	6.79	A	A	A
124	17.2	0.9	0.6	6.64	A	A	A
127	17.908696	1.920349	4.7	11.48	A	A	A
128	15.88	1.02	-7.1	7.62	A	A	A
130	17.64	0.66	3.2	5.55	A	A	A
132	17.8	0.8	4.1	6.08	A	A	A
133	18.1	1	5.8	6.88	A	A	A
134	17.6	0.2	2.9	4.25	A	A	A
139	18.1	1.1	5.8	7.33	A	A	A
140	16.2	1.1	-5.3	7.93	A	A	A
143	17.424213	1.323837	1.9	8.63	A	A	A
145	18.5	2.95	8.2	16.46	A	A	A
147	16.0824	0.8422	-6.0	6.65	A	A	A
150	17.2	0.9	0.6	6.64	A	A	A
151	16.98	1.36	-0.7	8.99	A	A	A
152	17.6	1.1	2.9	7.47	A	A	A
154	17	0.9	-0.6	6.69	A	A	A
155	15.9	1.1	-7.0	8.04	A	A	A
156	16.43	0.4	-3.9	4.76	A	A	A
158	16.5	2.1	-3.5	13.37	A	A	A
159	17.9	0.8	4.7	6.06	A	A	A
161	17	0.7	-0.6	5.81	A	A	A
165	17.88	1	4.6	6.93	A	A	A
166	17	0.44	-0.6	4.84	A	A	A
168	16.5	1.3	-3.5	8.88	A	A	A
170	16.7	0.8	-2.3	6.30	A	A	A
172	17.5	0.5	2.3	4.99	A	A	A
175	16.96	0.71	-0.8	5.86	A	A	A
177	17.8	0.5	4.1	4.96	A	A	A
178	16.8	1.6	-1.8	10.37	A	A	A
179	17.35	0.56	1.5	5.21	A	A	A
180	17.86	1.14	4.4	7.58	A	A	A
181	16.11	1.31	-5.8	9.10	A	A	A
183	19.6	0.7	14.6	5.43	A	N	W
184	15.85	1.76	-7.3	11.83	A	A	A
185	17.17	0.29	0.4	4.43	A	A	A
187	18.1	1.5	5.8	9.24	A	A	A
189	16.9	3.4	-1.2	20.53	A	N	W
190	16.8	0.46	-1.8	4.92	A	A	A
191	17.1	1.1	0.0	7.62	A	A	A
194	16.21	0.8	-5.2	6.41	A	A	A
197	19.62	2.35	14.7	12.66	A	A	A
198	18.3	1.6	7.0	9.65	A	A	A
200	16.1	0.5	-5.8	5.14	A	A	A
202	17.57	0.23	2.8	4.30	A	A	A
203	17.1	1.4	0.0	9.15	A	A	A
204	16.6	0.5	-2.9	5.08	A	A	A
205	17.8	0.989	4.1	6.90	A	A	A
206	16.8	2	-1.8	12.59	A	A	A
207	17	1.1	-0.6	7.66	A	A	A

Table 15. Evaluation results for Cs-137 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
208	17	1.12	-0.6	7.76	A	A	A
209	17	1.3	-0.6	8.67	A	A	A
211	18.49	0.61	8.1	5.26	A	A	A
213	16.6	1.1	-2.9	7.79	A	A	A
214	19	0.1	11.1	4.13	A	N	W
216	17.5	0.55	2.3	5.16	A	A	A
217	18.5	4	8.2	22.01	A	N	W
218	16.28946	0.99086	-4.7	7.33	A	A	A
220	17.5	1.2	2.3	7.99	A	A	A
223	18.1	1.7	5.8	10.25	A	A	A
224	17.4	1.6	1.8	10.07	A	A	A
226	15.56	0.95	-9.0	7.35	A	A	A
227	16.7	0.5	-2.3	5.07	A	A	A
228	16	1	-6.4	7.47	A	A	A
229	16.304	0.95236	-4.7	7.13	A	A	A
230	16.5	0.3	-3.5	4.48	A	A	A
232	17.3	0.8	1.2	6.18	A	A	A
233	17.8	1.1	4.1	7.41	A	A	A
235	17.1	1.2	0.0	8.12	A	A	A
238	16.8	1.07	-1.8	7.57	A	A	A
239	17.5	0.6	2.3	5.34	A	A	A
240	17.57	1.37	2.8	8.81	A	A	A
241	16.7	1.1	-2.3	7.76	A	A	A
242	17.26	0.37	0.9	4.62	A	A	A
243	16.79	0.429	-1.8	4.83	A	A	A
247	17.133	1.443	0.2	9.36	A	A	A
249	16.946768	0.688071	-0.9	5.77	A	A	A
250	16.4	1.2	-4.1	8.38	A	A	A
252	10.57	0.45	-38.2	5.91	N	N	N
253	17.3	1.1	1.2	7.56	A	A	A
254	14.9	3.07	-12.9	21.01	A	N	W
256	16.93	0.82	-1.0	6.34	A	A	A
257	18.12	0.55	6.0	5.10	A	A	A
258	17.3	0.8	1.2	6.18	A	A	A
260	17.2	1	0.6	7.11	A	A	A
261	17.1	0.4	0.0	4.71	A	A	A
262	15.8	0.26	-7.6	4.41	A	A	A
264	17.7	1.4	3.5	8.91	A	A	A
265	17	2	-0.6	12.46	A	A	A
267	16.76	1.59	-2.0	10.33	A	A	A
268	16.9	0.8	-1.2	6.26	A	A	A
270	17.2	1.3	0.6	8.60	A	A	A
271	17.7	0.6	3.5	5.31	A	A	A
272	16.9	1.1	-1.2	7.69	A	A	A
274	18.4	0.909983	7.6	6.42	A	A	A
276	17	0.9	-0.6	6.69	A	A	A
277	16.7	0.8	-2.3	6.30	A	A	A
278	17.7	1.9	3.5	11.49	A	A	A
279	17.1	0.6	0.0	5.39	A	A	A
281	17.03	0.42	-0.4	4.78	A	A	A
283	17.3	0.44	1.2	4.82	A	A	A
284	19.811	0.3758	15.8	4.51	A	N	W
285	16.62	0.88	-2.8	6.69	A	A	A
286	17.1	0.7	0.0	5.79	A	A	A
287	18.4	0.4	7.6	4.63	A	A	A
288	17.6	0.5	2.9	4.98	A	A	A
289	19	4	11.1	21.45	A	N	W
290	17	1.3	-0.6	8.67	A	A	A
291	17.11	1.797	0.1	11.27	A	A	A
292	16.8	0.4	-1.8	4.74	A	A	A

Table 15. Evaluation results for Cs-137 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
293	16.4	1.8	-4.1	11.71	A	A	A
294	17.7	1.6	3.5	9.92	A	A	A
295	17.45	0.63	2.0	5.46	A	A	A
296	18.1	0.712	5.8	5.68	A	A	A
297	17.02	0.94	-0.5	6.87	A	A	A
299	17.2	1.7	0.6	10.70	A	A	A
300	16.57	0.39	-3.1	4.72	A	A	A
302	17.3	1.4	1.2	9.07	A	A	A
303	16.5	0.8	-3.5	6.35	A	A	A
304	16.8	1.4	-1.8	9.28	A	A	A
306	17.1	2.6	0.0	15.75	A	A	A
307	17.2	0.7	0.6	5.77	A	A	A
310	16.9	1.2	-1.2	8.20	A	A	A
311	18.9	0.87	10.5	6.16	A	A	A
312	16.9	1.8	-1.2	11.41	A	A	A
313	17.8	0.984	4.1	6.88	A	A	A
314	18.37	0.55	7.4	5.07	A	A	A
315	17.6	0.86	2.9	6.37	A	A	A
316	17.7	1.9	3.5	11.49	A	A	A
317	20.8	1.7	21.6	9.14	N	A	N
318	17.22	0.25	0.7	4.34	A	A	A
319	17.7	0.771	3.5	5.98	A	A	A
322	17.1	0.6	0.0	5.39	A	A	A
323	20.7	1.3	21.0	7.50	N	N	N
325	17.5	0.96	2.3	6.84	A	A	A
326	17.06	1	-0.2	7.15	A	A	A
328	16.7	1.3	-2.3	8.80	A	A	A
331	16.2	0.5	-5.3	5.13	A	A	A
332	17.1	1.4	0.0	9.15	A	A	A
338	17.78	1.23	4.0	8.04	A	A	A
339	17.5	0.5	2.3	4.99	A	A	A
341	16.9	0.5	-1.2	5.05	A	A	A
342	17.55	0.25	2.6	4.33	A	A	A
343	18.2	1.18	6.4	7.67	A	A	A
344	17.1	1.4	0.0	9.15	A	A	A
346	16.6	1	-2.9	7.28	A	A	A
347	16.08	0.98	-6.0	7.34	A	A	A
348	17.2	1.2	0.6	8.09	A	A	A
350	15	0.5	-12.3	5.28	A	A	A
351	16	0.8	-6.4	6.46	A	A	A
354	17.6	0.7	2.9	5.71	A	A	A
355	16.25	0.23	-5.0	4.33	A	A	A
356	17.2	0.8	0.6	6.20	A	A	A
357	16.8	0.9	-1.8	6.74	A	A	A
358	22.5	1.1	31.6	6.38	N	N	N
363	16.3	0.7	-4.7	5.93	A	A	A
364	18.9	1.9	10.5	10.85	A	A	A
367	17.7	0.7	3.5	5.69	A	A	A
368	18.2	1.6	6.4	9.70	A	A	A
369	17.9	0.24	4.7	4.31	A	A	A
370	16.1	2.2	-5.8	14.26	A	A	A
371	16.38	0.82	-4.2	6.47	A	A	A
374	17.2	0.87	0.6	6.51	A	A	A
376	20.1	0.8	17.5	5.71	A	N	W
379	17.4	2.1	1.8	12.74	A	A	A
381	16.66	0.6	-2.6	5.45	A	A	A
382	17.19	1.03	0.5	7.26	A	A	A
383	20.3	1	18.7	6.40	A	N	W
384	16.2	1.6	-5.3	10.69	A	A	A
385	21.2	0.89	24.0	5.86	N	N	N

Table 15. Evaluation results for Cs-137 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
386	16.8	2.22	-1.8	13.83	A	A	A
387	17	0.4	-0.6	4.72	A	A	A
388	17.1	0.4	0.0	4.71	A	A	A
391	16.02	0.69	-6.3	5.94	A	A	A
392	17.1	0.78	0.0	6.13	A	A	A
393	16.55	0.92	-3.2	6.90	A	A	A
395	17.31	1.7	1.2	10.64	A	A	A
396	17.47	1.12	2.2	7.61	A	A	A
398	17	1.3	-0.6	8.67	A	A	A
401	18.2	1.4	6.4	8.71	A	A	A
402	16.2	0.9	-5.3	6.90	A	A	A
403	16.92	1.03	-1.0	7.34	A	A	A
404	17.11	0.97	0.1	6.99	A	A	A
405	16.5	0.9	-3.5	6.82	A	A	A
407	18.3	0.9	7.0	6.40	A	A	A
408	16.37	0.46	-4.3	4.97	A	A	A
410	18.1	2.2	5.8	12.83	A	A	A
411	17.7	0.5	3.5	4.97	A	A	A
412	16.17	0.79	-5.4	6.37	A	A	A
414	17.3	1.1	1.2	7.56	A	A	A
417	17.1	0.6	0.0	5.39	A	A	A
419	20.2	2	18.1	10.71	A	A	A
420	17.6	1.45	2.9	9.20	A	A	A
421	17.2	0.7	0.6	5.77	A	A	A
423	18	0.8	5.3	6.04	A	A	A
425	16.5	0.8	-3.5	6.35	A	A	A
426	16.46	1.99	-3.7	12.76	A	A	A
429	18.3	0.205	7.0	4.24	A	A	A
433	17.02	0.52	-0.5	5.11	A	A	A
434	18.42	0.9	7.7	6.37	A	A	A
435	19.3	1.9	12.9	10.66	A	A	A
437	16.8	1.4	-1.8	9.28	A	A	A
439	17.6	0.9	2.9	6.55	A	A	A
440	20.879	0.732	22.1	5.39	N	N	N
441	17.5	1	2.3	7.03	A	A	A
442	23.6439	1.374118	38.3	7.11	N	N	N
443	16.7	0.7	-2.3	5.86	A	A	A
444	17.24	0.77	0.8	6.06	A	A	A
445	17.9	0.9	4.7	6.48	A	A	A
446	18.7	0.6	9.4	5.20	A	A	A
448	17.17	0.29	0.4	4.43	A	A	A
450	17.5	0.5	2.3	4.99	A	A	A
452	16.18	0.977	-5.4	7.30	A	A	A
453	17	0.656	-0.6	5.63	A	A	A
454	17.8	0.8	4.1	6.08	A	A	A
455	14.9	1.1	-12.9	8.44	A	A	A
459	17.77	1.38	3.9	8.78	A	A	A
460	17.2	1	0.6	7.11	A	A	A
462	26	2	52.0	8.71	N	N	N
463	18.8	1	9.9	6.71	A	A	A
464	17.75	1.59	3.8	9.85	A	A	A
465	17.1	1.5	0.0	9.68	A	A	A
466	19.515	0.70835	14.1	5.47	A	N	W
469	17.2	0.88	0.6	6.55	A	A	A
471	17.4	0.64	1.8	5.50	A	A	A
472	19.3	1.2	12.9	7.44	A	A	A
475	17.7	0.9	3.5	6.53	A	A	A
477	17.3	1.2	1.2	8.05	A	A	A
478	17.3	0.9	1.2	6.62	A	A	A
479	17.07	1.04	-0.2	7.34	A	A	A

Table 15. Evaluation results for Cs-137 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
482	17.1	0.8	0.0	6.22	A	A	A
483	17.5	1	2.3	7.03	A	A	A
484	16.8	0.8	-1.8	6.28	A	A	A
487	17.5	1.4	2.3	8.99	A	A	A
490	17.5	0.81	2.3	6.18	A	A	A
491	5.219	0.176	-69.5	5.30	N	N	N
492	16	1	-6.4	7.47	A	A	A
495	17.39	0.73	1.7	5.86	A	A	A
496	16.99	0.34	-0.6	4.56	A	A	A
498	16.32	1.31	-4.6	9.01	A	A	A
499	15.8	1.6	-7.6	10.92	A	A	A
500	16.48	1.324	-3.6	9.02	A	A	A
501	18.4	1	7.6	6.80	A	A	A
506	17.7	0.7	3.5	5.69	A	A	A
507	15.735	0.106	-8.0	4.15	A	A	A
508	17.26	0.32	0.9	4.49	A	A	A
509	17.27	0.26	1.0	4.36	A	A	A
514	18.3	1	7.0	6.83	A	A	A
516	17.2	1.1	0.6	7.59	A	A	A
520	15.05	0.92	-12.0	7.36	A	A	A
522	17.4	0.5	1.8	5.00	A	A	A
523	17.4	0.7	1.8	5.74	A	A	A
525	17.3	1.1	1.2	7.56	A	A	A
527	16.5	1.1	-3.5	7.82	A	A	A
528	17	0.5	-0.6	5.04	A	A	A
529	17.41	0.98	1.8	6.96	A	A	A
530	17.405	0.73	1.8	5.86	A	A	A
532	17.535575	0.760674	2.5	5.96	A	A	A
533	18.3	1.1	7.0	7.27	A	A	A
535	15.9	1.9	-7.0	12.63	A	A	A
536	18.8	1	9.9	6.71	A	A	A
537	17.82	0.75	4.2	5.87	A	A	A
539	16.38	0.66	-4.2	5.74	A	A	A
544	19.59	0.59	14.6	5.08	A	N	W
553	17.43	0.83	1.9	6.28	A	A	A
555	17.4	1.2	1.8	8.02	A	A	A

Po-210 determination of activity concentration in Sample 1

Table 16. Target values

Parameter	Value
Activity concentration [Bq/kg]	29.9
Uncertainty [Bq/kg]	1.5
Maximum Acceptable Relative Bias [%]	30

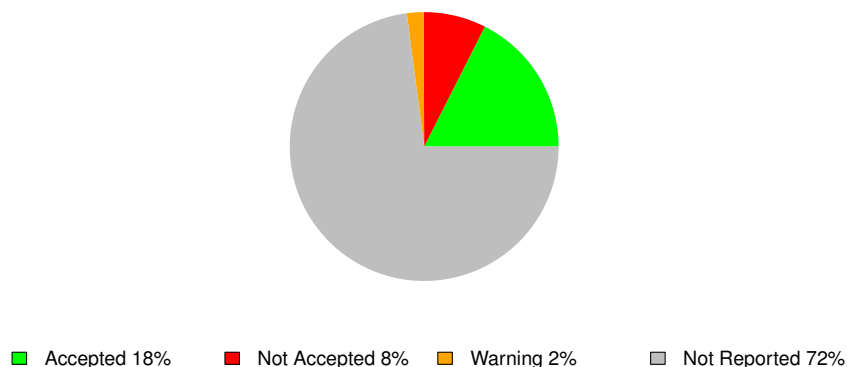


Figure 16. Percentage of Accepted vs. Warnings vs. Not Accepted vs. Not Reported results

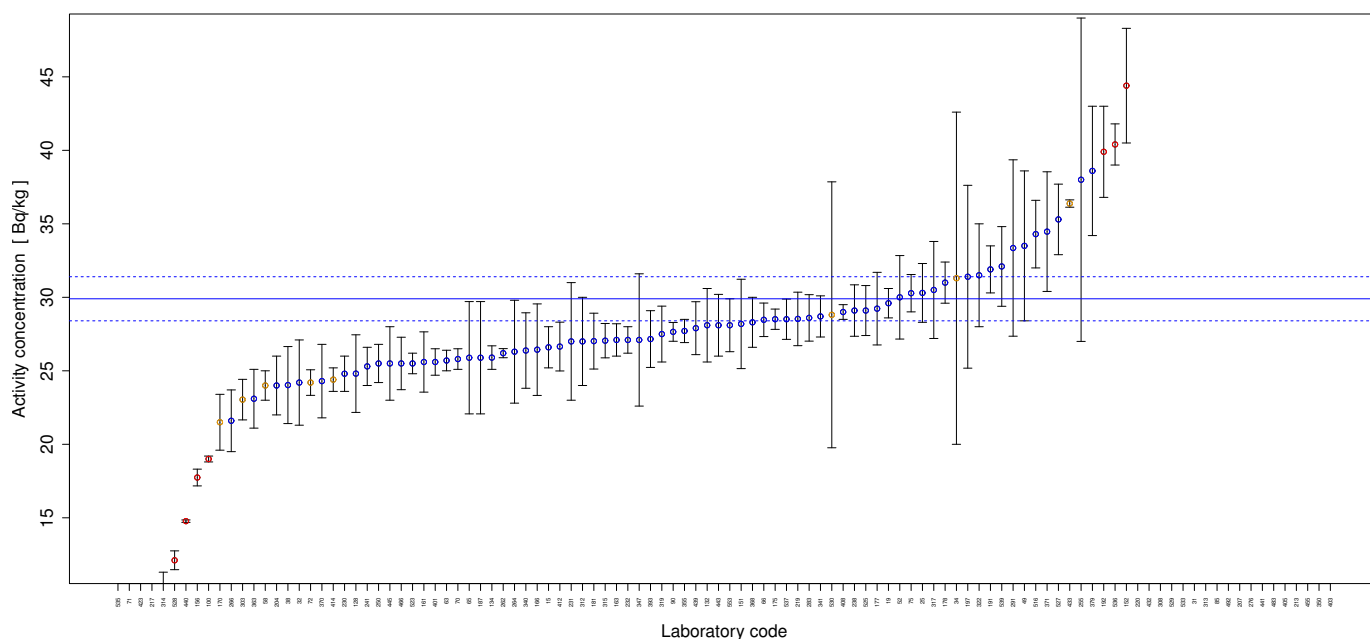


Figure 17. Reported results and evaluation parameters for Po-210. Blue points represent accepted scores, whereas yellow and red represent warning and not accepted scores, respectively.

Table 17. Evaluation results for Po-210 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
15	26.6	1.4	-11.0	7.27	A	A	A
19	29.6	1	-1.0	6.05	A	A	A
25	30.3	2	1.3	8.29	A	A	A

Table 17. Evaluation results for Po-210 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
31	71.7	4.59	139.8	8.13	N	N	N
32	24.2	2.9	-19.1	12.99	A	A	A
34	31.3	11.3	4.7	36.45	A	N	W
38	24.03	2.62	-19.6	12.00	A	A	A
49	33.5	5.1	12.0	16.03	A	A	A
52	30	2.84	0.3	10.71	A	A	A
58	24	1	-19.7	6.52	A	N	W
63	25.7	0.7	-14.1	5.71	A	A	A
65	25.89	3.82	-13.4	15.58	A	A	A
66	28.47	1.14	-4.8	6.42	A	A	A
70	25.8	0.7	-13.7	5.70	A	A	A
71	1.78	0.09	-94.0	7.12	N	N	N
72	24.2	0.87	-19.1	6.17	A	N	W
75	30.28	1.27	1.3	6.54	A	A	A
85	78.847	2.434	163.7	5.89	N	N	N
90	27.65	0.64	-7.5	5.52	A	A	A
100	19	0.2	-36.5	5.13	N	N	N
128	24.81	2.64	-17.0	11.76	A	A	A
132	28.1	2.5	-6.0	10.21	A	A	A
134	25.9	0.8	-13.4	5.89	A	A	A
151	28.19	3.04	-5.7	11.89	A	A	A
152	44.4	3.9	48.5	10.12	N	N	N
156	17.74	0.57	-40.7	5.96	N	N	N
161	25.6	2.05	-14.4	9.45	A	A	A
163	27.1	1.1	-9.4	6.45	A	A	A
166	26.438392	3.113584	-11.6	12.80	A	A	A
170	21.5	1.9	-28.1	10.16	A	N	W
175	28.51	0.69	-4.7	5.57	A	A	A
177	29.23	2.47	-2.2	9.83	A	A	A
178	31	1.4	3.7	6.75	A	A	A
181	27.02	1.9	-9.6	8.64	A	A	A
187	25.89	3.82	-13.4	15.58	A	A	A
191	31.9	1.6	6.7	7.09	A	A	A
192	39.9	3.1	33.4	9.25	N	N	N
197	31.4	6.22	5.0	20.43	A	A	A
204	24	2	-19.7	9.73	A	A	A
207	95	4	217.7	6.55	N	N	N
213	128	11.5	328.1	10.29	N	N	N
217	3.56	0.56	-88.1	16.51	N	N	N
219	28.53	1.82	-4.6	8.12	A	A	A
220	53.1	3.4	77.6	8.13	N	N	N
230	24.8	1.2	-17.1	6.97	A	A	A
231	27	4	-9.7	15.64	A	A	A
232	27.1	0.9	-9.4	6.02	A	A	A
238	29.1	1.75	-2.7	7.83	A	A	A
241	25.3	1.3	-15.4	7.18	A	A	A
250	25.5	1.3	-14.7	7.15	A	A	A
255	38	11	27.1	29.38	A	A	A
262	26.2	0.31	-12.4	5.15	A	A	A
264	26.3	3.5	-12.0	14.22	A	A	A
266	21.6	2.1	-27.8	10.94	A	A	A
276	98	3	227.8	5.88	N	N	N
283	28.6	1.58	-4.3	7.46	A	A	A
291	33.355	6	11.6	18.67	A	A	A
303	23.04	1.38	-22.9	7.81	A	N	W
308	60.8	3.2	103.3	7.27	N	N	N
312	27	3	-9.7	12.19	A	A	A
313	77	5.6	157.5	8.84	N	N	N
314	10.15	1.15	-66.0	12.39	N	N	N
315	27.051	1.169	-9.5	6.62	A	A	A

Table 17. Evaluation results for Po-210 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
317	30.5	3.3	2.0	11.93	A	A	A
319	27.5	1.9	-8.0	8.54	A	A	A
322	31.5	3.5	5.3	12.19	A	A	A
340	26.3798	2.5673	-11.8	10.95	A	A	A
341	28.7	1.4	-4.0	7.00	A	A	A
347	27.1	4.5	-9.4	17.35	A	A	A
350	142	4.5	374.9	5.93	N	N	N
355	27.71	0.79	-7.3	5.77	A	A	A
363	23.1	2	-22.7	10.01	A	A	A
368	28.3	1.7	-5.3	7.83	A	A	A
370	24.3	2.5	-18.7	11.45	A	A	A
371	34.47	4.07	15.3	12.83	A	A	A
379	38.6	4.4	29.1	12.45	A	A	A
393	27.16	1.93	-9.2	8.70	A	A	A
401	25.6	0.9	-14.4	6.13	A	A	A
403	334.32	71.52	1018.1	21.97	N	N	N
405	107.6	4.5	259.9	6.53	N	N	N
408	29	0.5	-3.0	5.30	A	A	A
412	26.65	1.66	-10.9	8.00	A	A	A
414	24.4	0.8	-18.4	5.99	A	N	W
423	2.72	0.22	-90.9	9.52	N	N	N
432	56.9	4.23	90.3	8.97	N	N	N
433	36.38	0.25	21.7	5.06	A	N	W
439	27.9	1.8	-6.7	8.17	A	A	A
440	14.7723	0.0825	-50.6	5.05	N	N	N
441	106.8	5.7	257.2	7.32	N	N	N
443	28.1	2.1	-6.0	9.00	A	A	A
445	25.5	2.5	-14.7	11.01	A	A	A
455	136	7	354.9	7.19	N	N	N
466	25.5	1.785	-14.7	8.61	A	A	A
483	106.8	5.7	257.2	7.32	N	N	N
492	81.7	3	173.2	6.22	N	N	N
516	34.3	2.3	14.7	8.37	A	A	A
523	25.5	0.7	-14.7	5.72	A	A	A
525	29.1	1.7	-2.7	7.70	A	A	A
527	35.3	2.4	18.1	8.45	A	A	A
528	12.11	0.64	-59.5	7.29	N	N	N
529	61.8	1.9	106.7	5.88	N	N	N
530	28.81	9.046	-3.6	31.80	A	N	W
533	64.7	4.6	116.4	8.70	N	N	N
535	0.029	0.003	-99.9	11.50	N	N	N
536	40.4	1.4	35.1	6.10	N	N	N
537	28.51	1.37	-4.7	6.95	A	A	A
539	32.1	2.71	7.4	9.82	A	A	A
553	28.1	1.8	-6.0	8.14	A	A	A

Pb-210 determination of activity concentration in Sample 1

Table 18. Target values

Parameter	Value
Activity concentration [Bq/kg]	29.4
Uncertainty [Bq/kg]	1.2
Maximum Acceptable Relative Bias [%]	30

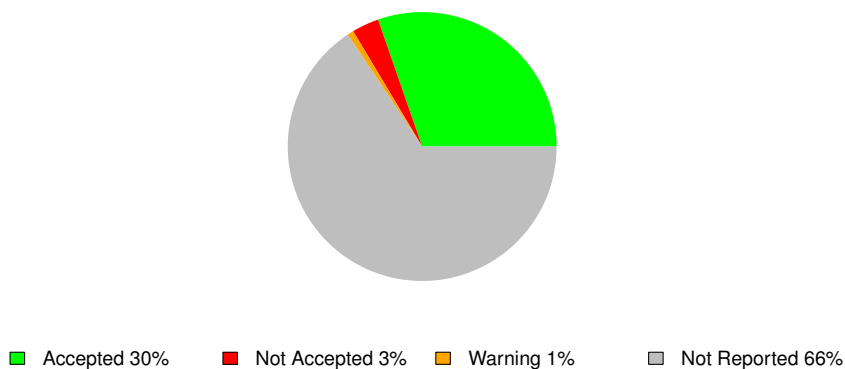


Figure 18. Percentage of Accepted vs. Warnings vs. Not Accepted vs. Not Reported results

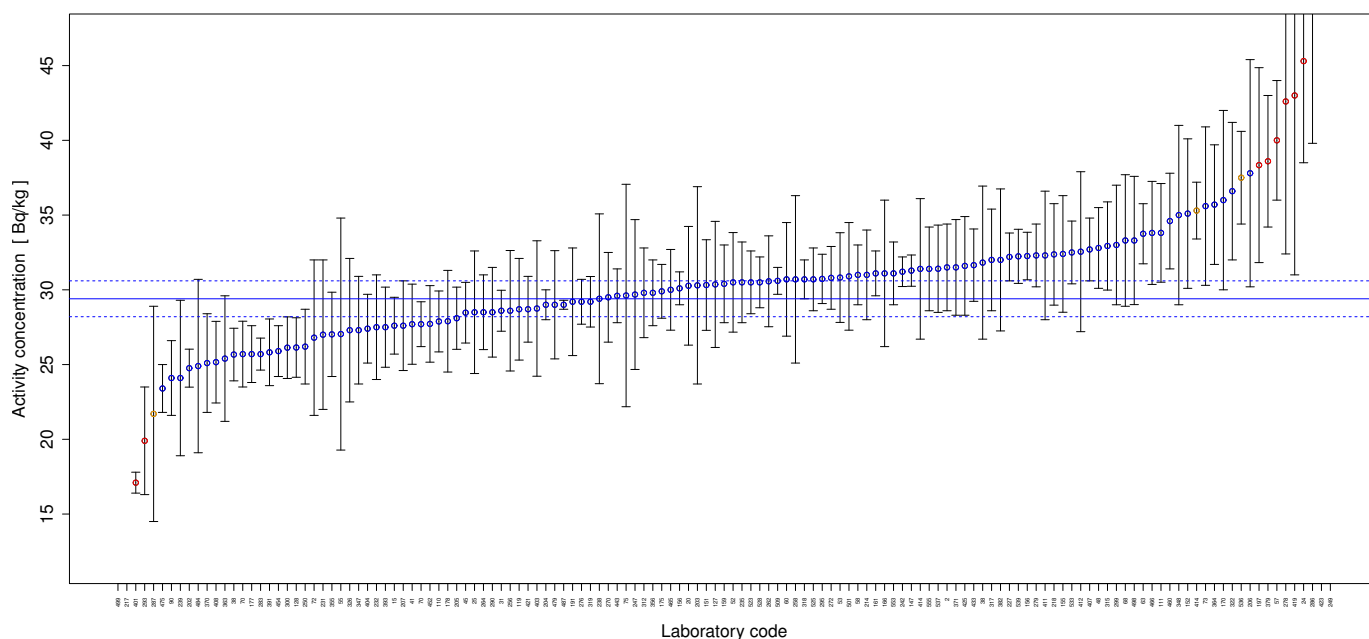


Figure 19. Reported results and evaluation parameters for Pb-210. Blue points represent accepted scores, whereas yellow and red represent warning and not accepted scores, respectively.

Table 19. Evaluation results for Pb-210 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
2	31.5	2.9	7.1	10.07	A	A	A
15	27.6	1.9	-6.1	8.00	A	A	A
20	30.27	3.97	3.0	13.74	A	A	A

Table 19. Evaluation results for Pb-210 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
24	45.3	6.8	54.1	15.56	N	N	N
25	28.5	4.1	-3.1	14.95	A	A	A
31	28.6	1.37	-2.7	6.29	A	A	A
38	25.67	1.76	-12.7	7.98	A	A	A
38	31.82	5.12	8.2	16.60	A	A	A
41	27.7	2.68	-5.8	10.50	A	A	A
45	28.47	2.03	-3.2	8.22	A	A	A
48	32.8	2.7	11.6	9.19	A	A	A
52	30.5	3.33	3.7	11.66	A	A	A
53	30.82	3	4.8	10.56	A	A	A
55	27.04	7.76	-8.0	28.99	A	A	A
57	40	4	36.0	10.80	N	N	N
58	31	2	5.4	7.63	A	A	A
60	30.7	3.8	4.4	13.03	A	A	A
63	33.75	2.01	14.8	7.22	A	A	A
68	33.3	4.4	13.3	13.83	A	A	A
70	27.7	1.5	-5.8	6.78	A	A	A
70	25.7	2.2	-12.6	9.48	A	A	A
72	26.8	5.2	-8.8	19.83	A	A	A
73	35.6	5.3	21.1	15.44	A	A	A
75	29.62	7.44	0.8	25.45	A	A	A
90	24.1	2.5	-18.0	11.15	A	A	A
110	27.884487	2.037853	-5.2	8.37	A	A	A
111	33.81	3.3	15.0	10.58	A	A	A
119	28.7	3.4	-2.4	12.53	A	A	A
127	30.361828	4.217186	3.3	14.48	A	A	A
128	26.14	1.99	-11.1	8.64	A	A	A
147	31.2842	1.0455	6.4	5.28	A	A	A
151	30.32	3.03	3.1	10.79	A	A	A
152	35.1	5	19.4	14.82	A	A	A
155	32.4	3.9	10.2	12.71	A	A	A
156	32.26	1.59	9.7	6.40	A	A	A
156	30.1	1.1	2.4	5.48	A	A	A
159	30.4	2.6	3.4	9.48	A	A	A
161	31.1	1.5	5.8	6.32	A	A	A
166	31.1	4.9	5.8	16.28	A	A	A
170	36	6	22.4	17.16	A	A	A
175	29.9	1.8	1.7	7.27	A	A	A
177	25.7	1.9	-12.6	8.44	A	A	A
178	27.9	3.4	-5.1	12.85	A	A	A
191	29.2	3.6	-0.7	12.99	A	A	A
197	38.34	6.52	30.4	17.49	N	A	N
202	24.76	1.27	-15.8	6.56	A	A	A
203	30.3	6.6	3.1	22.16	A	A	A
204	29	1	-1.4	5.34	A	A	A
205	28.1	2.08	-4.4	8.45	A	A	A
206	37.8	7.6	28.6	20.52	A	A	A
207	27.6	3	-6.1	11.61	A	A	A
214	31	3	5.4	10.50	A	A	A
217	3.56	0.56	-87.9	16.25	N	N	N
218	32.36915	3.39379	10.1	11.25	A	A	A
227	32.2	1.6	9.5	6.43	A	A	A
231	27	5	-8.2	18.96	A	A	A
232	27.5	3.5	-6.5	13.37	A	A	A
235	30.5	2.7	3.7	9.75	A	A	A
238	29.4	5.68	0.0	19.75	A	A	A
239	24.1	5.2	-18.0	21.96	A	A	A
242	31.21	0.99	6.2	5.17	A	A	A
247	29.684	5.012	1.0	17.37	A	A	A
249	60.784722	2.6	106.8	5.91	N	N	N

Table 19. Evaluation results for Pb-210 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
250	26.2	2.5	-10.9	10.38	A	A	A
256	28.6	4.03	-2.7	14.67	A	A	A
258	30.7	5.6	4.4	18.69	A	A	A
262	30.57	3.04	4.0	10.75	A	A	A
264	28.5	2.5	-3.1	9.68	A	A	A
270	29.5	3	0.3	10.96	A	A	A
272	30.8	2.1	4.8	7.95	A	A	A
276	29.2	1.5	-0.7	6.56	A	A	A
278	42.6	10.2	44.9	24.29	N	A	N
279	32.3	2.1	9.9	7.68	A	A	A
283	25.7	1.07	-12.6	5.83	A	A	A
286	55.5	15.7	88.8	28.58	N	N	N
287	21.7	7.2	-26.2	33.43	A	N	W
290	28.5	3	-3.1	11.29	A	A	A
293	19.9	3.6	-32.3	18.55	N	A	N
295	30.73	1.65	4.5	6.74	A	A	A
299	33	4	12.2	12.79	A	A	A
300	26.13	2.06	-11.1	8.88	A	A	A
312	29.8	3	1.4	10.86	A	A	A
315	32.933	2.95	12.0	9.84	A	A	A
317	32	3.4	8.8	11.38	A	A	A
318	30.7	1.3	4.4	5.88	A	A	A
319	29.2	1.69	-0.7	7.08	A	A	A
322	36.6	4.6	24.5	13.21	A	A	A
326	27.3	4.8	-7.1	18.05	A	A	A
347	27.3	3.6	-7.1	13.80	A	A	A
348	35	6	19.0	17.62	A	A	A
355	27.02	2.82	-8.1	11.21	A	A	A
356	29.8	2.2	1.4	8.44	A	A	A
363	25.4	4.2	-13.6	17.03	A	A	A
364	35.7	4	21.4	11.92	A	A	A
370	25.1	3.3	-14.6	13.77	A	A	A
371	31.5	3.2	7.1	10.95	A	A	A
379	38.6	4.4	31.3	12.11	N	N	N
382	32	4.75	8.8	15.39	A	A	A
391	25.82	2.23	-12.2	9.55	A	A	A
393	27.5	2.68	-6.5	10.57	A	A	A
401	17.1	0.7	-41.8	5.78	N	N	N
403	28.75	4.53	-2.2	16.28	A	A	A
404	27.4	2.3	-6.8	9.33	A	A	A
407	32.7	2.1	11.2	7.61	A	A	A
408	25.16	2.73	-14.4	11.59	A	A	A
411	32.3	4.3	9.9	13.92	A	A	A
412	32.55	5.35	10.7	16.94	A	A	A
414	35.3	1.9	20.1	6.76	A	N	W
414	31.4	4.7	6.8	15.51	A	A	A
419	43	12	46.3	28.20	N	A	N
421	28.7	2.2	-2.4	8.68	A	A	A
423	56	4.8	90.5	9.49	N	N	N
425	31.6	3.3	7.5	11.21	A	A	A
433	31.65	2.42	7.7	8.67	A	A	A
443	29.6	1.8	0.7	7.32	A	A	A
452	27.72	2.56	-5.7	10.10	A	A	A
454	25.9	1.7	-11.9	7.73	A	A	A
460	34.6	3.2	17.7	10.11	A	A	A
465	30	2.7	2.0	9.88	A	A	A
466	33.807	3.44645	15.0	10.98	A	A	A
475	23.4	1.6	-20.4	7.96	A	A	A
479	29	3.62	-1.4	13.13	A	A	A
484	24.9	5.8	-15.3	23.65	A	A	A

Table 19. Evaluation results for Pb-210 in Sample 1, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
487	29	0.3	-1.4	4.21	A	A	A
498	33.3	4.29	13.3	13.51	A	A	A
499	2.6	0.3	-91.2	12.24	N	N	N
501	30.9	3.6	5.1	12.34	A	A	A
509	30.6	0.9	4.1	5.03	A	A	A
523	30.5	2.1	3.7	8.00	A	A	A
525	30.7	2.1	4.4	7.97	A	A	A
528	30.5	1.7	3.7	6.91	A	A	A
533	32.5	2.1	10.5	7.64	A	A	A
536	37.5	3.1	27.6	9.22	A	N	W
537	31.41	2.92	6.8	10.15	A	A	A
539	32.24	1.81	9.7	6.94	A	A	A
553	31.1	2.1	5.8	7.89	A	A	A
555	31.4	2.8	6.8	9.81	A	A	A

Ra-226 determination of activity concentration in Sample 2

Table 20. Target values

Parameter	Value
Activity concentration [Bq/kg]	0.0962
Uncertainty [Bq/kg]	0.0058
Maximum Acceptable Relative Bias [%]	30

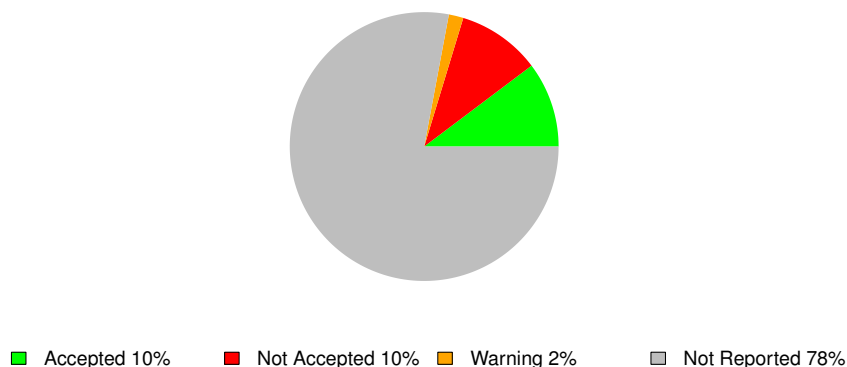


Figure 20. Percentage of Accepted vs. Warnings vs. Not Accepted vs. Not Reported results

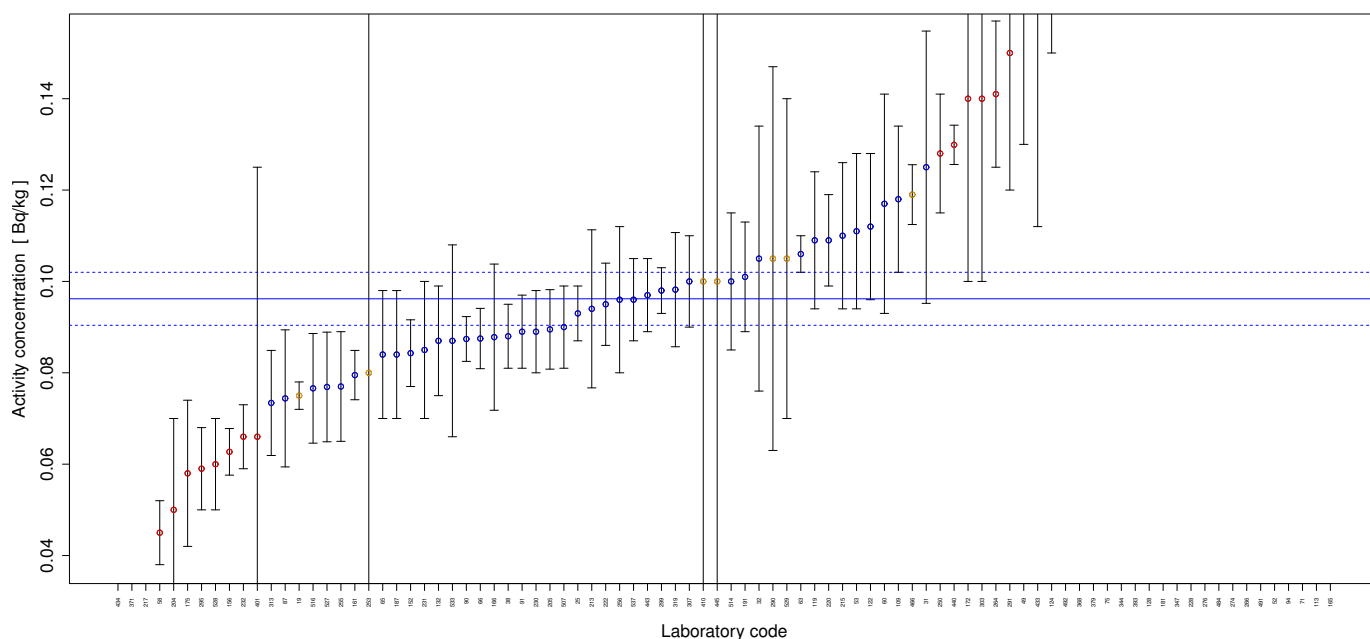


Figure 21. Reported results and evaluation parameters for Ra-226. Blue points represent accepted scores, whereas yellow and red represent warning and not accepted scores, respectively.

Table 21. Evaluation results for Ra-226 in Sample 2, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
19	0.075	0.003	-22.0	7.24	A	N	W
25	0.093	0.006	-3.3	8.83	A	A	A
31	0.125	0.0298	29.9	24.59	A	A	A

Table 21. Evaluation results for Ra-226 in Sample 2, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
32	0.105	0.029	9.2	28.27	A	A	A
38	0.088	0.007	-8.5	9.98	A	A	A
49	0.16	0.03	66.3	19.70	N	N	N
52	3.31	0.32	3340.8	11.39	N	N	N
53	0.111	0.017	15.4	16.46	A	A	A
58	0.045	0.007	-53.2	16.68	N	N	N
60	0.117	0.024	21.6	21.38	A	A	A
63	0.106	0.004	10.2	7.11	A	A	A
65	0.084	0.014	-12.7	17.72	A	A	A
66	0.0875	0.0066	-9.0	9.66	A	A	A
71	3.6	0.18	3642.2	7.83	N	N	N
75	0.334	0.031	247.2	11.07	N	N	N
87	0.0744	0.015	-22.7	21.04	A	A	A
90	0.0874	0.0049	-9.2	8.23	A	A	A
91	0.089	0.008	-7.5	10.82	A	A	A
94	3.41	0.54	3444.7	16.94	N	N	N
109	0.118	0.016	22.7	14.84	A	A	A
113	7.94	1.95	8153.6	25.29	N	N	N
119	0.109	0.015	13.3	15.02	A	A	A
122	0.112	0.016	16.4	15.51	A	A	A
124	0.18	0.03	87.1	17.72	N	N	N
128	0.52	0.08	440.5	16.52	N	N	N
132	0.087	0.012	-9.6	15.05	A	A	A
152	0.0843	0.0073	-12.4	10.55	A	A	A
156	0.0627	0.0051	-34.8	10.12	N	N	N
161	0.0795	0.0054	-17.4	9.08	A	A	A
165	37.6	2.4	38985.2	8.78	N	N	N
166	0.0878	0.016	-8.7	19.19	A	A	A
172	0.14	0.04	45.5	29.20	N	A	N
175	0.058	0.016	-39.7	28.24	N	A	N
181	0.52	0.06	440.5	13.02	N	N	N
187	0.084	0.014	-12.7	17.72	A	A	A
191	0.101	0.012	5.0	13.32	A	A	A
204	0.05	0.02	-48.0	40.45	N	N	N
205	0.0895	0.0087	-7.0	11.44	A	A	A
213	0.094	0.0173	-2.3	19.37	A	A	A
215	0.11	0.016	14.3	15.75	A	A	A
217	0.017205	0.002	-82.1	13.10	N	N	N
220	0.109	0.01	13.3	10.98	A	A	A
222	0.095	0.009	-1.2	11.23	A	A	A
228	0.56	0.1	482.1	18.85	N	N	N
230	0.089	0.009	-7.5	11.77	A	A	A
231	0.085	0.015	-11.6	18.65	A	A	A
232	0.066	0.007	-31.4	12.20	N	A	N
250	0.128	0.013	33.1	11.81	N	N	N
253	0.08	0.16	-16.8	200.09	A	N	W
255	0.077	0.012	-20.0	16.71	A	A	A
256	0.096	0.016	-0.2	17.72	A	A	A
264	0.141	0.016	46.6	12.85	N	N	N
266	1.93	0.33	1906.2	18.13	N	N	N
274	1.51	0.15	1469.7	11.62	N	N	N
276	0.6	0.03	523.7	7.83	N	N	N
290	0.105	0.042	9.2	40.45	A	N	W
291	0.15	0.03	55.9	20.89	N	N	N
295	0.059	0.009	-38.7	16.40	N	A	N
299	0.098	0.005	1.9	7.90	A	A	A
303	0.14	0.04	45.5	29.20	N	A	N
307	0.1	0.01	4.0	11.68	A	A	A
313	0.0734	0.0115	-23.7	16.79	A	A	A
319	0.0982	0.0125	2.1	14.08	A	A	A

Table 21. Evaluation results for Ra-226 in Sample 2, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
344	0.35	0.08	263.8	23.64	N	N	N
347	0.52	0.12	440.5	23.85	N	N	N
368	0.196	0.014	103.7	9.35	N	N	N
371	0.012	0.003	-87.5	25.72	N	N	N
379	0.2	0.026	107.9	14.33	N	N	N
393	0.51	0.08	430.1	16.81	N	N	N
401	0.066	0.059	-31.4	89.60	N	N	N
410	0.1	0.08	4.0	80.23	A	N	W
433	0.17	0.058	76.7	34.65	N	N	N
434	0	0	-100.0		N		N
440	0.1299	0.0043	35.0	6.88	N	N	N
443	0.097	0.008	0.8	10.22	A	A	A
445	0.1	0.09	4.0	90.20	A	N	W
466	0.119	0.006545	23.7	8.16	A	N	W
484	1.3	0.7	1251.3	54.18	N	N	N
491	2.263	0.377	2252.4	17.72	N	N	N
492	0.188	0.014	95.4	9.58	N	N	N
507	0.09	0.009	-6.4	11.68	A	A	A
514	0.1	0.015	4.0	16.17	A	A	A
516	0.0766	0.012	-20.4	16.79	A	A	A
527	0.0769	0.012	-20.1	16.73	A	A	A
528	0.06	0.01	-37.6	17.72	N	A	N
529	0.105	0.035	9.2	33.87	A	N	W
533	0.087	0.021	-9.6	24.88	A	A	A
537	0.096	0.009	-0.2	11.15	A	A	A

U-234 determination of activity concentration in Sample 2

Table 22. Target values

Parameter	Value
Activity concentration [Bq/kg]	0.0891
Uncertainty [Bq/kg]	0.00446
Maximum Acceptable Relative Bias [%]	30

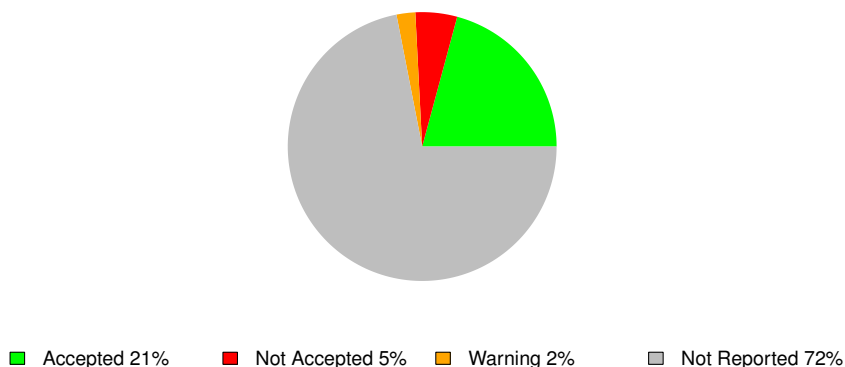


Figure 22. Percentage of Accepted vs. Warnings vs. Not Accepted vs. Not Reported results

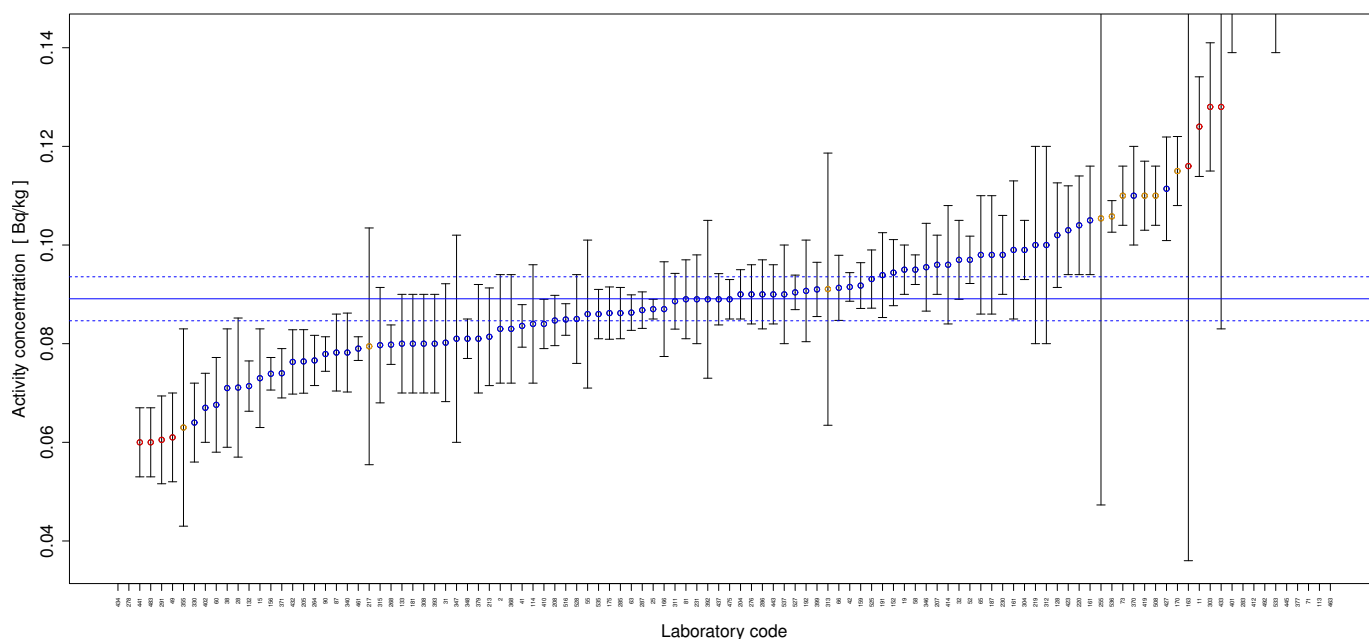


Figure 23. Reported results and evaluation parameters for U-234. Blue points represent accepted scores, whereas yellow and red represent warning and not accepted scores, respectively.

Table 23. Evaluation results for U-234 in Sample 2, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
2	0.083	0.011	-6.8	14.17	A	A	A
11	0.124	0.0101	39.2	9.56	N	N	N
15	0.073	0.01	-18.1	14.58	A	A	A

Table 23. Evaluation results for U-234 in Sample 2, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
19	0.095	0.005	6.6	7.26	A	A	A
25	0.087	0.002	-2.4	5.51	A	A	A
28	0.0711	0.0141	-20.2	20.45	A	A	A
31	0.0802	0.01195	-10.0	15.72	A	A	A
32	0.097	0.008	8.9	9.65	A	A	A
38	0.071	0.012	-20.3	17.63	A	A	A
41	0.0836	0.00431	-6.2	7.19	A	A	A
42	0.0915	0.0029	2.7	5.92	A	A	A
49	0.061	0.009	-31.5	15.58	N	A	N
52	0.097	0.0048	8.9	7.04	A	A	A
55	0.086	0.015	-3.5	18.15	A	A	A
58	0.095	0.003	6.6	5.92	A	A	A
60	0.0676	0.0096	-24.1	15.06	A	A	A
63	0.0863	0.0036	-3.1	6.52	A	A	A
65	0.098	0.012	10.0	13.23	A	A	A
66	0.09132	0.0066	2.5	8.79	A	A	A
71	4.47	0.22	4916.8	7.02	N	N	N
73	0.11	0.006	23.5	7.40	A	N	W
81	0.089	0.008	-0.1	10.29	A	A	A
87	0.0782	0.0078	-12.2	11.16	A	A	A
90	0.0779	0.0035	-12.6	6.73	A	A	A
113	17	1.87	18979.7	12.09	N	N	N
114	0.084	0.012	-5.7	15.14	A	A	A
128	0.102	0.0106	14.5	11.53	A	A	A
132	0.0714	0.0051	-19.9	8.72	A	A	A
133	0.08	0.01	-10.2	13.46	A	A	A
152	0.0944	0.0067	6.0	8.69	A	A	A
156	0.0739	0.0033	-17.1	6.71	A	A	A
159	0.09178	0.00464	3.0	7.11	A	A	A
161	0.105	0.011	17.9	11.61	A	A	A
161	0.099	0.014	11.1	15.00	A	A	A
163	0.116	0.08	30.2	69.15	N	N	N
166	0.087	0.0096	-2.4	12.12	A	A	A
170	0.115	0.007	29.1	7.88	A	N	W
175	0.0862	0.0053	-3.2	7.93	A	A	A
181	0.08	0.01	-10.2	13.46	A	A	A
187	0.098	0.012	10.0	13.23	A	A	A
191	0.0939	0.0086	5.4	10.44	A	A	A
192	0.0907	0.0103	1.8	12.41	A	A	A
204	0.09	0.005	1.0	7.48	A	A	A
205	0.0764	0.00644	-14.2	9.80	A	A	A
207	0.096	0.006	7.7	8.01	A	A	A
208	0.0847	0.0051	-4.9	7.83	A	A	A
213	0.0814	0.0099	-8.6	13.15	A	A	A
217	0.07946	0.024	-10.8	30.62	A	N	W
219	0.1	0.02	12.2	20.62	A	A	A
220	0.104	0.01	16.7	10.84	A	A	A
230	0.098	0.008	10.0	9.58	A	A	A
231	0.089	0.009	-0.1	11.28	A	A	A
255	0.1054	0.0581	18.3	55.35	A	N	W
264	0.0766	0.00509	-14.0	8.32	A	A	A
268	0.0798	0.004	-10.4	7.08	A	A	A
276	0.09	0.006	1.0	8.34	A	A	A
278	0.014	0.001	-84.3	8.72	N	N	N
283	0.168	0.012	88.6	8.72	N	N	N
285	0.0862	0.0052	-3.2	7.84	A	A	A
286	0.09	0.007	1.0	9.25	A	A	A
287	0.0868	0.0037	-2.6	6.57	A	A	A
291	0.0605	0.0089	-32.1	15.54	N	A	N
303	0.128	0.013	43.7	11.32	N	N	N

Table 23. Evaluation results for U-234 in Sample 2, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
304	0.099	0.006	11.1	7.86	A	A	A
308	0.08	0.01	-10.2	13.46	A	A	A
311	0.0886	0.00565	-0.6	8.11	A	A	A
312	0.1	0.02	12.2	20.62	A	A	A
313	0.09105	0.02759	2.2	30.71	A	N	W
315	0.0797	0.0117	-10.6	15.51	A	A	A
330	0.064	0.008	-28.2	13.46	A	A	A
340	0.0782	0.008	-12.2	11.39	A	A	A
346	0.0955	0.0089	7.2	10.58	A	A	A
347	0.081	0.021	-9.1	26.40	A	A	A
348	0.081	0.004	-9.1	7.03	A	A	A
355	0.063	0.02	-29.3	32.14	A	N	W
368	0.083	0.011	-6.8	14.17	A	A	A
370	0.11	0.01	23.5	10.38	A	A	A
371	0.074	0.005	-17.0	8.41	A	A	A
377	0.435	0.0813	388.2	19.35	N	N	N
379	0.081	0.011	-9.1	14.47	A	A	A
392	0.089	0.016	-0.1	18.66	A	A	A
393	0.08	0.01	-10.2	13.46	A	A	A
399	0.091	0.0055	2.1	7.85	A	A	A
401	0.167	0.028	87.4	17.50	N	N	N
402	0.067	0.007	-24.8	11.58	A	A	A
410	0.084	0.005	-5.7	7.78	A	A	A
412	0.18	0.01	102.0	7.48	N	N	N
414	0.096	0.012	7.7	13.46	A	A	A
419	0.11	0.007	23.5	8.10	A	N	W
423	0.103	0.009	15.6	10.07	A	A	A
427	0.1114	0.0105	25.0	10.67	A	A	A
432	0.0763	0.00652	-14.4	9.90	A	A	A
433	0.128	0.045	43.7	35.51	N	N	N
434	0	0	-100.0		N		N
437	0.089	0.0052	-0.1	7.69	A	A	A
441	0.06	0.007	-32.7	12.70	N	A	N
443	0.09	0.006	1.0	8.34	A	A	A
445	0.346	0.062	288.3	18.61	N	N	N
461	0.079	0.0024	-11.3	5.86	A	A	A
463	79.1	3.6	88676.7	6.77	N	N	N
475	0.089	0.004	-0.1	6.73	A	A	A
483	0.06	0.007	-32.7	12.70	N	A	N
492	0.208	0.01	133.4	6.94	N	N	N
508	0.11	0.006	23.5	7.40	A	N	W
516	0.0849	0.0032	-4.7	6.27	A	A	A
525	0.0931	0.0059	4.5	8.08	A	A	A
527	0.0904	0.0035	1.5	6.33	A	A	A
528	0.085	0.009	-4.6	11.71	A	A	A
533	0.211	0.072	136.8	34.49	N	N	N
535	0.086	0.005	-3.5	7.67	A	A	A
536	0.1058	0.0032	18.7	5.85	A	N	W
537	0.09	0.01	1.0	12.19	A	A	A

U-235 determination of mass fraction in Sample 2 by ICP-MS

Table 24. Target values

Parameter	Value
Mass fraction [ng/g]	0.0470
Uncertainty [ng/g]	0.0017
Maximum Acceptable Relative Bias [%]	20

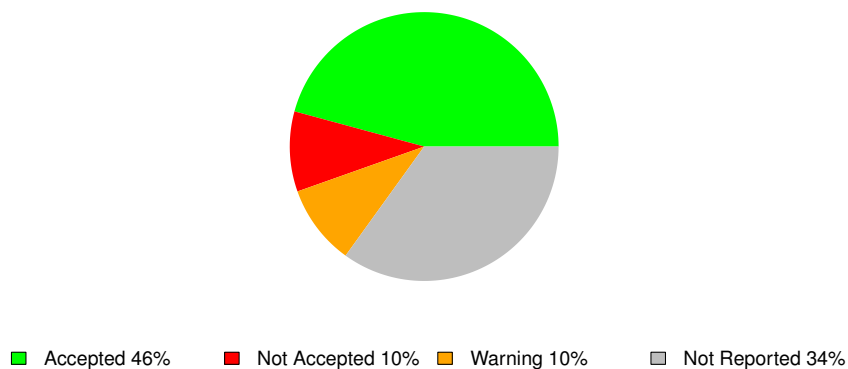


Figure 24. Percentage of Accepted vs. Warnings vs. Not Accepted vs. Not Reported results

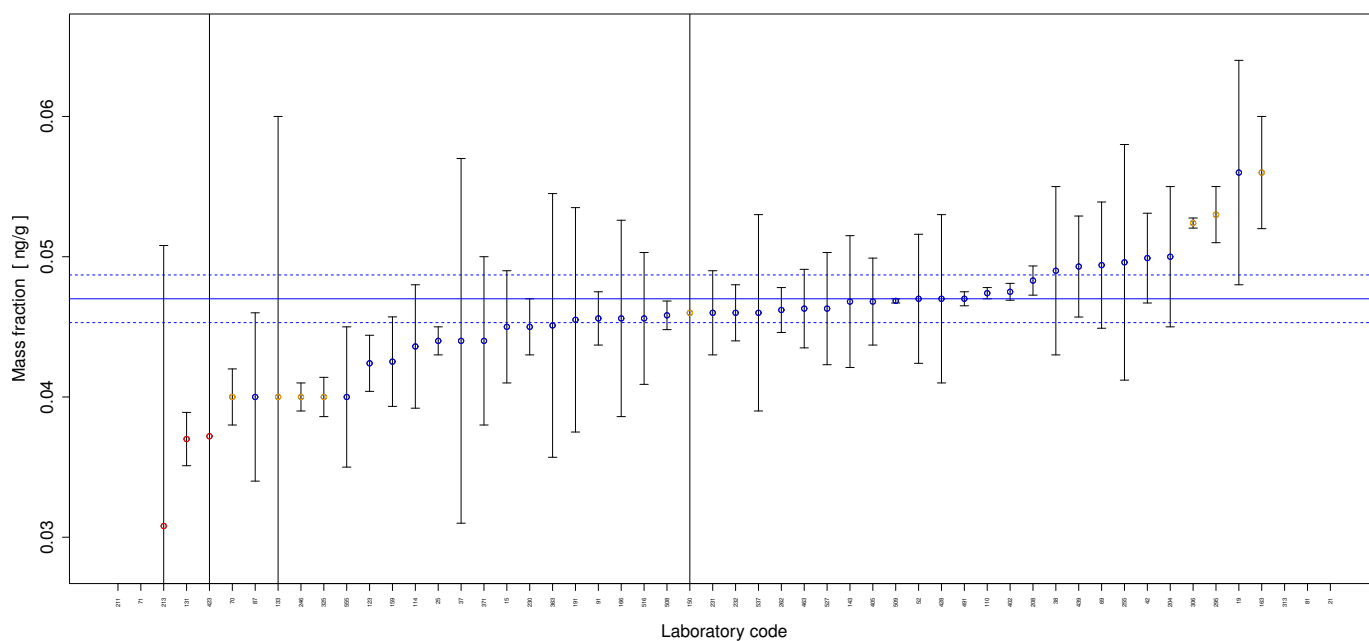


Figure 25. Reported results and evaluation parameters for U-235. Blue points represent accepted scores, whereas yellow and red represent warning and not accepted scores, respectively.

Table 25. Evaluation results for U-235 in Sample 2, Rep. Value and Rep. Unc. in ng/g for mass fraction

Labcode	Reported value [ng/g]	Reported uncertainty ($k = 1$) [ng/g]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
15	0.045	0.004	-4.3	5.73	A	A	A
19	0.056	0.008	19.1	8.01	A	A	A
21	6.38	0.06	13474.5	3.65	N	N	N

Table 25. Evaluation results for U-235 in Sample 2, Rep. Value and Rep. Unc. in ng/g for mass fraction

Labcode	Reported value [ng/g]	Reported uncertainty ($k = 1$) [ng/g]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
25	0.044	0.001	-6.4	3.79	A	A	A
37	0.044	0.013	-6.4	15.21	A	A	A
38	0.049	0.006	4.3	7.11	A	A	A
42	0.0499	0.0032	6.2	4.83	A	A	A
52	0.047	0.0046	0.0	6.09	A	A	A
69	0.0494	0.0045	5.1	5.82	A	A	A
70	0.04	0.002	-14.9	4.40	A	N	W
71	0.016	0.0006	-66.0	4.07	N	N	N
81	0.475	0.069	910.6	8.11	N	N	N
87	0.04	0.006	-14.9	8.33	A	A	A
91	0.0456	0.0019	-3.0	4.17	A	A	A
110	0.0474	0.0004	0.8	3.64	A	A	A
114	0.0436	0.0044	-7.2	6.21	A	A	A
123	0.0424	0.002	-9.8	4.32	A	A	A
131	0.037	0.0019	-21.3	4.44	N	N	N
133	0.04	0.02	-14.9	25.26	A	N	W
143	0.0468	0.0047	-0.4	6.19	A	A	A
150	0.046	0.03	-2.1	32.81	A	N	W
159	0.04252	0.00319	-9.5	5.21	A	A	A
163	0.056	0.004	19.1	5.08	A	N	W
166	0.0456	0.007	-3.0	8.48	A	A	A
191	0.0455	0.008	-3.2	9.51	A	A	A
204	0.05	0.005	6.4	6.17	A	A	A
208	0.0483	0.00104	2.8	3.77	A	A	A
211	0.015	0.002	-68.1	7.58	N	N	N
213	0.0308	0.02	-34.5	32.67	N	N	N
230	0.045	0.002	-4.3	4.25	A	A	A
231	0.046	0.003	-2.1	4.87	A	A	A
232	0.046	0.002	-2.1	4.22	A	A	A
246	0.04	0.001	-14.9	3.83	A	N	W
255	0.0496	0.0084	5.5	9.21	A	A	A
262	0.0462	0.0016	-1.7	4.01	A	A	A
295	0.053	0.002	12.8	4.08	A	N	W
306	0.0524	0.00036	11.5	3.63	A	N	W
313	0.156862	0.018855	233.8	7.01	N	N	N
325	0.04	0.0014	-14.9	4.02	A	N	W
363	0.0451	0.0094	-4.0	11.03	A	A	A
371	0.044	0.006	-6.4	7.72	A	A	A
402	0.0475	0.0006	1.1	3.67	A	A	A
405	0.0468	0.0031	-0.4	4.90	A	A	A
423	0.0372	0.15	-20.9	201.65	N	N	N
428	0.047	0.006	0.0	7.34	A	A	A
439	0.0493	0.0036	4.9	5.14	A	A	A
463	0.0463	0.0028	-1.5	4.71	A	A	A
491	0.047	0.0005	0.0	3.66	A	A	A
508	0.04582	0.00102	-2.5	3.78	A	A	A
509	0.04685	0.00015	-0.3	3.62	A	A	A
516	0.0456	0.0047	-3.0	6.30	A	A	A
527	0.0463	0.004	-1.5	5.63	A	A	A
537	0.046	0.007	-2.1	8.42	A	A	A
555	0.04	0.005	-14.9	7.22	A	A	A

U-235 determination of activity concentration in Sample 2

Table 26. Target values

Parameter	Value
Activity concentration [Bq/kg]	0.00372
Uncertainty [Bq/kg]	0.00031
Maximum Acceptable Relative Bias [%]	30

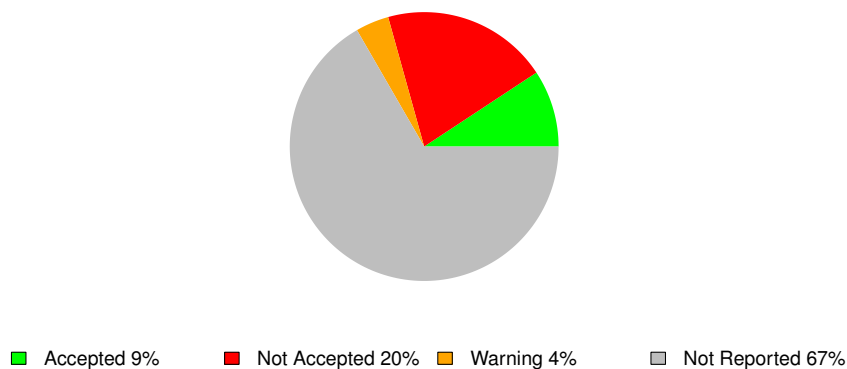


Figure 26. Percentage of Accepted vs. Warnings vs. Not Accepted vs. Not Reported results

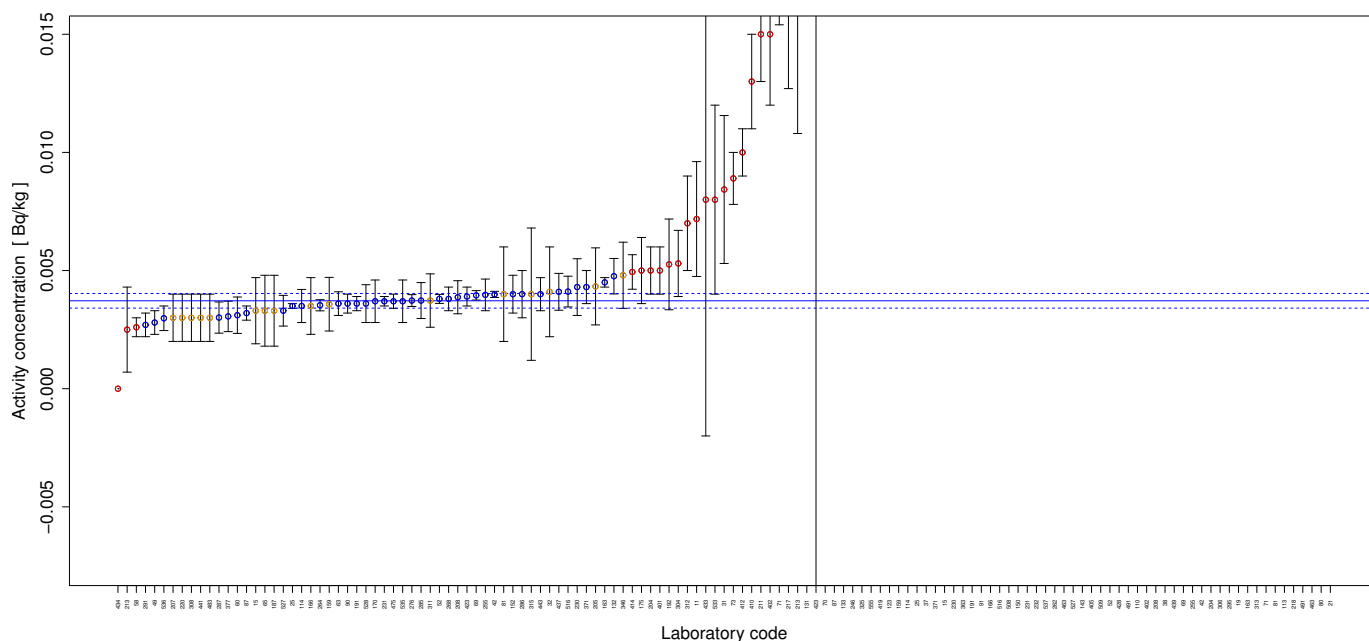


Figure 27. Reported results and evaluation parameters for U-235. Blue points represent accepted scores, whereas yellow and red represent warning and not accepted scores, respectively.

Table 27. Evaluation results for U-235 in Sample 2, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
11	0.00718	0.00243	93.0	34.85	N	N	N
15	0.0033	0.0014	-11.3	43.23	A	N	W
25	0.0035	0.0001	-5.9	8.81	A	A	A

Table 27. Evaluation results for U-235 in Sample 2, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
31	0.00843	0.00313	126.6	38.05	N	N	N
32	0.0041	0.0019	10.2	47.08	A	N	W
42	0.00399	0.00013	7.3	8.95	A	A	A
49	0.0028	0.0005	-24.7	19.71	A	A	A
52	0.0038	0.00019	2.1	9.72	A	A	A
58	0.0026	0.0004	-30.1	17.50	N	A	N
60	0.00311	0.00077	-16.4	26.12	A	A	A
63	0.0036	0.0005	-3.2	16.20	A	A	A
65	0.0033	0.0015	-11.3	46.21	A	N	W
69	0.00395	0.0002	6.2	9.75	A	A	A
71	0.16	0.008	4201.1	9.72	N	N	N
73	0.0089	0.0011	139.2	14.91	N	N	N
80	3.9058	0.25903	104894.6	10.65	N	N	N
81	0.004	0.002	7.5	50.69	A	N	W
87	0.0032	0.0003	-14.0	12.54	A	A	A
90	0.0036	0.0004	-3.2	13.89	A	A	A
113	0.7	0.077	18717.2	13.80	N	N	N
114	0.0035	0.0007	-5.9	21.67	A	A	A
132	0.00476	0.00075	28.0	17.82	A	A	A
152	0.004	0.0008	7.5	21.67	A	A	A
159	0.003576	0.001135	-3.9	32.82	A	N	W
163	0.0045	0.0002	21.0	9.44	A	A	A
166	0.0035	0.0012	-5.9	35.28	A	N	W
170	0.0037	0.0009	-0.5	25.71	A	A	A
175	0.005	0.0014	34.4	29.21	N	A	N
187	0.0033	0.0015	-11.3	46.21	A	N	W
191	0.0036	0.0003	-3.2	11.79	A	A	A
192	0.00526	0.00192	41.4	37.44	N	N	N
204	0.005	0.001	34.4	21.67	N	A	N
205	0.00433	0.00163	16.4	38.56	A	N	W
207	0.003	0.001	-19.4	34.36	A	N	W
208	0.00387	0.0007	4.0	19.92	A	A	A
213	0.0025	0.0018	-32.8	72.48	N	N	N
217	0.0227	0.01	510.2	44.83	N	N	N
218	0.82861	0.16254	22174.5	21.31	N	N	N
220	0.003	0.001	-19.4	34.36	A	N	W
230	0.0043	0.0012	15.6	29.12	A	A	A
231	0.0037	0.0002	-0.5	9.93	A	A	A
255	0.00397	0.00067	6.7	18.82	A	A	A
264	0.00353	0.000235	-5.1	10.67	A	A	A
268	0.0038	0.0005	2.1	15.57	A	A	A
276	0.00373	0.00025	0.3	10.69	A	A	A
285	0.00373	0.00076	0.3	22.01	A	A	A
286	0.004	0.001	7.5	26.35	A	A	A
287	0.00301	0.00066	-19.1	23.46	A	A	A
291	0.0027	0.0005	-27.4	20.31	A	A	A
304	0.0053	0.0014	42.5	27.70	N	A	N
308	0.003	0.001	-19.4	34.36	A	N	W
311	0.00373	0.00113	0.3	31.42	A	N	W
312	0.007	0.002	88.2	29.76	N	N	N
315	0.004	0.0028	7.5	70.49	A	N	W
346	0.0048	0.0014	29.0	30.33	A	N	W
371	0.0043	0.0007	15.6	18.29	A	A	A
377	0.00306	0.000645	-17.7	22.67	A	A	A
401	0.005	0.001	34.4	21.67	N	A	N
402	0.015	0.003	303.2	21.67	N	N	N
410	0.013	0.002	249.5	17.50	N	N	N
412	0.01	0.001	168.8	13.02	N	N	N
414	0.00494	0.00073	32.8	16.97	N	A	N
419	0.041	0.004	1002.1	12.83	N	N	N

Table 27. Evaluation results for U-235 in Sample 2, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
423	0.0039	0.0004	4.8	13.22	A	A	A
433	0.008	0.01	115.0	125.28	N	N	N
434	0	0	-100.0		N		N
437	0.0041	0.00078	10.2	20.77	A	A	A
441	0.003	0.001	-19.4	34.36	A	N	W
443	0.004	0.0007	7.5	19.38	A	A	A
463	3.55	0.47	95330.1	15.64	N	N	N
475	0.0037	0.0003	-0.5	11.63	A	A	A
483	0.003	0.001	-19.4	34.36	A	N	W
491	2.652	0.311	71190.3	14.39	N	N	N
516	0.00411	0.00065	10.5	17.88	A	A	A
527	0.0033	0.00065	-11.3	21.39	A	A	A
528	0.0036	0.0008	-3.2	23.73	A	A	A
533	0.008	0.004	115.0	50.69	N	N	N
535	0.0037	0.0009	-0.5	25.71	A	A	A
536	0.00298	0.00052	-19.9	19.34	A	A	A

U-238 determination of activity concentration in Sample 2

Table 28. Target values

Parameter	Value
Activity concentration [Bq/kg]	0.0818
Uncertainty [Bq/kg]	0.0041
Maximum Acceptable Relative Bias [%]	30

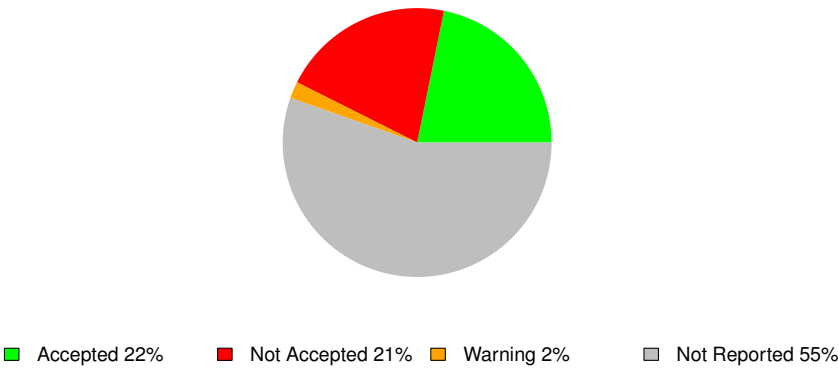


Figure 28. Percentage of Accepted vs. Warnings vs. Not Accepted vs. Not Reported results

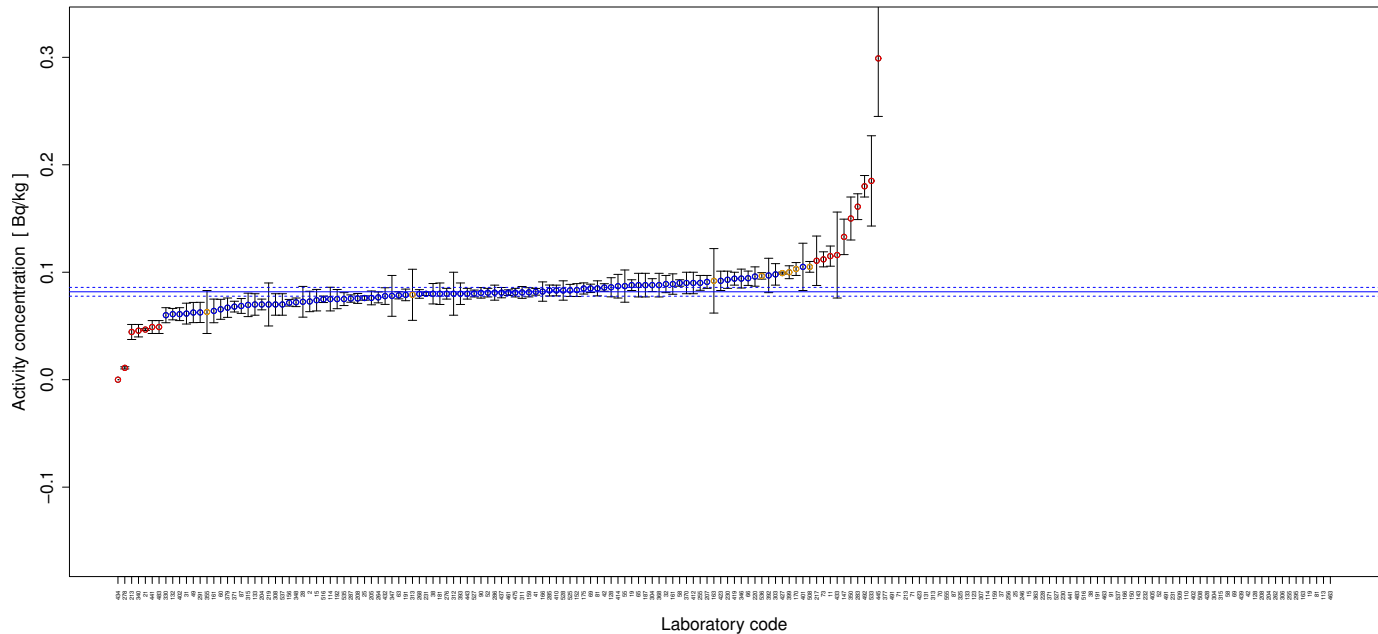


Figure 29. Reported results and evaluation parameters for U-238. Blue points represent accepted scores, whereas yellow and red represent warning and not accepted scores, respectively.

Table 29. Evaluation results for U-238 in Sample 2, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty (k = 1) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
2	0.0728	0.0095	-11.0	13.98	A	A	A
11	0.115	0.00938	40.6	9.57	N	N	N
15	0.074	0.01	-9.5	14.41	A	A	A

Table 29. Evaluation results for U-238 in Sample 2, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
19	0.088	0.005	7.6	7.58	A	A	A
25	0.076	0.002	-7.1	5.66	A	A	A
28	0.0725	0.0143	-11.4	20.35	A	A	A
31	0.0615	0.0097	-24.8	16.55	A	A	A
32	0.089	0.008	8.8	10.29	A	A	A
38	0.08	0.0095	-2.2	12.89	A	A	A
41	0.0818	0.00313	0.0	6.31	A	A	A
42	0.0858	0.0035	4.9	6.46	A	A	A
49	0.0625	0.0094	-23.6	15.85	A	A	A
52	0.081	0.004	-1.0	7.04	A	A	A
55	0.0871	0.015	6.5	17.94	A	A	A
58	0.09	0.003	10.0	6.02	A	A	A
60	0.0655	0.0093	-19.9	15.06	A	A	A
63	0.0785	0.0033	-4.0	6.54	A	A	A
65	0.088	0.011	7.6	13.47	A	A	A
66	0.0944	0.00667	15.4	8.66	A	A	A
69	0.085	0.0039	3.9	6.80	A	A	A
71	4.47	0.22	5364.6	7.02	N	N	N
73	0.112	0.007	36.9	8.01	N	N	N
81	0.085	0.007	3.9	9.64	A	A	A
87	0.0686	0.0069	-16.1	11.24	A	A	A
90	0.0808	0.0049	-1.2	7.87	A	A	A
113	16	1.76	19459.9	12.09	N	N	N
114	0.075	0.011	-8.3	15.50	A	A	A
128	0.086	0.0089	5.1	11.50	A	A	A
132	0.061	0.0053	-25.4	10.03	A	A	A
133	0.07	0.01	-14.4	15.14	A	A	A
147	0.1329	0.0165	62.5	13.39	N	N	N
152	0.0834	0.006	2.0	8.77	A	A	A
156	0.0716	0.0031	-12.5	6.62	A	A	A
159	0.08132	0.004265	-0.6	7.25	A	A	A
161	0.089	0.0095	8.8	11.79	A	A	A
161	0.064	0.011	-21.8	17.90	A	A	A
163	0.092	0.03	12.5	32.99	A	N	W
166	0.082	0.009	0.2	12.07	A	A	A
170	0.103	0.006	25.9	7.68	A	N	W
175	0.0849	0.0052	3.8	7.91	A	A	A
181	0.08	0.01	-2.2	13.47	A	A	A
187	0.088	0.011	7.6	13.47	A	A	A
191	0.0789	0.0054	-3.5	8.48	A	A	A
192	0.075	0.00893	-8.3	12.92	A	A	A
204	0.07	0.005	-14.4	8.73	A	A	A
205	0.0761	0.00643	-7.0	9.82	A	A	A
207	0.091	0.006	11.2	8.28	A	A	A
208	0.0756	0.0046	-7.6	7.88	A	A	A
213	0.0444	0.007	-45.7	16.54	N	N	N
217	0.11068	0.023	35.3	21.38	N	A	N
219	0.07	0.02	-14.4	29.01	A	A	A
220	0.096	0.009	17.4	10.63	A	A	A
230	0.093	0.008	13.7	9.96	A	A	A
231	0.0799	0.0016	-2.3	5.40	A	A	A
255	0.0901	0.0069	10.2	9.15	A	A	A
264	0.0766	0.00509	-6.4	8.32	A	A	A
268	0.0798	0.004	-2.4	7.09	A	A	A
276	0.08	0.005	-2.2	8.01	A	A	A
278	0.011	0.001	-86.6	10.38	N	N	N
283	0.161	0.012	96.8	8.98	N	N	N
285	0.083	0.0051	1.5	7.93	A	A	A
286	0.081	0.007	-1.0	9.99	A	A	A
287	0.0755	0.0034	-7.7	6.74	A	A	A

Table 29. Evaluation results for U-238 in Sample 2, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
291	0.0626	0.0094	-23.5	15.83	A	A	A
303	0.098	0.01	19.8	11.37	A	A	A
304	0.088	0.006	7.6	8.46	A	A	A
308	0.07	0.01	-14.4	15.14	A	A	A
311	0.0812	0.0055	-0.7	8.43	A	A	A
312	0.08	0.02	-2.2	25.50	A	A	A
313	0.079	0.02378	-3.4	30.52	A	N	W
315	0.0696	0.0109	-14.9	16.44	A	A	A
330	0.06	0.007	-26.6	12.70	A	A	A
340	0.0456	0.0058	-44.2	13.67	N	N	N
346	0.0941	0.0088	15.0	10.61	A	A	A
347	0.078	0.019	-4.7	24.87	A	A	A
348	0.072	0.004	-12.0	7.48	A	A	A
350	0.15	0.02	83.4	14.24	N	N	N
355	0.063	0.02	-23.0	32.14	A	N	W
368	0.088	0.011	7.6	13.47	A	A	A
370	0.09	0.01	10.0	12.19	A	A	A
371	0.068	0.005	-16.9	8.90	A	A	A
377	0.435	0.0813	431.8	19.35	N	N	N
379	0.067	0.009	-18.1	14.34	A	A	A
392	0.097	0.016	18.6	17.24	A	A	A
393	0.08	0.01	-2.2	13.47	A	A	A
399	0.1	0.006	22.2	7.82	A	N	W
401	0.105	0.022	28.4	21.54	A	A	A
402	0.061	0.006	-25.4	11.04	A	A	A
410	0.083	0.005	1.5	7.84	A	A	A
412	0.09	0.01	10.0	12.19	A	A	A
414	0.087	0.011	6.4	13.60	A	A	A
419	0.094	0.006	14.9	8.12	A	A	A
423	0.092	0.009	12.5	10.99	A	A	A
427	0.0992	0.0009	21.3	5.09	A	N	W
432	0.0778	0.00775	-4.9	11.15	A	A	A
433	0.116	0.04	41.8	34.85	N	N	N
434	0	0	-100.0		N		N
437	0.081	0.0048	-1.0	7.76	A	A	A
441	0.049	0.006	-40.1	13.23	N	N	N
443	0.08	0.005	-2.2	8.01	A	A	A
445	0.299	0.054	265.5	18.74	N	N	N
461	0.081	0.0026	-1.0	5.95	A	A	A
463	75.6	3.6	92320.5	6.91	N	N	N
475	0.081	0.004	-1.0	7.04	A	A	A
483	0.049	0.006	-40.1	13.23	N	N	N
491	2.129	0.567	2502.7	27.10	N	N	N
492	0.18	0.01	120.0	7.48	N	N	N
508	0.105	0.005	28.4	6.91	A	N	W
516	0.0748	0.003	-8.6	6.42	A	A	A
525	0.0831	0.0056	1.6	8.40	A	A	A
527	0.0802	0.0032	-2.0	6.41	A	A	A
528	0.083	0.009	1.5	11.95	A	A	A
533	0.185	0.042	126.2	23.25	N	N	N
535	0.075	0.006	-8.3	9.44	A	A	A
536	0.0966	0.003	18.1	5.90	A	N	W
537	0.07	0.01	-14.4	15.14	A	A	A

U-238 determination of mass fraction in Sample 2 by ICP-MS

Table 30. Target values

Parameter	Value
Mass fraction [ng/g]	6.56
Uncertainty [ng/g]	0.21
Maximum Acceptable Relative Bias [%]	20

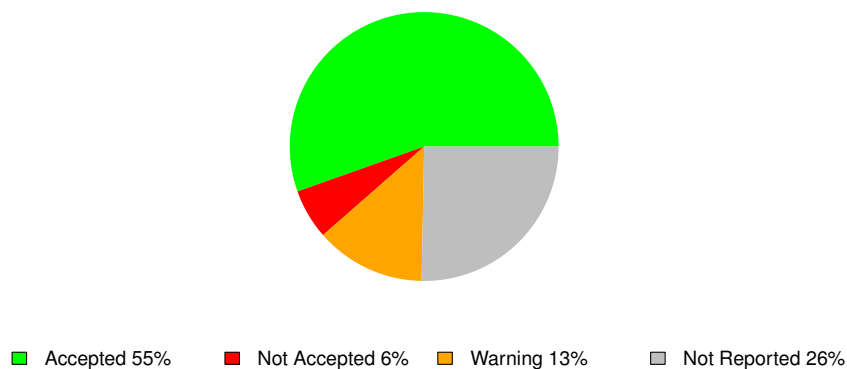


Figure 30. Percentage of Accepted vs. Warnings vs. Not Accepted vs. Not Reported results

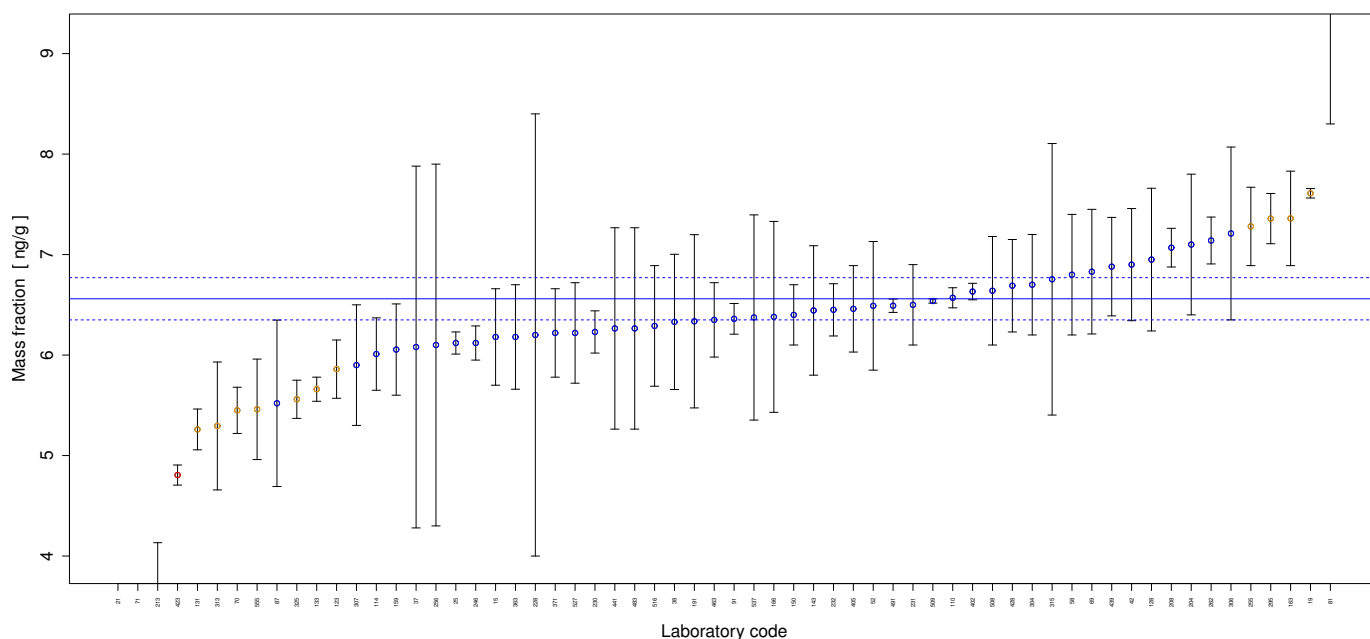


Figure 31. Reported results and evaluation parameters for U-238. Blue points represent accepted scores, whereas yellow and red represent warning and not accepted scores, respectively.

Table 31. Evaluation results for U-238 in Sample 2, Rep. Value and Rep. Unc. in ng/g for mass fraction

Labcode	Reported value [ng/g]	Reported uncertainty ($k = 1$) [ng/g]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
15	6.18	0.48	-5.8	5.03	A	A	A
19	7.61	0.047	16.0	3.22	A	N	W
21	0.04662	0.0008	-99.3	3.31	N	N	N

Table 31. Evaluation results for U-238 in Sample 2, Rep. Value and Rep. Unc. in ng/g for mass fraction

Labcode	Reported value [ng/g]	Reported uncertainty ($k = 1$) [ng/g]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
25	6.12	0.11	-6.7	3.32	A	A	A
37	6.08	1.8	-7.3	15.14	A	A	A
38	6.33	0.673	-3.5	6.21	A	A	A
42	6.9	0.558	5.2	5.16	A	A	A
52	6.49	0.64	-1.1	5.88	A	A	A
58	6.8	0.6	3.7	5.45	A	A	A
69	6.83	0.62	4.1	5.55	A	A	A
70	5.45	0.23	-16.9	3.83	A	N	W
71	2.238	0.068	-65.9	3.54	N	N	N
81	9.6	1.3	46.3	7.49	N	N	N
87	5.52	0.828	-15.8	8.15	A	A	A
91	6.3604	0.1526	-3.0	3.42	A	A	A
110	6.57	0.1	0.1	3.29	A	A	A
114	6.01	0.36	-8.4	4.38	A	A	A
123	5.86	0.29	-10.7	4.05	A	N	W
128	6.95	0.71	6.0	6.03	A	A	A
131	5.26	0.203	-19.8	3.74	A	N	W
133	5.66	0.12	-13.7	3.37	A	N	W
143	6.444	0.644	-1.8	5.93	A	A	A
150	6.4	0.3	-2.4	3.97	A	A	A
159	6.0548	0.4541	-7.7	4.93	A	A	A
163	7.36	0.47	12.2	4.52	A	N	W
166	6.38	0.95	-2.7	8.10	A	A	A
191	6.336	0.862	-3.4	7.52	A	A	A
204	7.1	0.7	8.2	5.88	A	A	A
208	7.0687	0.1925	7.8	3.48	A	A	A
213	3.57	0.563	-45.6	8.51	N	N	N
228	6.2	2.2	-5.5	18.03	A	A	A
230	6.23	0.21	-5.0	3.62	A	A	A
231	6.5	0.4	-0.9	4.44	A	A	A
232	6.45	0.26	-1.7	3.78	A	A	A
246	6.12	0.17	-6.7	3.49	A	A	A
255	7.28	0.39	11.0	4.17	A	N	W
256	6.1	1.8	-7.0	15.10	A	A	A
262	7.14	0.2332	8.8	3.59	A	A	A
295	7.358	0.25	12.2	3.62	A	N	W
304	6.7	0.5	2.1	4.92	A	A	A
306	7.21	0.86	9.9	6.77	A	A	A
307	5.9	0.6	-10.1	6.01	A	A	A
313	5.294478	0.636396	-19.3	6.81	A	N	W
315	6.754	1.351	3.0	10.50	A	A	A
325	5.56	0.19	-15.2	3.63	A	N	W
363	6.18	0.52	-5.8	5.29	A	A	A
371	6.22	0.44	-5.2	4.77	A	A	A
402	6.632	0.082	1.1	3.26	A	A	A
405	6.46	0.43	-1.5	4.62	A	A	A
423	4.806	0.1	-26.7	3.37	N	N	N
428	6.69	0.46	2.0	4.70	A	A	A
439	6.88	0.49	4.9	4.79	A	A	A
441	6.265	1.002	-4.5	8.61	A	A	A
463	6.35	0.37	-3.2	4.33	A	A	A
483	6.265	1.002	-4.5	8.61	A	A	A
491	6.491	0.0664	-1.0	3.24	A	A	A
508	6.64	0.54	1.2	5.18	A	A	A
509	6.538	0.021	-0.3	3.21	A	A	A
516	6.29	0.6	-4.1	5.74	A	A	A
527	6.22	0.5	-5.2	5.14	A	A	A
537	6.374	1.021	-2.8	8.63	A	A	A
555	5.46	0.5	-16.8	5.59	A	N	W

Total U determination of mass fraction in Sample 2 by ICP-MS

Table 32. Target values

Parameter	Value
Mass fraction [ng/g]	6.60
Uncertainty [ng/g]	0.21
Maximum Acceptable Relative Bias [%]	20

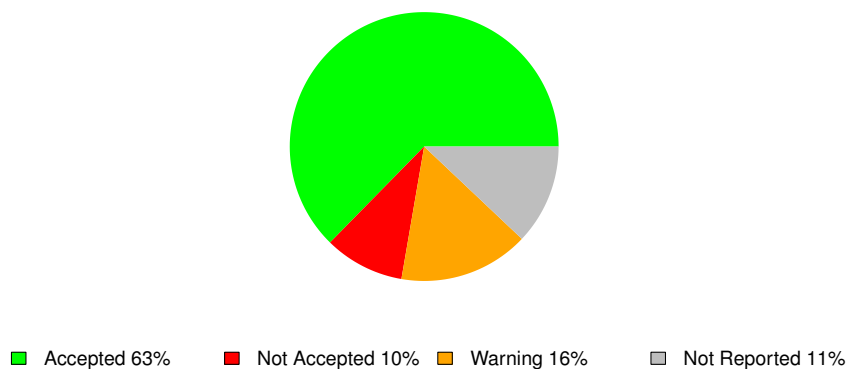


Figure 32. Percentage of Accepted vs. Warnings vs. Not Accepted vs. Not Reported results

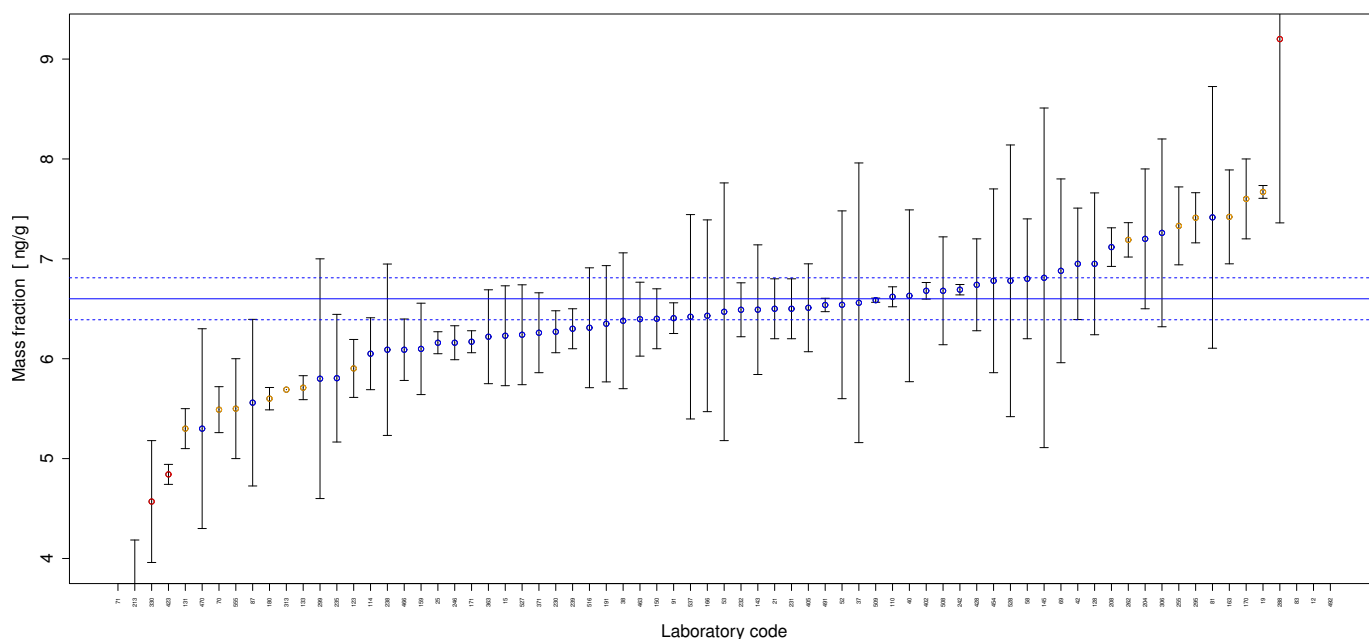


Figure 33. Reported results and evaluation parameters for Total U. Blue points represent accepted scores, whereas yellow and red represent warning and not accepted scores, respectively.

Table 33. Evaluation Results for Total U in Sample 2, Rep. Value and Rep. Unc. in ng/g for mass fraction

Labcode	Reported value [ng/g]	Reported uncertainty ($k = 1$) [ng/g]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
12	13.56	0.14	105.4	3.22	N	N	N
15	6.23	0.5	-5.6	5.12	A	A	A
19	7.67	0.064	16.2	3.21	A	N	W

Table 33. Evaluation Results for Total U in Sample 2, Rep. Value and Rep. Unc. in ng/g for mass fraction

Labcode	Reported value [ng/g]	Reported uncertainty ($k = 1$) [ng/g]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
21	6.5	0.3	-1.5	3.93	A	A	A
25	6.16	0.11	-6.7	3.30	A	A	A
37	6.56	1.4	-0.6	11.14	A	A	A
38	6.38	0.68	-3.3	6.21	A	A	A
40	6.63	0.86	0.4	7.22	A	A	A
42	6.95	0.558	5.3	5.12	A	A	A
52	6.54	0.94	-0.9	7.86	A	A	A
53	6.47	1.29	-2.0	10.46	A	A	A
58	6.8	0.6	3.0	5.44	A	A	A
69	6.88	0.92	4.2	7.40	A	A	A
70	5.49	0.23	-16.8	3.81	A	N	W
71	2.254	0.0068	-65.8	3.19	N	N	N
81	7.415	1.31	12.3	9.39	A	A	A
83	11.9	2.3	80.3	10.17	N	N	N
87	5.56	0.834	-15.8	8.15	A	A	A
91	6.406	0.1537	-2.9	3.40	A	A	A
110	6.62	0.1	0.3	3.27	A	A	A
114	6.05	0.36	-8.3	4.36	A	A	A
123	5.9027	0.29	-10.6	4.02	A	N	W
128	6.95	0.71	5.3	6.02	A	A	A
131	5.3	0.2	-19.7	3.70	A	N	W
133	5.71	0.12	-13.5	3.35	A	N	W
143	6.491	0.649	-1.6	5.93	A	A	A
145	6.81	1.7	3.2	12.88	A	A	A
150	6.4	0.3	-3.0	3.95	A	A	A
159	6.0984	0.4574	-7.6	4.92	A	A	A
163	7.42	0.47	12.4	4.49	A	N	W
166	6.43	0.96	-2.6	8.11	A	A	A
170	7.6	0.4	15.2	4.13	A	N	W
171	6.17	0.11	-6.5	3.30	A	A	A
180	5.6	0.112	-15.2	3.34	A	N	W
191	6.35	0.582	-3.8	5.58	A	A	A
204	7.2	0.7	9.1	5.81	A	A	A
208	7.1174	0.1932	7.8	3.46	A	A	A
213	3.6	0.585	-45.5	8.73	N	N	N
230	6.27	0.21	-5.0	3.60	A	A	A
231	6.5	0.3	-1.5	3.93	A	A	A
232	6.49	0.27	-1.7	3.80	A	A	A
235	5.805	0.639	-12.1	6.36	A	A	A
238	6.09	0.858	-7.7	7.73	A	A	A
239	6.3	0.2	-4.6	3.56	A	A	A
242	6.691	0.052	1.4	3.21	A	A	A
246	6.16	0.17	-6.7	3.47	A	A	A
255	7.33	0.39	11.1	4.15	A	N	W
262	7.19	0.172	8.9	3.40	A	N	W
288	9.2	1.84	39.4	10.49	N	N	N
295	7.411	0.251	12.3	3.60	A	N	W
299	5.8	1.2	-12.1	10.82	A	A	A
306	7.26	0.94	10.0	7.21	A	A	A
313	5.690275	0.000684	-13.8	3.18	A	N	W
330	4.57	0.61	-30.8	7.39	N	N	N
363	6.22	0.47	-5.8	4.94	A	A	A
371	6.26	0.4	-5.2	4.51	A	A	A
402	6.68	0.083	1.2	3.24	A	A	A
405	6.51	0.44	-1.4	4.64	A	A	A
423	4.842	0.1	-26.6	3.35	N	N	N
428	6.74	0.46	2.1	4.67	A	A	A
454	6.78	0.92	2.7	7.49	A	A	A
463	6.396	0.37	-3.1	4.30	A	A	A
466	6.09	0.307545	-7.7	4.06	A	A	A

Table 33. Evaluation Results for Total U in Sample 2, Rep. Value and Rep. Unc. in ng/g for mass fraction

Labcode	Reported value [ng/g]	Reported uncertainty ($k = 1$) [ng/g]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
470	5.3	1	-19.7	9.96	A	A	A
491	6.538	0.067	-0.9	3.22	A	A	A
492	14.55	0.7	120.4	3.99	N	N	N
508	6.68	0.54	1.2	5.14	A	A	A
509	6.586	0.021	-0.2	3.19	A	A	A
516	6.31	0.6	-4.4	5.72	A	A	A
527	6.24	0.5	-5.4	5.12	A	A	A
528	6.78	1.36	2.7	10.52	A	A	A
537	6.42	1.023	-2.7	8.58	A	A	A
555	5.5	0.5	-16.7	5.55	A	N	W

K-40 determination of activity concentration in Sample 3

Table 34. Target values

Parameter	Value
Activity concentration [Bq/kg]	485
Uncertainty [Bq/kg]	11
Maximum Acceptable Relative Bias [%]	20

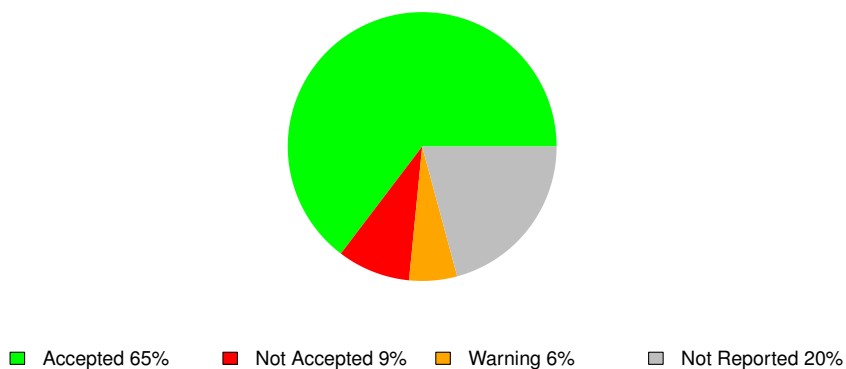


Figure 34. Percentage of Accepted vs. Warnings vs. Not Accepted vs. Not Reported results

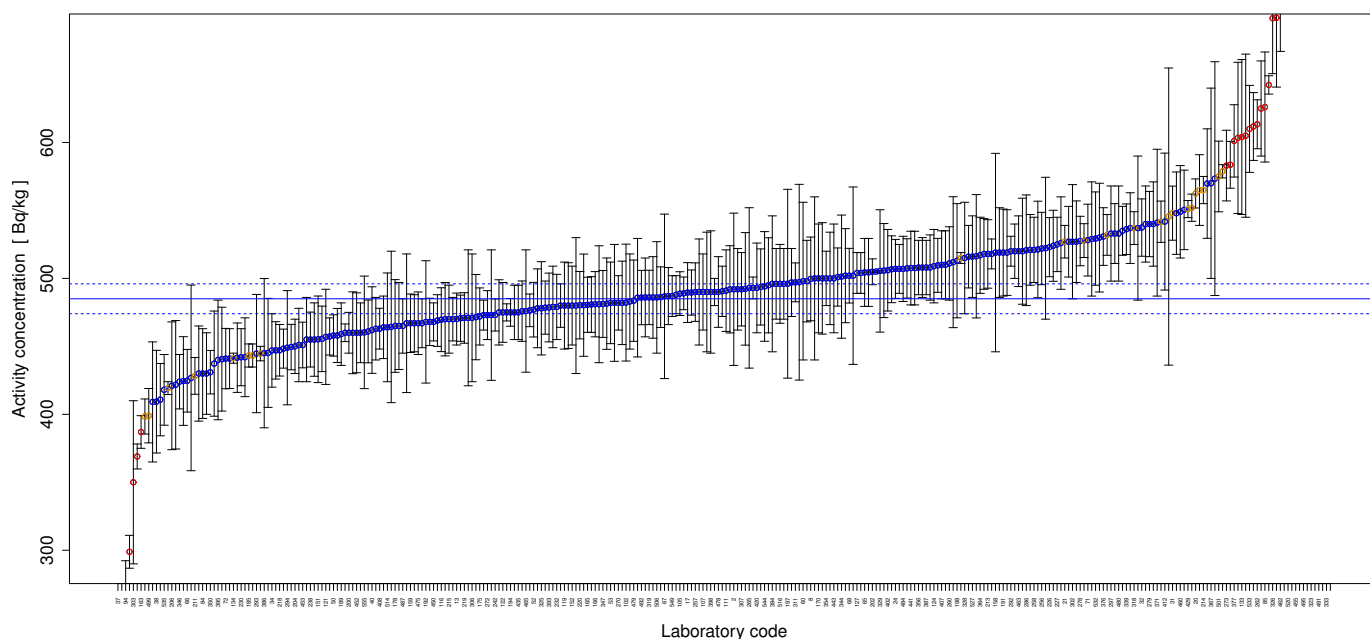


Figure 35. Reported results and evaluation parameters for K-40. Blue points represent accepted scores, whereas yellow and red represent warning and not accepted scores, respectively.

Table 35. Evaluation results for K-40 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
2	492	56	1.4	11.61	A	A	A
8	499.64	30.79	3.0	6.57	A	A	A
9	464.3	55.7	-4.3	12.21	A	A	A

Table 35. Evaluation results for K-40 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
11	502	34.6	3.5	7.26	A	A	A
12	409.12	44.16	-15.7	11.03	A	A	A
13	470.1	19.1	-3.1	4.65	A	A	A
15	479	30	-1.2	6.66	A	A	A
17	489.59	22.01	0.9	5.04	A	A	A
19	529	42	9.1	8.26	A	A	A
20	562.5	10.7	16.0	2.96	A	N	W
21	527	12	8.7	3.21	A	N	W
24	507	21.7	4.5	4.84	A	A	A
25	469	19	-3.3	4.64	A	A	A
28	516.3	45.35	6.4	9.07	A	A	A
31	548	19.9	13.0	4.28	A	N	W
32	537.4	21.1	10.8	4.53	A	A	A
34	447	27	-7.8	6.45	A	A	A
35	490	39	1.0	8.28	A	A	A
37	2.61	0.31	-99.5	12.09	N	N	N
38	409.32	37.75	-15.6	9.50	A	A	A
40	462	31.84	-4.7	7.26	A	A	A
41	447.05	21.1	-7.8	5.24	A	A	A
42	492	30	1.4	6.51	A	A	A
45	475.9	22.2	-1.9	5.19	A	A	A
48	490.5	18.5	1.1	4.40	A	A	A
49	500	60	3.1	12.21	A	A	A
50	458	15.2	-5.6	4.02	A	A	A
52	477	20.1	-1.6	4.79	A	A	A
53	482	30	-0.6	6.62	A	A	A
54	527	26	8.7	5.43	A	A	A
55	507.35	21.83	4.6	4.86	A	A	A
57	522.2	52.2	7.7	10.25	A	A	A
58	521	26	7.4	5.48	A	A	A
60	498	58	2.7	11.87	A	A	A
62	430	35	-11.3	8.45	A	A	A
63	527.81	12.45	8.8	3.27	A	N	W
64	485.8	43.6	0.2	9.26	A	A	A
65	504.4	25	4.0	5.45	A	A	A
66	424.7	23.045	-12.4	5.88	A	A	A
67	486.8	60.5	0.4	12.63	A	A	A
68	502	20.1	3.5	4.60	A	A	A
69	565	26	16.5	5.13	A	N	W
70	480	16	-1.0	4.03	A	A	A
71	528.18	26.41	8.9	5.49	A	A	A
72	441	22.2	-9.1	5.52	A	A	A
78	578.8	4.85	19.3	2.42	A	N	W
79	473	11	-2.5	3.25	A	A	A
81	421.75	47.25	-13.0	11.43	A	A	A
82	764.11	16.48	57.5	3.13	N	N	N
83	497.2	72	2.5	14.66	A	A	A
84	430	33	-11.3	8.00	A	A	A
85	626.094	40.482	29.1	6.85	N	N	N
90	518	26	6.8	5.51	A	A	A
94	272.5	19.8	-43.8	7.61	N	N	N
97	467	51	-3.7	11.15	A	A	A
100	475	24	-2.1	5.54	A	A	A
102	482.2	43	-0.6	9.20	A	A	A
104	470.7	17	-3.0	4.26	A	A	A
105	488.8	16.1	0.8	4.00	A	A	A
107	490	28	1.0	6.15	A	A	A
109	515	4	6.2	2.40	A	N	W
110	486	29	0.2	6.38	A	A	A
111	491	30	1.2	6.52	A	A	A

Table 35. Evaluation results for K-40 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
113	573.4	86	18.2	15.17	A	A	A
114	455	31	-6.2	7.18	A	A	A
116	469.62	23.49	-3.2	5.49	A	A	A
119	480	32	-1.0	7.04	A	A	A
121	457	35	-5.8	7.99	A	A	A
122	475	22	-2.1	5.16	A	A	A
124	509	27	5.0	5.77	A	A	A
125	480	31.52	-1.0	6.95	A	A	A
127	504	15	3.9	3.74	A	A	A
128	509.59	19.85	5.1	4.51	A	A	A
131	457.2827	13.67027	-5.7	3.75	A	A	A
132	471	50	-2.9	10.86	A	A	A
133	604	57	24.5	9.71	N	A	N
134	441.3	3.7	-9.0	2.42	A	N	W
139	501	21.4	3.3	4.84	A	A	A
140	463	23	-4.5	5.46	A	A	A
145	426.8	68.29	-12.0	16.16	A	A	A
147	611.755	24.943	26.1	4.67	N	N	N
150	497	25	2.5	5.52	A	A	A
151	455.19	31.85	-6.2	7.36	A	A	A
152	480	29	-1.0	6.45	A	A	A
154	470	27	-3.1	6.18	A	A	A
155	451	27	-7.0	6.40	A	A	A
156	475	6.3	-2.1	2.63	A	A	A
158	519	73	7.0	14.25	A	A	A
159	467	21.5	-3.7	5.13	A	A	A
161	519	33	7.0	6.75	A	A	A
163	387	12	-20.2	3.84	N	N	N
165	480.56	20.26	-0.9	4.79	A	A	A
166	481	24	-0.8	5.48	A	A	A
168	482	43	-0.6	9.20	A	A	A
170	500	40	3.1	8.32	A	A	A
172	540	28	11.3	5.66	A	A	A
175	472	21	-2.7	4.99	A	A	A
178	465	34.1	-4.1	7.68	A	A	A
179	505.03	0.59	4.1	2.27	A	A	A
180	458	19.9	-5.6	4.90	A	A	A
181	569.77	40.27	17.5	7.42	A	A	A
183	498	30	2.7	6.44	A	A	A
184	460	6.5	-5.2	2.67	A	A	A
185	443.27	8.49	-8.6	2.97	A	N	W
187	504.4	25	4.0	5.45	A	A	A
189	459	23	-5.4	5.50	A	A	A
191	519	32	7.0	6.57	A	A	A
192	468	45	-3.5	9.88	A	A	A
193	824.28	25.2	70.0	3.81	N	N	N
194	475	10.2	-2.1	3.12	A	A	A
197	496.09	69.45	2.3	14.18	A	A	A
198	513	42	5.8	8.50	A	A	A
200	460	15	-5.2	3.97	A	A	A
202	504.86	9.51	4.1	2.95	A	A	A
203	603.4	55.6	24.4	9.49	N	A	N
204	450	20	-7.2	4.99	A	A	A
205	548	30.3	13.0	5.98	A	A	A
206	421	47	-13.2	11.39	A	A	A
207	526	34	8.4	6.85	A	A	A
208	486.2	22.3	0.2	5.12	A	A	A
211	428.27	13.53	-11.7	3.89	A	N	W
213	518	25.2	6.8	5.37	A	A	A
214	565	10	16.5	2.88	A	N	W

Table 35. Evaluation results for K-40 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
215	470	25	-3.1	5.78	A	A	A
218	447.13067	18.96132	-7.8	4.81	A	A	A
219	470.9	18.6	-2.9	4.55	A	A	A
220	480.3	24.8	-1.0	5.64	A	A	A
223	605	60	24.7	10.17	N	A	N
224	445.2	40.1	-8.2	9.29	A	A	A
226	523	21.75	7.8	4.74	A	A	A
227	525	20	8.2	4.43	A	A	A
230	442	21	-8.9	5.26	A	A	A
232	479	24	-1.2	5.50	A	A	A
233	465	32	-4.1	7.25	A	A	A
235	481	43	-0.8	9.22	A	A	A
238	455	20.2	-6.2	4.99	A	A	A
242	473.1	11.82	-2.5	3.37	A	A	A
247	437.3	38.684	-9.8	9.13	A	A	A
249	441.67	25.531328	-8.9	6.21	A	A	A
252	449.48	16.71	-7.3	4.35	A	A	A
253	478	29	-1.4	6.48	A	A	A
254	691.74	51	42.6	7.71	N	N	N
256	521.99	26.62	7.6	5.58	A	A	A
257	489.91	21.52	1.0	4.94	A	A	A
258	521	24	7.4	5.13	A	A	A
260	511	27	5.4	5.75	A	A	A
261	552	10	13.8	2.90	A	N	W
262	613.4	18	26.5	3.71	N	N	N
265	493	59	1.6	12.18	A	A	A
267	490	44	1.0	9.26	A	A	A
268	461	23.1	-5.0	5.50	A	A	A
270	482	20	-0.6	4.73	A	A	A
271	398.4	12.9	-17.9	3.95	A	N	W
272	473	18	-2.5	4.43	A	A	A
273	583	26	20.2	5.00	N	N	N
274	524	26.118031	8.0	5.48	A	A	A
276	481.43	33.6	-0.7	7.34	A	A	A
277	504	15	3.9	3.74	A	A	A
278	527.5	18.2	8.8	4.13	A	A	A
279	540	24	11.3	4.99	A	A	A
280	1071.6	105.24	121.0	10.08	N	N	N
281	518	11	6.8	3.11	A	A	A
283	369	9.2	-23.9	3.37	N	N	N
284	535	18	10.3	4.06	A	A	A
286	520.7	40.7	7.4	8.14	A	A	A
287	476.5	12	-1.8	3.39	A	A	A
288	473	48	-2.5	10.40	A	A	A
290	475	20	-2.1	4.78	A	A	A
291	502	65.26	3.5	13.20	A	A	A
292	520	11	7.2	3.10	A	A	A
293	444.7	43.5	-8.3	10.04	A	A	A
294	449	42	-7.4	9.63	A	A	A
295	506.72	24.58	4.5	5.35	A	A	A
297	533	35	9.9	6.95	A	A	A
299	530	40	9.3	7.88	A	A	A
300	444.7	5.33	-8.3	2.57	A	N	W
302	527	42	8.7	8.29	A	A	A
303	350	60	-27.8	17.29	N	A	N
304	507	18	4.5	4.21	A	A	A
306	471	47	-2.9	10.23	A	A	A
307	492	27	1.4	5.94	A	A	A
310	527	30	8.7	6.13	A	A	A
311	497.1	14.3	2.5	3.66	A	A	A

Table 35. Evaluation results for K-40 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
312	480.8	20.5	-0.9	4.83	A	A	A
313	460	30.1	-5.2	6.93	A	A	A
314	493	8	1.6	2.79	A	A	A
315	537	26	10.7	5.35	A	A	A
316	440.6	38.2	-9.2	8.96	A	A	A
317	625	35	28.9	6.04	N	N	N
318	537	12.06	10.7	3.19	A	N	W
319	486	20	0.2	4.70	A	A	A
322	455	27	-6.2	6.35	A	A	A
323	897.4	40.3	85.0	5.03	N	N	N
325	478	34.3	-1.4	7.53	A	A	A
326	691.42	40.8	42.6	6.32	N	N	N
328	515	41	6.2	8.28	A	A	A
329	505.5	45	4.2	9.19	A	A	A
332	500	41	3.1	8.51	A	A	A
333	1758	37.24	262.5	3.10	N	N	N
338	519	31.5	7.0	6.48	A	A	A
339	536.2	18.6	10.6	4.14	A	A	A
341	488	14	0.6	3.66	A	A	A
344	501.3	45.3	3.4	9.32	A	A	A
346	424	20	-12.6	5.23	A	A	A
347	481.2	24.6	-0.8	5.59	A	A	A
348	430	30	-11.3	7.34	A	A	A
350	431	16	-11.1	4.35	A	A	A
354	500	20	3.1	4.60	A	A	A
355	419.28	4.73	-13.6	2.53	A	N	W
356	508	20	4.7	4.54	A	A	A
357	464	23	-4.3	5.45	A	A	A
358	537	53	10.7	10.13	A	A	A
363	467	21	-3.7	5.04	A	A	A
364	517	28	6.6	5.87	A	A	A
367	570	70	17.5	12.49	A	A	A
369	468	17.4	-3.5	4.36	A	A	A
370	508	22	4.7	4.89	A	A	A
371	541	54	11.6	10.24	A	A	A
373	532	15	9.7	3.62	A	N	W
376	530.8	21.2	9.4	4.59	A	A	A
377	601.1694	26.60554	24.0	4.97	N	N	N
379	480	50	-1.0	10.66	A	A	A
381	491.95	32.08	1.4	6.90	A	A	A
382	516	23	6.4	5.00	A	A	A
384	496	50	2.3	10.33	A	A	A
386	444.99	54.9	-8.2	12.54	A	A	A
387	508	20	4.7	4.54	A	A	A
388	520	20	7.2	4.47	A	A	A
391	448.34	14.34	-7.6	3.92	A	A	A
393	478.6	25.3	-1.3	5.75	A	A	A
395	440	44	-9.3	10.25	A	A	A
397	298.87	12.09	-38.4	4.64	N	N	N
398	490	45	1.0	9.46	A	A	A
400	259	2	-46.6	2.40	N	N	N
401	841	43	73.4	5.59	N	N	N
402	506	30	4.3	6.35	A	A	A
403	478.5	19.55	-1.3	4.67	A	A	A
405	487	21	0.4	4.87	A	A	A
407	510	25	5.2	5.40	A	A	A
408	463	15	-4.5	3.95	A	A	A
410	521.3	35.5	7.5	7.18	A	A	A
411	489.6	16.6	0.9	4.08	A	A	A
412	541.8	50.37	11.7	9.57	A	A	A

Table 35. Evaluation results for K-40 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
414	533	22	9.9	4.71	A	A	A
417	486	30	0.2	6.58	A	A	A
420	493	33	1.6	7.07	A	A	A
421	483	35	-0.4	7.59	A	A	A
425	500	34	3.1	7.17	A	A	A
426	492.3	41.39	1.5	8.71	A	A	A
428	494.9	35	2.0	7.43	A	A	A
429	551	6.3	13.6	2.54	A	N	W
430	540	31	11.3	6.17	A	A	A
433	583.59	17.22	20.3	3.72	N	N	N
434	410.8	26.6	-15.3	6.86	A	A	A
435	475	20	-2.1	4.78	A	A	A
437	442	29	-8.9	6.94	A	A	A
440	1258.3	16.2	159.4	2.61	N	N	N
441	507.6	27.1	4.7	5.80	A	A	A
442	505.76495	34.604526	4.3	7.21	A	A	A
443	500	40	3.1	8.32	A	A	A
444	482	30.7	-0.6	6.76	A	A	A
445	496	26	2.3	5.71	A	A	A
446	493.7	28	1.8	6.11	A	A	A
448	443.27	8.49	-8.6	2.97	A	N	W
450	468	14	-3.5	3.75	A	A	A
452	460	29.4	-5.2	6.78	A	A	A
453	451	16.8	-7.0	4.36	A	A	A
455	820	41	69.1	5.49	N	N	N
459	480.3	37.6	-1.0	8.15	A	A	A
460	549	34	13.2	6.60	A	A	A
462	702	35	44.7	5.48	N	N	N
463	520	26	7.2	5.49	A	A	A
464	511.93	48.16	5.6	9.68	A	A	A
465	476	45	-1.9	9.72	A	A	A
467	545.49	109.3	12.5	20.16	A	N	W
475	467	23	-3.7	5.42	A	A	A
477	490	10	1.0	3.05	A	A	A
478	490	26	1.0	5.77	A	A	A
479	483.6	29.9	-0.3	6.59	A	A	A
480	533	35	9.9	6.95	A	A	A
482	510	25	5.2	5.40	A	A	A
483	507.6	27.1	4.7	5.80	A	A	A
484	507	24	4.5	5.25	A	A	A
487	465	20	-4.1	4.86	A	A	A
491	1088.221	26.785	124.4	3.35	N	N	N
492	485.9	20	0.2	4.70	A	A	A
495	831	20	71.3	3.31	N	N	N
496	541.7	15.2	11.7	3.61	A	N	W
498	471.52	31.37	-2.8	7.03	A	A	A
499	399	20	-17.7	5.50	A	N	W
500	424.5	32.61	-12.5	8.01	A	A	A
501	575	26	18.6	5.06	A	N	W
506	486	41	0.2	8.74	A	A	A
507	642.33	6.741	32.4	2.50	N	N	N
508	489	12	0.8	3.34	A	A	A
509	4723	8	873.8	2.27	N	N	N
514	464	40	-4.3	8.91	A	A	A
516	496	29	2.3	6.27	A	A	A
520	753.83	31.77	55.4	4.79	N	N	N
522	470	16	-3.1	4.09	A	A	A
523	467	18	-3.7	4.47	A	A	A
525	496	26	2.3	5.71	A	A	A
527	516	30	6.4	6.24	A	A	A

Table 35. Evaluation results for K-40 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
528	441	22	-9.1	5.48	A	A	A
529	722	10	48.9	2.66	N	N	N
530	550.4	29.25	13.5	5.78	A	A	A
532	529.3	34.31	9.1	6.87	A	A	A
533	610	32	25.8	5.72	N	N	N
535	418	26	-13.8	6.62	A	A	A
536	520	39	7.2	7.84	A	A	A
537	508	24	4.7	5.24	A	A	A
539	455.51	24.09	-6.1	5.75	A	A	A
544	494.083	40.34	1.9	8.47	A	A	A
549	487	15	0.4	3.83	A	A	A
553	460	22	-5.2	5.29	A	A	A
555	460.3	41.4	-5.1	9.28	A	A	A

Cs-137 determination of activity concentration in Sample 3

Table 36. Target values

Parameter	Value
Activity concentration [Bq/kg]	10.3
Uncertainty [Bq/kg]	0.3
Maximum Acceptable Relative Bias [%]	20

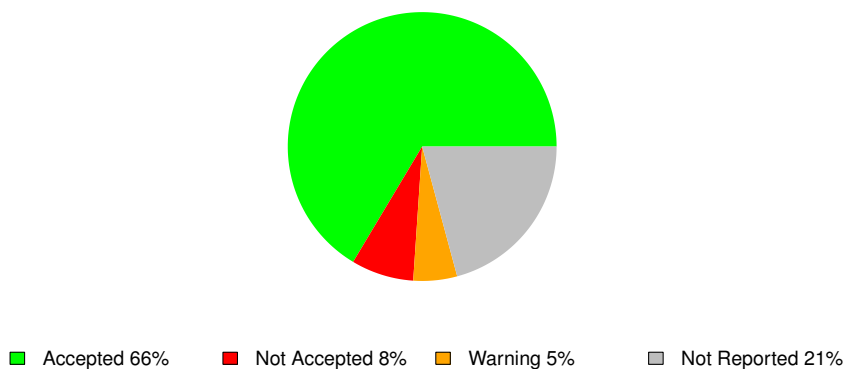


Figure 36. Percentage of Accepted vs. Warnings vs. Not Accepted vs. Not Reported results

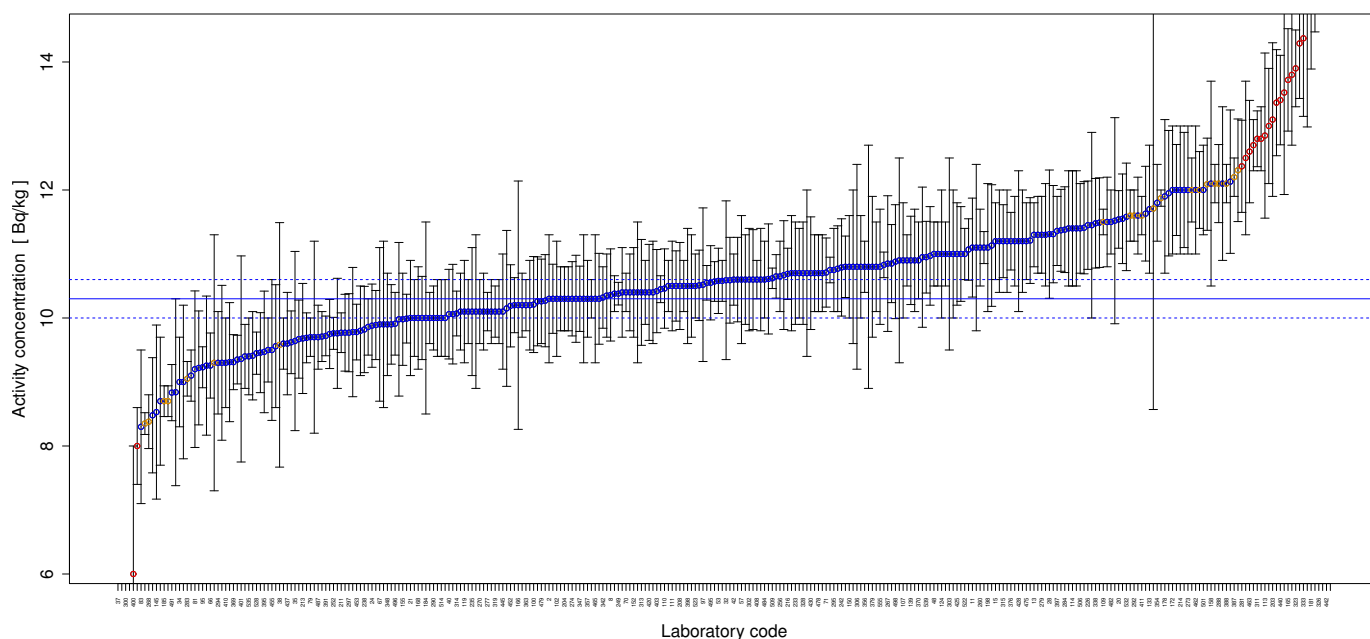


Figure 37. Reported results and evaluation parameters for Cs-137. Blue points represent accepted scores, whereas yellow and red represent warning and not accepted scores, respectively.

Table 37. Evaluation results for Cs-137 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
2	10.3	1	0.0	10.14	A	A	A
8	10.36	0.72	0.6	7.54	A	A	A
9	8.7	1	-15.5	11.86	A	A	A

Table 37. Evaluation results for Cs-137 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
11	11.1	0.773	7.8	7.55	A	A	A
12	15	2.015	45.6	13.75	N	N	N
13	11.3	0.5	9.7	5.30	A	A	A
15	11.2	0.6	8.7	6.10	A	A	A
19	10.67	0.85	3.6	8.48	A	A	A
20	11.54	0.45	12.0	4.87	A	A	A
21	10	0.9	-2.9	9.46	A	A	A
24	9.88	0.65	-4.1	7.19	A	A	A
25	10	0.6	-2.9	6.67	A	A	A
28	11.31	1.002	9.8	9.33	A	A	A
31	10.8	0.48	4.8	5.31	A	A	A
32	10.59	1.24	2.8	12.07	A	A	A
34	9	0.7	-12.6	8.31	A	A	A
35	9.64	1.4	-6.4	14.81	A	A	A
37	0.065	0.013	-99.4	20.21	N	N	N
38	9.58	1.91	-7.0	20.15	A	N	W
40	10.06	0.7	-2.3	7.54	A	A	A
41	10.06	0.778	-2.3	8.26	A	A	A
42	10.6	0.4	2.9	4.77	A	A	A
45	9.62	0.49	-6.6	5.87	A	A	A
48	11	0.5	6.8	5.40	A	A	A
49	11.1	1.3	7.8	12.07	A	A	A
50	10.4	0.7	1.0	7.33	A	A	A
52	10.6	0.66	2.9	6.87	A	A	A
53	10.58	0.51	2.7	5.63	A	A	A
54	11.3	0.6	9.7	6.06	A	A	A
55	11.63	0.74	12.9	7.00	A	A	A
57	10.6	1	2.9	9.87	A	A	A
58	9.6	0.4	-6.8	5.08	A	A	A
60	10.9	1.6	5.8	14.97	A	A	A
62	9.98	1.2	-3.1	12.37	A	A	A
63	10.55	0.27	2.4	3.88	A	A	A
64	9.8	0.7	-4.8	7.71	A	A	A
65	11.4	0.9	10.7	8.41	A	A	A
66	9.257	0.5085	-10.1	6.22	A	A	A
67	9.9	1.2	-3.9	12.47	A	A	A
68	10.3	0.54	0.0	6.00	A	A	A
69	10.1	0.6	-1.9	6.62	A	A	A
70	10.4	0.3	1.0	4.10	A	A	A
71	10.71	0.54	4.0	5.82	A	A	A
72	10.2	0.43	-1.0	5.12	A	A	A
78	10.5	0.4	1.9	4.80	A	A	A
79	9.7	0.3	-5.8	4.25	A	A	A
81	9.2	1.223	-10.7	13.61	A	A	A
82	19.73	0.59	91.6	4.17	N	N	N
83	8.3	1.2	-19.4	14.75	A	A	A
84	9.41	0.69	-8.6	7.89	A	A	A
85	13.522	1.593	31.3	12.14	N	A	N
90	11	0.5	6.8	5.40	A	A	A
94	12.13	1.12	17.8	9.68	A	A	A
95	9.23	0.32	-10.4	4.53	A	A	A
97	10.52	1.2	2.1	11.77	A	A	A
100	10.21	0.75	-0.9	7.90	A	A	A
102	10.3	0.9	0.0	9.21	A	A	A
104	10.4	0.6	1.0	6.46	A	A	A
105	10.6	0.7	2.9	7.22	A	A	A
107	10.9	0.9	5.8	8.76	A	A	A
109	11.5	0.2	11.7	3.39	A	N	W
110	10.46	0.62	1.6	6.60	A	A	A
111	10.5	0.7	1.9	7.28	A	A	A

Table 37. Evaluation results for Cs-137 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
113	12.85	1.29	24.8	10.45	N	A	N
114	11.4	0.9	10.7	8.41	A	A	A
116	10.27	0.72	-0.3	7.59	A	A	A
119	10.1	0.8	-1.9	8.44	A	A	A
122	10.35	0.65	0.5	6.92	A	A	A
124	11	1	6.8	9.55	A	A	A
127	10.9	0.4	5.8	4.69	A	A	A
128	10.65	0.34	3.4	4.32	A	A	A
130	10.77	0.67	4.6	6.87	A	A	A
131	9.255779	1.086739	-10.1	12.10	A	A	A
132	10.3	0.5	0.0	5.66	A	A	A
133	11.7	1	13.6	9.03	A	A	A
134	10.75	0.2	4.4	3.46	A	A	A
139	10.9	0.69	5.8	6.97	A	A	A
140	9.75	0.54	-5.3	6.26	A	A	A
145	8.53	1.36	-17.2	16.21	A	A	A
147	13.364	0.8289	29.8	6.85	N	N	N
150	10.8	0.8	4.8	7.96	A	A	A
151	9.31	0.93	-9.6	10.41	A	A	A
152	10.4	0.7	1.0	7.33	A	A	A
154	10.1	0.5	-1.9	5.74	A	A	A
155	9.98	0.72	-3.1	7.78	A	A	A
156	10.38	0.28	0.8	3.97	A	A	A
158	12.1	1.6	17.5	13.54	A	A	A
159	10.5	0.549	1.9	5.99	A	A	A
161	11.5	0.7	11.7	6.75	A	A	A
165	13.72	0.8	33.2	6.52	N	N	N
166	10.2	1.94	-1.0	19.24	A	A	A
168	10	0.8	-2.9	8.51	A	A	A
170	10.7	0.9	3.9	8.90	A	A	A
172	12	1	16.5	8.83	A	A	A
175	11.07	0.48	7.5	5.22	A	A	A
178	11.9	1.2	15.5	10.50	A	A	A
180	10	0.65	-2.9	7.12	A	A	A
181	15.11	1.22	46.7	8.58	N	N	N
183	11	0.5	6.8	5.40	A	A	A
184	10	1.5	-2.9	15.28	A	A	A
185	8.7	0.24	-15.5	4.01	A	N	W
187	11.4	0.9	10.7	8.41	A	A	A
190	9.22	0.89	-10.5	10.08	A	A	A
191	11.41	0.72	10.8	6.95	A	A	A
192	10.4	1.1	1.0	10.97	A	A	A
194	9.89	0.54	-4.0	6.19	A	A	A
197	11.52	1.61	11.8	14.28	A	A	A
198	11.1	1	7.8	9.47	A	A	A
200	10	0.4	-2.9	4.95	A	A	A
202	10.83	0.2	5.2	3.45	A	A	A
203	13.1	1.2	27.2	9.61	N	N	N
204	10.3	0.5	0.0	5.66	A	A	A
205	12	0.711	16.5	6.60	A	A	A
206	9	1.2	-12.6	13.65	A	A	A
207	11.31	0.76	9.8	7.32	A	A	A
208	10.5	0.68	1.9	7.10	A	A	A
211	9.77	0.31	-5.2	4.31	A	A	A
213	9.68	0.86	-6.0	9.35	A	A	A
214	12	1	16.5	8.83	A	A	A
215	10.3	0.5	0.0	5.66	A	A	A
216	10.69	0.4	3.8	4.74	A	A	A
217	9.3	2	-9.7	21.70	A	N	W
218	9.90008	0.6212	-3.9	6.92	A	A	A

Table 37. Evaluation results for Cs-137 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
220	10.9	0.8	5.8	7.90	A	A	A
223	12.5	1.2	21.4	10.03	N	A	N
226	11.45	0.69	11.2	6.69	A	A	A
227	11.6	0.4	12.6	4.51	A	N	W
229	9.4584	0.62501	-8.2	7.22	A	A	A
230	9.35	0.38	-9.2	5.00	A	A	A
232	9.78	1.01	-5.0	10.73	A	A	A
233	10.7	0.8	3.9	8.02	A	A	A
235	10.1	1	-1.9	10.32	A	A	A
238	9.82	0.674	-4.7	7.46	A	A	A
242	10.79	0.76	4.8	7.62	A	A	A
243	10.26	0.695	-0.4	7.37	A	A	A
247	11.132	0.95	8.1	9.02	A	A	A
249	10.38	0.176536	0.8	3.37	A	A	A
252	9.76	0.25	-5.2	3.88	A	A	A
253	12	0.9	16.5	8.05	A	A	A
254	11.71	3.14	13.7	26.97	A	N	W
256	10.65	0.55	3.4	5.93	A	A	A
257	9.76	0.86	-5.2	9.28	A	A	A
258	10.2	0.5	-1.0	5.70	A	A	A
260	11.1	0.6	7.8	6.14	A	A	A
261	12.1	0.3	17.5	3.82	A	N	W
262	12.7	0.4	23.3	4.29	N	N	N
265	10.1	1.2	-1.9	12.23	A	A	A
267	10.85	1.06	5.3	10.19	A	A	A
268	8.38	0.42	-18.6	5.80	A	N	W
270	10.1	0.5	-1.9	5.74	A	A	A
271	9.1	0.4	-11.7	5.27	A	A	A
272	10.1	0.6	-1.9	6.62	A	A	A
273	12	1	16.5	8.83	A	A	A
274	10.3	0.58035	0.0	6.34	A	A	A
276	10.3	0.68	0.0	7.22	A	A	A
277	10.1	0.3	-1.9	4.16	A	A	A
278	9.77	0.6	-5.2	6.80	A	A	A
279	11.3	0.6	9.7	6.06	A	A	A
280	15.2	0.73	47.6	5.62	N	N	N
281	12.37	0.72	20.1	6.51	N	N	N
283	9.05	0.27	-12.1	4.17	A	N	W
284	11.38	0.67	10.5	6.57	A	A	A
285	10.97	0.77	6.5	7.60	A	A	A
286	9.7	1.5	-5.8	15.74	A	A	A
287	12	0.5	16.5	5.08	A	N	W
288	12.1	0.61	17.5	5.82	A	N	W
290	10	0.5	-2.9	5.79	A	A	A
291	10.15	1.218	-1.5	12.35	A	A	A
292	11.6	0.4	12.6	4.51	A	N	W
293	10.8	1.2	4.8	11.49	A	A	A
294	9.3	0.8	-9.7	9.08	A	A	A
295	10.75	0.65	4.4	6.71	A	A	A
297	9.77	0.61	-5.2	6.89	A	A	A
299	10.7	0.7	3.9	7.16	A	A	A
300	0.56	0.25	-94.6	44.74	N	N	N
302	10.6	0.8	2.9	8.09	A	A	A
303	11	1.5	6.8	13.94	A	A	A
304	10.5	0.4	1.9	4.80	A	A	A
306	10.8	1.6	4.8	15.10	A	A	A
307	11.3	0.8	9.7	7.66	A	A	A
310	11.2	0.8	8.7	7.71	A	A	A
311	12.8	0.436	24.3	4.48	N	N	N
312	10.1	0.5	-1.9	5.74	A	A	A

Table 37. Evaluation results for Cs-137 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
313	10.4	0.827	1.0	8.47	A	A	A
314	10.07	0.35	-2.2	4.53	A	A	A
315	11.2	0.57	8.7	5.86	A	A	A
316	9.9	1.3	-3.9	13.45	A	A	A
317	13.8	1.1	34.0	8.49	N	N	N
318	11.1	0.25	7.8	3.68	A	A	A
319	10.1	0.4	-1.9	4.92	A	A	A
322	11.6	0.6	12.6	5.94	A	A	A
323	13.9	0.6	35.0	5.21	N	N	N
325	10.6	0.78	2.9	7.91	A	A	A
326	16.2	1.1	57.3	7.39	N	N	N
328	10.7	0.8	3.9	8.02	A	A	A
329	9.5	0.5	-7.8	6.02	A	A	A
332	11	1	6.8	9.55	A	A	A
333	14.37	1.22	39.5	8.98	N	N	N
338	11.48	0.7	11.5	6.76	A	A	A
339	11.2	0.8	8.7	7.71	A	A	A
341	10.57	0.31	2.6	4.13	A	A	A
342	10.32	0.48	0.2	5.49	A	A	A
344	10.8	0.8	4.8	7.96	A	A	A
347	10.3	0.51	0.0	5.74	A	A	A
348	9.9	0.8	-3.9	8.59	A	A	A
350	10.3	1	0.0	10.14	A	A	A
354	11.8	0.6	14.6	5.86	A	A	A
355	8.35	0.17	-18.9	3.55	A	N	W
356	10.8	0.4	4.8	4.71	A	A	A
357	10.3	0.6	0.0	6.51	A	A	A
358	12.1	1.2	17.5	10.34	A	A	A
363	10.2	0.4	-1.0	4.88	A	A	A
364	10	0.6	-2.9	6.67	A	A	A
367	10.8	1.9	4.8	17.83	A	A	A
369	9.31	0.43	-9.6	5.46	A	A	A
370	10.9	0.6	5.8	6.23	A	A	A
371	11.21	0.67	8.8	6.65	A	A	A
373	12.8	0.5	24.3	4.87	N	N	N
376	11.2	0.45	8.7	4.96	A	A	A
377	12.30795	0.801424	19.5	7.13	A	N	W
379	10.8	1.1	4.8	10.59	A	A	A
381	10.59	0.67	2.8	6.96	A	A	A
382	10.8	0.7	4.8	7.11	A	A	A
384	10.7	1.3	3.9	12.49	A	A	A
385	4.3	0.46	-58.2	11.09	N	N	N
386	9.3	1.21	-9.7	13.33	A	A	A
387	12.2	0.3	18.4	3.81	A	N	W
388	12.1	0.3	17.5	3.82	A	N	W
391	9.72	0.31	-5.6	4.32	A	A	A
393	10.51	0.55	2.0	5.99	A	A	A
395	9.47	0.95	-8.1	10.45	A	A	A
397	11.36	0.54	10.3	5.57	A	A	A
398	10.5	0.9	1.9	9.05	A	A	A
400	6	2	-41.8	33.46	N	N	N
401	9.36	1.61	-9.1	17.45	A	A	A
402	11.2	0.7	8.7	6.90	A	A	A
403	10.42	0.65	1.2	6.88	A	A	A
405	10.1	0.5	-1.9	5.74	A	A	A
407	10.4	0.5	1.0	5.62	A	A	A
408	10.6	0.3	2.9	4.06	A	A	A
410	9.3	0.7	-9.7	8.07	A	A	A
411	11.6	0.3	12.6	3.90	A	N	W
412	8.84	1.46	-14.2	16.77	A	A	A

Table 37. Evaluation results for Cs-137 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
414	11.49	0.7	11.6	6.75	A	A	A
417	9.71	0.39	-5.7	4.96	A	A	A
419	0.16	0.02	-98.4	12.83	N	N	N
420	10.4	0.75	1.0	7.78	A	A	A
421	10.6	0.8	2.9	8.09	A	A	A
425	11	0.8	6.8	7.83	A	A	A
426	11.45	1.45	11.2	12.99	A	A	A
428	11.2	1.1	8.7	10.24	A	A	A
429	9.99	0.381	-3.0	4.80	A	A	A
430	10.7	0.88	3.9	8.72	A	A	A
433	12.09	0.72	17.4	6.63	A	N	W
434	8.48	0.9	-17.7	11.01	A	A	A
435	10.5	0.8	1.9	8.16	A	A	A
437	9.6	0.8	-6.8	8.83	A	A	A
440	13.405	0.699	30.1	5.97	N	N	N
441	10.7	0.6	3.9	6.32	A	A	A
442	20.0412	1.374832	94.6	7.45	N	N	N
443	10.2	0.7	-1.0	7.46	A	A	A
444	10.61	0.86	3.0	8.61	A	A	A
445	10.1	0.9	-1.9	9.37	A	A	A
446	11.2	0.8	8.7	7.71	A	A	A
448	8.7	0.24	-15.5	4.01	A	N	W
450	10.3	0.3	0.0	4.12	A	A	A
452	10.19	0.64197	-1.1	6.94	A	A	A
453	9.78	0.435	-5.0	5.32	A	A	A
455	9.5	1.1	-7.8	11.94	A	A	A
459	9.56	0.96	-7.2	10.46	A	A	A
462	12	1	16.5	8.83	A	A	A
463	12.6	0.8	22.3	6.99	N	N	N
464	11.95	0.98	16.0	8.70	A	A	A
465	10.3	1	0.0	10.14	A	A	A
475	11.2	0.6	8.7	6.10	A	A	A
477	9.4	0.5	-8.7	6.06	A	A	A
478	10.7	0.6	3.9	6.32	A	A	A
479	10.26	0.66	-0.4	7.06	A	A	A
480	12	0.6	16.5	5.79	A	N	W
482	11.5	0.5	11.7	5.23	A	A	A
483	10.7	0.6	3.9	6.32	A	A	A
484	10.6	0.6	2.9	6.37	A	A	A
487	9.7	0.5	-5.8	5.92	A	A	A
491	8.834	0.4389	-14.2	5.76	A	A	A
492	11.55	0.7	12.1	6.72	A	A	A
495	10.55	0.58	2.4	6.22	A	A	A
496	9.91	0.49	-3.8	5.74	A	A	A
498	10.88	0.89	5.6	8.68	A	A	A
499	8	0.6	-22.3	8.05	N	N	N
500	10.95	1.095	6.3	10.42	A	A	A
501	12	0.7	16.5	6.52	A	A	A
506	11.4	0.7	10.7	6.80	A	A	A
507	11.873	0.127	15.3	3.10	A	N	W
508	10.45	0.21	1.5	3.54	A	A	A
509	10.62	0.16	3.1	3.28	A	A	A
514	10	0.6	-2.9	6.67	A	A	A
516	11	0.74	6.8	7.33	A	A	A
520	9.67	0.61	-6.1	6.95	A	A	A
522	11	0.4	6.8	4.66	A	A	A
523	10.5	0.5	1.9	5.58	A	A	A
525	10.4	0.8	1.0	8.23	A	A	A
527	10.3	0.71	0.0	7.48	A	A	A
528	9.45	0.33	-8.2	4.55	A	A	A

Table 37. Evaluation results for Cs-137 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
529	14.29	0.86	38.7	6.69	N	N	N
530	10.85	0.61	5.3	6.33	A	A	A
532	11.58	0.84	12.4	7.82	A	A	A
533	13	0.9	26.2	7.51	N	N	N
535	9.4	0.6	-8.7	7.02	A	A	A
536	11.37	0.64	10.4	6.34	A	A	A
537	10	0.6	-2.9	6.67	A	A	A
539	10.95	0.56	6.3	5.89	A	A	A
540	40.15	1.22	289.8	4.21	N	N	N
544	9.69	0.39	-5.9	4.97	A	A	A
549	10.58	0.32	2.7	4.20	A	A	A
553	9.86	0.44	-4.3	5.33	A	A	A
555	10.8	0.9	4.8	8.83	A	A	A

TL-208 determination of activity concentration in Sample 3

Table 38. Target values

Parameter	Value
Activity concentration [Bq/kg]	12.9
Uncertainty [Bq/kg]	0.4
Maximum Acceptable Relative Bias [%]	20

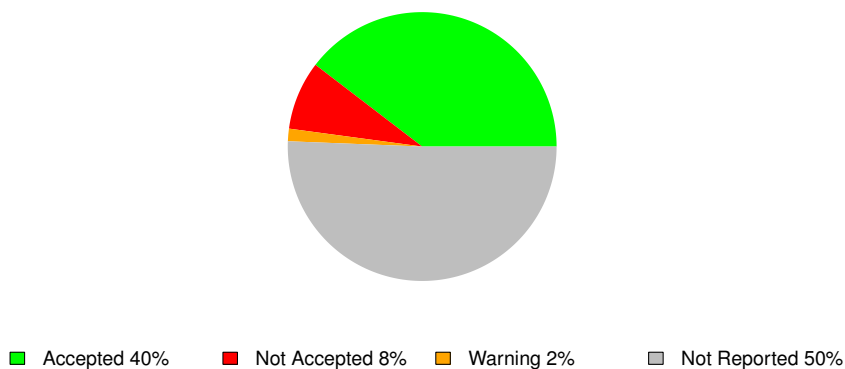


Figure 38. Percentage of Accepted vs. Warnings vs. Not Accepted vs. Not Reported results

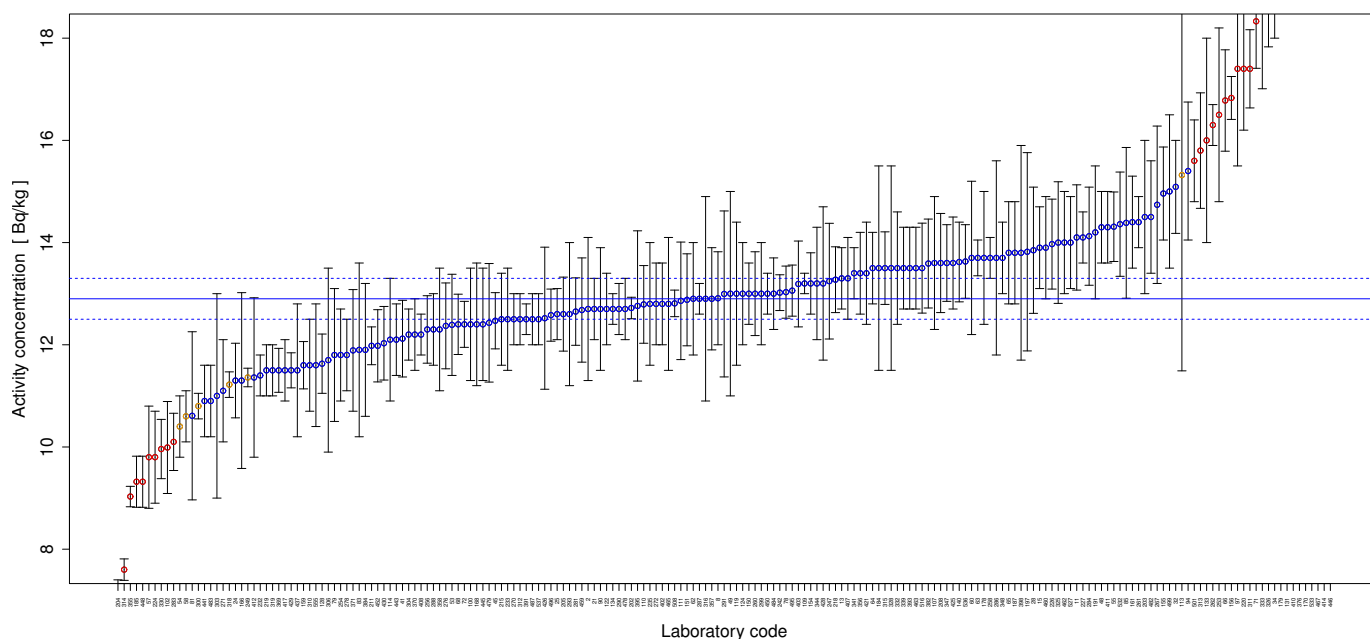


Figure 39. Reported results and evaluation parameters for TL-208. Blue points represent accepted scores, whereas yellow and red represent warning and not accepted scores, respectively.

Table 39. Evaluation results for TL-208 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty (k = 1) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
2	12.7	1.4	-1.6	11.45	A	A	A
8	12.91	0.91	0.1	7.70	A	A	A
11	14.1	1.03	9.3	7.94	A	A	A

Table 39. Evaluation results for Tl-208 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
13	13.3	0.6	3.1	5.47	A	A	A
15	13.9	0.8	7.8	6.54	A	A	A
21	12.7	0.6	-1.6	5.65	A	A	A
24	11.3	0.73	-12.4	7.17	A	A	A
25	12.6	0.5	-2.3	5.04	A	A	A
28	13.85	1.235	7.4	9.44	A	A	A
32	15.09	0.91	17.0	6.78	A	A	A
34	19.4	1.4	50.4	7.85	N	N	N
41	12.12	0.75	-6.0	6.92	A	A	A
45	12.47	0.55	-3.3	5.39	A	A	A
48	14.3	0.7	10.8	5.79	A	A	A
49	13	2	0.8	15.69	A	A	A
53	12.39	0.99	-4.0	8.57	A	A	A
54	10.4	0.6	-19.4	6.55	A	N	W
55	14.31	0.68	10.9	5.67	A	A	A
57	9.8	1	-24.0	10.66	N	A	N
58	10.6	0.5	-17.8	5.64	A	N	W
60	13.7	1.5	6.2	11.38	A	A	A
62	12.9	1.1	0.0	9.07	A	A	A
63	13.7	0.35	6.2	4.02	A	A	A
64	13.5	0.7	4.7	6.04	A	A	A
65	13.8	1	7.0	7.88	A	A	A
66	16.78	0.992	30.1	6.68	N	N	N
68	12.4	0.59	-3.9	5.68	A	A	A
71	18.33	0.92	42.1	5.90	N	N	N
72	12.4	0.45	-3.9	4.77	A	A	A
78	13.03	0.51	1.0	4.99	A	A	A
79	11.8	1.3	-8.5	11.44	A	A	A
81	10.61	1.645	-17.8	15.81	A	A	A
83	11.9	1.7	-7.8	14.62	A	A	A
85	14.386	1.475	11.5	10.71	A	A	A
90	12.7	1.2	-1.6	9.94	A	A	A
94	15.4	1.35	19.4	9.30	A	A	A
97	17.4	1.9	34.9	11.35	N	N	N
100	12.4	1.1	-3.9	9.40	A	A	A
102	9.99	0.9	-22.6	9.53	N	A	N
107	13.6	1.3	5.4	10.05	A	A	A
109	13.2	0.2	2.3	3.45	A	A	A
110	12.79	0.76	-0.8	6.70	A	A	A
111	12.86	1.15	-0.3	9.46	A	A	A
113	15.32	3.83	18.8	25.19	A	N	W
114	12.1	1.2	-6.2	10.39	A	A	A
119	13	1.4	0.8	11.21	A	A	A
122	12.7	0.7	-1.6	6.32	A	A	A
124	13	1	0.8	8.29	A	A	A
128	11.63	0.58	-9.8	5.87	A	A	A
131	28.0718	1.321835	117.6	5.64	N	N	N
133	16	2	24.0	12.88	N	A	N
134	12.7	0.3	-1.6	3.90	A	A	A
140	13.62	0.78	5.6	6.51	A	A	A
150	13	0.6	0.8	5.56	A	A	A
151	12.88	0.9	-0.2	7.64	A	A	A
154	13.2	0.6	2.3	5.50	A	A	A
155	14.96	0.91	16.0	6.83	A	A	A
156	16.83	0.42	30.5	3.98	N	N	N
159	11.6	0.463	-10.1	5.05	A	A	A
161	14.4	0.9	11.6	6.98	A	A	A
166	11.3	1.72	-12.4	15.53	A	A	A
168	12.4	1.2	-3.9	10.16	A	A	A
170	39	3	202.3	8.29	N	N	N

Table 39. Evaluation results for TI-208 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
178	13.7	1.3	6.2	9.98	A	A	A
179	25.71	1.01	99.3	5.00	N	N	N
184	13.5	2	4.7	15.14	A	A	A
185	9.32	0.5	-27.8	6.20	N	N	N
187	13.8	1	7.0	7.88	A	A	A
191	14.2	1.3	10.1	9.67	A	A	A
197	13.82	1.94	7.1	14.38	A	A	A
202	12.72	0.21	-1.4	3.51	A	A	A
203	14.5	1.5	12.4	10.80	A	A	A
204	7	0.4	-45.7	6.50	N	N	N
205	12.6	0.724	-2.3	6.53	A	A	A
208	13.6	0.97	5.4	7.78	A	A	A
211	11.98	0.37	-7.1	4.38	A	A	A
215	12.5	0.9	-3.1	7.84	A	A	A
218	13.27344	0.64368	2.9	5.76	A	A	A
219	11.5	0.5	-10.8	5.34	A	A	A
220	17.4	1.2	34.9	7.56	N	N	N
224	9.8	0.9	-24.0	9.69	N	A	N
226	13.97	0.88	8.3	7.02	A	A	A
227	14.1	0.5	9.3	4.71	A	A	A
232	11.4	0.4	-11.6	4.68	A	A	A
233	12.5	1	-3.1	8.58	A	A	A
235	12.8	1.2	-0.8	9.87	A	A	A
242	13.02	0.35	0.9	4.10	A	A	A
247	13.245	1.132	2.7	9.09	A	A	A
249	11.36	0.181728	-11.9	3.49	A	N	W
253	16.5	1.7	27.9	10.76	N	N	N
254	11.8	0.9	-8.5	8.23	A	A	A
256	12.3	0.66	-4.7	6.20	A	A	A
258	13.7	0.4	6.2	4.26	A	A	A
260	13	0.82	0.8	7.03	A	A	A
261	14.4	0.5	11.6	4.66	A	A	A
262	16.3	0.4	26.4	3.95	N	N	N
267	14.74	1.54	14.3	10.90	A	A	A
270	12.5	0.5	-3.1	5.06	A	A	A
271	11.1	1	-13.9	9.53	A	A	A
272	12.8	0.8	-0.8	6.98	A	A	A
276	12.37	0.84	-4.1	7.47	A	A	A
278	11.8	0.7	-8.5	6.69	A	A	A
281	12.65	0.66	-1.9	6.07	A	A	A
283	10.1	0.56	-21.7	6.35	N	N	N
284	14.125	0.96	9.5	7.47	A	A	A
286	13.7	1.9	6.2	14.21	A	A	A
287	12.9	0.3	0.0	3.88	A	A	A
288	12.3	0.7	-4.7	6.48	A	A	A
290	12.7	0.5	-1.6	5.01	A	A	A
291	12.995	1.624	0.7	12.88	A	A	A
293	12.6	1.4	-2.3	11.54	A	A	A
299	13	1	0.8	8.29	A	A	A
300	10.8	0.25	-16.3	3.87	A	N	W
303	11	2	-14.7	18.44	A	A	A
304	12.2	0.5	-5.4	5.14	A	A	A
306	11.7	1.8	-9.3	15.69	A	A	A
310	11.6	0.9	-10.1	8.36	A	A	A
311	17.4	0.765	34.9	5.38	N	N	N
312	12.5	0.5	-3.1	5.06	A	A	A
313	15.8	1.13	22.5	7.80	N	N	N
314	7.6	0.21	-41.1	4.15	N	N	N
315	13.5	0.71	4.7	6.11	A	A	A
316	12.9	2	0.0	15.81	A	A	A

Table 39. Evaluation results for Tl-208 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
318	11.22	0.25	-13.0	3.82	A	N	W
319	11.5	0.5	-10.8	5.34	A	A	A
325	14	1.19	8.5	9.05	A	A	A
326	18.83	1	46.0	6.15	N	N	N
328	13.5	2	4.7	15.14	A	A	A
330	9.96	0.58	-22.8	6.60	N	N	N
332	13.5	1.1	4.7	8.72	A	A	A
333	18.57	1.56	44.0	8.95	N	N	N
339	13.5	0.8	4.7	6.69	A	A	A
341	13.4	0.5	3.9	4.85	A	A	A
344	13.2	1.1	2.3	8.89	A	A	A
347	13.6	0.75	5.4	6.33	A	A	A
348	13.7	0.7	6.2	5.98	A	A	A
355	9.03	0.2	-30.0	3.81	N	N	N
356	13.4	0.8	3.9	6.73	A	A	A
357	12.9	1	0.0	8.35	A	A	A
358	12.3	1.2	-4.7	10.24	A	A	A
369	11.5	0.43	-10.8	4.86	A	A	A
370	12.2	0.7	-5.4	6.52	A	A	A
371	11.89	1.19	-7.8	10.48	A	A	A
376	37.9	1.5	193.8	5.03	N	N	N
382	13.59	0.87	5.3	7.11	A	A	A
384	11.9	1.3	-7.8	11.36	A	A	A
391	12.5	0.3	-3.1	3.92	A	A	A
393	13.5	0.8	4.7	6.69	A	A	A
395	12.76	1.47	-1.1	11.93	A	A	A
398	13.8	2.1	7.0	15.53	A	A	A
402	12.8	0.8	-0.8	6.98	A	A	A
403	13.19	0.84	2.2	7.08	A	A	A
407	13.3	0.8	3.1	6.77	A	A	A
408	12.2	0.4	-5.4	4.51	A	A	A
410	34.3	0.8	165.9	3.88	N	N	N
411	14.3	0.7	10.8	5.79	A	A	A
412	11.36	1.56	-11.9	14.08	A	A	A
414	52.2	3.2	304.6	6.87	N	N	N
417	11.5	0.6	-10.8	6.07	A	A	A
421	13.4	1	3.9	8.08	A	A	A
425	13.6	0.9	5.4	7.31	A	A	A
426	12.52	1.39	-3.0	11.53	A	A	A
428	13.2	1.5	2.3	11.78	A	A	A
429	11.5	0.343	-10.8	4.30	A	A	A
430	12.03	0.72	-6.7	6.74	A	A	A
437	11.5	1.3	-10.8	11.72	A	A	A
441	10.9	0.7	-15.5	7.13	A	A	A
443	12.1	0.7	-6.2	6.56	A	A	A
445	12.4	1.1	-3.9	9.40	A	A	A
446	69.5	4.7	438.8	7.44	N	N	N
448	9.32	0.5	-27.8	6.20	N	N	N
450	13	0.4	0.8	4.37	A	A	A
452	11.98	0.70682	-7.1	6.67	A	A	A
459	12.68	1.02	-1.7	8.62	A	A	A
460	13.9	1	7.8	7.83	A	A	A
462	14	1	8.5	7.79	A	A	A
463	13.5	0.8	4.7	6.69	A	A	A
465	12.8	1.3	-0.8	10.62	A	A	A
467	46.78	11.6	262.6	24.99	N	N	N
478	12.7	0.6	-1.6	5.65	A	A	A
479	12.43	1.16	-3.6	9.83	A	A	A
482	14.5	1.1	12.4	8.20	A	A	A
483	10.9	0.7	-15.5	7.13	A	A	A

Table 39. Evaluation results for Tl-208 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
484	13	0.7	0.8	6.21	A	A	A
487	12.5	0.5	-3.1	5.06	A	A	A
495	13.06	0.5	1.2	4.93	A	A	A
496	12.58	0.51	-2.5	5.10	A	A	A
499	15	1.5	16.3	10.47	A	A	A
501	15.6	0.8	20.9	5.99	N	N	N
508	12.81	0.26	-0.7	3.71	A	A	A
516	13.5	0.88	4.7	7.22	A	A	A
527	14	0.9	8.5	7.14	A	A	A
532	14.36	1.02	11.3	7.75	A	A	A
533	44.7	2.4	246.5	6.20	N	N	N
536	13.63	0.72	5.7	6.13	A	A	A
537	12.5	0.5	-3.1	5.06	A	A	A
555	11.6	1.2	-10.1	10.80	A	A	A

Pb-210 determination of activity concentration in Sample 3

Table 40. Target values

Parameter	Value
Activity concentration [Bq/kg]	43.4
Uncertainty [Bq/kg]	1.7
Maximum Acceptable Relative Bias [%]	20

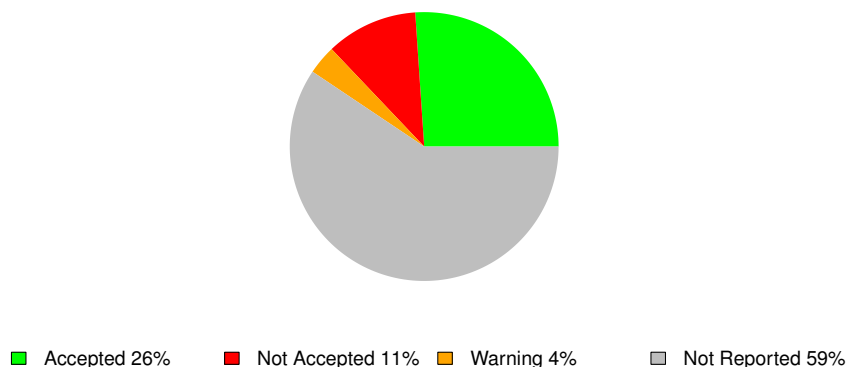


Figure 40. Percentage of Accepted vs. Warnings vs. Not Accepted vs. Not Reported results

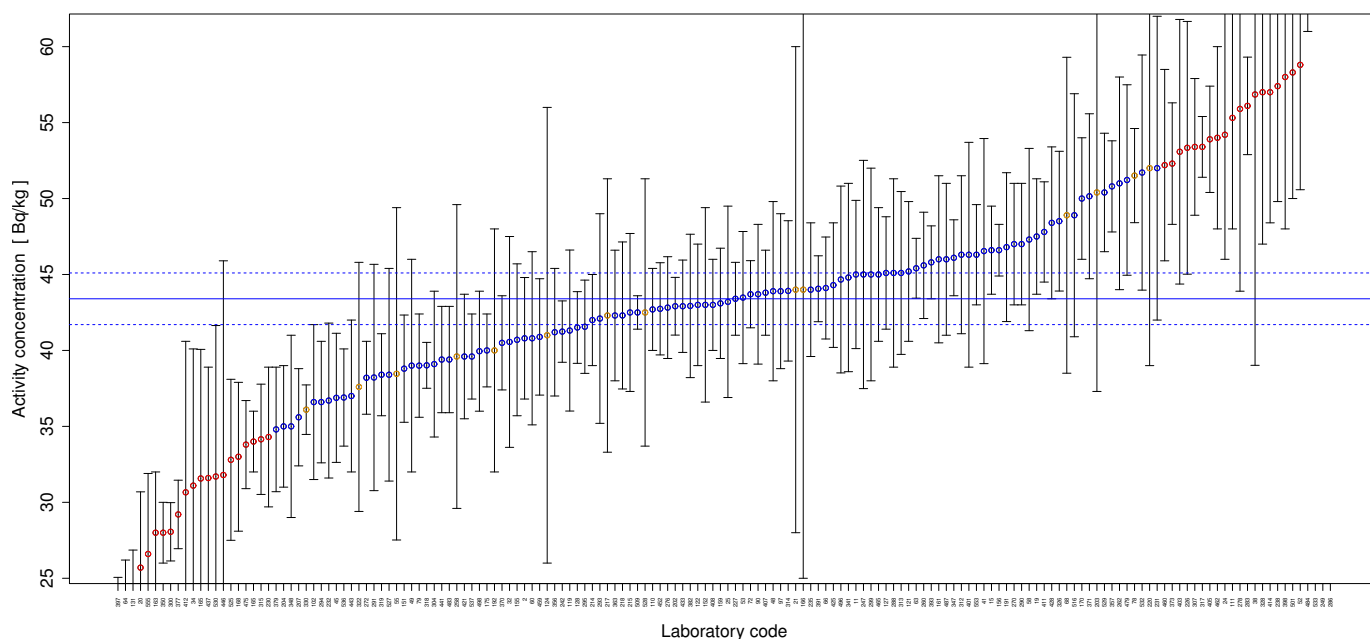


Figure 41. Reported results and evaluation parameters for Pb-210. Blue points represent accepted scores, whereas yellow and red represent warning and not accepted scores, respectively.

Table 41. Evaluation results for Pb-210 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
2	40.8	4	-6.0	10.56	A	A	A
11	45	4.88	3.7	11.53	A	A	A
15	46.6	2.9	7.4	7.35	A	A	A

Table 41. Evaluation results for Pb-210 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
19	47.5	3.8	9.4	8.91	A	A	A
20	25.7	4.99	-40.8	19.81	N	A	N
21	44	16	1.4	36.57	A	N	W
24	54.2	8.2	24.9	15.63	N	A	N
25	43.2	6.3	-0.5	15.10	A	A	A
32	40.56	6.94	-6.5	17.55	A	A	A
34	31.1	9	-28.3	29.20	N	N	N
38	56.85	17.83	31.0	31.61	N	N	N
41	46.54	7.41	7.2	16.40	A	A	A
45	36.88	4.25	-15.0	12.17	A	A	A
48	43.9	5.9	1.1	14.00	A	A	A
49	39	7	-10.1	18.37	A	A	A
52	58.8	8.22	35.5	14.52	N	A	N
53	43.48	4.35	0.2	10.74	A	A	A
55	38.46	10.94	-11.4	28.71	A	N	W
58	47.3	6	9.0	13.28	A	A	A
60	40.8	5.7	-6.0	14.51	A	A	A
63	45.41	1.97	4.6	5.84	A	A	A
64	24.1	2.1	-44.5	9.55	N	N	N
66	44.11	3.357	1.6	8.56	A	A	A
68	48.9	10.4	12.7	21.63	A	N	W
72	43.7	2.21	0.7	6.40	A	A	A
78	51.51	3.1	18.7	7.18	A	N	W
79	39	3.4	-10.1	9.56	A	A	A
90	43.7	4.6	0.7	11.23	A	A	A
97	43.9	5.1	1.1	12.26	A	A	A
102	36.6	5.1	-15.7	14.47	A	A	A
110	42.7	2.7	-1.6	7.44	A	A	A
111	55.31	7.31	27.4	13.78	N	A	N
119	41.31	5.3	-4.8	13.41	A	A	A
121	45.2	4.6	4.2	10.90	A	A	A
122	43	4	-0.9	10.09	A	A	A
124	41	15	-5.5	36.79	A	N	W
127	45.1	3.7	3.9	9.09	A	A	A
128	41.51	2.36	-4.3	6.90	A	A	A
131	24.16666	2.690446	-44.3	11.80	N	N	N
151	38.8	3.53	-10.6	9.91	A	A	A
152	43	6.4	-0.9	15.39	A	A	A
155	40.7	5	-6.2	12.89	A	A	A
156	46.6	1.7	7.4	5.35	A	A	A
159	43.1	3.63	-0.7	9.29	A	A	A
161	46	5.5	6.0	12.58	A	A	A
163	28	4	-35.5	14.81	N	A	N
165	31.57	8.5	-27.3	27.21	N	N	N
165	34	2	-21.7	7.07	N	N	N
166	44	19	1.4	43.36	A	N	W
168	33	4.9	-24.0	15.36	N	A	N
170	50	4	15.2	8.91	A	A	A
175	40	2.4	-7.8	7.17	A	A	A
191	46.8	4.9	7.8	11.18	A	A	A
192	40	8	-7.8	20.38	A	N	W
202	42.91	1.9	-1.1	5.91	A	A	A
203	50.4	13.1	16.1	26.29	A	N	W
204	35	4	-19.4	12.08	A	A	A
207	35.6	3.2	-18.0	9.81	A	A	A
214	42	3	-3.2	8.15	A	A	A
215	42.5	5.2	-2.1	12.85	A	A	A
217	42.3	9	-2.5	21.63	A	N	W
218	42.3025	4.83934	-2.5	12.09	A	A	A
220	52	13	19.8	25.31	A	N	W

Table 41. Evaluation results for Pb-210 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
226	53.34	8.32	22.9	16.08	N	A	N
227	43.4	2.4	0.0	6.78	A	A	A
230	34.3	4.6	-21.0	13.97	N	A	N
231	52	10	19.8	19.63	A	A	A
232	36.7	5.1	-15.4	14.44	A	A	A
235	44	4.4	1.4	10.74	A	A	A
238	57.4	7.6	32.3	13.81	N	A	N
242	41.24	2.02	-5.0	6.27	A	A	A
247	45	7.514	3.7	17.15	A	A	A
249	78.79	1.763597	81.5	4.51	N	N	N
258	39.6	10	-8.8	25.55	A	N	W
260	45.6	3.5	5.1	8.62	A	A	A
262	51	7	17.5	14.27	A	A	A
270	47	4	8.3	9.37	A	A	A
272	38.2	2.4	-12.0	7.40	A	A	A
276	42.82	3.35	-1.3	8.75	A	A	A
278	55.9	12	28.8	21.82	N	N	N
283	56.1	3.21	29.3	6.93	N	N	N
286	122.8	58.9	182.9	48.12	N	N	N
288	45.1	6.2	3.9	14.29	A	A	A
290	47	4	8.3	9.37	A	A	A
291	38.219	7.45	-11.9	19.88	A	A	A
293	42.1	6.9	-3.0	16.85	A	A	A
294	36.6	4	-15.7	11.61	A	A	A
295	41.56	3.07	-4.2	8.36	A	A	A
299	45	7	3.7	16.04	A	A	A
300	28.06	1.92	-35.4	7.88	N	N	N
304	39.1	4.8	-9.9	12.89	A	A	A
307	53.4	4.5	23.0	9.29	N	A	N
312	46.3	5.2	6.7	11.89	A	A	A
313	45.1	5.36	3.9	12.51	A	A	A
314	43.92	4.62	1.2	11.22	A	A	A
315	34.15	3.63	-21.3	11.33	N	A	N
317	53.4	2	23.0	5.42	N	N	N
318	39.02	1.51	-10.1	5.51	A	A	A
319	38.4	2.7	-11.5	8.05	A	A	A
322	37.6	8.2	-13.4	22.16	A	N	W
326	48.51	4.6	11.8	10.26	A	A	A
328	57	10	31.3	17.98	N	A	N
330	36.1	1.63	-16.8	5.98	A	N	W
341	44.8	6.2	3.2	14.38	A	A	A
347	46.1	2.5	6.2	6.69	A	A	A
348	35	6	-19.4	17.58	A	A	A
350	28	2	-35.5	8.15	N	N	N
356	41.2	4.2	-5.1	10.92	A	A	A
357	50.8	3	17.0	7.09	A	A	A
363	42.3	4.3	-2.5	10.89	A	A	A
370	40.5	3.1	-6.7	8.60	A	A	A
371	50.15	5.43	15.6	11.51	A	A	A
373	52.3	4	20.5	8.59	N	A	N
377	29.20244	2.255174	-32.7	8.66	N	N	N
379	34.8	4.1	-19.8	12.42	A	A	A
382	42.93	4.72	-1.1	11.67	A	A	A
391	44.06	2.17	1.5	6.29	A	A	A
393	45.8	2.4	5.5	6.54	A	A	A
397	22.28	2.78	-48.7	13.08	N	N	N
398	58	10	33.6	17.68	N	A	N
401	46.3	7.4	6.7	16.46	A	A	A
403	53.08	8.71	22.3	16.87	N	A	N
405	53.9	3.5	24.2	7.58	N	N	N

Table 41. Evaluation results for Pb-210 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
407	43.8	2.8	0.9	7.50	A	A	A
408	43	3	-0.9	8.00	A	A	A
411	47.8	3.3	10.1	7.94	A	A	A
412	30.66	9.94	-29.4	32.66	N	N	N
414	57	8.6	31.3	15.59	N	A	N
421	39.6	4.1	-8.8	11.07	A	A	A
425	44.3	4.1	2.1	10.05	A	A	A
428	48.4	5	11.5	11.05	A	A	A
433	42.91	3.04	-1.1	8.10	A	A	A
437	31.6	7.3	-27.2	23.43	N	N	N
441	39.4	3.5	-9.2	9.71	A	A	A
443	37	5	-14.8	14.07	A	A	A
446	31.8	14.1	-26.7	44.51	N	N	N
452	42.74	3.03454	-1.5	8.11	A	A	A
459	40.89	3.83	-5.8	10.15	A	A	A
460	52.2	6.3	20.3	12.69	N	A	N
462	54	6	24.4	11.78	N	A	N
465	45	4.4	3.7	10.53	A	A	A
475	33.8	2.9	-22.1	9.43	N	A	N
479	51.22	6.27	18.0	12.85	A	A	A
483	39.4	3.5	-9.2	9.71	A	A	A
484	67.6	6.6	55.8	10.52	N	N	N
487	46	5	6.0	11.55	A	A	A
496	44.67	6.15	2.9	14.31	A	A	A
498	39.95	3.95	-8.0	10.63	A	A	A
501	58.3	8.3	34.3	14.77	N	A	N
509	42.5	1.1	-2.1	4.69	A	A	A
516	48.9	8	12.7	16.82	A	A	A
525	32.8	5.3	-24.4	16.63	N	A	N
527	38.4	7	-11.5	18.65	A	A	A
528	42.5	8.8	-2.1	21.07	A	N	W
529	50.4	3.9	16.1	8.67	A	A	A
530	31.7	9.94	-27.0	31.60	N	N	N
532	51.71	7.74	19.1	15.47	A	A	A
533	71	6.1	63.6	9.44	N	N	N
536	36.9	3.2	-15.0	9.52	A	A	A
537	39.6	2.8	-8.8	8.08	A	A	A
553	46.3	3.3	6.7	8.13	A	A	A
555	26.6	5.3	-38.7	20.31	N	N	N

Bi-212 determination of activity concentration in Sample 3

Table 42. Target values

Parameter	Value
Activity concentration [Bq/kg]	39.6
Uncertainty [Bq/kg]	1.7
Maximum Acceptable Relative Bias [%]	20

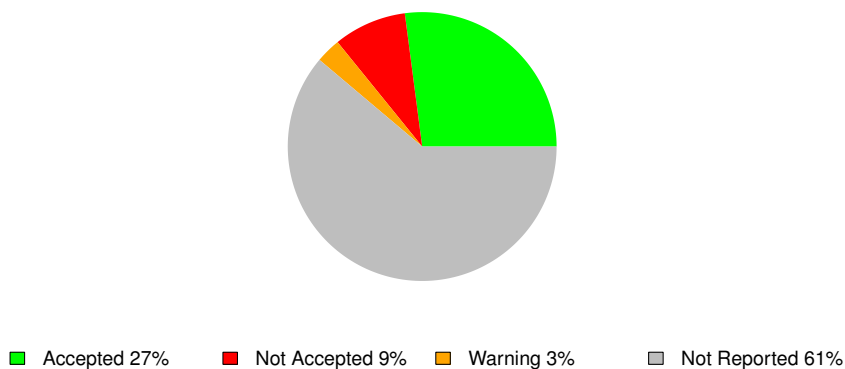


Figure 42. Percentage of Accepted vs. Warnings vs. Not Accepted vs. Not Reported results

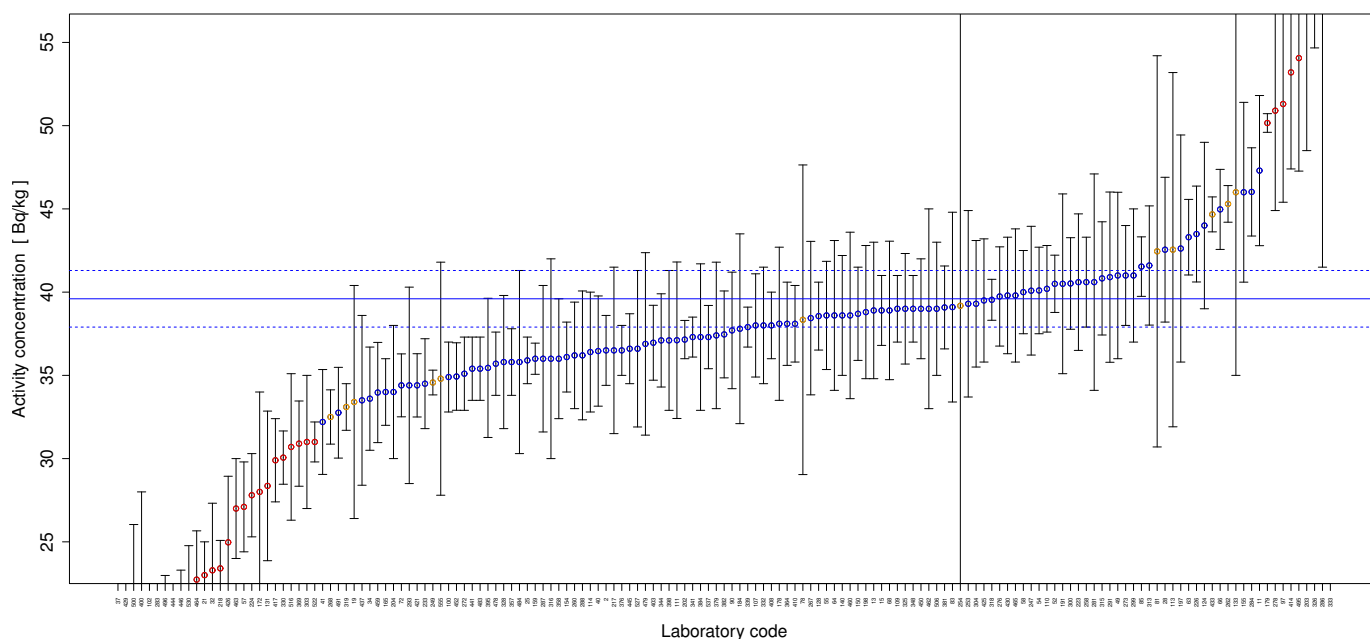


Figure 43. Reported results and evaluation parameters for Bi-212. Blue points represent accepted scores, whereas yellow and red represent warning and not accepted scores, respectively.

Table 43. Evaluation results for Bi-212 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
2	36.5	2.1	-7.8	7.18	A	A	A
11	47.3	4.51	19.4	10.46	A	A	A
13	38.9	4.1	-1.8	11.38	A	A	A

Table 43. Evaluation results for Bi-212 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
15	38.9	2.1	-1.8	6.90	A	A	A
19	33.4	7	-15.7	21.39	A	N	W
21	23	2	-41.9	9.70	N	N	N
25	35.9	1.4	-9.3	5.80	A	A	A
28	42.55	4.349	7.4	11.09	A	A	A
32	23.29	4.03	-41.2	17.83	N	A	N
34	33.6	3.1	-15.2	10.18	A	A	A
37	0.16	0.06	-99.6	37.74	N	N	N
40	36.46	3.31	-7.9	10.04	A	A	A
41	32.2	3.15	-18.7	10.68	A	A	A
49	41	5	3.5	12.93	A	A	A
52	40.5	1.72	2.3	6.04	A	A	A
54	40.1	2.6	1.3	7.78	A	A	A
55	38.6	3.25	-2.5	9.45	A	A	A
57	27.1	2.7	-31.6	10.85	N	N	N
58	40	2.5	1.0	7.58	A	A	A
63	43.3	2.27	9.3	6.78	A	A	A
64	38.6	4.5	-2.5	12.42	A	A	A
66	44.97	2.4045	13.6	6.86	A	A	A
68	38.9	4.16	-1.8	11.52	A	A	A
72	34.4	1.89	-13.1	6.97	A	A	A
78	38.34	9.3	-3.2	24.63	A	N	W
81	42.45	11.75	7.2	28.01	A	N	W
83	39.1	5.7	-1.3	15.20	A	A	A
85	41.533	1.787	4.9	6.08	A	A	A
90	37.7	3.5	-4.8	10.23	A	A	A
97	51.3	5.9	29.6	12.28	N	A	N
100	34.9	2.1	-11.9	7.39	A	A	A
102	19.4	2.1	-51.0	11.64	N	N	N
107	38	3.1	-4.0	9.22	A	A	A
109	39	2	-1.5	6.69	A	A	A
110	40.2	2.6	1.5	7.76	A	A	A
111	37.11	4.7	-6.3	13.37	A	A	A
113	42.55	10.64	7.4	25.37	A	N	W
114	36.4	3.6	-8.1	10.78	A	A	A
124	44	5	11.1	12.15	A	A	A
128	38.56	2.04	-2.6	6.81	A	A	A
131	28.36015	4.493641	-28.4	16.42	N	A	N
133	46	11	16.2	24.30	A	N	W
140	38.6	3.6	-2.5	10.27	A	A	A
150	38.7	2.8	-2.3	8.41	A	A	A
154	36.1	2.1	-8.8	7.23	A	A	A
155	46	5.4	16.2	12.50	A	A	A
159	36	0.936	-9.1	5.02	A	A	A
165	34	2	-14.1	7.28	A	A	A
172	28	6	-29.3	21.85	N	N	N
178	38.1	4.6	-3.8	12.81	A	A	A
179	50.16	0.56	26.7	4.44	N	N	N
184	37.8	5.7	-4.6	15.68	A	A	A
191	40.5	5.4	2.3	14.01	A	A	A
197	42.62	6.82	7.6	16.57	A	A	A
198	38.8	4	-2.0	11.17	A	A	A
202	37.15	1.15	-6.2	5.29	A	A	A
203	58.4	9.9	47.5	17.49	N	N	N
204	34	4	-14.1	12.52	A	A	A
217	36.5	5	-7.8	14.36	A	A	A
218	23.40725	1.67791	-40.9	8.36	N	N	N
223	40.6	4.1	2.5	10.97	A	A	A
224	27.8	2.5	-29.8	9.96	N	N	N
226	43.49	2.88	9.8	7.89	A	A	A

Table 43. Evaluation results for Bi-212 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
233	34.5	2.7	-12.9	8.93	A	A	A
247	40.087	3.867	1.2	10.56	A	A	A
249	34.57	0.743388	-12.7	4.80	A	N	W
253	39.3	5.6	-0.8	14.88	A	A	A
254	39.18	19.36	-1.1	49.60	A	N	W
258	40.6	2.7	2.5	7.92	A	A	A
260	36.2	3.2	-8.6	9.83	A	A	A
262	45.3	1.1	14.4	4.93	A	N	W
267	38.44	4.61	-2.9	12.74	A	A	A
268	32.5	1.63	-17.9	6.60	A	N	W
272	35.1	2.2	-11.4	7.60	A	A	A
273	41	3	3.5	8.48	A	A	A
276	39.74	2.98	0.3	8.64	A	A	A
278	50.9	6	28.5	12.55	N	A	N
281	40.6	6.5	2.5	16.58	A	A	A
283	20.3	1.21	-48.7	7.35	N	N	N
284	46.02	2.65	16.2	7.18	A	A	A
286	61.8	20.3	56.1	33.13	N	N	N
287	36	4.4	-9.1	12.95	A	A	A
288	36.2	3.87	-8.6	11.52	A	A	A
291	40.9	5.113	3.3	13.22	A	A	A
293	34.4	5.9	-13.1	17.68	A	A	A
299	41	4	3.5	10.66	A	A	A
300	40.52	2.75	2.3	8.03	A	A	A
303	31	4	-21.7	13.60	N	A	N
304	39.3	3.8	-0.8	10.58	A	A	A
313	41.6	3.58	5.0	9.62	A	A	A
315	40.825	3.4	3.1	9.37	A	A	A
316	36	6	-9.1	17.21	A	A	A
318	39.54	1.23	-0.1	5.30	A	A	A
319	33.1	1.4	-16.4	6.03	A	N	W
325	39	3.32	-1.5	9.53	A	A	A
326	61.57	6.9	55.5	12.00	N	N	N
328	35.8	4	-9.6	11.97	A	A	A
330	30.06	1.6	-24.1	6.84	N	N	N
332	38	3.5	-4.0	10.16	A	A	A
333	72.76	15.82	83.7	22.16	N	N	N
339	37.9	1.2	-4.3	5.33	A	A	A
341	37.3	1.2	-5.8	5.36	A	A	A
344	37.1	2.8	-6.3	8.68	A	A	A
348	39	2	-1.5	6.69	A	A	A
357	35.8	2	-9.6	7.05	A	A	A
358	36	3.6	-9.1	10.88	A	A	A
364	38.1	2.5	-3.8	7.84	A	A	A
369	30.9	2.56	-22.0	9.33	N	A	N
376	36.5	1.5	-7.8	5.94	A	A	A
379	37.4	4.4	-5.6	12.52	A	A	A
381	39.08	2.49	-1.3	7.68	A	A	A
382	37.46	2.61	-5.4	8.18	A	A	A
384	37.3	4.4	-5.8	12.55	A	A	A
395	35.45	4.18	-10.5	12.55	A	A	A
398	37.1	4.2	-6.3	12.11	A	A	A
400	19	9	-52.0	47.56	N	N	N
403	36.96	2.25	-6.7	7.45	A	A	A
408	38	2	-4.0	6.79	A	A	A
410	38.1	2.3	-3.8	7.41	A	A	A
414	53.2	5.8	34.3	11.72	N	N	N
417	29.9	2.5	-24.5	9.40	N	N	N
421	34.4	1.9	-13.1	7.00	A	A	A
425	39.5	3.7	-0.2	10.30	A	A	A

Table 43. Evaluation results for Bi-212 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
426	24.97	3.97	-36.9	16.47	N	A	N
429	17.1	2.63	-56.8	15.97	N	N	N
430	39.8	3.5	0.5	9.79	A	A	A
433	44.67	1.05	12.8	4.89	A	N	W
437	33.5	5.1	-15.4	15.82	A	A	A
441	35.4	1.9	-10.6	6.87	A	A	A
444	20.57	1.7	-48.1	9.31	N	N	N
445	36.6	2.1	-7.6	7.17	A	A	A
446	21.4	1.9	-46.0	9.86	N	N	N
450	39	3	-1.5	8.81	A	A	A
452	34.93	2.02594	-11.8	7.22	A	A	A
459	33.97	3.01	-14.2	9.85	A	A	A
460	38.6	5	-2.5	13.65	A	A	A
462	39	6	-1.5	15.97	A	A	A
463	27	3	-31.8	11.91	N	N	N
464	22.73	2.93	-42.6	13.59	N	N	N
465	39.8	4	0.5	10.93	A	A	A
478	35.7	1.9	-9.8	6.84	A	A	A
479	36.89	5.48	-6.8	15.46	A	A	A
483	35.4	1.9	-10.6	6.87	A	A	A
484	35.8	5.5	-9.6	15.95	A	A	A
491	32.756	2.726	-17.3	9.36	A	A	A
495	54.06	6.79	36.5	13.27	N	N	N
496	20.41	2.57	-48.5	13.30	N	N	N
500	17.88	8.16	-54.9	45.84	N	N	N
506	39	4	-1.5	11.12	A	A	A
516	30.7	4.4	-22.5	14.96	N	A	N
522	31	1.2	-21.7	5.78	N	N	N
527	36.6	4.7	-7.6	13.54	A	A	A
530	21.56	3.21	-45.6	15.50	N	N	N
537	37.3	1.9	-5.8	6.66	A	A	A
555	34.8	7	-12.1	20.57	A	N	W

Pb-212 determination of activity concentration in Sample 3

Table 44. Target values

Parameter	Value
Activity concentration [Bq/kg]	36.8
Uncertainty [Bq/kg]	1.1
Maximum Acceptable Relative Bias [%]	20

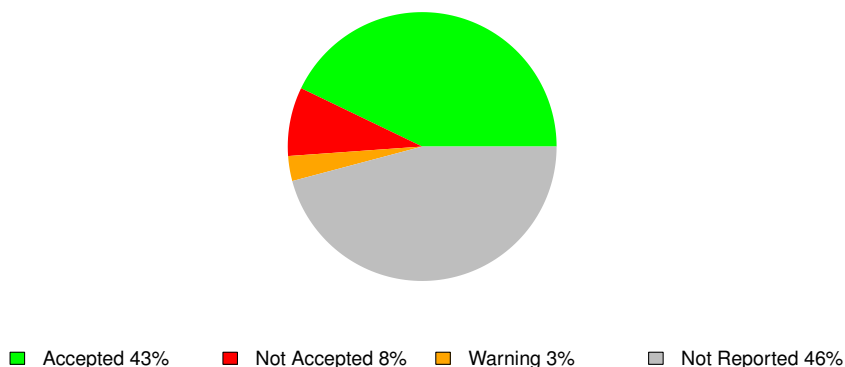


Figure 44. Percentage of Accepted vs. Warnings vs. Not Accepted vs. Not Reported results

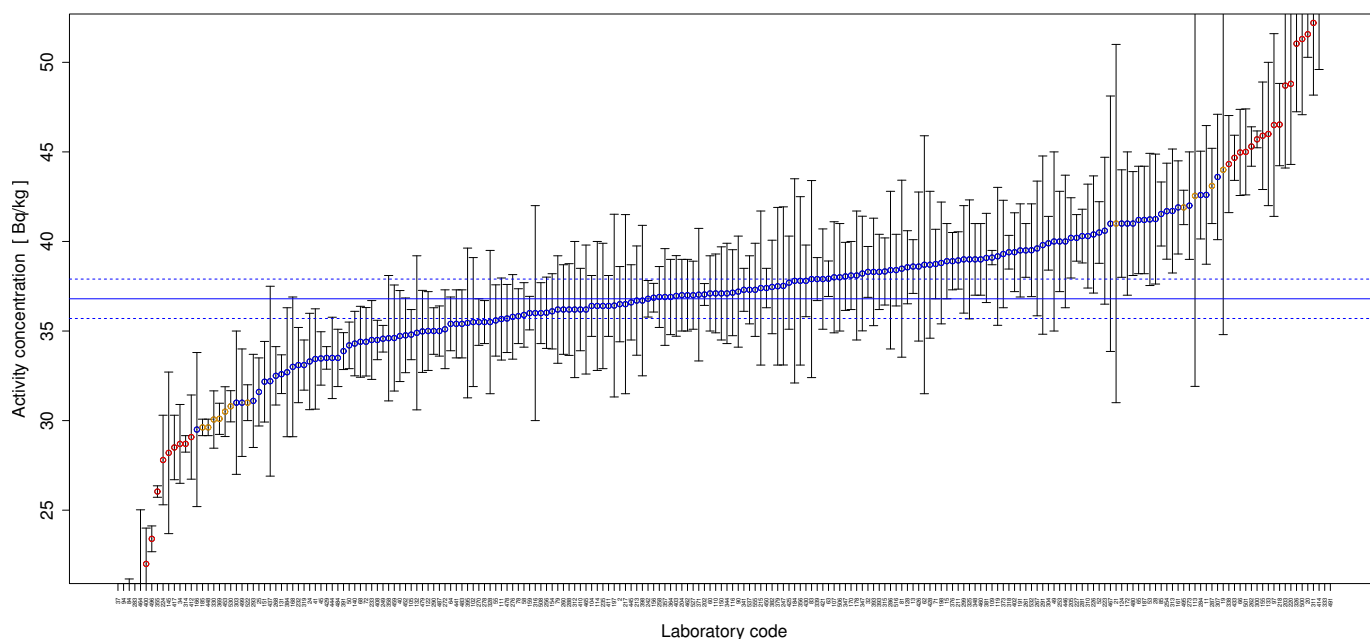


Figure 45. Reported results and evaluation parameters for Pb-212. Blue points represent accepted scores, whereas yellow and red represent warning and not accepted scores, respectively.

Table 45. Evaluation results for Pb-212 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
2	36.5	2.1	-0.8	6.48	A	A	A
11	42.6	3.87	15.8	9.56	A	A	A
13	38.6	1.5	4.9	4.90	A	A	A

Table 45. Evaluation results for Pb-212 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
15	38.9	2.1	5.7	6.17	A	A	A
19	44	9.2	19.6	21.12	A	N	W
20	51.57	1.29	40.1	3.90	N	N	N
21	41	10	11.4	24.57	A	N	W
24	33.3	2.69	-9.5	8.61	A	A	A
25	31.6	1.9	-14.1	6.71	A	A	A
28	41.25	3.627	12.1	9.29	A	A	A
32	38.3	1.42	4.1	4.76	A	A	A
34	28.7	2.2	-22.0	8.23	N	N	N
37	0.18	0.02	-99.5	11.51	N	N	N
40	34.72	2.54	-5.7	7.90	A	A	A
41	33.44	2.8	-9.1	8.89	A	A	A
45	33.47	1.49	-9.1	5.36	A	A	A
49	40	5	8.7	12.85	A	A	A
50	34.2	1.3	-7.1	4.84	A	A	A
52	40.5	1.72	10.1	5.19	A	A	A
53	41.23	3.69	12.0	9.44	A	A	A
55	35.59	1.99	-3.3	6.34	A	A	A
58	35.9	1.8	-2.5	5.84	A	A	A
60	37.1	2.1	0.8	6.40	A	A	A
62	38.7	7.2	5.2	18.84	A	A	A
63	37.92	0.99	3.0	3.97	A	A	A
64	35.4	1.5	-3.8	5.19	A	A	A
65	41.2	3	12.0	7.87	A	A	A
66	44.97	2.4045	22.2	6.13	N	N	N
68	34.4	1.98	-6.5	6.49	A	A	A
71	38.74	1.94	5.3	5.83	A	A	A
72	34.4	1.91	-6.5	6.31	A	A	A
78	35.83	1.53	-2.6	5.21	A	A	A
79	36.2	3	-1.6	8.81	A	A	A
81	38.48	4.94	4.6	13.18	A	A	A
83	37.9	5.5	3.0	14.82	A	A	A
84	16.96	4.2	-53.9	24.94	N	N	N
85	41.533	1.787	12.9	5.24	A	A	A
90	37.2	3.1	1.1	8.85	A	A	A
94	11.07	1.24	-69.9	11.59	N	N	N
97	46.5	5.1	26.4	11.37	N	A	N
102	35.5	3.6	-3.5	10.57	A	A	A
104	36.4	1.7	-1.1	5.54	A	A	A
105	34.8	1.4	-5.4	5.01	A	A	A
107	38	3.1	3.3	8.69	A	A	A
109	39.1	0.4	6.2	3.16	A	A	A
110	37.1	2.2	0.8	6.64	A	A	A
111	35.67	2.29	-3.1	7.08	A	A	A
113	42.55	10.64	15.6	25.18	A	N	W
114	36.4	3.6	-1.1	10.33	A	A	A
116	37.14	2.4	0.9	7.12	A	A	A
119	39.17	3.85	6.4	10.27	A	A	A
122	35	2.2	-4.9	6.96	A	A	A
124	41	3	11.4	7.90	A	A	A
128	38.56	2.04	4.8	6.08	A	A	A
131	32.59043	1.081342	-11.4	4.47	A	A	A
132	34.9	4.3	-5.2	12.68	A	A	A
133	46	4	25.0	9.20	N	N	N
140	34.3	1.8	-6.8	6.04	A	A	A
145	28.2	4.51	-23.4	16.27	N	A	N
150	37.1	2.6	0.8	7.62	A	A	A
151	32.17	2.25	-12.6	7.61	A	A	A
154	36.1	2.1	-1.9	6.54	A	A	A
155	45.9	3	24.7	7.19	N	N	N

Table 45. Evaluation results for Pb-212 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
156	36.86	0.8	0.2	3.69	A	A	A
159	36	0.936	-2.2	3.96	A	A	A
161	41.9	2.6	13.9	6.89	A	A	A
166	29.5	4.3	-19.8	14.88	A	A	A
168	33	3.9	-10.3	12.19	A	A	A
170	38.1	1.9	3.5	5.81	A	A	A
172	41	4	11.4	10.20	A	A	A
178	38.1	3.6	3.5	9.91	A	A	A
184	37.8	5.7	2.7	15.37	A	A	A
185	29.62	0.46	-19.5	3.37	A	N	W
187	41.2	3	12.0	7.87	A	A	A
191	39.5	2.6	7.3	7.23	A	A	A
197	36.42	5.1	-1.0	14.32	A	A	A
198	38.8	3.4	5.4	9.26	A	A	A
202	37.04	0.61	0.7	3.41	A	A	A
203	48.7	4.6	32.3	9.91	N	N	N
204	37	2	0.5	6.18	A	A	A
205	40.2	2.24	9.2	6.32	A	A	A
211	38.94	1.6	5.8	5.08	A	A	A
213	36.7	3.05	-0.3	8.83	A	A	A
215	37.4	4.3	1.6	11.88	A	A	A
217	36.5	5	-0.8	14.02	A	A	A
218	46.52533	2.29717	26.4	5.77	N	N	N
220	48.8	4.5	32.6	9.69	N	N	N
223	40.6	4.1	10.3	10.53	A	A	A
224	27.8	2.5	-24.5	9.48	N	N	N
226	40.39	3.27	9.8	8.63	A	A	A
227	40.2	1.3	9.2	4.40	A	A	A
232	33.1	2.1	-10.1	7.01	A	A	A
233	34.5	2.2	-6.2	7.04	A	A	A
235	36.4	3.5	-1.1	10.07	A	A	A
242	36.8	1.02	0.0	4.08	A	A	A
247	37.518	4.414	2.0	12.14	A	A	A
249	34.57	0.743388	-6.1	3.68	A	A	A
253	40	2.8	8.7	7.61	A	A	A
254	41.69	2.68	13.3	7.09	A	A	A
256	36.02	1.99	-2.1	6.28	A	A	A
258	36.9	1.7	0.3	5.49	A	A	A
260	36.2	2.5	-1.6	7.53	A	A	A
261	39.5	1.5	7.3	4.83	A	A	A
262	45.3	1.1	23.1	3.85	N	N	N
267	39.61	3.76	7.6	9.95	A	A	A
268	32.5	1.63	-11.7	5.84	A	A	A
270	35.5	1.3	-3.5	4.73	A	A	A
272	35.1	2.2	-4.6	6.94	A	A	A
273	42	3	14.1	7.74	A	A	A
276	35.79	2.36	-2.7	7.24	A	A	A
278	35.5	1.2	-3.5	4.51	A	A	A
281	40.3	1.5	9.5	4.77	A	A	A
283	19.7	0.5	-46.5	3.92	N	N	N
284	42.59	2.45	15.7	6.48	A	A	A
286	38.4	4.4	4.3	11.84	A	A	A
287	43.1	2.1	17.1	5.72	A	N	W
288	36.2	2.56	-1.6	7.68	A	A	A
290	35	1.3	-4.9	4.77	A	A	A
291	39.797	4.975	8.1	12.85	A	A	A
293	31.1	2.6	-15.5	8.88	A	A	A
299	39	3	6.0	8.25	A	A	A
300	45.7	0.47	24.2	3.16	N	N	N
303	31	4	-15.8	13.24	A	A	A

Table 45. Evaluation results for Pb-212 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
304	39.9	1.5	8.4	4.80	A	A	A
307	43.6	3.5	18.5	8.57	A	A	A
310	40.3	2.9	9.5	7.79	A	A	A
311	52.2	4.03	41.9	8.28	N	N	N
312	36.2	3.8	-1.6	10.91	A	A	A
313	41.7	3.46	13.3	8.82	A	A	A
314	28.7	0.46	-22.0	3.39	N	N	N
315	38.325	1.873	4.1	5.73	A	A	A
316	36	6	-2.2	16.93	A	A	A
318	39.4	0.94	7.1	3.82	A	A	A
319	33.1	1.4	-10.1	5.18	A	A	A
325	39	3.32	6.0	9.02	A	A	A
326	51.04	3.8	38.7	8.02	N	N	N
328	35.5	4	-3.5	11.66	A	A	A
330	30.06	1.6	-18.3	6.10	A	N	W
333	59.52	1.51	61.7	3.92	N	N	N
338	44.32	2.71	20.4	6.81	N	N	N
339	37.9	1.2	3.0	4.35	A	A	A
341	37.3	1.2	1.4	4.39	A	A	A
344	37.1	2.8	0.8	8.12	A	A	A
347	38.21	3.2	3.8	8.89	A	A	A
347	38.05	1.9	3.4	5.82	A	A	A
348	39	2	6.0	5.94	A	A	A
355	26.04	0.32	-29.2	3.23	N	N	N
356	37.8	4.7	2.7	12.79	A	A	A
357	36.9	2.7	0.3	7.90	A	A	A
358	34.6	3.5	-6.0	10.55	A	A	A
364	36.9	2.1	0.3	6.43	A	A	A
369	30.1	0.87	-18.2	4.16	A	N	W
371	37.03	3.7	0.6	10.43	A	A	A
373	39.3	3	6.8	8.20	A	A	A
376	38.9	1.6	5.7	5.08	A	A	A
379	37.5	4.4	1.9	12.11	A	A	A
381	39.08	2.49	6.2	7.04	A	A	A
382	37.46	2.61	1.8	7.58	A	A	A
384	32.7	3.6	-11.1	11.41	A	A	A
391	33.88	1.03	-7.9	4.26	A	A	A
393	38.3	3	4.1	8.38	A	A	A
393	38.3	2.1	4.1	6.24	A	A	A
395	35.45	4.18	-3.7	12.16	A	A	A
398	36.7	4.2	-0.3	11.83	A	A	A
400	22	2	-40.2	9.57	N	N	N
402	39.4	2.2	7.1	6.33	A	A	A
403	36.96	2.25	0.4	6.78	A	A	A
408	34.5	1.1	-6.2	4.37	A	A	A
410	36.2	2.3	-1.6	7.02	A	A	A
411	36.4	1.7	-1.1	5.54	A	A	A
412	29.08	2.35	-21.0	8.62	N	A	N
414	53.9	4.3	46.5	8.52	N	N	N
417	28.5	1.8	-22.6	6.99	N	N	N
421	37.9	2.8	3.0	7.97	A	A	A
425	37.7	2.6	2.5	7.52	A	A	A
426	38.6	4.16	4.9	11.18	A	A	A
428	38.7	4.1	5.2	11.01	A	A	A
429	33.5	0.63	-9.0	3.53	A	A	A
430	37.8	2	2.7	6.08	A	A	A
433	44.67	1.26	21.4	4.11	N	N	N
437	32.2	5.3	-12.5	16.73	A	A	A
441	35.4	1.9	-3.8	6.14	A	A	A
444	33.5	2.27	-9.0	7.41	A	A	A

Table 45. Evaluation results for Pb-212 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
445	36.6	2.1	-0.5	6.47	A	A	A
446	40	3.7	8.7	9.72	A	A	A
448	29.62	0.46	-19.5	3.37	A	N	W
450	37.4	1.1	1.6	4.19	A	A	A
452	34.76	2.0856	-5.5	6.70	A	A	A
453	30.5	1.39	-17.1	5.45	A	N	W
459	34.61	2.96	-6.0	9.06	A	A	A
460	39	2	6.0	5.94	A	A	A
462	37	2	0.5	6.18	A	A	A
464	20.31	4.71	-44.8	23.38	N	N	N
465	36.2	3.6	-1.6	10.38	A	A	A
467	40.99	7.13	11.4	17.65	A	A	A
478	35.7	1.9	-3.0	6.10	A	A	A
479	34.98	2.29	-5.0	7.20	A	A	A
480	41	2.9	11.4	7.68	A	A	A
483	35.4	1.9	-3.8	6.14	A	A	A
484	33.5	1.6	-9.0	5.63	A	A	A
487	35	1.4	-4.9	4.99	A	A	A
491	115.977	4.643	215.2	5.00	N	N	N
495	41.9	0.96	13.9	3.77	A	N	W
496	23.4	0.72	-36.4	4.29	N	N	N
499	31	3	-15.8	10.13	A	A	A
500	51.3	4.224	39.4	8.76	N	N	N
501	45	2.4	22.3	6.11	N	N	N
506	38	3	3.3	8.44	A	A	A
508	36	1.7	-2.2	5.59	A	A	A
516	38.4	2	4.3	6.01	A	A	A
522	31	1	-15.8	4.40	A	N	W
527	37	1.9	0.5	5.94	A	A	A
530	30.8	0.87	-16.3	4.11	A	N	W
532	39.51	2.59	7.4	7.20	A	A	A
537	37.3	1.9	1.4	5.91	A	A	A
555	37.3	2.6	1.4	7.58	A	A	A

Pb-214 determination of activity concentration in Sample 3

Table 46. Target values

Parameter	Value
Activity concentration [Bq/kg]	47.9
Uncertainty [Bq/kg]	1.3
Maximum Acceptable Relative Bias [%]	20

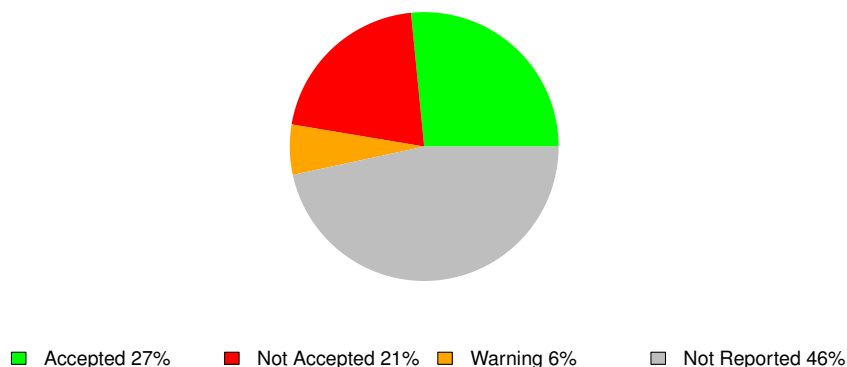


Figure 46. Percentage of Accepted vs. Warnings vs. Not Accepted vs. Not Reported results

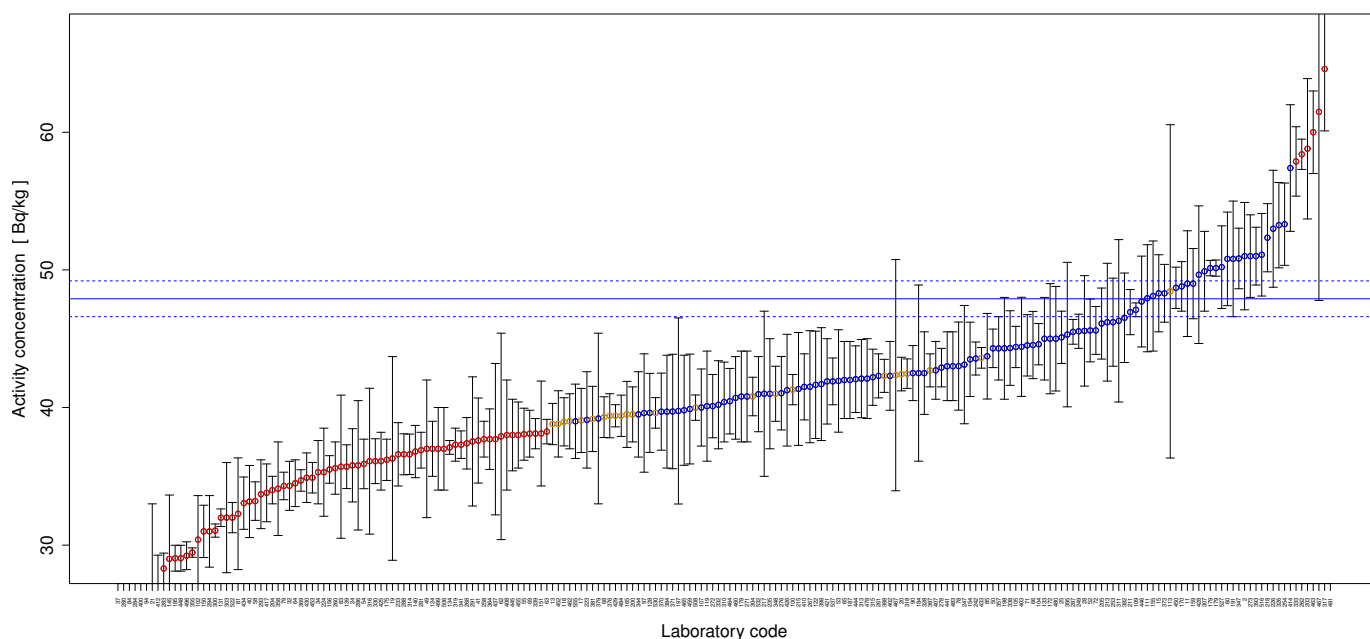


Figure 47. Reported results and evaluation parameters for Pb-214. Blue points represent accepted scores, whereas yellow and red represent warning and not accepted scores, respectively.

Table 47. Evaluation results for Pb-214 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
2	51	3.9	6.5	8.11	A	A	A
11	49	3.84	2.3	8.29	A	A	A
13	38.8	1.5	-19.0	4.72	A	N	W

Table 47. Evaluation results for Pb-214 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
15	48.3	2.8	0.8	6.40	A	A	A
17	39.06	2.33	-18.5	6.55	A	N	W
19	36.3	7.4	-24.2	20.57	N	N	N
20	42.43	1.22	-11.4	3.95	A	N	W
21	26	7	-45.7	27.06	N	N	N
24	35.8	2.66	-25.3	7.91	N	N	N
25	45.1	1.9	-5.8	5.01	A	A	A
28	45.57	4.013	-4.9	9.21	A	A	A
32	34.31	1.78	-28.4	5.85	N	N	N
34	35.3	2.3	-26.3	7.06	N	N	N
37	0.19	0.02	-99.6	10.87	N	N	N
40	33.17	2.62	-30.8	8.35	N	N	N
41	37.6	3.09	-21.5	8.65	N	A	N
49	37	5	-22.8	13.78	N	A	N
50	44.3	1.4	-7.5	4.17	A	A	A
52	45.6	2.28	-4.8	5.69	A	A	A
53	41.93	3.72	-12.5	9.28	A	A	A
54	35.9	1.8	-25.0	5.70	N	N	N
55	38.06	1.89	-20.5	5.66	N	N	N
58	33.2	1.4	-30.7	5.01	N	N	N
60	50.8	3.4	6.0	7.22	A	A	A
62	37.9	7.5	-20.9	19.97	N	A	N
63	38.25	0.89	-20.1	3.57	N	N	N
64	34.5	1.7	-28.0	5.63	N	N	N
65	42	2.8	-12.3	7.20	A	A	A
66	44.54	2.4445	-7.0	6.12	A	A	A
68	39.3	1.48	-18.0	4.64	A	N	W
69	38.1	1.7	-20.5	5.22	N	N	N
71	44.52	2.23	-7.1	5.70	A	A	A
72	45.6	1.74	-4.8	4.68	A	A	A
78	43.01	3.2	-10.2	7.92	A	A	A
79	34.3	1	-28.4	3.98	N	N	N
81	32.28	4.06	-32.6	12.87	N	A	N
83	35.7	5.2	-25.5	14.82	N	A	N
84	15.5	2.68	-67.6	17.50	N	N	N
85	43.726	3.11	-8.7	7.61	A	A	A
90	42.5	2	-11.3	5.43	A	A	A
94	24.35	1.28	-49.2	5.92	N	N	N
97	39.6	4.3	-17.3	11.19	A	A	A
100	41.3	1.1	-13.8	3.80	A	N	W
102	30.4	3.2	-36.5	10.87	N	N	N
104	44.6	1.5	-6.9	4.32	A	A	A
105	44.4	1.5	-7.3	4.33	A	A	A
107	40	2.8	-16.5	7.51	A	A	A
109	47.1	0.5	-1.7	2.91	A	A	A
111	47.94	3.89	0.1	8.56	A	A	A
113	48.44	12.11	1.1	25.15	A	N	W
116	38.96	1.75	-18.7	5.25	A	N	W
119	40.1	4	-16.3	10.34	A	A	A
122	41.65	3.9	-13.1	9.75	A	A	A
124	37	2	-22.8	6.05	N	N	N
128	39.61	2.87	-17.3	7.74	A	A	A
131	31.99369	0.637759	-33.2	3.37	N	N	N
133	45	3	-6.0	7.20	A	A	A
134	37.1	0.5	-22.6	3.03	N	N	N
139	35.7	1.59	-25.5	5.22	N	N	N
140	36.8	1.9	-23.2	5.83	N	N	N
145	29	4.64	-39.5	16.23	N	A	N
150	31	1.9	-35.3	6.70	N	N	N
151	38.11	3.81	-20.4	10.36	N	A	N

Table 47. Evaluation results for Pb-214 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
154	43.5	2.7	-9.2	6.77	A	A	A
155	48.1	4	0.4	8.75	A	A	A
156	35.5	1	-25.9	3.91	N	N	N
159	49	2.55	2.3	5.87	A	A	A
165	39.5	2.4	-17.5	6.65	A	N	W
170	48.8	1.8	1.9	4.58	A	A	A
172	45	4	-6.0	9.29	A	A	A
175	36.2	1.5	-24.4	4.95	N	N	N
178	40.8	3.3	-14.8	8.53	A	A	A
179	50.13	0.56	4.7	2.93	A	A	A
179	50.13	0.59	4.7	2.96	A	A	A
184	42.5	6.4	-11.3	15.30	A	A	A
185	29.05	0.94	-39.4	4.22	N	N	N
187	42	2.8	-12.3	7.20	A	A	A
191	50.8	4.2	6.0	8.70	A	A	A
197	39.75	6.76	-17.0	17.22	A	A	A
198	44.3	3.7	-7.5	8.78	A	A	A
200	39.5	2	-17.5	5.74	A	N	W
203	58.8	5.1	22.8	9.09	N	A	N
204	34	1	-29.0	4.00	N	N	N
205	46.1	2.58	-3.8	6.22	A	A	A
211	46.93	1.64	-2.0	4.42	A	A	A
213	46.2	4.28	-3.5	9.65	A	A	A
215	41.35	4.1	-13.7	10.28	A	A	A
217	41	6	-14.4	14.88	A	A	A
218	52.33706	2.47697	9.3	5.46	A	A	A
223	39.1	3.5	-18.4	9.35	A	A	A
224	35.3	3.2	-26.3	9.46	N	N	N
226	52.99	4.25	10.6	8.47	A	A	A
233	36.6	2.3	-23.6	6.85	N	N	N
235	41	4	-14.4	10.13	A	A	A
242	43.56	1.2	-9.1	3.87	A	A	A
247	43.117	4.298	-10.0	10.33	A	A	A
249	45.54	1.240693	-4.9	3.85	A	A	A
253	46.2	3.2	-3.5	7.44	A	A	A
254	53.32	2.99	11.3	6.23	A	A	A
258	37.7	1.3	-21.3	4.39	N	N	N
260	35.6	1.9	-25.7	5.99	N	N	N
261	42.3	1.6	-11.7	4.66	A	A	A
262	58.4	1.1	21.9	3.30	N	N	N
267	41.51	4.07	-13.3	10.17	A	A	A
268	37.4	1.87	-21.9	5.69	N	N	N
271	40.8	3.3	-14.8	8.53	A	A	A
272	40.1	2.3	-16.3	6.35	A	A	A
273	51	3	6.5	6.48	A	A	A
276	41.04	2.67	-14.3	7.05	A	A	A
278	42.9	1.4	-10.4	4.24	A	A	A
280	11.93	2.14	-75.1	18.14	N	N	N
281	36.9	1.3	-23.0	4.45	N	N	N
283	28.3	1.12	-40.9	4.80	N	N	N
284	22.92	1.1	-52.1	5.51	N	N	N
286	35.8	4.7	-25.3	13.41	N	A	N
287	45.5	0.9	-5.0	3.36	A	A	A
288	36.6	1.49	-23.6	4.89	N	N	N
291	37.536	4.692	-21.6	12.79	N	A	N
293	33.7	2.5	-29.6	7.90	N	N	N
294	31	2.6	-35.3	8.82	N	N	N
300	31.06	0.48	-35.2	3.12	N	N	N
303	32	4	-33.2	12.79	N	N	N
304	40.8	1.4	-14.8	4.37	A	N	W

Table 47. Evaluation results for Pb-214 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
307	49.9	2.9	4.2	6.41	A	A	A
310	40.4	2.9	-15.7	7.67	A	A	A
311	46.3	5.9	-3.3	13.03	A	A	A
313	42.1	2.84	-12.1	7.27	A	A	A
314	36.6	1.47	-23.6	4.85	N	N	N
315	42.2	2.04	-11.9	5.54	A	A	A
316	36.1	5.3	-24.6	14.93	N	A	N
317	64.6	4.5	34.9	7.48	N	N	N
318	42.46	1.07	-11.4	3.70	A	N	W
319	37.3	1.2	-22.1	4.21	N	N	N
326	53.25	3.1	11.2	6.42	A	A	A
328	42.5	3	-11.3	7.56	A	A	A
330	36.1	1.63	-24.6	5.27	N	N	N
332	40.2	3.2	-16.1	8.41	A	A	A
333	57.88	2.52	20.8	5.13	N	N	N
338	44.32	2.71	-7.5	6.69	A	A	A
339	38.1	1.1	-20.5	3.96	N	N	N
341	37.3	1	-22.1	3.81	N	N	N
344	39.5	3.1	-17.5	8.30	A	A	A
347	50.83	2.2	6.1	5.11	A	A	A
348	41	2	-14.4	5.58	A	N	W
355	29.46	0.34	-38.5	2.95	N	N	N
357	44.3	2.3	-7.5	5.86	A	A	A
358	34.1	3.4	-28.8	10.33	N	N	N
364	37.7	2.2	-21.3	6.44	N	N	N
369	34.7	0.78	-27.6	3.52	N	N	N
370	39.7	2.8	-17.1	7.56	A	A	A
371	39.71	4.16	-17.1	10.82	A	A	A
373	48.3	2.1	0.8	5.13	A	A	A
376	39.4	1.6	-17.8	4.88	A	N	W
379	39.2	6.2	-18.2	16.05	A	A	A
381	39.17	2.37	-18.2	6.63	A	N	W
382	46.52	3.25	-2.9	7.49	A	A	A
384	39.7	4.1	-17.1	10.68	A	A	A
387	42.7	1.2	-10.9	3.91	A	N	W
388	42.3	1.2	-11.7	3.93	A	N	W
393	51	2.1	6.5	4.93	A	A	A
395	45.3	5.25	-5.4	11.90	A	A	A
398	41.7	4.1	-12.9	10.20	A	A	A
400	23	4	-52.0	17.60	N	N	N
402	42.3	2.5	-11.7	6.50	A	A	A
403	44.41	3.6	-7.3	8.55	A	A	A
407	42.7	2.1	-10.9	5.62	A	A	A
408	38	4	-20.7	10.87	N	A	N
410	41.5	2.4	-13.4	6.39	A	A	A
412	26.55	2.72	-44.6	10.60	N	N	N
414	57.4	4.6	19.8	8.46	A	A	A
417	33.8	2.1	-29.4	6.78	N	N	N
421	41.9	3.1	-12.5	7.88	A	A	A
425	36.1	2.1	-24.6	6.42	N	N	N
426	41.26	4.06	-13.9	10.21	A	A	A
428	49.65	5	3.6	10.43	A	A	A
429	39.4	0.805	-17.8	3.40	A	N	W
430	34.9	1.8	-27.1	5.83	N	N	N
433	43.61	0.75	-9.0	3.21	A	N	W
434	33.05	1.9	-31.0	6.36	N	N	N
437	37.7	5.5	-21.3	14.84	N	A	N
441	43	2.5	-10.2	6.42	A	A	A
444	42.06	2.42	-12.2	6.36	A	A	A
445	38	2.6	-20.7	7.36	N	N	N

Table 47. Evaluation results for Pb-214 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
446	47.7	3.3	-0.4	7.43	A	A	A
448	29.05	0.94	-39.4	4.22	N	N	N
450	48.7	1.5	1.7	4.11	A	A	A
452	38.81	2.40622	-19.0	6.77	A	N	W
453	34.9	1.11	-27.1	4.18	N	N	N
455	38	2.4	-20.7	6.87	N	N	N
459	39.89	3.99	-16.7	10.36	A	A	A
460	40.7	3	-15.0	7.85	A	A	A
462	39	2	-18.6	5.80	A	N	W
463	60	3	25.3	5.69	N	N	N
464	40.46	2.38	-15.5	6.48	A	A	A
465	39.8	4	-16.9	10.41	A	A	A
467	61.48	13.7	28.4	22.45	N	N	N
467	42.35	8.4	-11.6	20.02	A	N	W
478	42.1	2.9	-12.1	7.40	A	A	A
480	45	3.8	-6.0	8.87	A	A	A
483	43	2.5	-10.2	6.42	A	A	A
484	39.4	1.5	-17.8	4.68	A	N	W
491	102.118	2.395	113.2	3.59	N	N	N
496	29.23	1.01	-39.0	4.39	N	N	N
499	37	3	-22.8	8.55	N	N	N
506	37	3	-22.8	8.55	N	N	N
508	39.99	0.92	-16.5	3.56	A	N	W
516	51.1	3	6.7	6.47	A	A	A
522	32	1.1	-33.2	4.38	N	N	N
527	50.2	3	4.8	6.56	A	A	A
530	39.61	1.11	-17.3	3.90	A	N	W
532	40.97	2.73	-14.5	7.19	A	A	A
537	41.9	1.7	-12.5	4.88	A	A	A
555	39	2.7	-18.6	7.44	A	A	A

Bi-214 determination of activity concentration in Sample 3

Table 48. Target values

Parameter	Value
Activity concentration [Bq/kg]	47.9
Uncertainty [Bq/kg]	1.3
Maximum Acceptable Relative Bias [%]	20

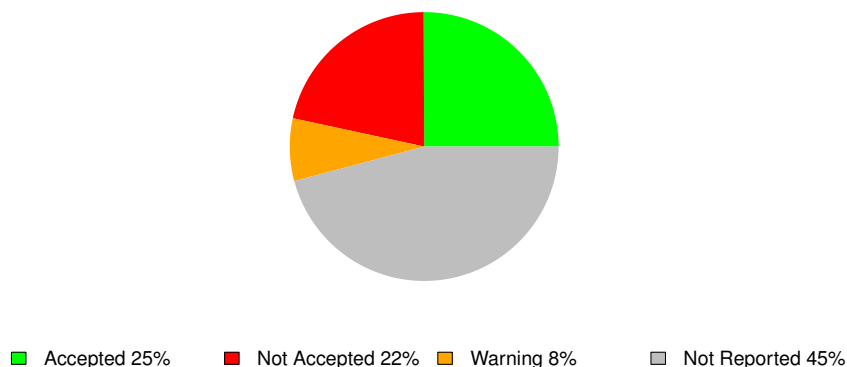


Figure 48. Percentage of Accepted vs. Warnings vs. Not Accepted vs. Not Reported results

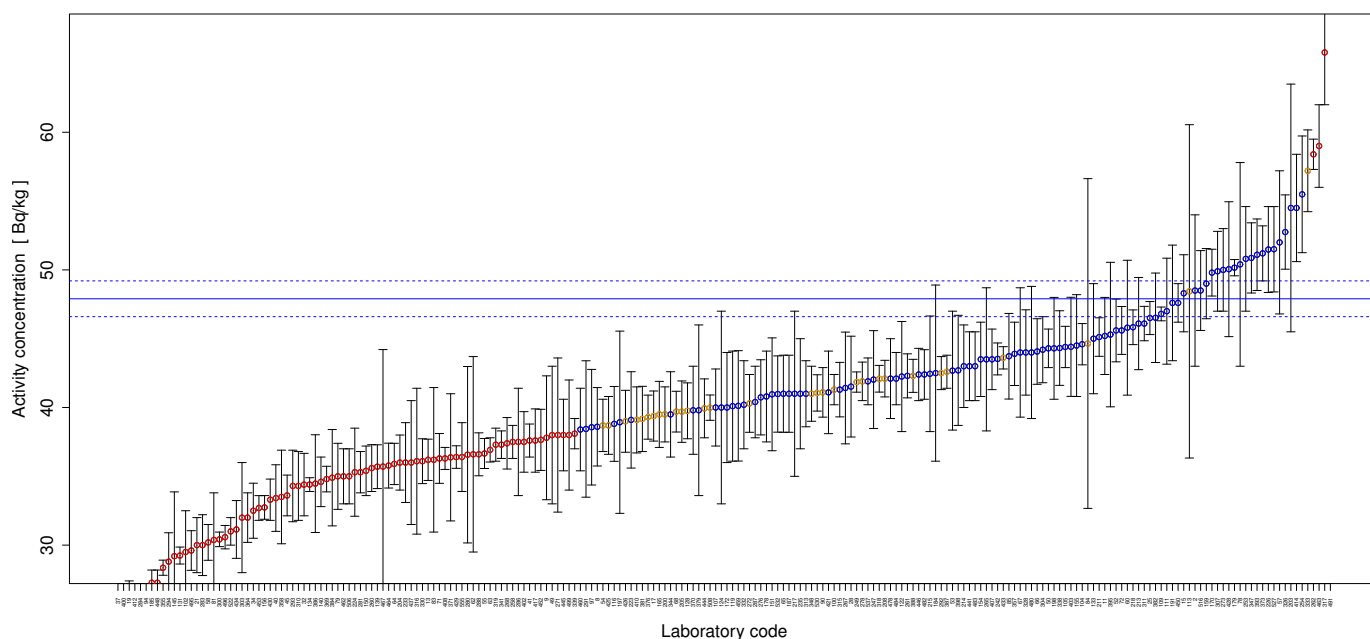


Figure 49. Reported results and evaluation parameters for Bi-214. Blue points represent accepted scores, whereas yellow and red represent warning and not accepted scores, respectively.

Table 49. Evaluation results for Bi-214 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
2	48.5	5.5	1.2	11.66	A	A	A
8	38.6	2.85	-19.4	7.87	A	A	A
9	37.8	4.5	-21.1	12.21	N	A	N

Table 49. Evaluation results for Bi-214 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
11	45.2	2.8	-5.6	6.76	A	A	A
13	36.2	1.5	-24.4	4.95	N	N	N
15	48.3	2.8	0.8	6.40	A	A	A
17	39.38	1.82	-17.8	5.36	A	N	W
19	22.9	4.5	-52.2	19.84	N	N	N
21	30	2	-37.4	7.20	N	N	N
25	46.5	1.2	-2.9	3.75	A	A	A
28	41.52	3.662	-13.3	9.23	A	A	A
32	34.4	2.27	-28.2	7.14	N	N	N
34	32.5	2	-32.1	6.73	N	N	N
37	0.2	0.03	-99.6	15.24	N	N	N
40	33.42	2.42	-30.2	7.73	N	N	N
41	37.6	1.2	-21.5	4.19	N	N	N
45	33.61	1.48	-29.8	5.17	N	N	N
49	38	5	-20.7	13.43	N	A	N
50	44.3	1.4	-7.5	4.17	A	A	A
52	45.6	2.28	-4.8	5.69	A	A	A
53	42.68	4.32	-10.9	10.48	A	A	A
54	38.7	1.9	-19.2	5.61	A	N	W
55	36.66	1.09	-23.5	4.03	N	N	N
57	52	5.2	8.6	10.36	A	A	A
58	30.2	1.3	-37.0	5.09	N	N	N
60	45.8	4.9	-4.4	11.04	A	A	A
62	36.6	7.1	-23.6	19.59	N	A	N
63	36.92	0.88	-22.9	3.61	N	N	N
64	35.9	1.5	-25.0	4.98	N	N	N
65	41	2.8	-14.4	7.35	A	A	A
66	44.07	2.382	-8.0	6.05	A	A	A
67	44	4.7	-8.1	11.02	A	A	A
68	39.7	1.48	-17.1	4.61	A	N	W
71	36.3	1.81	-24.2	5.68	N	N	N
72	45.6	1.74	-4.8	4.68	A	A	A
78	50.4	7.4	5.2	14.93	A	A	A
79	35	2.4	-26.9	7.37	N	N	N
81	30.38	3.42	-36.6	11.58	N	N	N
83	36.2	5.25	-24.4	14.75	N	A	N
84	44.65	11.98	-6.8	26.97	A	N	W
85	43.726	3.11	-8.7	7.61	A	A	A
90	41.1	1.8	-14.2	5.15	A	N	W
94	24.35	1.28	-49.2	5.92	N	N	N
97	38.57	4.2	-19.5	11.22	A	A	A
100	41.3	1.1	-13.8	3.80	A	N	W
102	29.5	3	-38.4	10.53	N	N	N
104	44.6	1.5	-6.9	4.32	A	A	A
105	44.4	1.5	-7.3	4.33	A	A	A
107	40	2.8	-16.5	7.51	A	A	A
109	46.8	0.5	-2.3	2.92	A	A	A
111	47	3.85	-1.9	8.63	A	A	A
113	48.44	12.11	1.1	25.15	A	N	W
116	38.81	2.72	-19.0	7.52	A	A	A
119	40.1	4	-16.3	10.34	A	A	A
122	42.25	4	-11.8	9.85	A	A	A
124	40	7	-16.5	17.71	A	A	A
128	39.76	2.03	-17.0	5.78	A	N	W
131	29.24424	0.615928	-39.0	3.44	N	N	N
133	45	4	-6.0	9.29	A	A	A
134	34.4	0.5	-28.2	3.08	N	N	N
139	35.7	1.59	-25.5	5.22	N	N	N
140	34.6	1.8	-27.8	5.87	N	N	N
145	29.2	4.67	-39.0	16.22	N	A	N

Table 49. Evaluation results for Bi-214 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
150	35.4	1.8	-26.1	5.76	N	N	N
151	40.96	4.1	-14.5	10.37	A	A	A
154	43.5	2.7	-9.2	6.77	A	A	A
155	44.5	3.7	-7.1	8.75	A	A	A
156	32.74	0.86	-31.6	3.78	N	N	N
159	49	2.55	2.3	5.87	A	A	A
165	39.5	2.4	-17.5	6.65	A	N	W
170	49.8	1.7	4.0	4.36	A	A	A
172	40	4	-16.5	10.36	A	A	A
178	40.8	3.3	-14.8	8.53	A	A	A
179	50.16	0.59	4.7	2.96	A	A	A
184	42.5	6.4	-11.3	15.30	A	A	A
185	27.27	0.92	-43.1	4.33	N	N	N
187	41	2.8	-14.4	7.35	A	A	A
191	47.6	4.2	-0.6	9.23	A	A	A
197	38.93	6.62	-18.7	17.22	A	A	A
198	44.3	3.7	-7.5	8.78	A	A	A
200	39.5	2	-17.5	5.74	A	N	W
203	54.5	9	13.8	16.74	A	A	A
204	36	2	-24.8	6.18	N	N	N
205	39.7	2.23	-17.1	6.24	A	N	W
208	42.1	1.33	-12.1	4.16	A	N	W
211	45.12	1.4	-5.8	4.12	A	A	A
213	46.1	3.35	-3.8	7.76	A	A	A
214	43	3	-10.2	7.49	A	A	A
215	42.45	4.2	-11.4	10.26	A	A	A
217	41	6	-14.4	14.88	A	A	A
218	45.83091	1.26166	-4.3	3.87	A	A	A
223	39.1	3.5	-18.4	9.35	A	A	A
224	35.3	3.2	-26.3	9.46	N	N	N
226	51.48	3.12	7.5	6.64	A	A	A
233	36	2.9	-24.8	8.50	N	N	N
235	41	4	-14.4	10.13	A	A	A
242	43.53	1.16	-9.1	3.80	A	A	A
247	42.029	3.556	-12.3	8.89	A	A	A
249	41.85	0.735266	-12.6	3.23	A	N	W
253	50.8	3.8	6.0	7.96	A	A	A
254	55.49	4.24	15.8	8.11	A	A	A
258	37.5	1.2	-21.7	4.20	N	N	N
260	35.6	1.7	-25.7	5.49	N	N	N
261	42.3	1.6	-11.7	4.66	A	A	A
262	58.4	1.1	21.9	3.30	N	N	N
265	43.5	5.2	-9.2	12.26	A	A	A
267	41.42	4.06	-13.5	10.17	A	A	A
268	37.4	1.87	-21.9	5.69	N	N	N
271	38	5.6	-20.7	14.98	N	A	N
272	40.3	2.1	-15.9	5.88	A	N	W
273	50	3	4.4	6.59	A	A	A
276	40.74	2.73	-14.9	7.23	A	A	A
278	41.9	1.4	-12.5	4.30	A	N	W
280	36.57	6.41	-23.6	17.74	N	A	N
281	35.3	1.5	-26.3	5.04	N	N	N
283	30	2.21	-37.4	7.85	N	N	N
284	24.13	1.16	-49.6	5.52	N	N	N
286	37.5	3.9	-21.7	10.75	N	A	N
287	40.4	2.6	-15.7	6.98	A	A	A
288	36.6	1.56	-23.6	5.05	N	N	N
291	38.44	4.956	-19.8	13.18	A	A	A
292	42.5	1.2	-11.3	3.92	A	N	W
293	34.3	2.6	-28.4	8.05	N	N	N

Table 49. Evaluation results for Bi-214 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
294	28.8	2.1	-39.9	7.78	N	N	N
300	30.42	0.53	-36.5	3.23	N	N	N
303	32	4	-33.2	12.79	N	N	N
304	44.2	2.4	-7.7	6.07	A	A	A
307	49.9	2.9	4.2	6.41	A	A	A
310	34.3	2.5	-28.4	7.78	N	N	N
311	46.1	1.25	-3.8	3.84	A	A	A
313	41	2.4	-14.4	6.45	A	A	A
315	41.3	1.98	-13.8	5.51	A	A	A
316	36.1	5.3	-24.6	14.93	N	A	N
317	65.8	3.8	37.4	6.38	N	N	N
318	42.09	0.97	-12.1	3.56	A	N	W
319	37.3	1.2	-22.1	4.21	N	N	N
326	52.75	2.7	10.1	5.79	A	A	A
328	44	3.1	-8.1	7.55	A	A	A
330	36.1	1.63	-24.6	5.27	N	N	N
332	40.2	3.2	-16.1	8.41	A	A	A
333	57.2	2.97	19.4	5.86	A	N	W
338	44.32	2.71	-7.5	6.69	A	A	A
339	38.1	1.1	-20.5	3.96	N	N	N
341	37.3	1	-22.1	3.81	N	N	N
344	39.5	3.1	-17.5	8.30	A	A	A
347	50.87	2.55	6.2	5.70	A	A	A
348	41	2	-14.4	5.58	A	N	W
355	28.36	0.55	-40.8	3.34	N	N	N
357	43.9	2.3	-8.3	5.90	A	A	A
358	33.5	3.4	-30.1	10.51	N	N	N
364	32	1.8	-33.2	6.25	N	N	N
369	34.8	0.93	-27.4	3.81	N	N	N
370	39.8	3.2	-16.9	8.49	A	A	A
371	36.38	4.62	-24.0	12.99	N	A	N
373	51.2	2	6.9	4.76	A	A	A
376	39.3	1.6	-18.0	4.89	A	N	W
379	39.8	6.2	-16.9	15.81	A	A	A
381	39.17	2.37	-18.2	6.63	A	N	W
382	46.52	3.25	-2.9	7.49	A	A	A
384	34.9	3.5	-27.1	10.39	N	N	N
386	34.47	3.55	-28.0	10.65	N	N	N
387	42.6	1.2	-11.1	3.91	A	N	W
388	42.3	1.2	-11.7	3.93	A	N	W
393	51.1	2.6	6.7	5.77	A	A	A
395	45.3	5.25	-5.4	11.90	A	A	A
398	42.7	4	-10.9	9.75	A	A	A
400	20	5	-58.2	25.15	N	N	N
402	37.5	2.2	-21.7	6.46	N	N	N
403	44.41	3.6	-7.3	8.55	A	A	A
407	43.5	2.2	-9.2	5.74	A	A	A
408	36.3	0.8	-24.2	3.50	N	N	N
410	39.1	2.4	-18.4	6.71	A	N	W
412	23.17	3.67	-51.6	16.07	N	N	N
414	54.5	3.9	13.8	7.65	A	A	A
417	37.6	2.3	-21.5	6.69	N	N	N
421	41.1	3	-14.2	7.79	A	A	A
425	38.7	2.1	-19.2	6.07	A	N	W
426	39	2.25	-18.6	6.38	A	N	W
428	50.05	4.9	4.5	10.16	A	A	A
429	36.4	0.82	-24.0	3.53	N	N	N
430	33.3	1.5	-30.5	5.26	N	N	N
433	43.61	0.81	-9.0	3.29	A	N	W
434	31.14	2.1	-35.0	7.27	N	N	N

Table 49. Evaluation results for Bi-214 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
437	36	4.5	-24.8	12.79	N	A	N
441	43	2.5	-10.2	6.42	A	A	A
444	39.94	2.14	-16.6	6.01	A	N	W
445	38	2.6	-20.7	7.36	N	N	N
446	42.4	1.9	-11.5	5.24	A	A	A
448	27.27	0.92	-43.1	4.33	N	N	N
450	47.6	1.4	-0.6	4.00	A	A	A
452	37.65	2.22135	-21.4	6.49	N	N	N
453	32.7	0.897	-31.7	3.86	N	N	N
459	40.12	4.01	-16.2	10.36	A	A	A
460	38.4	3	-19.8	8.27	A	A	A
462	35	2	-26.9	6.33	N	N	N
463	59	3	23.2	5.76	N	N	N
464	35.78	1.63	-25.3	5.30	N	N	N
467	35.71	8.5	-25.4	23.96	N	N	N
478	42.1	2.9	-12.1	7.40	A	A	A
480	44	4.8	-8.1	11.24	A	A	A
482	42.4	1.8	-11.5	5.04	A	A	A
483	43	2.5	-10.2	6.42	A	A	A
484	42.1	1.9	-12.1	5.27	A	A	A
491	114.665	2.877	139.4	3.70	N	N	N
495	29.61	1.44	-38.2	5.57	N	N	N
496	30.58	0.85	-36.2	3.88	N	N	N
499	38	4	-20.7	10.87	N	A	N
506	35	2	-26.9	6.33	N	N	N
508	39.99	0.92	-16.5	3.56	A	N	W
516	48.5	2.9	1.2	6.57	A	A	A
522	31	1	-35.3	4.22	N	N	N
527	51.5	3.1	7.5	6.60	A	A	A
530	41.06	1.32	-14.3	4.21	A	N	W
532	40.98	2.77	-14.4	7.28	A	A	A
537	41.9	1.7	-12.5	4.88	A	A	A
555	36.4	2.5	-24.0	7.38	N	N	N

Table 50. Target values

Parameter	Value
Activity concentration [Bq/kg]	47.9
Uncertainty [Bq/kg]	1.3
Maximum Acceptable Relative Bias [%]	20

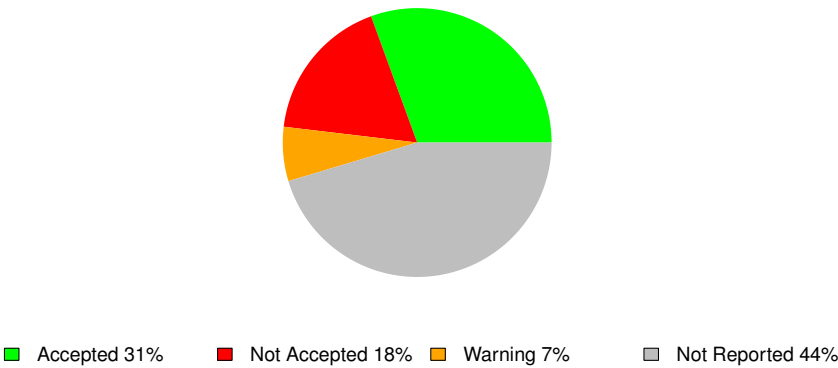


Figure 50. Percentage of Accepted vs. Warnings vs. Not Accepted vs. Not Reported results

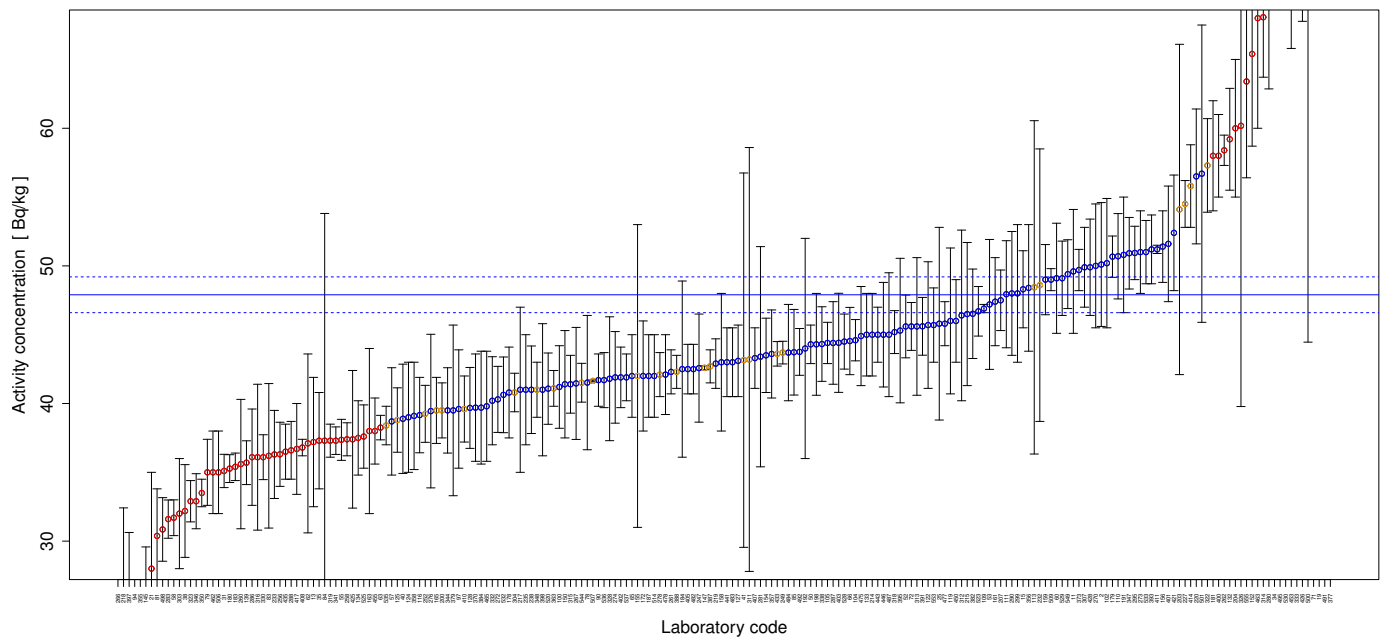


Figure 51. Reported results and evaluation parameters for Ra-226. Blue points represent accepted scores, whereas yellow and red represent warning and not accepted scores, respectively.

Table 51. Evaluation results for Ra-226 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty (k = 1) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
2	50.1	4.5	4.6	9.38	A	A	A
11	49.6	4.5	3.5	9.47	A	A	A
13	37.2	4.7	-22.3	12.92	N	A	N

Table 51. Evaluation results for Ra-226 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
15	48.3	2.8	0.8	6.40	A	A	A
19	93	24	94.2	25.95	N	N	N
21	28	7	-41.5	25.15	N	N	N
25	45.8	7	-4.4	15.52	A	A	A
31	35.1	1.21	-26.7	4.39	N	N	N
34	76.7	7	60.1	9.52	N	N	N
35	37.3	3.5	-22.1	9.77	N	A	N
38	32.19	3.37	-32.8	10.82	N	N	N
40	38.89	3.97	-18.8	10.56	A	A	A
41	43.15	13.6	-9.9	31.63	A	N	W
50	44.3	1.4	-7.5	4.17	A	A	A
52	45.6	2.28	-4.8	5.69	A	A	A
53	47.2	4.72	-1.5	10.36	A	A	A
55	37.36	1.49	-22.0	4.82	N	N	N
57	38.7	3.9	-19.2	10.44	A	A	A
58	31.7	1.3	-33.8	4.92	N	N	N
60	49.1	4	2.5	8.59	A	A	A
62	37.1	6.5	-22.6	17.73	N	A	N
63	38.25	0.89	-20.1	3.57	N	N	N
65	42	3	-12.3	7.64	A	A	A
66	44.54	2.4445	-7.0	6.12	A	A	A
71	86.83	4.34	81.3	5.69	N	N	N
72	45.6	1.74	-4.8	4.68	A	A	A
78	41.52	4.88	-13.3	12.06	A	A	A
79	35	2.4	-26.9	7.37	N	N	N
81	30.38	3.42	-36.6	11.58	N	N	N
83	36.2	5.25	-24.4	14.75	N	A	N
84	37.3	16.51	-22.1	44.35	N	N	N
85	43.726	3.11	-8.7	7.61	A	A	A
90	41.7	1.9	-12.9	5.30	A	A	A
94	24.35	1.28	-49.2	5.92	N	N	N
97	39.6	4.3	-17.3	11.19	A	A	A
100	41.2	3	-14.0	7.77	A	A	A
102	50.2	4.7	4.8	9.75	A	A	A
104	44.6	1.5	-6.9	4.32	A	A	A
105	44.4	1.5	-7.3	4.33	A	A	A
109	46.9	0.3	-2.1	2.79	A	A	A
110	50.7	3.1	5.8	6.69	A	A	A
111	47.94	3.89	0.1	8.56	A	A	A
113	48.44	12.11	1.1	25.15	A	N	W
116	39.16	2.74	-18.2	7.50	A	A	A
119	46	5.3	-4.0	11.84	A	A	A
122	45.7	4.6	-4.6	10.43	A	A	A
124	39	4	-18.6	10.61	A	A	A
125	38.8	2.34	-19.0	6.61	A	N	W
127	43.1	2.6	-10.0	6.61	A	A	A
128	39.68	2.94	-17.2	7.89	A	A	A
132	59.2	3.7	23.6	6.81	N	N	N
133	45	3	-6.0	7.20	A	A	A
134	37.5	2.7	-21.7	7.69	N	N	N
139	35.7	1.59	-25.5	5.22	N	N	N
145	25.5	4.08	-46.8	16.23	N	N	N
147	42.594	0.1428	-11.1	2.73	A	N	W
150	41.4	3.9	-13.6	9.80	A	A	A
152	65.4	6.7	36.5	10.60	N	N	N
154	43.5	2.7	-9.2	6.77	A	A	A
155	42	11	-12.3	26.33	A	N	W
156	51.4	2.6	7.3	5.74	A	A	A
158	43	5	-10.2	11.94	A	A	A
159	49	2.55	2.3	5.87	A	A	A

Table 51. Evaluation results for Ra-226 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
161	47.4	3.2	-1.0	7.28	A	A	A
163	38	6	-20.7	16.02	N	A	N
165	39.5	2.4	-17.5	6.65	A	N	W
172	42	4	-12.3	9.90	A	A	A
178	40.8	3.3	-14.8	8.53	A	A	A
179	50.67	1.5	5.8	4.02	A	A	A
180	35.27	1.01	-26.4	3.95	N	N	N
181	58	4	21.1	7.41	N	N	N
183	35.4	1	-26.1	3.92	N	N	N
184	42.5	6.4	-11.3	15.30	A	A	A
187	42	3	-12.3	7.64	A	A	A
191	50.8	4.2	6.0	8.70	A	A	A
192	44	8	-8.1	18.38	A	A	A
198	44.3	3.7	-7.5	8.78	A	A	A
200	39.5	2	-17.5	5.74	A	N	W
203	54.1	12	12.9	22.35	A	N	W
204	60	5	25.3	8.76	N	N	N
207	47.5	2.2	-0.8	5.37	A	A	A
214	45	3	-6.0	7.20	A	A	A
215	46.5	5.2	-2.9	11.51	A	A	A
217	41	6	-14.4	14.88	A	A	A
218	21.25897	11.15741	-55.6	52.55	N	N	N
219	42.9	1.8	-10.4	5.00	A	A	A
220	56.5	4.9	18.0	9.09	A	A	A
227	54.5	1.7	13.8	4.13	A	N	W
232	48.6	9.9	1.5	20.55	A	N	W
233	36.3	3.2	-24.2	9.22	N	N	N
235	41	4	-14.4	10.13	A	A	A
238	41	3.18	-14.4	8.22	A	A	A
247	42.573	3.927	-11.1	9.62	A	A	A
249	43.7	0.823984	-8.8	3.30	A	N	W
252	39.25	2.07	-18.1	5.93	A	N	W
256	36.31	2.33	-24.2	6.97	N	N	N
258	37.4	1.2	-21.9	4.20	N	N	N
260	35.6	4.7	-25.7	13.48	N	A	N
261	42.3	1.6	-11.7	4.66	A	A	A
262	58.4	1.1	21.9	3.30	N	N	N
266	2.22	0.36	-95.4	16.44	N	N	N
267	41.46	4.07	-13.4	10.18	A	A	A
270	50	4.5	4.4	9.40	A	A	A
272	40.3	2.4	-15.9	6.54	A	A	A
273	51	3	6.5	6.48	A	A	A
274	41.9	3.327558	-12.5	8.39	A	A	A
276	39.45	5.58	-17.6	14.40	A	A	A
278	42.1	1.6	-12.1	4.67	A	N	W
280	69	6.14	44.0	9.30	N	N	N
281	43.4	8	-9.4	18.63	A	A	A
283	31.6	1.39	-34.0	5.17	N	N	N
286	36.1	3.5	-24.6	10.07	N	A	N
287	44.4	3	-7.3	7.28	A	A	A
288	36.6	2.1	-23.6	6.35	N	N	N
290	48	4.5	0.2	9.76	A	A	A
295	50.94	1.94	6.3	4.68	A	A	A
299	48	5	0.2	10.76	A	A	A
303	32	4	-33.2	12.79	N	N	N
304	40.8	1.4	-14.8	4.37	A	N	W
307	49.9	2.9	4.2	6.41	A	A	A
311	43.2	15.4	-9.8	35.75	A	N	W
312	46.4	6.2	-3.1	13.63	A	A	A
313	45.6	5	-4.8	11.30	A	A	A

Table 51. Evaluation results for Ra-226 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
314	68.07	4.36	42.1	6.96	N	N	N
315	41.4	2.1	-13.6	5.75	A	A	A
316	36.1	5.3	-24.6	14.93	N	A	N
318	45.19	1.56	-5.7	4.39	A	A	A
319	37.3	1.2	-22.1	4.21	N	N	N
322	57.3	3.4	19.6	6.52	A	N	W
323	32.9	1.5	-31.3	5.31	N	N	N
326	60.18	20.4	25.6	34.01	N	N	N
328	41.8	4.5	-12.7	11.10	A	A	A
330	36.1	1.63	-24.6	5.27	N	N	N
332	40.2	3.2	-16.1	8.41	A	A	A
333	84.49	13.59	76.4	16.31	N	N	N
338	44.32	2.71	-7.5	6.69	A	A	A
341	37.3	1	-22.1	3.81	N	N	N
344	39.5	3.1	-17.5	8.30	A	A	A
346	32.9	2	-31.3	6.66	N	N	N
347	50.92	2.6	6.3	5.78	A	A	A
348	41	2	-14.4	5.58	A	N	W
350	33.5	1	-30.1	4.03	N	N	N
355	25.14	0.73	-47.5	3.97	N	N	N
356	48.4	4.6	1.0	9.88	A	A	A
357	43.6	3.2	-9.0	7.83	A	A	A
358	39.1	3.9	-18.4	10.34	A	A	A
363	41.1	1.3	-14.2	4.17	A	N	W
370	39.7	3.9	-17.1	10.19	A	A	A
373	49.7	1.5	3.8	4.06	A	A	A
377	115.0968	12.06731	140.3	10.83	N	N	N
379	39.5	6.2	-17.5	15.93	A	A	A
382	46.52	3.25	-2.9	7.49	A	A	A
384	39.7	4.1	-17.1	10.68	A	A	A
387	42.7	1.2	-10.9	3.91	A	N	W
388	42.3	1.2	-11.7	3.93	A	N	W
391	45.61	2.1	-4.8	5.34	A	A	A
393	51.2	2.5	6.9	5.59	A	A	A
395	45.3	5.25	-5.4	11.90	A	A	A
397	23.13	7.5	-51.7	32.54	N	N	N
398	41	4.8	-14.4	12.02	A	A	A
400	58	3	21.1	5.84	N	N	N
401	51.6	4.2	7.7	8.58	A	A	A
402	41.9	2.2	-12.5	5.91	A	A	A
403	44.41	3.6	-7.3	8.55	A	A	A
405	42.5	1.8	-11.3	5.03	A	A	A
407	43.3	2.2	-9.6	5.76	A	A	A
408	36.8	0.6	-23.2	3.17	N	N	N
410	39.6	2.4	-17.3	6.64	A	N	W
411	51.2	0.3	6.9	2.78	A	A	A
414	55.8	3	16.5	6.02	A	N	W
417	36.7	3.3	-23.4	9.39	N	A	N
421	52.4	4.2	9.4	8.46	A	A	A
425	37.4	5	-21.9	13.64	N	A	N
426	84.66	16.89	76.7	20.13	N	N	N
428	49.9	3.5	4.2	7.52	A	A	A
433	43.61	0.89	-9.0	3.40	A	N	W
435	36.5	2	-23.8	6.11	N	N	N
441	43	2.5	-10.2	6.42	A	A	A
443	45	2	-6.0	5.21	A	A	A
446	45	3.8	-6.0	8.87	A	A	A
450	46	3	-4.0	7.06	A	A	A
453	83.4	17.6	74.1	21.28	N	N	N
455	38	2.4	-20.7	6.87	N	N	N

Table 51. Evaluation results for Ra-226 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
462	35	3	-26.9	8.99	N	N	N
463	68	8	42.0	12.07	N	N	N
465	39.8	4	-16.9	10.41	A	A	A
475	44.9	3.6	-6.3	8.46	A	A	A
477	45.8	1.6	-4.4	4.42	A	A	A
478	42.1	2.9	-12.1	7.40	A	A	A
482	42.5	1.8	-11.3	5.03	A	A	A
483	43	2.5	-10.2	6.42	A	A	A
484	43.7	3.5	-8.8	8.46	A	A	A
487	45	4.5	-6.0	10.36	A	A	A
491	108.392	1.841	126.3	3.20	N	N	N
492	43.75	1.7	-8.7	4.74	A	A	A
495	79.72	6.5	66.4	8.59	N	N	N
498	30.85	2.31	-35.6	7.96	N	N	N
500	85.13	40.67	77.7	47.85	N	N	N
501	56.7	10.8	18.4	19.24	A	A	A
506	35	3	-26.9	8.99	N	N	N
507	41.643	0.064	-13.1	2.72	A	N	W
509	49	0.8	2.3	3.17	A	A	A
514	42	3	-12.3	7.64	A	A	A
520	41.08	2.59	-14.2	6.86	A	A	A
523	46.7	1.8	-2.5	4.71	A	A	A
525	37.6	2.3	-21.5	6.69	N	N	N
528	44.5	2	-7.1	5.25	A	A	A
529	49.1	2.7	2.5	6.13	A	A	A
530	81.59	10.54	70.3	13.20	N	N	N
532	40.63	2.75	-15.2	7.29	A	A	A
533	51	2.3	6.5	5.26	A	A	A
535	38.4	1.4	-19.8	4.55	A	N	W
536	41.7	2	-12.9	5.51	A	A	A
537	41.9	1.7	-12.5	4.88	A	A	A
544	41.51	1.41	-13.3	4.35	A	N	W
549	49.4	2.5	3.1	5.74	A	A	A
553	45.7	2.7	-4.6	6.50	A	A	A
555	63.4	7	32.4	11.37	N	N	N

Ac-228 determination of activity concentration in Sample 3

Table 52. Target values

Parameter	Value
Activity concentration [Bq/kg]	36.4
Uncertainty [Bq/kg]	1.7
Maximum Acceptable Relative Bias [%]	20

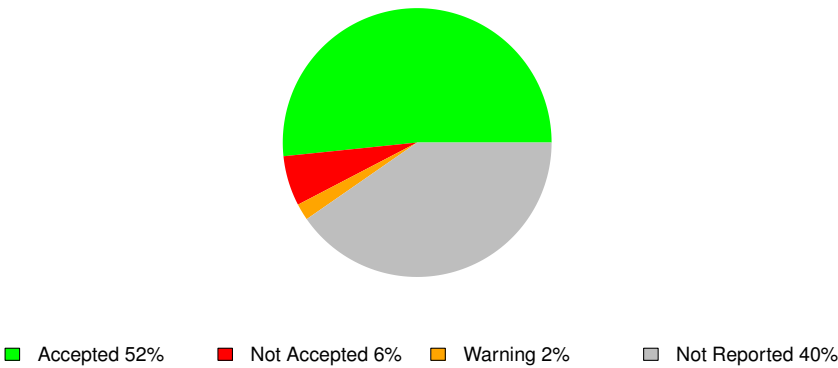


Figure 52. Percentage of Accepted vs. Warnings vs. Not Accepted vs. Not Reported results

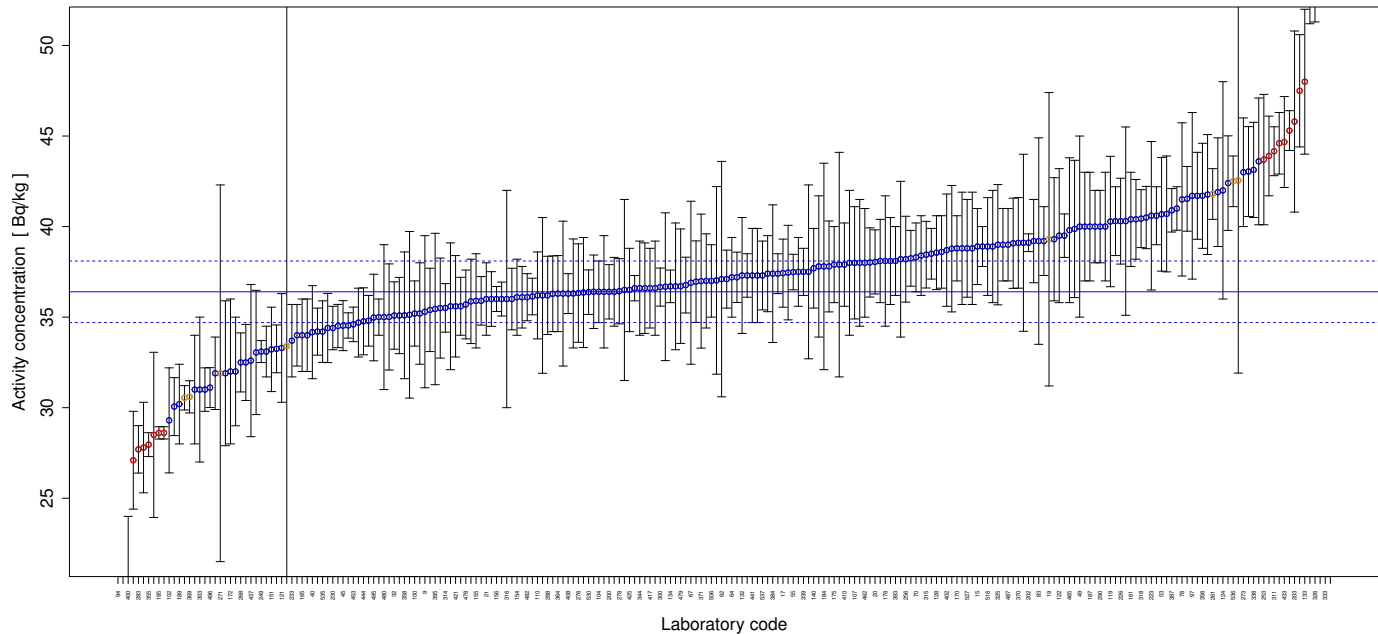


Figure 53. Reported results and evaluation parameters for Ac-228. Blue points represent accepted scores, whereas yellow and red represent warning and not accepted scores, respectively.

Table 53. Evaluation results for Ac-228 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty (k = 1) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
2	37.8	3.9	3.9	11.33	A	A	A
8	35.87	2.33	-1.5	8.00	A	A	A
9	35.3	4.2	-3.0	12.78	A	A	A

Table 53. Evaluation results for Ac-228 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
11	42.4	2.61	16.5	7.73	A	A	A
13	38.1	2.3	4.7	7.63	A	A	A
15	38.9	2.1	6.9	7.14	A	A	A
17	37.43	1.88	2.8	6.86	A	A	A
19	39.3	8.1	8.0	21.13	A	N	W
20	38.05	1.77	4.5	6.59	A	A	A
21	36	2	-1.1	7.26	A	A	A
24	33.4	173	-8.2	517.99	A	N	W
25	35	1	-3.9	5.47	A	A	A
28	38.78	3.49	6.5	10.14	A	A	A
32	35.09	1.86	-3.6	7.06	A	A	A
34	31.9	2	-12.4	7.82	A	A	A
40	34.17	2.57	-6.1	8.85	A	A	A
41	36.4	2.03	0.0	7.27	A	A	A
45	34.53	1.38	-5.1	6.15	A	A	A
48	39.2	2.3	7.7	7.50	A	A	A
49	40	5	9.9	13.34	A	A	A
50	34.2	1.3	-6.0	6.02	A	A	A
52	40.5	1.72	11.3	6.31	A	A	A
53	40.68	3.14	11.8	9.02	A	A	A
54	37.5	1.9	3.0	6.89	A	A	A
55	37.49	0.98	3.0	5.35	A	A	A
57	27.1	2.7	-25.6	11.00	N	A	N
58	34	1.7	-6.6	6.84	A	A	A
60	38	4	4.4	11.52	A	A	A
62	37.1	6.5	1.9	18.13	A	A	A
63	36.77	1.54	1.0	6.27	A	A	A
64	37.2	2.2	2.2	7.54	A	A	A
65	40	3	9.9	8.84	A	A	A
67	36.9	4.5	1.4	13.06	A	A	A
69	40.3	1.9	10.7	6.64	A	A	A
70	38.3	1.9	5.2	6.81	A	A	A
72	34.4	1.91	-5.5	7.26	A	A	A
78	41.5	4.23	14.0	11.21	A	A	A
79	38.5	1.4	5.8	5.92	A	A	A
81	35.13	4.6	-3.5	13.90	A	A	A
83	39.2	5.7	7.7	15.27	A	A	A
84	14.74	3.74	-59.5	25.80	N	N	N
85	41.533	1.787	14.1	6.35	A	A	A
90	37	2.6	1.6	8.44	A	A	A
94	11.07	1.24	-69.6	12.14	N	N	N
97	41.7	4.6	14.6	11.98	A	A	A
100	35.2	1.8	-3.3	6.93	A	A	A
102	29.3	2.9	-19.5	10.94	A	A	A
104	36.4	1.7	0.0	6.60	A	A	A
105	34.8	1.4	-4.4	6.16	A	A	A
107	38	3.1	4.4	9.40	A	A	A
109	36.6	0.7	0.6	5.05	A	A	A
110	36.2	2.4	-0.6	8.11	A	A	A
111	36.36	3.04	-0.1	9.58	A	A	A
113	42.55	10.64	16.9	25.44	A	N	W
114	36.4	3.1	0.0	9.71	A	A	A
119	40.28	3.6	10.7	10.08	A	A	A
121	33.3	3	-8.5	10.15	A	A	A
122	39.5	3.7	8.5	10.47	A	A	A
124	42	6	15.4	15.03	A	A	A
128	38.56	2.04	5.9	7.06	A	A	A
131	30.54639	0.67258	-16.1	5.16	A	N	W
132	37.3	3.2	2.5	9.77	A	A	A
133	48	4	31.9	9.55	N	N	N

Table 53. Evaluation results for Ac-228 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
134	36.7	0.9	0.8	5.28	A	A	A
139	36	1.51	-1.1	6.28	A	A	A
140	37.7	2.2	3.6	7.47	A	A	A
145	28.5	4.56	-21.7	16.67	N	A	N
150	38.4	2.2	5.5	7.39	A	A	A
151	33.22	2.33	-8.7	8.43	A	A	A
154	36.1	2.1	-0.8	7.46	A	A	A
155	35.9	2.6	-1.4	8.62	A	A	A
156	36	0.69	-1.1	5.05	A	A	A
159	36	0.936	-1.1	5.35	A	A	A
161	40.4	2.6	11.0	7.95	A	A	A
165	34	2	-6.6	7.51	A	A	A
168	35.2	2.8	-3.3	9.22	A	A	A
170	38.8	1.8	6.6	6.58	A	A	A
172	32	4	-12.1	13.34	A	A	A
175	37.9	2.1	4.1	7.25	A	A	A
178	38.1	3.6	4.7	10.54	A	A	A
179	57.72	0.88	58.6	4.91	N	N	N
184	37.8	5.7	3.9	15.79	A	A	A
185	28.61	0.34	-21.4	4.82	N	N	N
187	40	3	9.9	8.84	A	A	A
189	30.2	2.2	-17.0	8.65	A	A	A
191	39.3	3.4	8.0	9.83	A	A	A
197	37.03	5.18	1.7	14.75	A	A	A
198	38.8	3.1	6.6	9.25	A	A	A
200	36.4	1.5	0.0	6.23	A	A	A
202	39.11	0.49	7.4	4.84	A	A	A
203	45.8	5	25.8	11.87	N	A	N
204	31	3	-14.8	10.75	A	A	A
208	37.8	2.51	3.9	8.12	A	A	A
211	33.25	1.32	-8.7	6.13	A	A	A
213	35.5	2.76	-2.5	9.07	A	A	A
215	38.2	4.3	5.0	12.19	A	A	A
217	36.5	5	0.3	14.47	A	A	A
218	34.50817	1.19534	-5.2	5.81	A	A	A
223	40.6	4.1	11.5	11.13	A	A	A
224	27.8	2.5	-23.6	10.13	N	A	N
226	40.3	2.37	10.7	7.51	A	A	A
230	34.4	1.2	-5.5	5.83	A	A	A
232	37.4	2.1	2.8	7.30	A	A	A
233	33.7	2	-7.4	7.55	A	A	A
235	38.8	3.1	6.6	9.25	A	A	A
242	36.14	1.01	-0.7	5.44	A	A	A
247	36.308	3.008	-0.2	9.51	A	A	A
249	33.1	0.606403	-9.1	5.02	A	A	A
253	43.7	3.6	20.0	9.47	N	A	N
254	35.9	1.34	-1.4	5.98	A	A	A
256	38.2	2.37	5.0	7.77	A	A	A
258	38.9	1.1	6.9	5.46	A	A	A
260	41.7	2.4	14.6	7.41	A	A	A
261	41.8	1.4	14.8	5.75	A	N	W
262	45.3	1.1	24.4	5.26	N	N	N
265	36.2	4.3	-0.6	12.76	A	A	A
267	39.87	3.79	9.5	10.59	A	A	A
268	32.5	1.63	-10.7	6.85	A	A	A
270	40	2	9.9	6.84	A	A	A
271	31.9	10.4	-12.4	32.93	A	N	W
272	35.4	2.3	-2.8	8.00	A	A	A
273	43	3	18.1	8.40	A	A	A
276	36.33	2.72	-0.2	8.82	A	A	A

Table 53. Evaluation results for Ac-228 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
278	36.43	1.8	0.1	6.80	A	A	A
281	40.4	2.2	11.0	7.17	A	A	A
283	27.7	1.31	-23.9	6.65	N	N	N
284	43.04	2.48	18.2	7.42	A	A	A
286	37.9	6.2	4.1	17.01	A	A	A
287	39.5	1.2	8.5	5.57	A	A	A
288	36.2	2.16	-0.6	7.58	A	A	A
290	40	2	9.9	6.84	A	A	A
291	39.106	4.888	7.4	13.34	A	A	A
293	32.5	2.1	-10.7	7.97	A	A	A
294	35.6	3.5	-2.2	10.88	A	A	A
299	40	3	9.9	8.84	A	A	A
300	36.66	1.05	0.7	5.48	A	A	A
303	31	4	-14.8	13.72	A	A	A
304	36.1	1.7	-0.8	6.63	A	A	A
307	43.6	3.5	19.8	9.29	A	A	A
310	40.7	3.2	11.8	9.14	A	A	A
311	44.16	1.35	21.3	5.58	N	N	N
312	40.3	5.2	10.7	13.72	A	A	A
313	38.1	2.4	4.7	7.84	A	A	A
314	35.51	1.34	-2.5	6.00	A	A	A
315	38.45	1.84	5.6	6.69	A	A	A
316	36	6	-1.1	17.31	A	A	A
317	53.4	2.2	46.7	6.23	N	N	N
318	40.44	1.6	11.1	6.12	A	A	A
319	33.1	1.4	-9.1	6.30	A	A	A
325	39	3.32	7.1	9.71	A	A	A
326	54	2.7	48.4	6.84	N	N	N
328	36.7	3.5	0.8	10.62	A	A	A
329	31.9	4	-12.4	13.38	A	A	A
330	30.06	1.6	-17.4	7.08	A	A	A
332	38	3.5	4.4	10.33	A	A	A
333	68.95	5.53	89.4	9.28	N	N	N
338	43.13	2.63	18.5	7.68	A	A	A
339	37.5	1.3	3.0	5.82	A	A	A
341	37.3	1.2	2.5	5.67	A	A	A
344	36.6	2.6	0.6	8.50	A	A	A
347	38.02	1.91	4.4	6.86	A	A	A
348	39	2	7.1	6.94	A	A	A
355	27.96	0.66	-23.2	5.23	N	N	N
356	41.7	2.9	14.6	8.38	A	A	A
357	34.7	1.9	-4.7	7.20	A	A	A
358	35.1	3.5	-3.6	11.01	A	A	A
364	36.3	2.1	-0.3	7.44	A	A	A
369	30.6	0.89	-15.9	5.50	A	N	W
370	39.1	2.5	7.4	7.92	A	A	A
371	36.99	3.7	1.6	11.04	A	A	A
373	36.6	2.5	0.6	8.27	A	A	A
376	40.6	1.6	11.5	6.11	A	A	A
379	37.5	4.8	3.0	13.63	A	A	A
381	39.08	2.49	7.4	7.90	A	A	A
382	37.46	2.61	2.9	8.39	A	A	A
384	37.4	3.8	2.8	11.18	A	A	A
386	33.05	3.43	-9.2	11.38	A	A	A
387	40.9	1.2	12.4	5.52	A	A	A
388	41	1.2	12.6	5.51	A	A	A
391	34.54	0.7	-5.1	5.09	A	A	A
393	38.1	1.9	4.7	6.83	A	A	A
395	35.45	4.18	-2.6	12.68	A	A	A
398	36.3	4	-0.3	11.97	A	A	A

Table 53. Evaluation results for Ac-228 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
400	19	5	-47.8	26.73	N	N	N
402	38.7	3.1	6.3	9.27	A	A	A
403	36.96	2.25	1.5	7.67	A	A	A
407	38.6	2	6.0	6.98	A	A	A
408	36.3	1.1	-0.3	5.57	A	A	A
410	37.9	2.3	4.1	7.66	A	A	A
412	36.68	4.08	0.8	12.06	A	A	A
414	43.9	2.2	20.6	6.85	N	N	N
417	36.6	2.2	0.6	7.61	A	A	A
421	35.6	2.8	-2.2	9.15	A	A	A
425	36.5	2.3	0.3	7.84	A	A	A
426	36.29	2.09	-0.3	7.41	A	A	A
429	37.2	1.39	2.2	5.98	A	A	A
430	39.2	1.9	7.7	6.73	A	A	A
433	44.67	2.51	22.7	7.31	N	N	N
437	32.6	4.2	-10.4	13.70	A	A	A
441	37.3	2.6	2.5	8.39	A	A	A
444	34.77	1.85	-4.5	7.08	A	A	A
445	36.6	2.6	0.6	8.50	A	A	A
446	35.6	1.6	-2.2	6.48	A	A	A
448	28.61	0.34	-21.4	4.82	N	N	N
450	37.4	1.1	2.8	5.52	A	A	A
452	35.09	2.1054	-3.6	7.60	A	A	A
453	34.6	0.955	-5.0	5.42	A	A	A
455	37.1	1.6	1.9	6.36	A	A	A
459	35.01	2.93	-3.8	9.58	A	A	A
460	41.9	3	15.1	8.55	A	A	A
462	38	3	4.4	9.17	A	A	A
463	34	2	-6.6	7.51	A	A	A
464	38.25	1.54	5.1	6.17	A	A	A
465	39.8	4	9.3	11.08	A	A	A
478	35.7	1.9	-1.9	7.08	A	A	A
479	36.71	3.16	0.8	9.79	A	A	A
480	35	4	-3.9	12.35	A	A	A
482	36.1	1.3	-0.8	5.90	A	A	A
483	37.3	2.6	2.5	8.39	A	A	A
484	36.4	1.9	0.0	7.00	A	A	A
487	39	2	7.1	6.94	A	A	A
491	82.397	1.914	126.4	5.22	N	N	N
495	34.98	2.39	-3.9	8.28	A	A	A
496	31.11	1.1	-14.5	5.86	A	A	A
499	32	3	-12.1	10.47	A	A	A
501	44.6	1.7	22.5	6.03	N	N	N
506	37	2	1.6	7.14	A	A	A
508	36	1.7	-1.1	6.64	A	A	A
516	38.9	2.7	6.9	8.37	A	A	A
522	31	1.2	-14.8	6.07	A	A	A
527	38.8	2.7	6.6	8.38	A	A	A
530	36.38	1.23	-0.0	5.77	A	A	A
532	41.77	3.31	14.8	9.20	A	A	A
533	47.5	3.1	30.5	8.03	N	N	N
535	34.2	1.7	-6.0	6.82	A	A	A
536	42.5	1.4	16.8	5.72	A	N	W
537	37.3	1.9	2.5	6.91	A	A	A
555	38.9	3.1	6.9	9.24	A	A	A

Th-232 determination of activity concentration in Sample 3

Table 54. Target values

Parameter	Value
Activity concentration [Bq/kg]	36.4
Uncertainty [Bq/kg]	1.7
Maximum Acceptable Relative Bias [%]	20

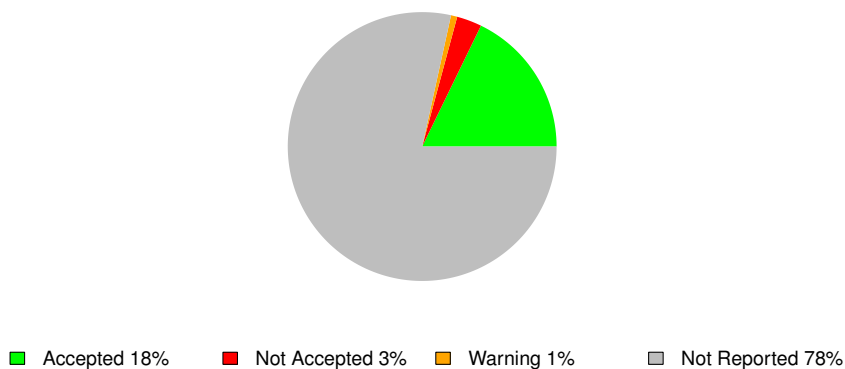


Figure 54. Percentage of Accepted vs. Warnings vs. Not Accepted vs. Not Reported results

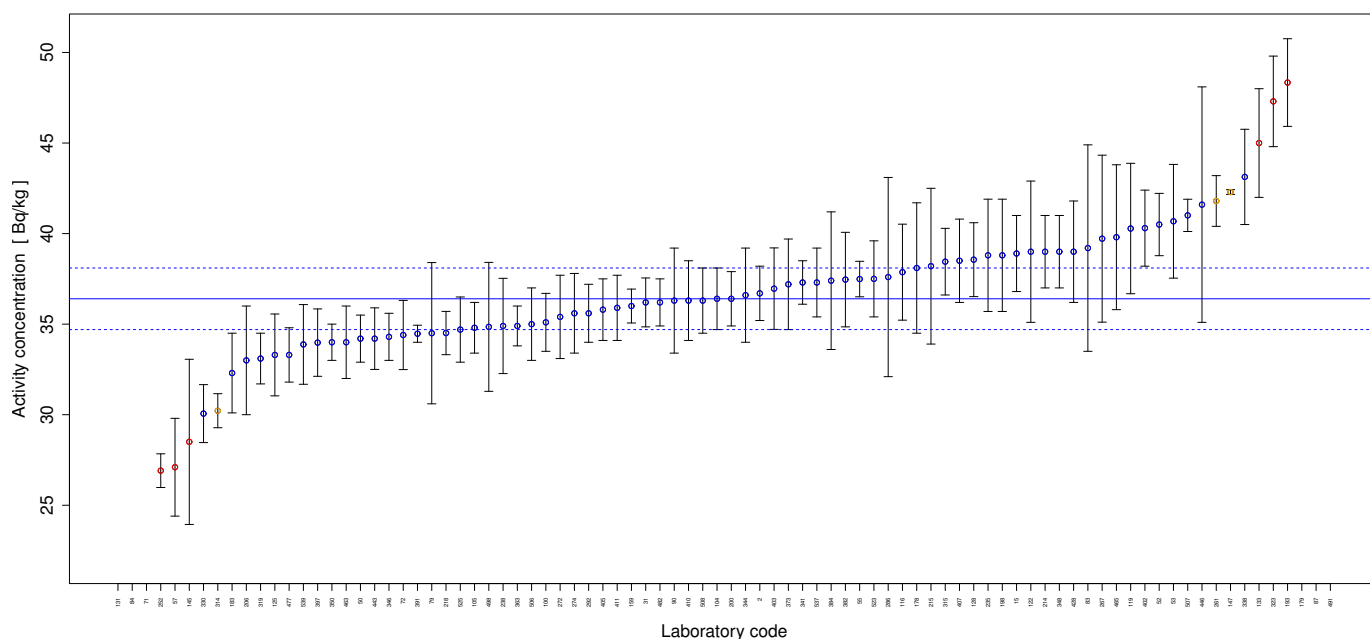


Figure 55. Reported results and evaluation parameters for Th-232. Blue points represent accepted scores, whereas yellow and red represent warning and not accepted scores, respectively.

Table 55. Evaluation results for Th-232 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
2	36.7	1.5	0.8	6.21	A	A	A
15	38.9	2.1	6.9	7.14	A	A	A
31	36.2	1.35	-0.6	5.98	A	A	A

Table 55. Evaluation results for Th-232 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
50	34.2	1.3	-6.0	6.02	A	A	A
52	40.5	1.72	11.3	6.31	A	A	A
53	40.68	3.14	11.8	9.02	A	A	A
55	37.49	0.98	3.0	5.35	A	A	A
57	27.1	2.7	-25.6	11.00	N	A	N
71	18.33	0.92	-49.6	6.86	N	N	N
72	34.4	1.91	-5.5	7.26	A	A	A
79	34.5	3.9	-5.2	12.23	A	A	A
83	39.2	5.7	7.7	15.27	A	A	A
84	14.93	4.01	-59.0	27.26	N	N	N
90	36.3	2.9	-0.3	9.25	A	A	A
100	35.1	1.6	-3.6	6.53	A	A	A
104	36.4	1.7	0.0	6.60	A	A	A
105	34.8	1.4	-4.4	6.16	A	A	A
116	37.87	2.65	4.0	8.41	A	A	A
119	40.28	3.6	10.7	10.08	A	A	A
122	39	3.9	7.1	11.04	A	A	A
125	33.3	2.26	-8.5	8.24	A	A	A
128	38.56	2.04	5.9	7.06	A	A	A
131	7.712536	2.177005	-78.8	28.61	N	N	N
133	45	3	23.6	8.14	N	N	N
145	28.5	4.56	-21.7	16.67	N	A	N
147	42.295	0.1305	16.2	4.68	A	N	W
159	36	0.936	-1.1	5.35	A	A	A
178	38.1	3.6	4.7	10.54	A	A	A
179	57.72	0.88	58.6	4.91	N	N	N
183	32.3	2.2	-11.3	8.26	A	A	A
193	48.34	2.42	32.8	6.85	N	N	N
198	38.8	3.1	6.6	9.25	A	A	A
200	36.4	1.5	0.0	6.23	A	A	A
206	33	3	-9.3	10.22	A	A	A
214	39	2	7.1	6.94	A	A	A
215	38.2	4.3	5.0	12.19	A	A	A
218	34.50817	1.19534	-5.2	5.81	A	A	A
235	38.8	3.1	6.6	9.25	A	A	A
238	34.9	2.63	-4.1	8.87	A	A	A
252	26.91	0.93	-26.1	5.81	N	N	N
261	41.8	1.4	14.8	5.75	A	N	W
267	39.72	4.61	9.1	12.51	A	A	A
272	35.4	2.3	-2.8	8.00	A	A	A
274	35.6	2.199256	-2.2	7.74	A	A	A
286	37.6	5.5	3.3	15.36	A	A	A
292	35.6	1.6	-2.2	6.48	A	A	A
314	30.22	0.94	-17.0	5.61	A	N	W
315	38.45	1.84	5.6	6.69	A	A	A
319	33.1	1.4	-9.1	6.30	A	A	A
323	47.3	2.5	30.0	7.05	N	N	N
330	30.06	1.6	-17.4	7.08	A	A	A
338	43.13	2.63	18.5	7.68	A	A	A
341	37.3	1.2	2.5	5.67	A	A	A
344	36.6	2.6	0.6	8.50	A	A	A
346	34.3	1.3	-5.8	6.01	A	A	A
348	39	2	7.1	6.94	A	A	A
350	34	1	-6.6	5.52	A	A	A
363	34.9	1.1	-4.1	5.63	A	A	A
373	37.2	2.5	2.2	8.18	A	A	A
382	37.46	2.61	2.9	8.39	A	A	A
384	37.4	3.8	2.8	11.18	A	A	A
391	34.47	0.47	-5.3	4.87	A	A	A
397	33.98	1.86	-6.7	7.20	A	A	A

Table 55. Evaluation results for Th-232 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
402	40.3	2.1	10.7	7.00	A	A	A
403	36.96	2.25	1.5	7.67	A	A	A
405	35.8	1.7	-1.6	6.66	A	A	A
407	38.5	2.3	5.8	7.58	A	A	A
410	36.3	2.2	-0.3	7.65	A	A	A
411	35.9	1.8	-1.4	6.85	A	A	A
428	39	2.8	7.1	8.56	A	A	A
443	34.2	1.7	-6.0	6.82	A	A	A
446	41.6	6.5	14.3	16.31	A	A	A
463	34	2	-6.6	7.51	A	A	A
465	39.8	4	9.3	11.08	A	A	A
477	33.3	1.5	-8.5	6.49	A	A	A
482	36.2	1.3	-0.6	5.89	A	A	A
491	76.373	1.254	109.8	4.95	N	N	N
498	34.85	3.56	-4.3	11.23	A	A	A
506	35	2	-3.9	7.38	A	A	A
507	41.006	0.891	12.7	5.15	A	A	A
523	37.5	2.1	3.0	7.29	A	A	A
525	34.7	1.8	-4.7	6.98	A	A	A
537	37.3	1.9	2.5	6.91	A	A	A
539	33.88	2.2	-6.9	8.00	A	A	A

Pa-234m determination of activity concentration in Sample 3

Table 56. Target values

Parameter	Value
Activity concentration [Bq/kg]	27.0
Uncertainty [Bq/kg]	0.4
Maximum Acceptable Relative Bias [%]	20

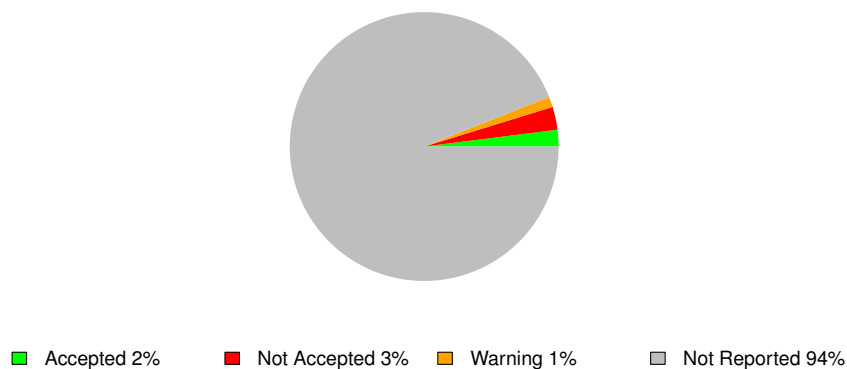


Figure 56. Percentage of Accepted vs. Warnings vs. Not Accepted vs. Not Reported results

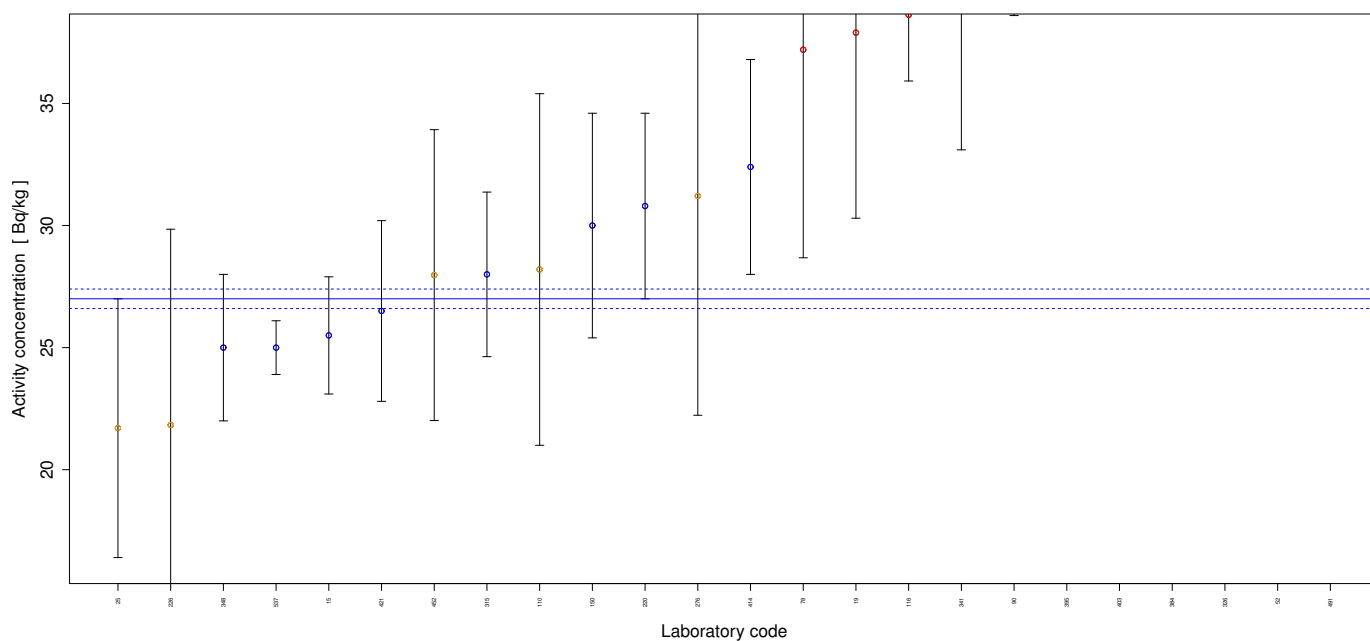


Figure 57. Reported results and evaluation parameters for Pa-234m. Blue points represent accepted scores, whereas yellow and red represent warning and not accepted scores, respectively.

Table 57. Evaluation results for Pa-234m in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
15	25.5	2.4	-5.6	9.53	A	A	A
19	37.9	7.6	40.4	20.11	N	N	N
25	21.7	5.3	-19.6	24.47	A	N	W

Table 57. Evaluation results for Pa-234m in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
52	67.6	3.03	150.4	4.72	N	N	N
78	37.2	8.52	37.8	22.95	N	N	N
90	40.4	1.8	49.6	4.70	N	N	N
110	28.2	7.2	4.4	25.57	A	N	W
116	38.63	2.71	43.1	7.17	N	N	N
150	30	4.6	11.1	15.40	A	A	A
220	30.8	3.8	14.1	12.43	A	A	A
226	21.83	8.02	-19.1	36.77	A	N	W
276	31.21	8.98	15.6	28.81	A	N	W
315	28	3.37	3.7	12.13	A	A	A
326	62.59	11.3	131.8	18.11	N	N	N
341	39	5.9	44.4	15.20	N	N	N
348	25	3	-7.4	12.09	A	A	A
384	50.9	6.2	88.5	12.27	N	N	N
395	45.3	5.25	67.8	11.68	N	N	N
403	46.22	4.6	71.2	10.06	N	N	N
414	32.4	4.4	20.0	13.66	A	A	A
421	26.5	3.7	-1.9	14.04	A	A	A
452	27.97	5.95761	3.6	21.35	A	N	W
491	99.991	2.446	270.3	2.86	N	N	N
537	25	1.1	-7.4	4.64	A	A	A

Th-234 determination of activity concentration in Sample 3

Table 58. Target values

Parameter	Value
Activity concentration [Bq/kg]	27.0
Uncertainty [Bq/kg]	0.4
Maximum Acceptable Relative Bias [%]	20

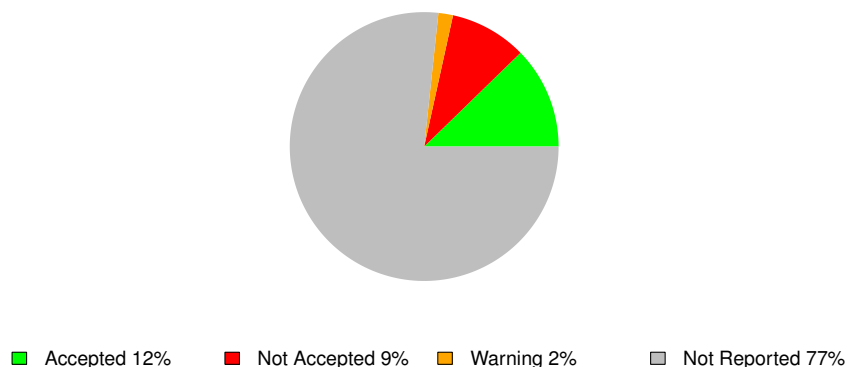


Figure 58. Percentage of Accepted vs. Warnings vs. Not Accepted vs. Not Reported results

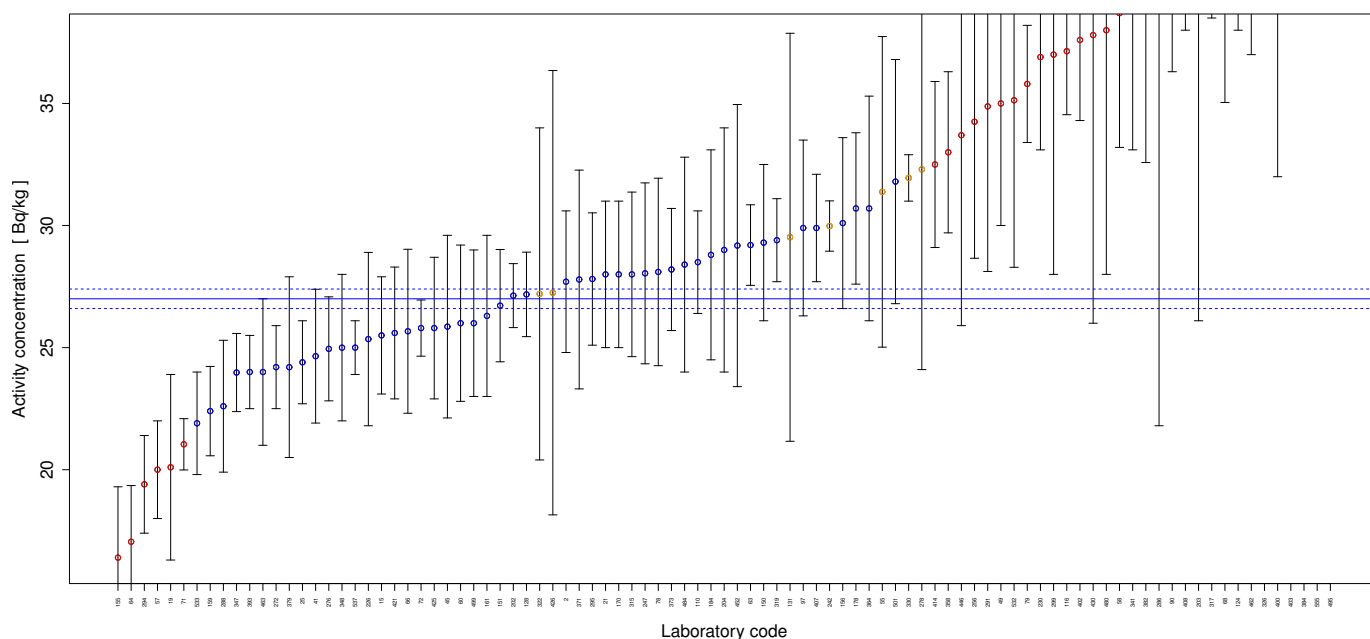


Figure 59. Reported results and evaluation parameters for Th-234. Blue points represent accepted scores, whereas yellow and red represent warning and not accepted scores, respectively.

Table 59. Evaluation results for Th-234 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
2	27.7	2.9	2.6	10.57	A	A	A
15	25.5	2.4	-5.6	9.53	A	A	A
19	20.1	3.8	-25.6	18.96	N	A	N

Table 59. Evaluation results for Th-234 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
21	28	3	3.7	10.82	A	A	A
25	24.4	1.7	-9.6	7.12	A	A	A
41	24.65	2.74	-8.7	11.21	A	A	A
45	25.86	3.74	-4.2	14.54	A	A	A
49	35	5	29.6	14.36	N	A	N
55	31.38	6.36	16.2	20.32	A	N	W
57	20	2	-25.9	10.11	N	A	N
58	38.7	5.5	43.3	14.29	N	N	N
60	26	3.2	-3.7	12.40	A	A	A
63	29.2	1.65	8.2	5.84	A	A	A
64	17.05	2.3	-36.9	13.57	N	N	N
66	25.67	3.358	-4.9	13.17	A	A	A
68	41.8	6.76	54.8	16.24	N	N	N
71	21.04	1.05	-22.1	5.21	N	N	N
72	25.8	1.15	-4.4	4.70	A	A	A
78	28.1	3.84	4.1	13.75	A	A	A
79	35.8	2.4	32.6	6.87	N	N	N
90	39.9	3.6	47.8	9.14	N	N	N
97	29.9	3.6	10.7	12.13	A	A	A
110	28.5	2.1	5.6	7.52	A	A	A
116	37.14	2.6	37.6	7.16	N	N	N
124	43	5	59.3	11.72	N	N	N
128	27.18	1.73	0.7	6.54	A	A	A
131	29.51942	8.355257	9.3	28.34	A	N	W
150	29.3	3.2	8.5	11.02	A	A	A
151	26.72	2.3	-1.0	8.73	A	A	A
155	16.4	2.9	-39.3	17.74	N	A	N
156	30.1	3.5	11.5	11.72	A	A	A
159	22.4	1.83	-17.0	8.30	A	A	A
161	26.3	3.3	-2.6	12.63	A	A	A
170	28	3	3.7	10.82	A	A	A
178	30.7	3.1	13.7	10.21	A	A	A
184	28.8	4.3	6.7	15.00	A	A	A
202	27.13	1.31	0.5	5.05	A	A	A
203	40.6	14.5	50.4	35.74	N	N	N
204	29	5	7.4	17.30	A	A	A
226	25.35	3.55	-6.1	14.08	A	A	A
230	36.9	3.8	36.7	10.40	N	N	N
242	29.98	1.03	11.0	3.74	A	N	W
247	28.042	3.705	3.9	13.30	A	A	A
256	34.25	5.59	26.9	16.39	N	A	N
272	24.2	1.7	-10.4	7.18	A	A	A
276	24.95	2.13	-7.6	8.66	A	A	A
278	32.3	8.2	19.6	25.43	A	N	W
286	39.6	17.8	46.7	44.97	N	N	N
288	22.6	2.7	-16.3	12.04	A	A	A
291	34.88	6.76	29.2	19.44	N	A	N
294	19.4	2	-28.1	10.42	N	N	N
295	27.81	2.71	3.0	9.86	A	A	A
299	37	9	37.0	24.37	N	N	N
315	28	3.37	3.7	12.13	A	A	A
317	41.4	2.9	53.3	7.16	N	N	N
319	29.4	1.7	8.9	5.97	A	A	A
322	27.2	6.8	0.7	25.04	A	N	W
326	43.66	4	61.7	9.28	N	N	N
330	31.95	0.95	18.3	3.32	A	N	W
341	39	5.9	44.4	15.20	N	N	N
347	23.98	1.6	-11.2	6.83	A	A	A
348	25	3	-7.4	12.09	A	A	A
358	33	3.3	22.2	10.11	N	A	N

Table 59. Evaluation results for Th-234 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
364	30.7	4.6	13.7	15.06	A	A	A
371	27.79	4.48	2.9	16.19	A	A	A
373	28.2	2.5	4.4	8.99	A	A	A
379	24.2	3.7	-10.4	15.36	A	A	A
382	39.23	6.65	45.3	17.02	N	N	N
384	50.9	6.2	88.5	12.27	N	N	N
393	24	1.5	-11.1	6.42	A	A	A
400	44	12	63.0	27.31	N	N	N
402	37.6	3.3	39.3	8.90	N	N	N
403	46.22	4.6	71.2	10.06	N	N	N
407	29.9	2.2	10.7	7.51	A	A	A
408	40	2	48.1	5.21	N	N	N
414	32.5	3.4	20.4	10.57	N	A	N
421	25.6	2.7	-5.2	10.65	A	A	A
425	25.8	2.9	-4.4	11.34	A	A	A
426	27.25	9.1	0.9	33.43	A	N	W
430	37.8	11.8	40.0	31.25	N	N	N
446	33.7	7.8	24.8	23.19	N	N	N
452	29.18	5.77764	8.1	19.86	A	A	A
462	43	6	59.3	14.03	N	N	N
463	24	3	-11.1	12.59	A	A	A
480	38	10	40.7	26.36	N	N	N
484	28.4	4.4	5.2	15.56	A	A	A
495	153.69	1.37	469.2	1.73	N	N	N
499	26	3	-3.7	11.63	A	A	A
501	31.8	5	17.8	15.79	A	A	A
532	35.13	6.84	30.1	19.53	N	A	N
533	21.9	2.1	-18.9	9.70	A	A	A
537	25	1.1	-7.4	4.64	A	A	A
555	51.1	8.7	89.3	17.09	N	N	N

U-235 determination of activity concentration in Sample 3

Table 60. Target values

Parameter	Value
Activity concentration [Bq/kg]	1.24
Uncertainty [Bq/kg]	0.02
Maximum Acceptable Relative Bias [%]	20

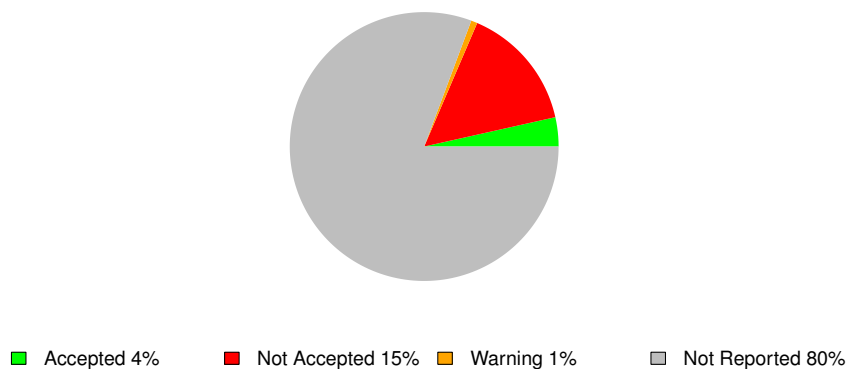


Figure 60. Percentage of Accepted vs. Warnings vs. Not Accepted vs. Not Reported results

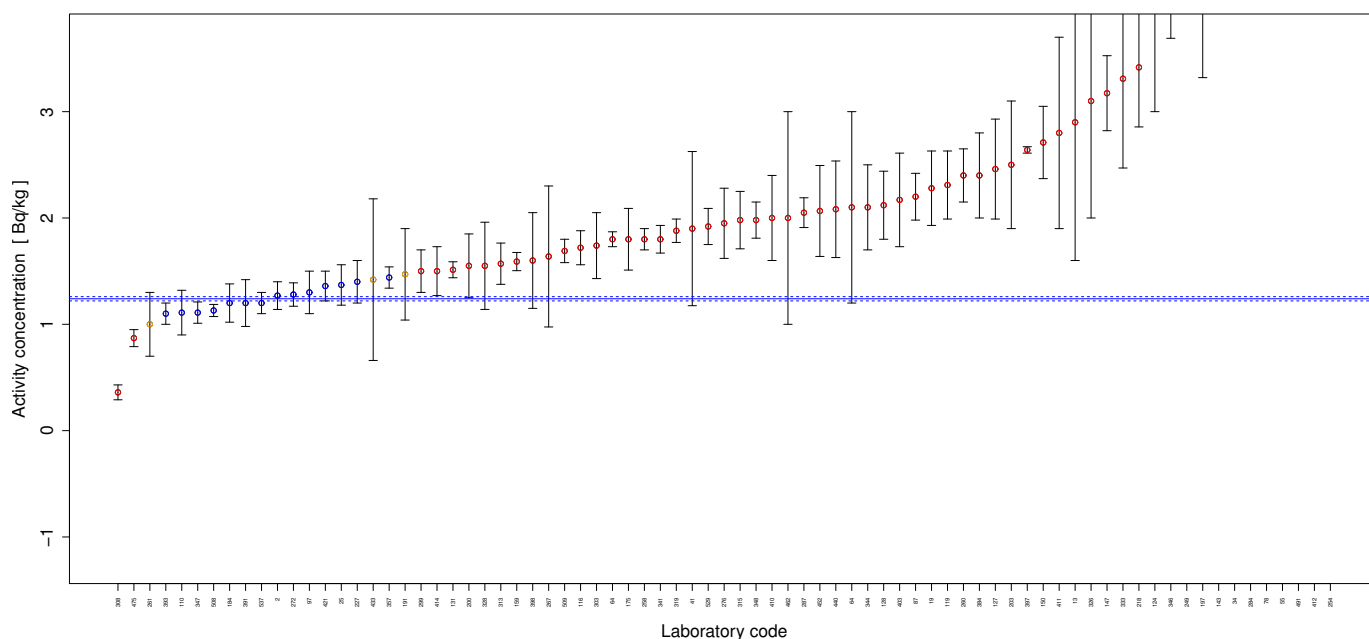


Figure 61. Reported results and evaluation parameters for U-235. Blue points represent accepted scores, whereas yellow and red represent warning and not accepted scores, respectively.

Table 61. Evaluation results for U-235 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
2	1.27	0.13	2.4	10.36	A	A	A
13	2.9	1.3	133.9	44.86	N	N	N
19	2.28	0.35	83.9	15.44	N	N	N

Table 61. Evaluation results for U-235 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
25	1.37	0.19	10.5	13.96	A	A	A
34	4.8	0.5	287.1	10.54	N	N	N
41	1.9	0.725	53.2	38.19	N	N	N
55	5.21	0.52	320.2	10.11	N	N	N
64	2.1	0.9	69.3	42.89	N	N	N
64	1.8	0.07	45.2	4.21	N	N	N
78	4.85	0.63	291.1	13.09	N	N	N
97	1.3	0.2	4.8	15.47	A	A	A
110	1.11	0.21	-10.5	18.99	A	A	A
116	1.72	0.16	38.7	9.44	N	N	N
119	2.31	0.32	86.3	13.95	N	N	N
124	4	1	222.6	25.05	N	N	N
127	2.46	0.47	98.4	19.17	N	N	N
128	2.12	0.32	71.0	15.18	N	N	N
131	1.512841	0.07514	22.0	5.22	N	N	N
143	4.561303	0.408749	267.9	9.11	N	N	N
147	3.1735	0.3527	155.9	11.23	N	N	N
150	2.71	0.34	118.6	12.65	N	N	N
159	1.59	0.0856	28.2	5.62	N	N	N
175	1.8	0.29	45.2	16.19	N	N	N
184	1.2	0.18	-3.2	15.09	A	A	A
191	1.47	0.43	18.6	29.30	A	N	W
197	4.43	1.11	257.3	25.11	N	N	N
200	1.55	0.3	25.0	19.42	N	A	N
203	2.5	0.6	101.6	24.05	N	N	N
218	3.4162	0.55982	175.5	16.47	N	N	N
227	1.4	0.2	12.9	14.38	A	A	A
249	4.39	0.06988	254.0	2.27	N	N	N
254	6.21	2.06	400.8	33.21	N	N	N
258	1.8	0.1	45.2	5.78	N	N	N
260	2.4	0.25	93.6	10.54	N	N	N
261	1	0.3	-19.4	30.04	A	N	W
267	1.638	0.663	32.1	40.51	N	N	N
272	1.28	0.11	3.2	8.74	A	A	A
276	1.95	0.33	57.3	17.00	N	N	N
284	4.805	0.59	287.5	12.38	N	N	N
287	2.05	0.14	65.3	7.02	N	N	N
299	1.5	0.2	21.0	13.43	N	A	N
303	1.74	0.31	40.3	17.89	N	A	N
308	0.36	0.07	-71.0	19.51	N	N	N
313	1.57	0.194	26.6	12.46	N	A	N
315	1.98	0.27	59.7	13.73	N	N	N
319	1.88	0.11	51.6	6.07	N	N	N
326	3.1	1.1	150.0	35.52	N	N	N
328	1.55	0.41	25.0	26.50	N	N	N
333	3.31	0.84	166.9	25.43	N	N	N
341	1.8	0.13	45.2	7.40	N	N	N
344	2.1	0.4	69.3	19.12	N	N	N
346	4.29	0.6	246.0	14.08	N	N	N
347	1.11	0.1	-10.5	9.15	A	A	A
348	1.98	0.17	59.7	8.74	N	N	N
357	1.44	0.1	16.1	7.13	A	A	A
384	2.4	0.4	93.6	16.74	N	N	N
391	1.2	0.22	-3.2	18.40	A	A	A
393	1.1	0.1	-11.3	9.23	A	A	A
397	2.64	0.03	112.9	1.97	N	N	N
398	1.6	0.45	29.0	28.17	N	N	N
403	2.17	0.44	75.0	20.34	N	N	N
410	2	0.4	61.3	20.06	N	N	N
411	2.8	0.9	125.8	32.18	N	N	N

Table 61. Evaluation results for U-235 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
412	5.6	1.39	351.6	24.87	N	N	N
414	1.5	0.23	21.0	15.42	N	A	N
421	1.36	0.14	9.7	10.42	A	A	A
433	1.42	0.76	14.5	53.55	A	N	W
440	2.082	0.454	67.9	21.87	N	N	N
452	2.066	0.427662	66.6	20.76	N	N	N
462	2	1	61.3	50.03	N	N	N
475	0.87	0.08	-29.8	9.34	N	N	N
491	5.256	1.115	323.9	21.28	N	N	N
509	1.69	0.11	36.3	6.71	N	N	N
529	1.92	0.17	54.8	9.00	N	N	N
537	1.2	0.1	-3.2	8.49	A	A	A

U-238 determination of activity concentration in Sample 3

Table 62. Target values

Parameter	Value
Activity concentration [Bq/kg]	27.0
Uncertainty [Bq/kg]	0.4
Maximum Acceptable Relative Bias [%]	20

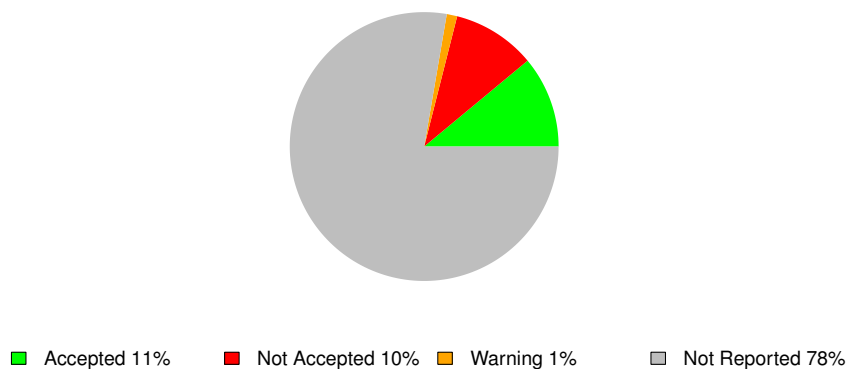


Figure 62. Percentage of Accepted vs. Warnings vs. Not Accepted vs. Not Reported results

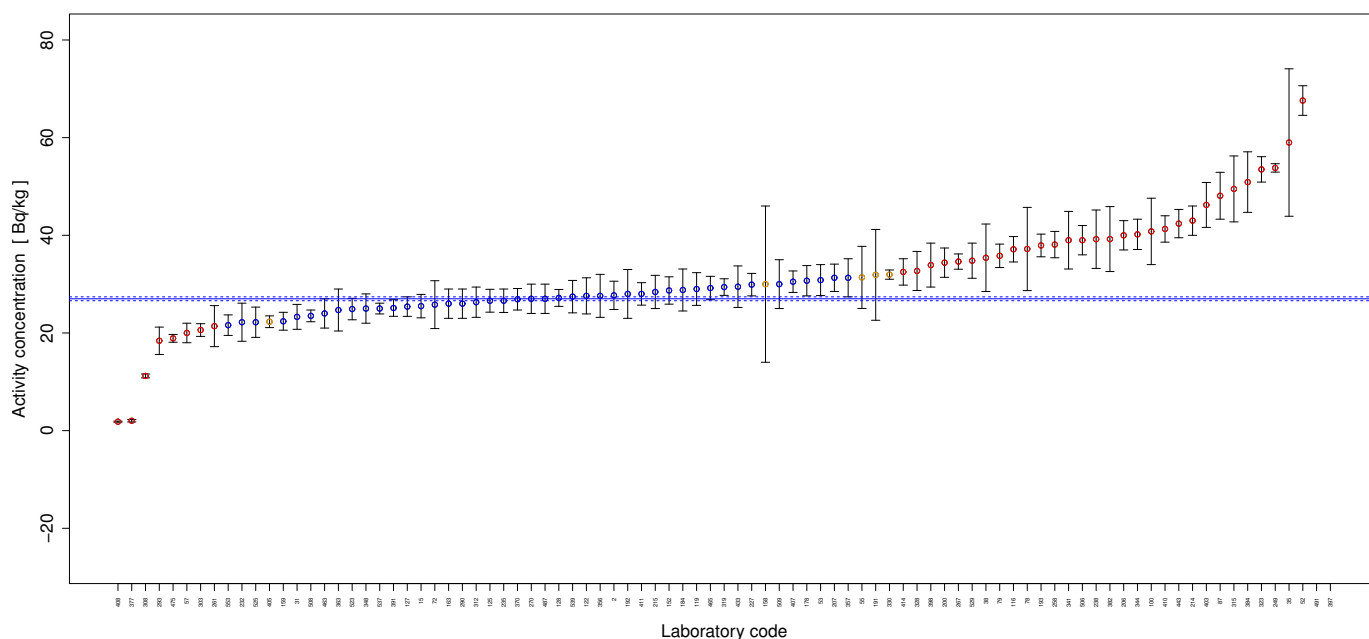


Figure 63. Reported results and evaluation parameters for U-238. Blue points represent accepted scores, whereas yellow and red represent warning and not accepted scores, respectively.

Table 63. Evaluation results for U-238 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
2	27.7	2.9	2.6	10.57	A	A	A
15	25.5	2.4	-5.6	9.53	A	A	A
31	23.3	2.55	-13.7	11.04	A	A	A

Table 63. Evaluation results for U-238 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
35	59	15.1	118.5	25.64	N	N	N
38	35.4	6.91	31.1	19.58	N	A	N
52	67.6	3.03	150.4	4.72	N	N	N
53	30.83	3.17	14.2	10.39	A	A	A
55	31.38	6.36	16.2	20.32	A	N	W
57	20	2	-25.9	10.11	N	A	N
72	25.8	4.9	-4.4	19.05	A	A	A
78	37.2	8.52	37.8	22.95	N	N	N
79	35.8	2.4	32.6	6.87	N	N	N
100	40.8	6.8	51.1	16.73	N	N	N
116	37.14	2.6	37.6	7.16	N	N	N
119	29	3.35	7.4	11.65	A	A	A
122	27.6	3.7	2.2	13.49	A	A	A
125	26.6	2.34	-1.5	8.92	A	A	A
127	25.4	2	-5.9	8.01	A	A	A
128	27.18	1.73	0.7	6.54	A	A	A
152	28.7	2.8	6.3	9.87	A	A	A
158	30	16	11.1	53.35	A	N	W
159	22.4	1.83	-17.0	8.30	A	A	A
163	26	3	-3.7	11.63	A	A	A
178	30.7	3.1	13.7	10.21	A	A	A
184	28.8	4.3	6.7	15.00	A	A	A
191	31.9	9.3	18.1	29.19	A	N	W
192	28	5	3.7	17.92	A	A	A
193	37.92	2.32	40.4	6.29	N	N	N
200	34.4	3	27.4	8.85	N	N	N
206	40	3	48.1	7.64	N	N	N
207	31.3	2.8	15.9	9.07	A	A	A
214	43	3	59.3	7.13	N	N	N
215	28.4	3.4	5.2	12.06	A	A	A
227	29.9	2.3	10.7	7.83	A	A	A
232	22.2	3.9	-17.8	17.63	A	A	A
235	26.6	2.4	-1.5	9.14	A	A	A
238	39.2	5.98	45.2	15.33	N	N	N
249	53.8	0.858891	99.3	2.18	N	N	N
258	38.1	2.7	41.1	7.24	N	N	N
261	21.4	4.2	-20.7	19.68	N	A	N
267	34.62	1.563	28.2	4.75	N	N	N
270	27	3	0.0	11.21	A	A	A
290	26	3	-3.7	11.63	A	A	A
293	18.4	2.8	-31.9	15.29	N	A	N
303	20.6	1.3	-23.7	6.48	N	N	N
308	11.2	0.4	-58.5	3.87	N	N	N
312	26.3	3.1	-2.6	11.88	A	A	A
315	49.5	6.75	83.3	13.72	N	N	N
319	29.4	1.7	8.9	5.97	A	A	A
323	53.5	2.6	98.2	5.08	N	N	N
328	32.7	4	21.1	12.32	N	A	N
330	31.95	0.95	18.3	3.32	A	N	W
341	39	5.9	44.4	15.20	N	N	N
344	40.2	3.1	48.9	7.85	N	N	N
348	25	3	-7.4	12.09	A	A	A
356	27.6	4.4	2.2	16.01	A	A	A
357	31.3	3.9	15.9	12.55	A	A	A
363	24.7	4.3	-8.5	17.47	A	A	A
370	26.9	2.2	-0.4	8.31	A	A	A
377	2.018346	0.245445	-92.5	12.25	N	N	N
382	39.23	6.65	45.3	17.02	N	N	N
384	50.9	6.2	88.5	12.27	N	N	N
391	25.11	1.7	-7.0	6.93	A	A	A

Table 63. Evaluation results for U-238 in Sample 3, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
397	194.25	27.98	619.4	14.48	N	N	N
398	33.9	4.5	25.6	13.36	N	A	N
403	46.22	4.6	71.2	10.06	N	N	N
405	22.3	1.2	-17.4	5.58	A	N	W
407	30.5	2.2	13.0	7.36	A	A	A
408	1.84	0.11	-93.2	6.16	N	N	N
410	41.3	2.7	53.0	6.70	N	N	N
411	28	2.3	3.7	8.35	A	A	A
414	32.5	2.7	20.4	8.44	N	A	N
433	29.48	4.25	9.2	14.49	A	A	A
443	42.4	2.9	57.0	7.00	N	N	N
463	24	3	-11.1	12.59	A	A	A
465	29.2	2.4	8.2	8.35	A	A	A
475	18.9	0.8	-30.0	4.48	N	N	N
487	27	3	0.0	11.21	A	A	A
491	106.292	1.149	293.7	1.83	N	N	N
506	39	3	44.4	7.83	N	N	N
509	30	5	11.1	16.73	A	A	A
523	24.9	2.2	-7.8	8.96	A	A	A
525	22.2	3.1	-17.8	14.04	A	A	A
529	34.8	3.6	28.9	10.45	N	N	N
537	25	1.1	-7.4	4.64	A	A	A
539	27.44	3.32	1.6	12.19	A	A	A
553	21.6	2.1	-20.0	9.83	A	A	A

K-40 determination of activity concentration in Sample 4

Table 64. Target values

Parameter	Value
Activity concentration [Bq/kg]	2029
Uncertainty [Bq/kg]	69
Maximum Acceptable Relative Bias [%]	20

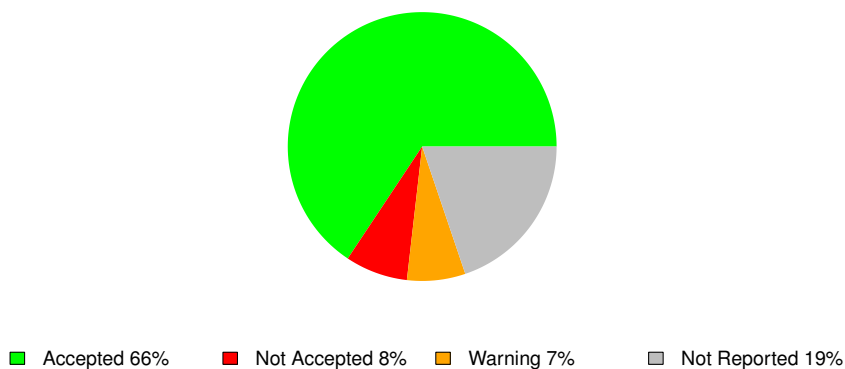


Figure 64. Percentage of Accepted vs. Warnings vs. Not Accepted vs. Not Reported results

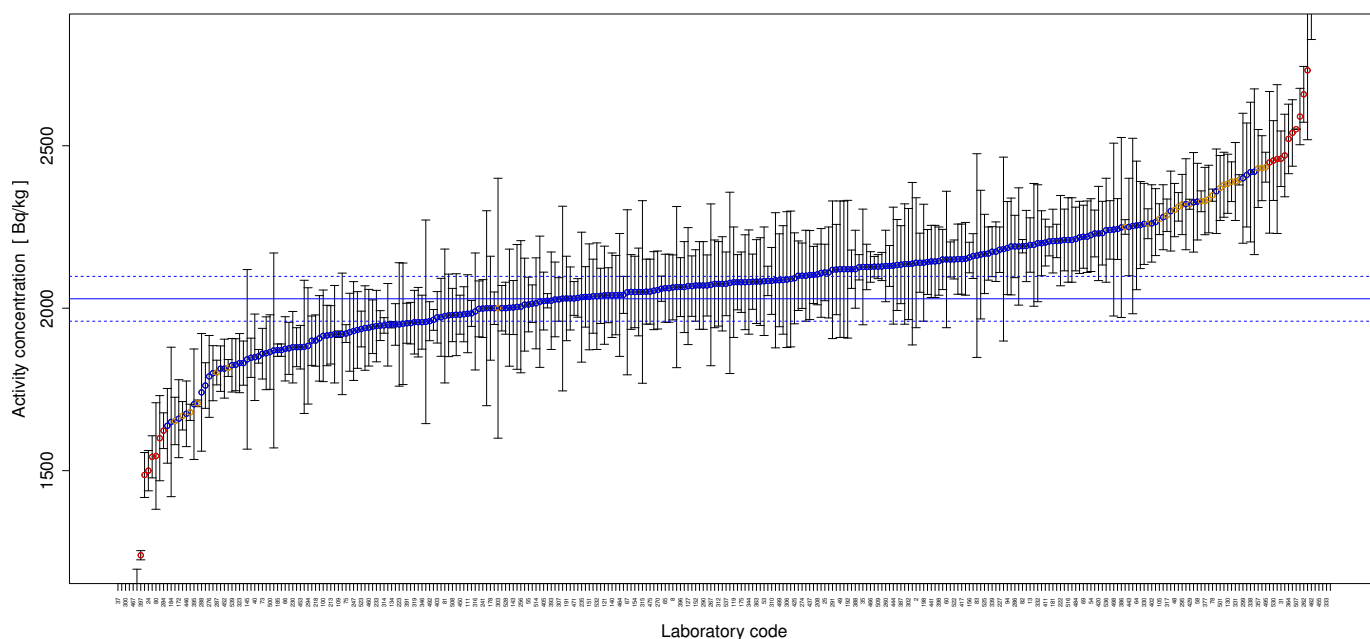


Figure 65. Reported results and evaluation parameters for K-40. Blue points represent accepted scores, whereas yellow and red represent warning and not accepted scores, respectively.

Table 65. Evaluation results for K-40 in Sample 4, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
2	2140	200	5.5	9.95	A	A	A
5	2133	140	5.1	7.39	A	A	A
8	2064	100	1.7	5.92	A	A	A

Table 65. Evaluation results for K-40 in Sample 4, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
9	2065	248	1.8	12.48	A	A	A
11	2190	149	7.9	7.61	A	A	A
12	2108.59	136.57	3.9	7.32	A	A	A
13	2194.5	83.8	8.2	5.11	A	A	A
15	1949	127	-3.9	7.35	A	A	A
17	2102.36	87.94	3.6	5.39	A	A	A
19	2182	283	7.5	13.41	A	A	A
20	2329.09	32.04	14.8	3.67	A	N	W
21	2260	46	11.4	3.96	A	N	W
24	1500	62	-26.1	5.35	N	N	N
25	2110	87	4.0	5.34	A	A	A
28	2136	185.2	5.3	9.31	A	A	A
31	2460	85.5	21.2	4.86	N	N	N
32	1814	70	-10.6	5.14	A	A	A
34	2420	255	19.3	11.07	A	A	A
35	2127	178	4.8	9.03	A	A	A
37	16.97	1.43	-99.2	9.09	N	N	N
38	1907.22	131.54	-6.0	7.69	A	A	A
40	1849	133	-8.9	7.96	A	A	A
41	2034.88	93.1	0.3	5.70	A	A	A
42	1954	64	-3.7	4.72	A	A	A
45	1916	93	-5.6	5.93	A	A	A
48	2302	82	13.4	4.92	A	N	W
49	2120	210	4.5	10.47	A	A	A
50	2205.7	44.6	8.7	3.96	A	A	A
52	2150	92.6	6.0	5.49	A	A	A
53	2083	167	2.7	8.71	A	A	A
54	2225	112	9.7	6.07	A	A	A
55	2011.4	84.17	-0.9	5.39	A	A	A
57	2019.9	202	-0.4	10.56	A	A	A
58	2328	118	14.7	6.10	A	A	A
60	2150	210	6.0	10.34	A	A	A
62	1920	150	-5.4	8.52	A	A	A
63	2060.04	38.85	1.5	3.89	A	A	A
64	2254.8	197.9	11.1	9.41	A	A	A
65	2061.5	104.7	1.6	6.11	A	A	A
66	1875	98.9	-7.6	6.28	A	A	A
67	2049	254	1.0	12.85	A	A	A
69	2220	97	9.4	5.54	A	A	A
70	1950	64	-3.9	4.73	A	A	A
71	2191.5	109.6	8.0	6.05	A	A	A
72	1826	80	-10.0	5.55	A	A	A
73	1860	78	-8.3	5.40	A	A	A
75	1921.9	27.4	-5.3	3.69	A	A	A
78	2347.9	18.73	15.7	3.49	A	N	W
79	2023	22	-0.3	3.57	A	A	A
80	1545.1	163.95	-23.9	11.14	N	A	N
81	1976	206	-2.6	10.97	A	A	A
82	2190.82	20.59	8.0	3.53	A	A	A
83	2162	313.5	6.6	14.89	A	A	A
84	1600	131	-21.1	8.87	N	A	N
90	2119	139	4.4	7.39	A	A	A
94	2185.1	143.17	7.7	7.38	A	A	A
95	2732.2	213.59	34.7	8.53	N	N	N
97	1998	86	-1.5	5.49	A	A	A
100	1915	141	-5.6	8.11	A	A	A
102	1921	187	-5.3	10.31	A	A	A
104	2128.4	43.4	4.9	3.97	A	A	A
105	2274.1	47.5	12.1	3.99	A	N	W
107	2050	115	1.0	6.56	A	A	A

Table 65. Evaluation results for K-40 in Sample 4, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
109	1920	10	-5.4	3.44	A	A	A
110	2027	115	-0.1	6.61	A	A	A
111	1983	120	-2.3	6.94	A	A	A
113	2090	209	3.0	10.56	A	A	A
114	1939	130	-4.4	7.52	A	A	A
116	1861.3	112.1	-8.3	6.92	A	A	A
119	2080	170	2.5	8.85	A	A	A
121	2040	151	0.5	8.15	A	A	A
122	2075	135	2.3	7.34	A	A	A
124	2256	134	11.2	6.84	A	A	A
127	2068	180	1.9	9.34	A	A	A
128	2168.23	81.85	6.9	5.08	A	A	A
130	2383	91	17.4	5.11	A	N	W
131	1946.496	45.96987	-4.1	4.14	A	A	A
132	2100	107	3.5	6.13	A	A	A
133	2449	218	20.7	9.53	N	A	N
134	1949.3	9.9	-3.9	3.44	A	A	A
139	2040	84.6	0.5	5.36	A	A	A
140	2040	130	0.5	7.22	A	A	A
143	2002.071	83.146214	-1.3	5.37	A	A	A
145	1842.6	276.39	-9.2	15.38	A	A	A
147	2539.378	102.28	25.1	5.27	N	N	N
150	1638	115	-19.3	7.80	A	A	A
151	2035	163	0.3	8.70	A	A	A
152	2070	110	2.0	6.31	A	A	A
154	2050	110	1.0	6.35	A	A	A
155	2037	114	0.4	6.55	A	A	A
156	2156	47	6.3	4.04	A	A	A
158	2078	279	2.4	13.85	A	A	A
159	2210	95	8.9	5.48	A	A	A
161	2080	85	2.5	5.32	A	A	A
165	2243.7	93.6	10.6	5.38	A	A	A
166	1980	126	-2.4	7.22	A	A	A
168	2120	210	4.5	10.47	A	A	A
170	2000	300	-1.4	15.38	A	A	A
172	1660	120	-18.2	7.99	A	A	A
175	2080	93	2.5	5.62	A	A	A
178	2000	160	-1.4	8.69	A	A	A
179	1679.52	24.97	-17.2	3.71	A	N	W
180	1876.48	80.21	-7.5	5.46	A	A	A
181	2206.6	98.08	8.8	5.60	A	A	A
183	2051	100	1.1	5.94	A	A	A
184	1650	230	-18.7	14.35	A	A	A
185	1870.94	19.01	-7.8	3.55	A	A	A
187	2061.5	104.7	1.6	6.11	A	A	A
189	1653	73	-18.5	5.57	A	N	W
191	2030	130	0.0	7.25	A	A	A
192	2120	212	4.5	10.56	A	A	A
194	1852	21	-8.7	3.58	A	A	A
197	2029.7	284.2	0.0	14.41	A	A	A
198	2140	180	5.5	9.07	A	A	A
200	2320	140	14.3	6.93	A	A	A
202	215.23	3.79	-89.4	3.83	N	N	N
203	2459	229	21.2	9.91	N	A	N
204	2000	50	-1.4	4.22	A	A	A
205	2360	130	16.3	6.47	A	A	A
206	1881	205	-7.3	11.42	A	A	A
207	2410	160	18.8	7.46	A	A	A
208	2104	93.4	3.7	5.59	A	A	A
211	1847.42	60.4	-8.9	4.72	A	A	A

Table 65. Evaluation results for K-40 in Sample 4, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
213	1918	89.8	-5.5	5.79	A	A	A
214	1964	32	-3.2	3.77	A	A	A
215	2070	135	2.0	7.36	A	A	A
217	1958.1	313.3	-3.5	16.36	A	A	A
218	1900.4176	78.95298	-6.3	5.37	A	A	A
219	2040.3	122.1	0.6	6.88	A	A	A
220	2151	108	6.0	6.06	A	A	A
222	2208	139	8.8	7.16	A	A	A
223	1950	190	-3.9	10.32	A	A	A
224	2001.7	180.2	-1.4	9.62	A	A	A
226	1542.61	64.78	-24.0	5.40	N	N	N
227	2180	70	7.4	4.68	A	A	A
228	1486.7	69.2	-26.7	5.76	N	N	N
230	1880	110	-7.3	6.77	A	A	A
232	2054	120	1.2	6.76	A	A	A
233	1945	110	-4.1	6.60	A	A	A
235	2034	200	0.2	10.40	A	A	A
238	1943	82.6	-4.2	5.44	A	A	A
241	1999	89	-1.5	5.60	A	A	A
242	2013.99	57.7	-0.7	4.45	A	A	A
247	1929.773	152.031	-4.9	8.58	A	A	A
249	2160.504133	68.920082	6.5	4.66	A	A	A
252	2127.9	31.5	4.9	3.71	A	A	A
253	1933	118	-4.7	6.99	A	A	A
256	2004.56	203.36	-1.2	10.70	A	A	A
257	1668.94	43.71	-17.8	4.29	A	N	W
258	2265	103	11.6	5.68	A	A	A
260	2130	110	5.0	6.18	A	A	A
261	2126	39	4.8	3.86	A	A	A
262	2658.3	85.9	31.0	4.69	N	N	N
265	2253	270	11.0	12.46	A	A	A
267	2072	249	2.1	12.49	A	A	A
268	1900	76	-6.4	5.25	A	A	A
270	2056	120	1.3	6.76	A	A	A
271	2031.7	59.3	0.1	4.48	A	A	A
272	1926	120	-5.1	7.10	A	A	A
273	2280	100	12.4	5.55	A	A	A
274	2100	100.674384	3.5	5.88	A	A	A
276	1790.07	125.98	-11.8	7.82	A	A	A
277	2150	54	6.0	4.23	A	A	A
278	2084	45.2	2.7	4.03	A	A	A
280	19.07	0.64	-99.1	4.78	N	N	N
281	2120	59	4.5	4.39	A	A	A
283	2207	51.4	8.8	4.12	A	A	A
284	1623	55	-20.0	4.80	N	N	N
286	2190	96	7.9	5.55	A	A	A
287	1802	38	-11.2	4.00	A	N	W
288	1741	181	-14.2	10.94	A	A	A
290	2070	135	2.0	7.36	A	A	A
291	2118.3	211.83	4.4	10.56	A	A	A
292	2312	44	13.9	3.90	A	N	W
293	1952	187	-3.8	10.17	A	A	A
294	1884	179	-7.2	10.09	A	A	A
295	2319.2	92.68	14.3	5.25	A	N	W
299	2400	200	18.3	9.00	A	A	A
300	193	3	-90.5	3.74	N	N	N
302	2136	171	5.3	8.70	A	A	A
303	2000	400	-1.4	20.29	A	N	W
304	2230	72	9.9	4.69	A	A	A
306	2088	209	2.9	10.57	A	A	A

Table 65. Evaluation results for K-40 in Sample 4, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
307	2027	67	-0.1	4.74	A	A	A
310	2084	103	2.7	6.00	A	A	A
311	2130	63	5.0	4.51	A	A	A
312	2075	130	2.3	7.13	A	A	A
313	2050	135	1.0	7.41	A	A	A
314	1947	24	-4.0	3.62	A	A	A
315	2050	281	1.0	14.12	A	A	A
316	1990	180	-1.9	9.66	A	A	A
317	2286	50	12.7	4.04	A	N	W
319	1957	98	-3.5	6.05	A	A	A
322	1957	107	-3.5	6.44	A	A	A
323	1831	91	-9.8	6.02	A	A	A
325	2080	146	2.5	7.80	A	A	A
326	2081.55	85	2.6	5.31	A	A	A
328	2070	94	2.0	5.67	A	A	A
329	2195	188.9	8.2	9.25	A	A	A
330	2259.47	124.78	11.4	6.49	A	A	A
331	2390	120	17.8	6.06	A	N	W
332	2200	180	8.4	8.86	A	A	A
333	3500.3	57.78	72.5	3.78	N	N	N
338	2419	215	19.2	9.52	A	A	A
339	2174	77	7.2	4.91	A	A	A
341	2041	57	0.6	4.40	A	A	A
344	2080.5	160.4	2.5	8.43	A	A	A
346	1957	83	-3.5	5.44	A	A	A
347	2011	143	-0.9	7.88	A	A	A
348	2100	140	3.5	7.48	A	A	A
350	2395.2	15.8	18.0	3.46	A	N	W
354	2000	70	-1.4	4.88	A	A	A
355	1707.18	10.25	-15.9	3.45	A	N	W
356	2127	70	4.8	4.73	A	A	A
357	2430	120	19.8	6.00	A	N	W
358	2250	22.5	10.9	3.54	A	N	W
363	2082	129	2.6	7.07	A	A	A
364	2521	107	24.2	5.44	N	N	N
369	1762	70.2	-13.2	5.24	A	A	A
370	2200	100	8.4	5.68	A	A	A
371	2218	111	9.3	6.05	A	A	A
376	2241	90	10.4	5.26	A	A	A
377	2329.862	103.6831	14.8	5.60	A	N	W
379	1870	300	-7.8	16.40	A	A	A
382	2336	104	15.1	5.60	A	N	W
383	1880	60	-7.3	4.66	A	A	A
384	2086	208	2.8	10.54	A	A	A
386	2248.49	277.02	10.8	12.78	A	A	A
387	2134	120	5.2	6.57	A	A	A
388	2120	120	4.5	6.60	A	A	A
391	1953.72	61.55	-3.7	4.64	A	A	A
393	2023	150	-0.3	8.16	A	A	A
395	1704.5	170	-16.0	10.54	A	A	A
396	2065	90.63	1.8	5.55	A	A	A
397	1239.7	14.15	-38.9	3.59	N	N	N
398	2145	105	5.7	5.96	A	A	A
401	1800	84.8	-11.3	5.81	A	A	A
402	2261	119	11.4	6.27	A	A	A
403	1972	79.21	-2.8	5.26	A	A	A
405	2022	89	-0.3	5.56	A	A	A
407	2068	93	1.9	5.64	A	A	A
408	1816	26	-10.5	3.69	A	N	W
410	2110	140	4.0	7.46	A	A	A

Table 65. Evaluation results for K-40 in Sample 4, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
411	2202	72	8.5	4.72	A	A	A
412	2590	86.8	27.6	4.77	N	N	N
414	2231	98	10.0	5.56	A	A	A
417	2151	108	6.0	6.06	A	A	A
420	2230	145	9.9	7.34	A	A	A
425	2092	140	3.1	7.51	A	A	A
426	2190	180.5	7.9	8.92	A	A	A
428	2137	250	5.3	12.18	A	A	A
429	2320	15.4	14.3	3.46	A	N	W
433	2389.36	61.1	17.8	4.25	A	N	W
434	1981.4	84.7	-2.4	5.46	A	A	A
435	2380	100	17.3	5.41	A	N	W
437	2102	137	3.6	7.35	A	A	A
439	2140	91	5.5	5.44	A	A	A
440	3498.84	30.26	72.4	3.51	N	N	N
441	2144	111	5.7	6.19	A	A	A
442	2325.9255	153.196716	14.6	7.41	A	A	A
443	2250	150	10.9	7.48	A	A	A
444	2131	180	5.0	9.11	A	A	A
445	2142.3	99.9	5.6	5.77	A	A	A
446	1675	101	-17.4	6.92	A	A	A
448	1870.94	19.01	-7.8	3.55	A	A	A
450	1980	60	-2.4	4.55	A	A	A
452	1814	90.7	-10.6	6.05	A	A	A
453	1880	67.1	-7.3	4.93	A	A	A
454	2299	123	13.3	6.34	A	A	A
455	3393	98	67.2	4.46	N	N	N
459	2165	198	6.7	9.76	A	A	A
460	1940	118	-4.4	6.97	A	A	A
462	2954	127	45.6	5.48	N	N	N
463	2220	110	9.4	6.01	A	A	A
464	2040.85	189.16	0.6	9.87	A	A	A
465	2004	192	-1.2	10.17	A	A	A
466	2127	47	4.8	4.06	A	A	A
467	511	2.7	-74.8	3.44	N	N	N
469	2030	97	0.0	5.86	A	A	A
471	2030	52	0.0	4.26	A	A	A
475	2051	100	1.1	5.94	A	A	A
477	1984	40	-2.2	3.95	A	A	A
478	2152	112	6.1	6.22	A	A	A
479	1972	120	-2.8	6.97	A	A	A
480	2082	135	2.6	7.32	A	A	A
482	2065	140	1.8	7.58	A	A	A
483	2144	111	5.7	6.19	A	A	A
484	2213	98	9.1	5.58	A	A	A
487	2075	145	2.3	7.77	A	A	A
491	3197.681	83.767	57.6	4.29	N	N	N
492	1960	60	-3.4	4.58	A	A	A
495	2434	46	20.0	3.89	A	N	W
496	2174	91.66	7.2	5.42	A	A	A
498	2242	266	10.5	12.34	A	A	A
499	2086	143	2.8	7.65	A	A	A
500	1865	114.7	-8.1	7.03	A	A	A
501	2370	100	16.8	5.42	A	N	W
506	1978	127	-2.5	7.27	A	A	A
507	2550.973	0.285	25.7	3.40	N	N	N
508	1979	82	-2.5	5.36	A	A	A
509	2128	37	4.9	3.82	A	A	A
514	2015	140	-0.7	7.74	A	A	A
516	2210	130	8.9	6.79	A	A	A

Table 65. Evaluation results for K-40 in Sample 4, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Reported value [Bq/kg]	Reported uncertainty ($k = 1$) [Bq/kg]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
520	2430.95	100	19.8	5.34	A	N	W
522	2150	60	6.0	4.40	A	A	A
523	1936	55	-4.6	4.43	A	A	A
525	2167	122	6.8	6.58	A	A	A
527	2210	130	8.9	6.79	A	A	A
528	2000	80	-1.4	5.25	A	A	A
529	3515	18	73.2	3.44	N	N	N
530	2454.5	122.85	21.0	6.05	N	N	N
532	2037.01	164	0.4	8.74	A	A	A
533	2470	127	21.7	6.16	N	N	N
535	2038	85	0.4	5.38	A	A	A
536	2240	160	10.4	7.91	A	A	A
537	2075	98	2.3	5.82	A	A	A
539	1824.49	82.45	-10.1	5.66	A	A	A
544	1141.5	55.24	-43.7	5.91	N	N	N
553	1831	68	-9.8	5.04	A	A	A
555	2087	167	2.9	8.69	A	A	A

Sr-90 determination of activity per sample in Sample 5

Table 66. Target values

Parameter	Value
Massic activity [Bq/sample]	3.22
Uncertainty [Bq/sample]	0.16
Maximum Acceptable Relative Bias [%]	30

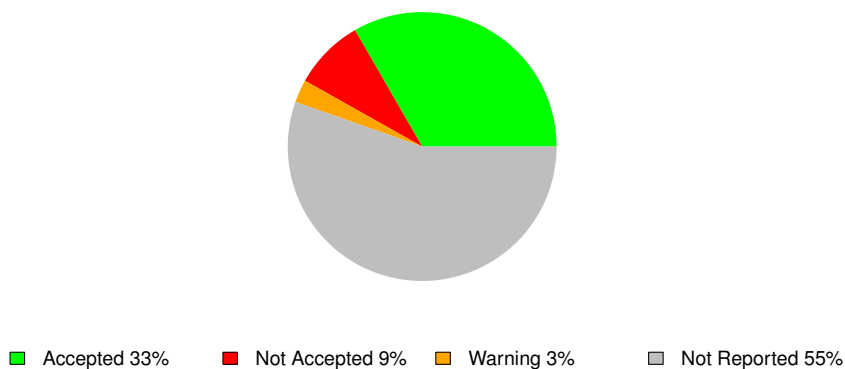


Figure 66. Percentage of Accepted vs. Warnings vs. Not Accepted vs. Not Reported results

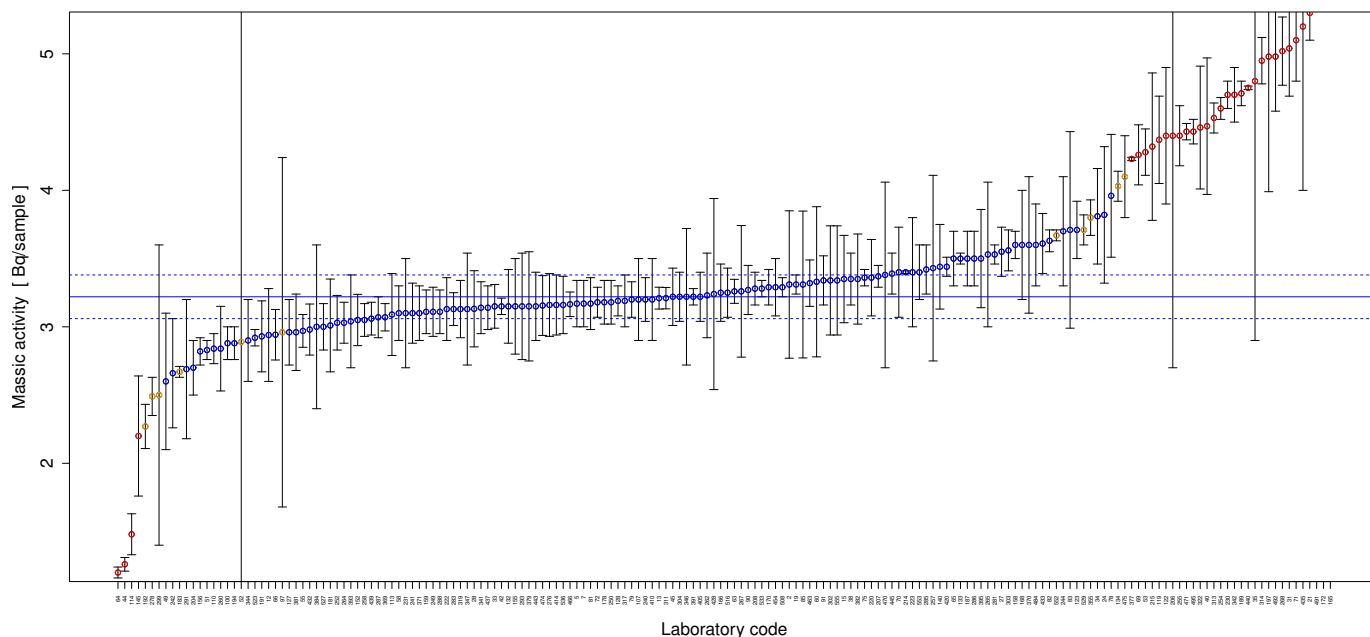


Figure 67. Reported results and evaluation parameters for Sr-90. Blue points represent accepted scores, whereas yellow and red represent warning and not accepted scores, respectively.

Table 67. Evaluation results for Sr-90 in Sample 5, Rep. Value and Rep. Unc. in Bq/sample

Labcode	Reported value [Bq/sample]	Reported uncertainty ($k = 1$) [Bq/sample]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
2	3.31	0.54	2.8	17.05	A	A	A
5	3.17	0.17	-1.6	7.31	A	A	A
7	3.17	0.17	-1.6	7.31	A	A	A

Table 67. Evaluation results for Sr-90 in Sample 5, Rep. Value and Rep. Unc. in Bq/sample

Labcode	Reported value [Bq/sample]	Reported uncertainty ($k = 1$) [Bq/sample]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
12	2.94	0.34	-8.7	12.59	A	A	A
13	3.21	0.08	-0.3	5.56	A	A	A
15	3.35	0.32	4.0	10.77	A	A	A
19	3.31	0.07	2.8	5.40	A	A	A
21	5.3	0.2	64.6	6.24	N	N	N
24	3.82	0.5	18.6	14.00	A	A	A
27	3.55	0.18	10.2	7.10	A	A	A
28	3.132	0.279	-2.7	10.20	A	A	A
31	5.04	0.35	56.5	8.54	N	N	N
33	3.15	0.16	-2.2	7.11	A	A	A
34	3.81	0.35	18.3	10.44	A	A	A
35	4.8	1.9	49.1	39.89	N	N	N
38	3.35	0.19	4.0	7.54	A	A	A
40	4.47	0.5	38.8	12.24	N	N	N
42	3.15	0.06	-2.2	5.32	A	A	A
44	1.26	0.05	-60.9	6.36	N	N	N
45	3.22	0.21	0.0	8.20	A	A	A
49	2.6	0.5	-19.2	19.86	A	A	A
51	2.83	0.07	-12.1	5.55	A	A	A
52	2.89	8.62	-10.2	298.31	A	N	W
53	4.28	0.17	32.9	6.36	N	N	N
55	2.97	0.12	-7.8	6.40	A	A	A
58	3.1	0.2	-3.7	8.14	A	A	A
60	3.33	0.55	3.4	17.25	A	A	A
63	3.26	0.088	1.2	5.65	A	A	A
64	1.2	0.04	-62.7	5.98	N	N	N
65	3.5	0.2	8.7	7.57	A	A	A
66	2.942	0.1851	-8.6	8.02	A	A	A
69	4.26	0.22	32.3	7.17	N	N	N
70	3.4	0.33	5.6	10.90	A	A	A
71	5.1	0.3	58.4	7.70	N	N	N
72	3.18	0.11	-1.2	6.05	A	A	A
75	3.36	0.06	4.3	5.28	A	A	A
78	3.96	0.45	23.0	12.40	A	A	A
79	3.2	0.13	-0.6	6.42	A	A	A
81	3.17	0.19	-1.6	7.79	A	A	A
82	3.63	0.08	12.7	5.44	A	A	A
83	3.71	0.72	15.2	20.03	A	A	A
85	3.31	0.538	2.8	17.00	A	A	A
90	3.27	0.18	1.6	7.42	A	A	A
91	3.34	0.18	3.7	7.33	A	A	A
97	2.96	1.28	-8.1	43.53	A	N	W
100	2.88	0.12	-10.6	6.48	A	A	A
107	3.2	0.3	-0.6	10.61	A	A	A
110	2.84	0.11	-11.8	6.30	A	A	A
113	3.09	0.3	-4.0	10.91	A	A	A
114	1.48	0.15	-54.0	11.29	N	N	N
119	4.37	0.32	35.7	8.85	N	N	N
122	4.4	0.5	36.6	12.40	N	N	N
123	3.71	0.21	15.2	7.53	A	A	A
127	2.96	0.24	-8.1	9.51	A	A	A
128	3.19	0.11	-0.9	6.05	A	A	A
132	3.15	0.27	-2.2	9.91	A	A	A
133	3.5	0.04	8.7	5.10	A	A	A
134	4.03	0.11	25.2	5.67	A	N	W
140	3.44	0.31	6.8	10.29	A	A	A
145	2.2	0.44	-31.7	20.61	N	A	N
152	3.05	0.188	-5.3	7.92	A	A	A
155	3.15	0.35	-2.2	12.17	A	A	A
156	2.82	0.1	-12.4	6.10	A	A	A

Table 67. Evaluation results for Sr-90 in Sample 5, Rep. Value and Rep. Unc. in Bq/sample

Labcode	Reported value [Bq/sample]	Reported uncertainty ($k = 1$) [Bq/sample]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
158	3.6	0.1	11.8	5.69	A	A	A
159	3.11	0.16	-3.4	7.15	A	A	A
165	9.47	0.086	194.1	5.05	N	N	N
166	3.25	0.21	0.9	8.15	A	A	A
168	3.6	0.4	11.8	12.17	A	A	A
170	3.29	0.13	2.2	6.35	A	A	A
172	6.74	0.4	109.3	7.74	N	N	N
178	3.18	0.16	-1.2	7.07	A	A	A
181	3.01	0.34	-6.5	12.34	A	A	A
183	2.67	0.04	-17.1	5.19	A	N	W
187	3.5	0.2	8.7	7.57	A	A	A
189	4.71	0.09	46.3	5.32	N	N	N
191	2.93	0.26	-9.0	10.17	A	A	A
192	2.27	0.162	-29.5	8.70	A	N	W
194	2.88	0.12	-10.6	6.48	A	A	A
197	4.98	0.99	54.7	20.49	N	N	N
204	2.7	0.2	-16.1	8.92	A	A	A
206	4.4	1.7	36.6	38.95	N	N	N
207	3.37	0.08	4.7	5.51	A	A	A
208	3.28	0.12	1.9	6.17	A	A	A
214	3.4	0.01	5.6	4.98	A	A	A
215	4.32	0.54	34.2	13.45	N	A	N
220	3.36	0.28	4.3	9.70	A	A	A
222	3.13	0.23	-2.8	8.87	A	A	A
223	3.4	0.4	5.6	12.77	A	A	A
230	4.7	0.1	46.0	5.41	N	N	N
231	3.1	0.4	-3.7	13.83	A	A	A
240	3.2	0.16	-0.6	7.05	A	A	A
241	3.1	0.22	-3.7	8.66	A	A	A
242	2.66	0.4	-17.4	15.84	A	A	A
244	3.7	0.4	14.9	11.90	A	A	A
249	3.11	0.18	-3.4	7.63	A	A	A
250	3.18	0.16	-1.2	7.07	A	A	A
252	3.03	0.2	-5.9	8.26	A	A	A
254	4.6	0.08	42.9	5.26	N	N	N
255	4.4	0.22	36.6	7.05	N	N	N
257	3.43	0.68	6.5	20.44	A	A	A
258	3.05	0.12	-5.3	6.34	A	A	A
260	2.84	0.31	-11.8	11.99	A	A	A
262	3.23	0.31	0.3	10.81	A	A	A
264	3.03	0.15	-5.9	7.01	A	A	A
265	3.53	0.53	9.6	15.82	A	A	A
267	3.26	0.482	1.2	15.60	A	A	A
268	5.02	0.25	55.9	7.04	N	N	N
276	3.16	0.23	-1.9	8.81	A	A	A
278	2.49	0.14	-22.7	7.50	A	N	W
281	3.53	0.07	9.6	5.35	A	A	A
283	3.13	0.12	-2.8	6.28	A	A	A
285	3.42	0.18	6.2	7.24	A	A	A
286	3.5	0.2	8.7	7.57	A	A	A
287	3.07	0.15	-4.7	6.97	A	A	A
288	3.11	0.16	-3.4	7.15	A	A	A
291	2.69	0.51	-16.5	19.60	A	A	A
293	3.15	0.39	-2.2	13.34	A	A	A
299	2.5	1.1	-22.4	44.28	A	N	W
302	3.34	0.4	3.7	12.97	A	A	A
303	3.56	0.15	10.6	6.51	A	A	A
304	3.22	0.18	0.0	7.48	A	A	A
311	3.21	0.0785	-0.3	5.54	A	A	A
313	4.53	0.11	40.7	5.53	N	N	N

Table 67. Evaluation results for Sr-90 in Sample 5, Rep. Value and Rep. Unc. in Bq/sample

Labcode	Reported value [Bq/sample]	Reported uncertainty ($k = 1$) [Bq/sample]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
314	4.95	0.17	53.7	6.04	N	N	N
317	3.19	0.19	-0.9	7.76	A	A	A
319	3.13	0.21	-2.8	8.35	A	A	A
322	4.46	0.45	38.5	11.25	N	N	N
341	3.14	0.19	-2.5	7.83	A	A	A
342	4.7	0.2	46.0	6.54	N	N	N
344	2.9	0.3	-9.9	11.48	A	A	A
346	3.22	0.5	0.0	16.30	A	A	A
347	3.13	0.41	-2.8	14.01	A	A	A
355	3.8	0.13	18.0	6.03	A	N	W
369	3.07	0.1	-4.7	5.94	A	A	A
370	3.6	0.5	11.8	14.75	A	A	A
371	3.1	0.2	-3.7	8.14	A	A	A
377	4.23	0.012	31.4	4.98	N	N	N
379	3.15	0.4	-2.2	13.64	A	A	A
381	2.96	0.28	-8.1	10.69	A	A	A
382	3.35	0.33	4.0	11.03	A	A	A
384	3	0.6	-6.8	20.61	A	A	A
391	3.22	0.06	0.0	5.31	A	A	A
393	3.04	0.34	-5.6	12.24	A	A	A
395	3.5	0.36	8.7	11.42	A	A	A
405	3.22	0.18	0.0	7.48	A	A	A
410	3.2	0.3	-0.6	10.61	A	A	A
414	3.16	0.22	-1.9	8.55	A	A	A
420	3.44	0.07	6.8	5.37	A	A	A
428	3.24	0.7	0.6	22.17	A	A	A
432	2.98	0.187	-7.4	8.00	A	A	A
433	3.61	0.22	12.1	7.86	A	A	A
435	5.2	1.2	61.5	23.61	N	N	N
437	3.14	0.16	-2.5	7.12	A	A	A
439	3.06	0.12	-5.0	6.33	A	A	A
440	4.751	0.013	47.5	4.98	N	N	N
443	3.15	0.25	-2.2	9.36	A	A	A
445	3.39	0.15	5.3	6.65	A	A	A
454	3.29	0.21	2.2	8.09	A	A	A
463	3.32	0.17	3.1	7.14	A	A	A
466	3.165	0.09	-1.7	5.73	A	A	A
470	3.38	0.68	5.0	20.72	A	A	A
471	4.43	0.06	37.6	5.15	N	N	N
474	3.156	0.219	-2.0	8.53	A	A	A
475	4.1	0.3	27.3	8.84	A	N	W
484	3.6	0.3	11.8	9.70	A	A	A
491	6.43	0.174	99.7	5.66	N	N	N
492	4.98	0.4	54.7	9.44	N	N	N
495	4.43	0.09	37.6	5.37	N	N	N
508	3.29	0.07	2.2	5.41	A	A	A
516	3.25	0.18	0.9	7.44	A	A	A
523	2.92	0.06	-9.3	5.38	A	A	A
527	3	0.17	-6.8	7.54	A	A	A
529	3.71	0.11	15.2	5.79	A	N	W
533	3.28	0.06	1.9	5.29	A	A	A
536	3.16	0.21	-1.9	8.30	A	A	A
552	3.67	0.04	14.0	5.09	A	N	W
553	3.4	0.2	5.6	7.70	A	A	A
555	3.34	0.4	3.7	12.97	A	A	A

Ba-133 determination of activity per sample in Sample 5

Table 68. Target values

Parameter	Value
Massic activity [Bq/sample]	10.1
Uncertainty [Bq/sample]	0.51
Maximum Acceptable Relative Bias [%]	30

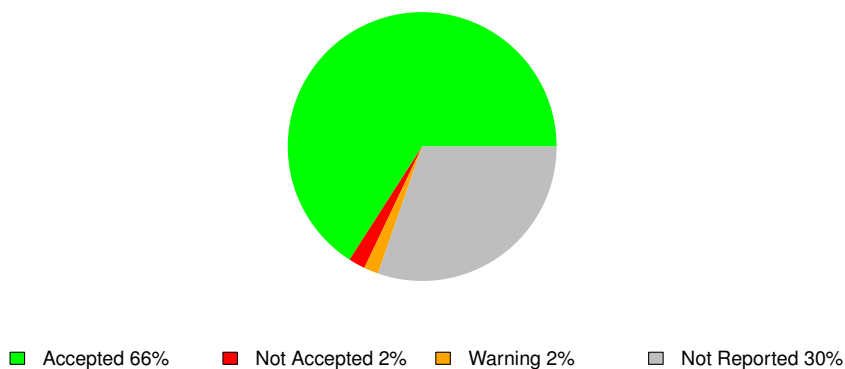


Figure 68. Percentage of Accepted vs. Warnings vs. Not Accepted vs. Not Reported results

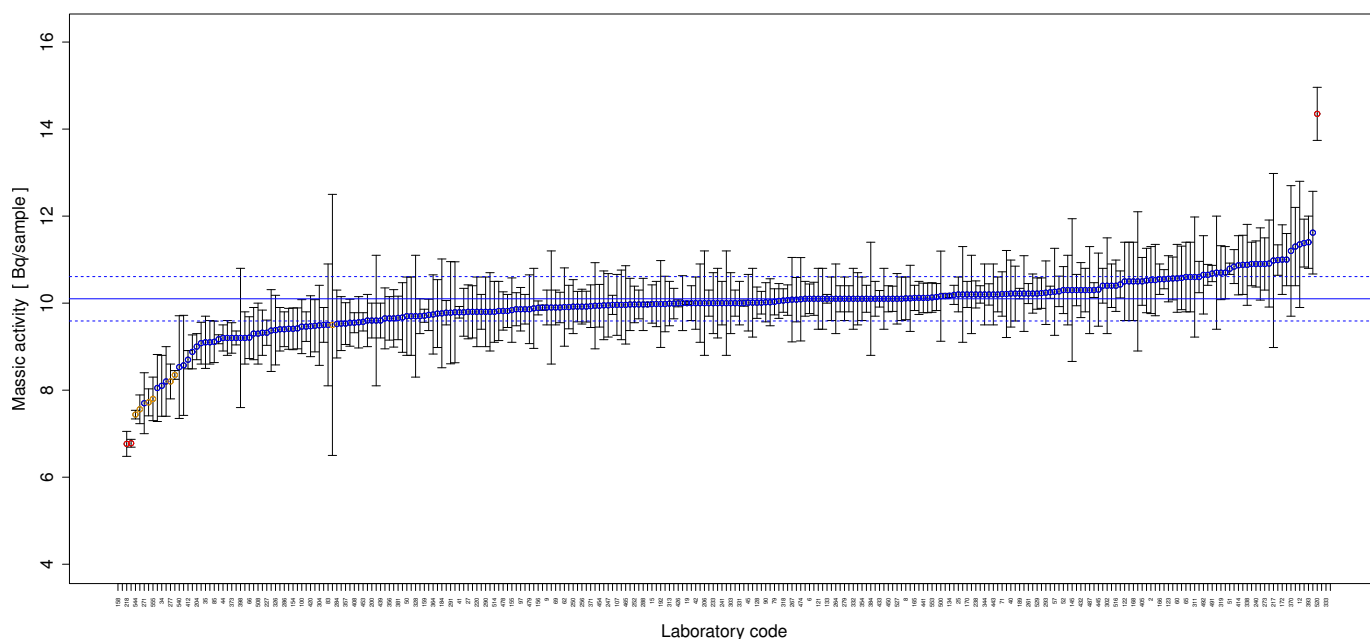


Figure 69. Reported results and evaluation parameters for Ba-133. Blue points represent accepted scores, whereas yellow and red represent warning and not accepted scores, respectively.

Table 69. Evaluation results for Ba-133 in Sample 5, Rep. Value and Rep. Unc. in Bq/sample

Labcode	Reported value [Bq/sample]	Reported uncertainty ($k = 1$) [Bq/sample]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
2	10.53	0.77	4.3	8.89	A	A	A
5	10.1	0.4	0.0	6.42	A	A	A
6	10.1	0.34	0.0	6.07	A	A	A

Table 69. Evaluation results for Ba-133 in Sample 5, Rep. Value and Rep. Unc. in Bq/sample

Labcode	Reported value [Bq/sample]	Reported uncertainty ($k = 1$) [Bq/sample]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
7	10.1	0.38	0.0	6.30	A	A	A
8	10.11	0.49	0.1	7.00	A	A	A
9	9.9	0.4	-2.0	6.47	A	A	A
11	10	0.631	-1.0	8.08	A	A	A
12	11.35	1.45	12.4	13.74	A	A	A
13	9.73	0.36	-3.7	6.26	A	A	A
15	9.98	0.44	-1.2	6.70	A	A	A
17	9.98	0.52	-1.2	7.26	A	A	A
19	10	0.034	-1.0	5.06	A	A	A
21	10	0.4	-1.0	6.44	A	A	A
24	8.05	0.77	-20.3	10.82	A	A	A
25	10.2	0.4	1.0	6.39	A	A	A
27	9.8	0.62	-3.0	8.09	A	A	A
31	9.95	0.79	-1.5	9.41	A	A	A
34	8.1	0.7	-19.8	10.01	A	A	A
35	9.1	0.6	-9.9	8.30	A	A	A
38	9.79	1.16	-3.1	12.88	A	A	A
40	10.22	0.77	1.2	9.07	A	A	A
41	9.79	0.133	-3.1	5.23	A	A	A
42	10	0.6	-1.0	7.84	A	A	A
44	9.2	0.3	-8.9	6.01	A	A	A
45	10.01	0.65	-0.9	8.23	A	A	A
48	9.6	0.6	-5.0	8.03	A	A	A
49	9.9	1.3	-2.0	14.07	A	A	A
50	9.7	0.9	-4.0	10.56	A	A	A
51	10.79	0.13	6.8	5.19	A	A	A
52	10.3	0.54	2.0	7.28	A	A	A
53	10.3	0.8	2.0	9.26	A	A	A
55	8.88	0.39	-12.1	6.69	A	A	A
57	10.26	1	1.6	10.98	A	A	A
58	9.5	0.4	-5.9	6.57	A	A	A
60	10.57	0.78	4.7	8.94	A	A	A
62	9.91	0.9	-1.9	10.39	A	A	A
63	10.01	0.79	-0.9	9.37	A	A	A
64	8.2	0.8	-18.8	10.99	A	A	A
65	10.6	0.8	5.0	9.08	A	A	A
66	9.207	0.4802	-8.8	7.26	A	A	A
69	9.9	0.4	-2.0	6.47	A	A	A
70	9.86	0.38	-2.4	6.35	A	A	A
71	10.21	0.51	1.1	7.10	A	A	A
72	9.9	0.35	-2.0	6.16	A	A	A
75	10.27	0.35	1.7	6.09	A	A	A
78	10.22	0.63	1.2	7.97	A	A	A
79	10.03	0.3	-0.7	5.87	A	A	A
80	9.8961	0.060094	-2.0	5.09	A	A	A
81	10.19	0.22	0.9	5.49	A	A	A
82	9.96	0.22	-1.4	5.51	A	A	A
83	9.5	1.4	-5.9	15.58	A	A	A
84	6.78	0.09	-32.9	5.22	N	N	N
85	9.11	0.476	-9.8	7.27	A	A	A
90	10.02	0.45	-0.8	6.76	A	A	A
94	10.14	0.31	0.4	5.90	A	A	A
97	9.86	0.5	-2.4	7.16	A	A	A
100	9.46	0.62	-6.3	8.27	A	A	A
102	11.3	0.9	11.9	9.43	A	A	A
107	9.96	0.7	-1.4	8.65	A	A	A
110	9.53	0.62	-5.6	8.24	A	A	A
111	10.53	0.82	4.3	9.28	A	A	A
113	9.97	0.6	-1.3	7.86	A	A	A
114	9.82	0.68	-2.8	8.57	A	A	A

Table 69. Evaluation results for Ba-133 in Sample 5, Rep. Value and Rep. Unc. in Bq/sample

Labcode	Reported value [Bq/sample]	Reported uncertainty ($k = 1$) [Bq/sample]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
119	10	0.9	-1.0	10.32	A	A	A
121	10.1	0.7	0.0	8.58	A	A	A
122	10.5	0.9	4.0	9.95	A	A	A
123	10.56	0.53	4.6	7.12	A	A	A
124	10.2	1.1	1.0	11.91	A	A	A
127	10.1	0.7	0.0	8.58	A	A	A
128	10.01	0.36	-0.9	6.20	A	A	A
132	10.5	0.9	4.0	9.95	A	A	A
133	10.1	0.1	0.0	5.15	A	A	A
134	10.17	0.04	0.7	5.06	A	A	A
140	10.88	0.68	7.7	8.03	A	A	A
145	10.3	1.64	2.0	16.70	A	A	A
150	9.41	0.47	-6.8	7.10	A	A	A
152	9.8	0.6	-3.0	7.94	A	A	A
154	9.41	0.48	-6.8	7.18	A	A	A
155	9.84	0.74	-2.6	9.06	A	A	A
156	9.89	0.16	-2.1	5.30	A	A	A
158	0.38	0.04	-96.2	11.67	N	N	N
159	9.71	0.15	-3.9	5.28	A	A	A
165	10.12	0.29	0.2	5.81	A	A	A
166	10.55	0.35	4.5	6.04	A	A	A
168	10.5	0.9	4.0	9.95	A	A	A
170	10.2	0.3	1.0	5.84	A	A	A
172	11	0.8	8.9	8.85	A	A	A
175	9.32	0.52	-7.7	7.53	A	A	A
178	10.1	0.5	0.0	7.07	A	A	A
179	9.17	0.103	-9.2	5.17	A	A	A
181	10.52	0.74	4.2	8.66	A	A	A
183	9.4	0.5	-6.9	7.33	A	A	A
184	9.765	1.25	-3.3	13.76	A	A	A
187	10.6	0.8	5.0	9.08	A	A	A
189	10.22	0.12	1.2	5.18	A	A	A
191	9.67	0.8	-4.3	9.69	A	A	A
192	9.98	0.998	-1.2	11.20	A	A	A
194	9.78	0.28	-3.2	5.80	A	A	A
197	10.22	0.87	1.2	9.90	A	A	A
200	9.6	0.4	-5.0	6.55	A	A	A
203	10.12	0.38	0.2	6.29	A	A	A
204	9	0.3	-10.9	6.05	A	A	A
205	9.98	0.638	-1.2	8.15	A	A	A
206	10	1.2	-1.0	13.02	A	A	A
207	10.07	0.35	-0.3	6.13	A	A	A
208	9.96	0.8	-1.4	9.49	A	A	A
213	9.88	0.92	-2.2	10.59	A	A	A
214	11	0.6	8.9	7.43	A	A	A
215	10.2	0.9	1.0	10.17	A	A	A
217	10.98	2	8.7	18.90	A	A	A
218	6.76588	0.2869	-33.0	6.59	N	N	N
220	9.8	0.8	-3.0	9.60	A	A	A
223	9.8	0.4	-3.0	6.49	A	A	A
226	7.56	0.33	-25.1	6.67	A	N	W
227	9.32	0.29	-7.7	5.93	A	A	A
230	10	0.3	-1.0	5.87	A	A	A
232	10.9	0.5	7.9	6.82	A	A	A
233	10	0.7	-1.0	8.63	A	A	A
235	10	0.8	-1.0	9.46	A	A	A
238	10.2	0.311	1.0	5.90	A	A	A
240	10.9	0.53	7.9	7.01	A	A	A
241	10	0.5	-1.0	7.11	A	A	A
242	9.94	0.99	-1.6	11.17	A	A	A

Table 69. Evaluation results for Ba-133 in Sample 5, Rep. Value and Rep. Unc. in Bq/sample

Labcode	Reported value [Bq/sample]	Reported uncertainty ($k = 1$) [Bq/sample]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
247	9.95	0.729	-1.5	8.90	A	A	A
249	19.62	1.08	94.3	7.47	N	N	N
250	9.92	0.62	-1.8	8.03	A	A	A
252	9.97	0.42	-1.3	6.58	A	A	A
253	9.1	0.5	-9.9	7.46	A	A	A
254	9.92	0.35	-1.8	6.16	A	A	A
256	9.92	0.4	-1.8	6.46	A	A	A
257	9.37	0.94	-7.2	11.23	A	A	A
258	10.43	0.31	3.3	5.86	A	A	A
260	10.9	0.83	7.9	9.14	A	A	A
261	10.22	0.23	1.2	5.53	A	A	A
262	10.55	0.22	4.5	5.46	A	A	A
264	10.1	0.8	0.0	9.39	A	A	A
265	10	1.2	-1.0	13.02	A	A	A
267	10.08	0.97	-0.2	10.87	A	A	A
268	9.42	0.47	-6.7	7.10	A	A	A
270	9.7	0.9	-4.0	10.56	A	A	A
271	7.7	0.7	-23.8	10.40	A	A	A
272	10.1	0.3	0.0	5.86	A	A	A
273	10.9	0.6	7.9	7.47	A	A	A
276	9.08	0.48	-10.1	7.31	A	A	A
277	8.2	0.4	-18.8	7.02	A	N	W
278	8.35	0.1	-17.3	5.19	A	N	W
279	10.1	0.5	0.0	7.07	A	A	A
281	10.25	0.14	1.5	5.23	A	A	A
283	9.97	0.33	-1.3	6.04	A	A	A
284	9.52	0.78	-5.7	9.62	A	A	A
285	10.02	0.54	-0.8	7.39	A	A	A
286	9.4	0.4	-6.9	6.60	A	A	A
287	10.1	0.3	0.0	5.86	A	A	A
288	9.97	0.6	-1.3	7.86	A	A	A
290	9.8	0.8	-3.0	9.60	A	A	A
291	9.78	1.174	-3.2	13.02	A	A	A
292	10.2	0.2	1.0	5.42	A	A	A
293	10.24	0.73	1.4	8.74	A	A	A
295	10.11	0.76	0.1	9.06	A	A	A
299	10.4	0.4	3.0	6.35	A	A	A
300	32.32	0.44	220.0	5.23	N	N	N
302	10.4	1.1	3.0	11.72	A	A	A
303	10	0.7	-1.0	8.63	A	A	A
304	9.49	0.92	-6.0	10.93	A	A	A
306	10.7	1.3	5.9	13.16	A	A	A
307	9.6	1.5	-5.0	16.42	A	A	A
310	10.3	0.36	2.0	6.14	A	A	A
311	10.6	1.38	5.0	13.96	A	A	A
313	9.99	0.51	-1.1	7.18	A	A	A
314	10.23	0.35	1.3	6.10	A	A	A
315	10.567	0.492	4.6	6.87	A	A	A
317	9.65	0.7	-4.5	8.84	A	A	A
318	10.06	0.27	-0.4	5.72	A	A	A
319	10.7	0.62	5.9	7.69	A	A	A
322	10	0.3	-1.0	5.87	A	A	A
325	9.48	0.6	-6.1	8.10	A	A	A
326	9.38	0.8	-7.1	9.91	A	A	A
328	9.7	1.4	-4.0	15.29	A	A	A
330	9.92	0.354	-1.8	6.18	A	A	A
331	10	0.5	-1.0	7.11	A	A	A
332	10.1	0.7	0.0	8.58	A	A	A
333	26.7	0.259	164.4	5.14	N	N	N
338	10.88	0.93	7.7	9.93	A	A	A

Table 69. Evaluation results for Ba-133 in Sample 5, Rep. Value and Rep. Unc. in Bq/sample

Labcode	Reported value [Bq/sample]	Reported uncertainty ($k = 1$) [Bq/sample]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
339	10.1	0.6	0.0	7.80	A	A	A
341	10.01	0.26	-0.9	5.68	A	A	A
344	10.2	0.7	1.0	8.52	A	A	A
346	10.22	0.45	1.2	6.70	A	A	A
347	11.38	0.55	12.7	6.99	A	A	A
348	9.7	0.4	-4.0	6.52	A	A	A
350	9.2	0.4	-8.9	6.66	A	A	A
354	10.1	0.5	0.0	7.07	A	A	A
355	9.97	0.05	-1.3	5.07	A	A	A
356	9.65	0.5	-4.5	7.23	A	A	A
357	9.53	0.48	-5.6	7.13	A	A	A
364	9.74	0.91	-3.6	10.62	A	A	A
369	10.1	0.31	0.0	5.91	A	A	A
370	11.2	1.5	10.9	14.31	A	A	A
371	9.93	0.49	-1.7	7.06	A	A	A
373	9.2	0.35	-8.9	6.32	A	A	A
376	7.72	0.31	-23.6	6.45	A	N	W
379	10.5	1.6	4.0	16.05	A	A	A
381	9.66	0.5	-4.4	7.23	A	A	A
382	9.65	0.66	-4.5	8.50	A	A	A
384	10.1	1.3	0.0	13.83	A	A	A
385	8.57	1.15	-15.2	14.34	A	A	A
386	11.62	0.95	15.1	9.61	A	A	A
391	9.2	0.16	-8.9	5.34	A	A	A
393	11.4	0.6	12.9	7.29	A	A	A
395	10.21	1	1.1	11.02	A	A	A
396	9.8	0.9	-3.0	10.48	A	A	A
398	9.2	1.6	-8.9	18.11	A	A	A
401	10.84	0.39	7.3	6.20	A	A	A
402	9.55	0.54	-5.4	7.58	A	A	A
403	10.58	0.73	4.8	8.55	A	A	A
404	10.08	0.51	-0.2	7.15	A	A	A
405	10.5	0.55	4.0	7.28	A	A	A
407	10.7	0.6	5.9	7.55	A	A	A
408	9.55	0.23	-5.4	5.59	A	A	A
410	9.3	0.6	-7.9	8.19	A	A	A
411	9.86	0.34	-2.4	6.11	A	A	A
412	8.7	0.21	-13.9	5.60	A	A	A
414	10.87	0.68	7.6	8.04	A	A	A
417	10.1	0.4	0.0	6.42	A	A	A
419	0.43	0.04	-95.7	10.58	N	N	N
420	9.47	0.7	-6.2	8.95	A	A	A
423	10	0.07	-1.0	5.10	A	A	A
425	9.91	0.5	-1.9	7.14	A	A	A
426	9.9958	0.0801	-1.0	5.11	A	A	A
428	9.2	0.6	-8.9	8.25	A	A	A
429	10.2	0.245	1.0	5.59	A	A	A
432	10.3	0.632	2.0	7.95	A	A	A
433	10.1	0.19	0.0	5.39	A	A	A
435	9.5	3	-5.9	31.98	A	N	W
437	10.1	0.7	0.0	8.58	A	A	A
439	9.6	0.4	-5.0	6.55	A	A	A
440	10.164	0.061	0.6	5.09	A	A	A
441	10.12	0.34	0.2	6.07	A	A	A
443	10.2	0.7	1.0	8.52	A	A	A
445	10.31	0.84	2.1	9.59	A	A	A
446	10.3	0.5	2.0	7.00	A	A	A
450	10.1	0.3	0.0	5.86	A	A	A
452	9.79	0.55	-3.1	7.55	A	A	A
453	9.57	0.21	-5.2	5.51	A	A	A

Table 69. Evaluation results for Ba-133 in Sample 5, Rep. Value and Rep. Unc. in Bq/sample

Labcode	Reported value [Bq/sample]	Reported uncertainty ($k = 1$) [Bq/sample]	Relative bias [%]	P-Test [%]	Trueness evaluation	Precision evaluation	Final Score
454	9.94	0.49	-1.6	7.06	A	A	A
460	9.76	0.78	-3.4	9.45	A	A	A
463	10.05	0.4	-0.5	6.43	A	A	A
465	9.96	0.9	-1.4	10.35	A	A	A
466	10.6	0.36	5.0	6.09	A	A	A
471	10.1	0.29	0.0	5.81	A	A	A
474	10.089	0.958	-0.1	10.75	A	A	A
475	10.4	0.5	3.0	6.97	A	A	A
478	9.82	0.44	-2.8	6.75	A	A	A
479	9.86	0.79	-2.4	9.47	A	A	A
483	10.12	0.34	0.2	6.07	A	A	A
484	10.2	0.4	1.0	6.39	A	A	A
487	10.3	1	2.0	10.94	A	A	A
491	10.681	0.187	5.8	5.34	A	A	A
492	10.65	0.9	5.4	9.84	A	A	A
495	10.99	0.35	8.8	5.97	A	A	A
498	10.91	1	8.0	10.46	A	A	A
500	10.16	1.036	0.6	11.38	A	A	A
508	9.3	0.7	-7.9	9.06	A	A	A
514	9.8	0.7	-3.0	8.75	A	A	A
516	10.4	0.59	3.0	7.59	A	A	A
520	14.35	0.61	42.1	6.60	N	N	N
523	9.82	0.38	-2.8	6.36	A	A	A
525	9.56	0.59	-5.3	7.97	A	A	A
527	10.1	0.58	0.0	7.65	A	A	A
528	10.1	0.5	0.0	7.07	A	A	A
529	10.22	0.36	1.2	6.16	A	A	A
532	9.46	0.34	-6.3	6.20	A	A	A
533	10.3	0.17	2.0	5.31	A	A	A
536	10.65	0.24	5.4	5.53	A	A	A
537	9.99	0.35	-1.1	6.15	A	A	A
540	8.53	1.18	-15.5	14.73	A	A	A
544	7.438	0.099	-26.4	5.22	A	N	W
553	10.13	0.34	0.3	6.06	A	A	A
555	7.8	0.5	-22.8	8.16	A	N	W

3.2 Display of intercomparison values

Reported results for Gross Alpha Determination in Sample 2

Table 70. Target values

Parameter	Value
Robust Mean, Bq/kg	0.319
Robust SD, Bq/kg	0.188

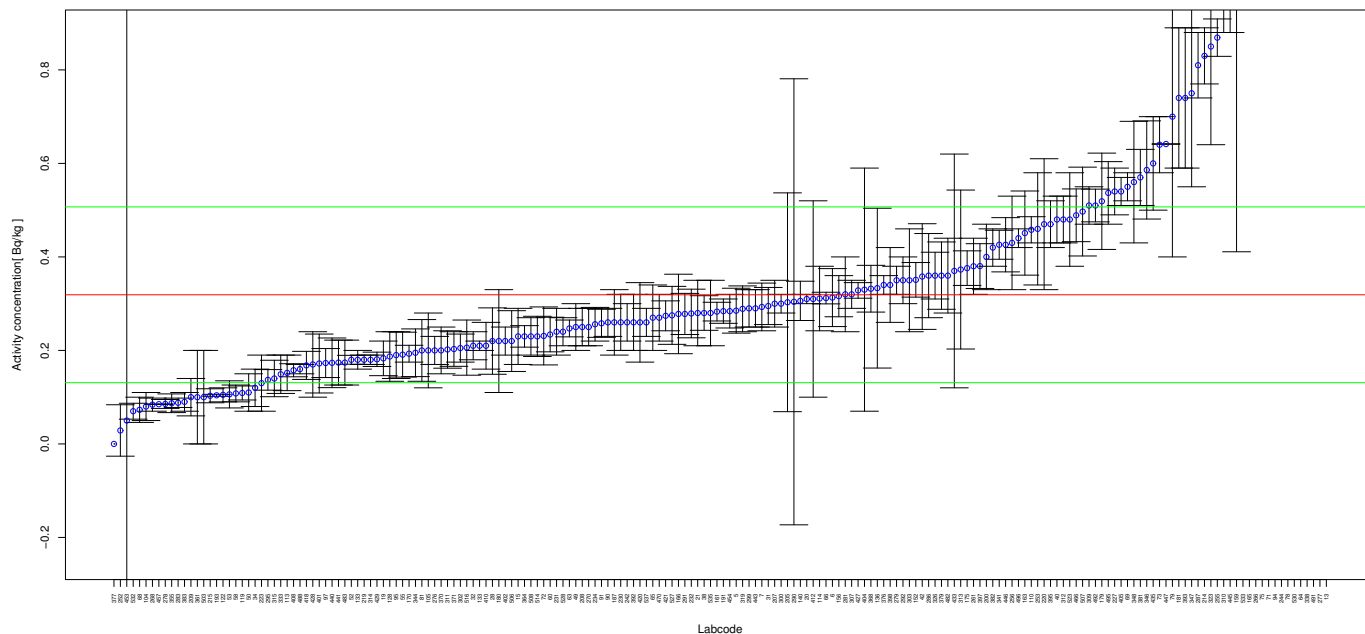


Figure 70. Reported results and evaluation parameters for Gross Alpha in Sample 2.

Table 71. IC Evaluation results for Gross Alpha in Sample 2, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Rep. Value	Rep. Unc.	Z-Score	Z-Score Evaluation
5	0.285	0.048	-0.18	A
6	0.313	0.062	-0.03	A
7	0.293	0.051	-0.14	A
13	98	6	519.58	N
15	0.23	0.06	-0.47	A
19	0.183	0.037	-0.72	A
20	0.31	0.01	-0.05	A
21	0.28	0.07	-0.21	A
28	0.22	0.071	-0.53	A
31	0.295	0.0397	-0.13	A
32	0.21	0.03	-0.58	A
34	0.12	0.04	-1.06	A
38	0.28	0.037	-0.21	A
40	0.48	0.05	0.86	A
42	0.358	0.113	0.21	A
49	0.25	0.05	-0.37	A
50	0.11	0.04	-1.11	A
52	0.18	0.0095	-0.74	A
53	0.106	0.029	-1.13	A
55	0.191	0.048	-0.68	A
58	0.108	0.018	-1.12	A
60	0.234	0.037	-0.45	A
63	0.247	0.018	-0.38	A
64	21.06	0.1	110.32	N

Table 71. IC Evaluation results for Gross Alpha in Sample 2, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Rep. Value	Rep. Unc.	Z-Score	Z-Score Evaluation
65	0.27	0.07	-0.26	A
66	0.312	0.01243	-0.04	A
68	0.073	0.027	-1.31	A
69	0.55	0.03	1.23	A
71	3.48	0.17	16.81	N
72	0.231	0.062	-0.47	A
73	0.64	0.06	1.71	A
75	3.32	0.45	15.96	N
78	8.74	0.18	44.79	N
79	0.7	0.3	2.03	Q
81	0.2	0.066	-0.63	A
90	0.26	0.03	-0.31	A
91	0.258	0.03	-0.32	A
94	4.3	0.27	21.18	N
95	0.19	0.05	-0.69	A
97	0.173	0.031	-0.78	A
104	0.08	0.03	-1.27	A
105	0.2	0.08	-0.63	A
110	0.458	0.028	0.74	A
113	0.152	0.038	-0.89	A
114	0.311	0.069	-0.04	A
119	0.109	0.015	-1.12	A
122	0.105	0.015	-1.14	A
128	0.187	0.053	-0.70	A
133	0.21	0.01	-0.58	A
133	0.18	0.02	-0.74	A
136	0.3332	0.1709	0.08	A
140	0.306	0.042	-0.07	A
152	0.351	0.037	0.17	A
156	0.316	0.044	-0.02	A
159	1.077	0.666	4.03	N
161	0.283	0.02	-0.19	A
163	0.451	0.09	0.70	A
165	1.666	0.15	7.16	N
166	0.278	0.085	-0.22	A
170	0.193	0.018	-0.67	A
175	0.376	0.037	0.30	A
179	0.519	0.103	1.06	A
180	0.22	0.11	-0.53	A
181	0.74	0.15	2.24	Q
187	0.26	0.07	-0.31	A
191	0.284	0.026	-0.19	A
193	0.104	0.0021	-1.14	A
200	0.4	0.07	0.43	A
205	0.303	0.234	-0.09	A
207	0.3	0.05	-0.10	A
208	0.25	0.04	-0.37	A
209	0.1	0.04	-1.16	A
214	0.83	0.06	2.72	Q
215	0.103	0.015	-1.15	A
219	0.18	0.01	-0.74	A
220	0.47	0.14	0.80	A
223	0.13	0.06	-1.01	A
227	0.54	0.05	1.18	A
230	0.26	0.06	-0.31	A
231	0.24	0.05	-0.42	A
232	0.279	0.052	-0.21	A
234	0.256	0.036	-0.34	A
242	0.26	0.04	-0.31	A
244	6.9	4.1	35.01	N
252	0.0288	0.055	-1.54	A

Table 71. IC Evaluation results for Gross Alpha in Sample 2, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Rep. Value	Rep. Unc.	Z-Score	Z-Score Evaluation
253	0.46	0.12	0.75	A
255	0.869	0.04	2.93	Q
256	0.43	0.1	0.59	A
261	0.38	0.06	0.32	A
266	1.84	0.34	8.09	N
268	0.084	0.014	-1.25	A
270	0.25	0.04	-0.37	A
276	0.2	0.03	-0.63	A
277	90.5	25	479.69	N
278	0.0855	0.0095	-1.24	A
279	0.35	0.03	0.16	A
281	0.32	0.08	0.01	A
283	0.088	0.01	-1.23	A
286	0.36	0.09	0.22	A
287	0.81	0.07	2.61	Q
290	0.304	0.477	-0.08	A
291	0.278	0.044	-0.22	A
292	0.35	0.05	0.16	A
295	0.137	0.022	-0.97	A
299	0.29	0.04	-0.15	A
300	0.3	0.02	-0.10	A
302	0.205	0.03	-0.61	A
303	0.35	0.11	0.16	A
307	0.32	0.03	0.01	A
309	0.51	0.04	1.02	A
310	1.01	0.13	3.68	N
311	0.202	0.04	-0.62	A
312	0.48	0.05	0.86	A
313	0.373	0.17	0.29	A
314	0.18	0.01	-0.74	A
315	0.14	0.039	-0.95	A
319	0.289	0.049	-0.16	A
323	0.85	0.21	2.82	Q
326	0.36	0.05	0.22	A
333	0.149	0.041	-0.90	A
338	41.15	5.53	217.19	N
341	0.426	0.031	0.57	A
344	0.195	0.051	-0.66	A
346	0.586	0.105	1.42	A
347	0.75	0.2	2.29	Q
348	0.56	0.13	1.28	A
355	0.087	0.02	-1.23	A
361	0.1	0.1	-1.16	A
364	0.23	0.023	-0.47	A
368	0.332	0.05	0.07	A
370	0.2	0.05	-0.63	A
371	0.203	0.037	-0.62	A
376	0.34	0.02	0.11	A
377	0.000015	0	-1.70	A
379	0.36	0.072	0.22	A
381	0.57	0.06	1.34	A
382	0.42	0.04	0.54	A
383	0.09	0.02	-1.22	A
392	0.26	0.06	-0.31	A
393	0.74	0.15	2.24	Q
395	0.47	0.05	0.80	A
397	0.3804	0.0479	0.33	A
398	0.34	0.08	0.11	A
401	0.172	0.063	-0.78	A
402	0.22	0.03	-0.53	A
404	0.33	0.26	0.06	A

Table 71. IC Evaluation results for Gross Alpha in Sample 2, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Rep. Value	Rep. Unc.	Z-Score	Z-Score Evaluation
405	0.54	0.03	1.18	A
408	0.1576	0.014	-0.86	A
410	0.21	0.05	-0.58	A
412	0.31	0.21	-0.05	A
418	0.168	0.03	-0.80	A
420	0.26	0.085	-0.31	A
421	0.274	0.032	-0.24	A
427	0.328333	0.016667	0.05	A
428	0.17	0.07	-0.79	A
429	0.181	0.0153	-0.73	A
433	0.37	0.25	0.27	A
435	0.6	0.1	1.49	A
440	0.1735	0.0531	-0.77	A
441	0.174	0.048	-0.77	A
443	0.29	0.04	-0.15	A
445	1.03	0.15	3.78	N
446	0.426	0.058	0.57	A
447	0.641439	0.00063	1.72	A
453	0.05	33.78	-1.43	A
454	0.284	0.036	-0.19	A
457	0.085	0.00059	-1.24	A
466	0.489	0.0564	0.90	A
470	0.27	0.05	-0.26	A
482	0.36	0.08	0.22	A
483	0.174	0.048	-0.77	A
488	0.16	0.01	-0.85	A
491	84.368	3.205	447.07	N
492	0.51	0.035	1.02	A
495	0.5369	0.0669	1.16	A
496	0.44	0.02	0.64	A
503	0.1	0.1	-1.16	A
506	0.22	0.065	-0.53	A
507	0.497	0.095	0.95	A
508	0.23	0.04	-0.47	A
514	0.23	0.043	-0.47	A
516	0.206	0.059	-0.60	A
523	0.48	0.1	0.86	A
527	0.275	0.062	-0.23	A
528	0.24	0.03	-0.42	A
530	13.729	0.211	71.33	N
532	0.07	0.017	-1.32	A
533	1.43	0.33	5.91	N
535	0.28	0.07	-0.21	A
537	0.26	0.03	-0.31	A

Reported results for Gross Beta Determination in Sample 2

Table 72. Target values

Parameter	Value
Robust Mean, Bq/kg	0.417
Robust SD, Bq/kg	0.294

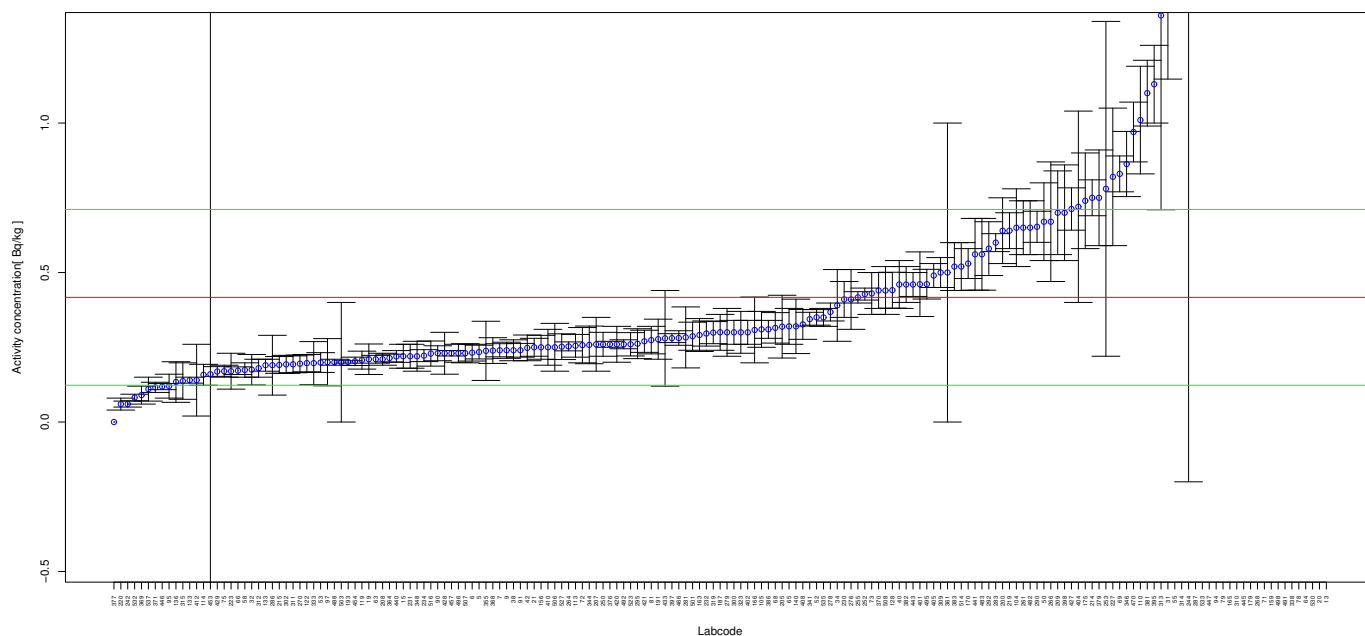


Figure 71. Reported results and evaluation parameters for Gross Beta in Sample 2.

Table 73. IC Evaluation results for Gross Beta in Sample 2, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Rep. Value	Rep. Unc.	Z-Score	Z-Score Evaluation
5	0.234	0.023	-0.62	A
6	0.232	0.028	-0.63	A
7	0.24	0.022	-0.60	A
9	0.24	0.027	-0.60	A
13	521	31	1770.69	N
15	0.22	0.04	-0.67	A
19	0.21	0.051	-0.70	A
20	222.1	20.67	754.02	N
21	0.25	0.03	-0.57	A
31	1.45	0.303	3.51	N
32	0.175	0.051	-0.82	A
34	0.39	0.12	-0.09	A
38	0.24	0.035	-0.60	A
40	0.46	0.08	0.15	A
42	0.248	0.043	-0.57	A
50	0.67	0.13	0.86	A
52	0.35	0.026	-0.23	A
53	0.199	0.033	-0.74	A
55	1.49	0.09	3.65	N
58	0.174	0.024	-0.83	A
63	0.21	0.013	-0.70	A
64	84.3	0.3	285.32	N
65	0.32	0.06	-0.33	A
66	0.1717	0.0128	-0.83	A
68	0.315	0.051	-0.35	A
69	0.83	0.06	1.40	A

Table 73. IC Evaluation results for Gross Beta in Sample 2, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Rep. Value	Rep. Unc.	Z-Score	Z-Score Evaluation
71	11.6	0.5	38.04	N
72	0.257	0.059	-0.54	A
73	0.43	0.07	0.04	A
75	0.17	0.02	-0.84	A
78	69.7	4.36	235.66	N
79	3.6	1.4	10.83	N
81	0.274	0.046	-0.49	A
90	0.23	0.025	-0.64	A
91	0.24	0.023	-0.60	A
94	3.25	0.38	9.64	N
95	0.12	0.04	-1.01	A
97	0.2	0.079	-0.74	A
104	0.65	0.13	0.79	A
105	0.31	0.06	-0.36	A
110	1.01	0.18	2.02	Q
113	0.255	0.038	-0.55	A
114	0.158	0.035	-0.88	A
119	0.207	0.03	-0.71	A
122	0.197	0.029	-0.75	A
128	0.441	0.06	0.08	A
133	0.14	0.01	-0.94	A
133	0.19	0.02	-0.77	A
136	0.1338	0.0679	-0.96	A
140	0.32	0.091	-0.33	A
156	0.25	0.04	-0.57	A
159	21.6	2.21	72.05	N
163	0.291	0.055	-0.43	A
165	4.521	0.13	13.96	N
166	0.308	0.11	-0.37	A
170	0.53	0.05	0.38	A
175	0.74	0.16	1.10	A
179	7.572	0.396	24.34	N
187	0.3	0.06	-0.40	A
191	0.277	0.067	-0.48	A
193	0.201	0.004	-0.73	A
200	0.64	0.11	0.76	A
205	0.319	0.105	-0.33	A
207	0.26	0.09	-0.53	A
208	0.21	0.02	-0.70	A
209	0.7	0.14	0.96	A
214	0.75	0.06	1.13	A
215	0.191	0.028	-0.77	A
219	0.64	0.06	0.76	A
220	0.06	0.02	-1.21	A
223	0.17	0.06	-0.84	A
227	0.82	0.23	1.37	A
230	0.41	0.06	-0.02	A
231	0.22	0.04	-0.67	A
232	0.296	0.042	-0.41	A
234	0.222	0.02	-0.66	A
242	0.06	0.01	-1.21	A
244	1.7	1.9	4.36	N
250	0.26	0.04	-0.53	A
252	0.428	0.02	0.04	A
253	0.78	0.56	1.23	A
255	0.417	0.019	0.00	A
261	0.65	0.09	0.79	A
264	0.253	0.015	-0.56	A
266	0.67	0.2	0.86	A
268	11.3	0.57	37.02	N
270	0.195	0.029	-0.76	A

Table 73. IC Evaluation results for Gross Beta in Sample 2, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Rep. Value	Rep. Unc.	Z-Score	Z-Score Evaluation
276	0.41	0.1	-0.02	A
278	0.368	0.03	-0.17	A
279	0.3	0.08	-0.40	A
281	0.283	0.102	-0.46	A
283	0.6	0.03	0.62	A
286	0.19	0.1	-0.77	A
287	1.7	0.29	4.36	N
290	0.653	0.052	0.80	A
292	0.58	0.09	0.55	A
295	0.262	0.05	-0.53	A
300	0.3	0.04	-0.40	A
302	0.193	0.03	-0.76	A
309	0.5	0.05	0.28	A
310	6.1	0.69	19.33	N
311	0.193	0.0282	-0.76	A
312	0.18	0.03	-0.81	A
313	1.36	0.65	3.21	N
314	1.65	0.07	4.19	N
315	0.137	0.061	-0.95	A
319	0.299	0.037	-0.40	A
323	0.3	0.07	-0.40	A
333	0.197	0.072	-0.75	A
338	39.72	9.53	133.68	N
341	0.344	0.023	-0.25	A
344	0.258	0.063	-0.54	A
346	0.863	0.109	1.52	A
348	0.22	0.05	-0.67	A
355	0.238	0.099	-0.61	A
361	0.5	0.5	0.28	A
364	0.214	0.013	-0.69	A
368	0.239	0.043	-0.61	A
369	0.09	0.03	-1.11	A
370	0.44	0.06	0.08	A
371	0.116	0.017	-1.02	A
376	0.26	0.01	-0.53	A
377	0.000025	0.000003	-1.42	A
379	0.75	0.16	1.13	A
381	1.1	0.11	2.32	Q
382	0.46	0.06	0.15	A
383	0.52	0.08	0.35	A
386	0.31	0.03	-0.36	A
395	1.13	0.13	2.43	Q
397	0.2806	0.0149	-0.46	A
398	0.7	0.16	0.96	A
401	0.461	0.108	0.15	A
402	0.3	0.04	-0.40	A
404	0.72	0.32	1.03	A
405	0.49	0.04	0.25	A
408	0.3266	0.05	-0.31	A
410	0.25	0.06	-0.57	A
412	0.14	0.12	-0.94	A
420	0.26	0.06	-0.53	A
421	0.27	0.037	-0.50	A
427	0.7125	0.070833	1.01	A
428	0.23	0.07	-0.64	A
429	0.169	0.0162	-0.84	A
433	0.28	0.16	-0.47	A
440	0.2193	0.0196	-0.67	A
441	0.561	0.12	0.49	A
443	0.46	0.04	0.15	A
445	6.13	0.83	19.43	N

Table 73. IC Evaluation results for Gross Beta in Sample 2, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Rep. Value	Rep. Unc.	Z-Score	Z-Score Evaluation
446	0.1186	0.0104	-1.01	A
447	2.88529	0.0169	8.40	N
453	0.16	18.37	-0.87	A
454	0.203	0.014	-0.73	A
457	0.23	0.0091	-0.64	A
466	0.281	0.0243	-0.46	A
470	0.97	0.1	1.88	A
482	0.65	0.09	0.79	A
483	0.561	0.12	0.49	A
488	0.2	0.01	-0.74	A
491	31.53	3.178	105.83	N
492	0.26	0.015	-0.53	A
495	0.4611	0.0497	0.15	A
496	0.23	0.03	-0.64	A
498	25.7	1.66	86.00	N
501	0.287	0.047	-0.44	A
503	0.2	0.2	-0.74	A
506	0.25	0.08	-0.57	A
507	0.23	0.032	-0.64	A
508	0.44	0.08	0.08	A
514	0.52	0.08	0.35	A
516	0.229	0.042	-0.64	A
523	0.26	0.039	-0.53	A
527	0.252	0.043	-0.56	A
530	157.222	1.046	533.35	N
532	0.082	0.011	-1.14	A
533	1.89	0.29	5.01	N
535	0.35	0.03	-0.23	A
537	0.11	0.04	-1.04	A

Reported results for Ra-228 Determination in Sample 2

Table 74. Target values

Parameter	Value
Robust Mean, Bq/kg	0.656
Robust SD, Bq/kg	0.703

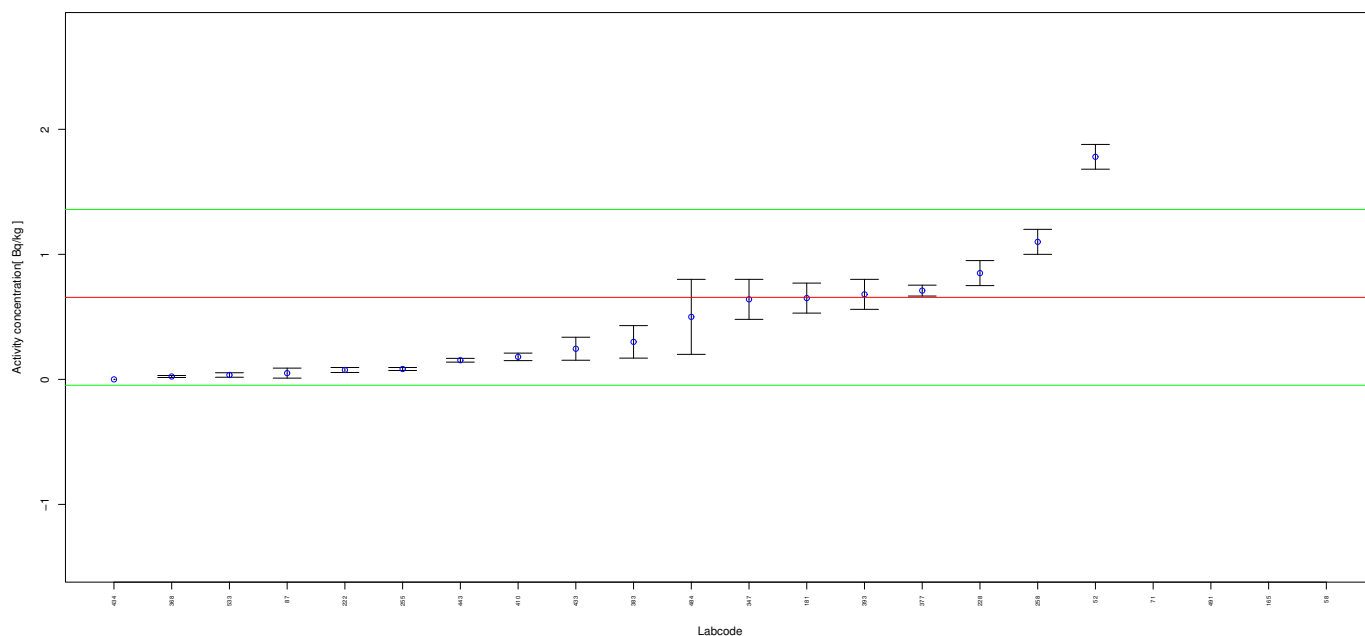


Figure 72. Reported results and evaluation parameters for Ra-228 in Sample 2.

Table 75. IC Evaluation results for Ra-228 in Sample 2, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Rep. Value	Rep. Unc.	Z-Score	Z-Score Evaluation
52	1.78	0.099	1.60	A
58		0.5		
71	3.6	0.18	4.19	N
87	0.05	0.04	-0.86	A
165	34.8	2.3	48.57	N
181	0.65	0.12	-0.01	A
222	0.075	0.02	-0.83	A
228	0.85	0.1	0.28	A
255	0.083	0.012	-0.82	A
258	1.1	0.1	0.63	A
347	0.64	0.16	-0.02	A
368	0.023	0.008	-0.90	A
377	0.71	0.0435	0.08	A
383	0.3	0.13	-0.51	A
393	0.68	0.12	0.03	A
410	0.18	0.03	-0.68	A
433	0.245	0.092	-0.58	A
434	0	0	-0.93	A
443	0.153	0.015	-0.72	A
484	0.5	0.3	-0.22	A
491	5.17	0.244	6.42	N
533	0.035	0.018	-0.88	A

Reported results for Cs-137 Determination in Sample 4

Table 76. Target values

Parameter	Value
Robust Mean, Bq/kg	0.500
Robust SD, Bq/kg	0.382

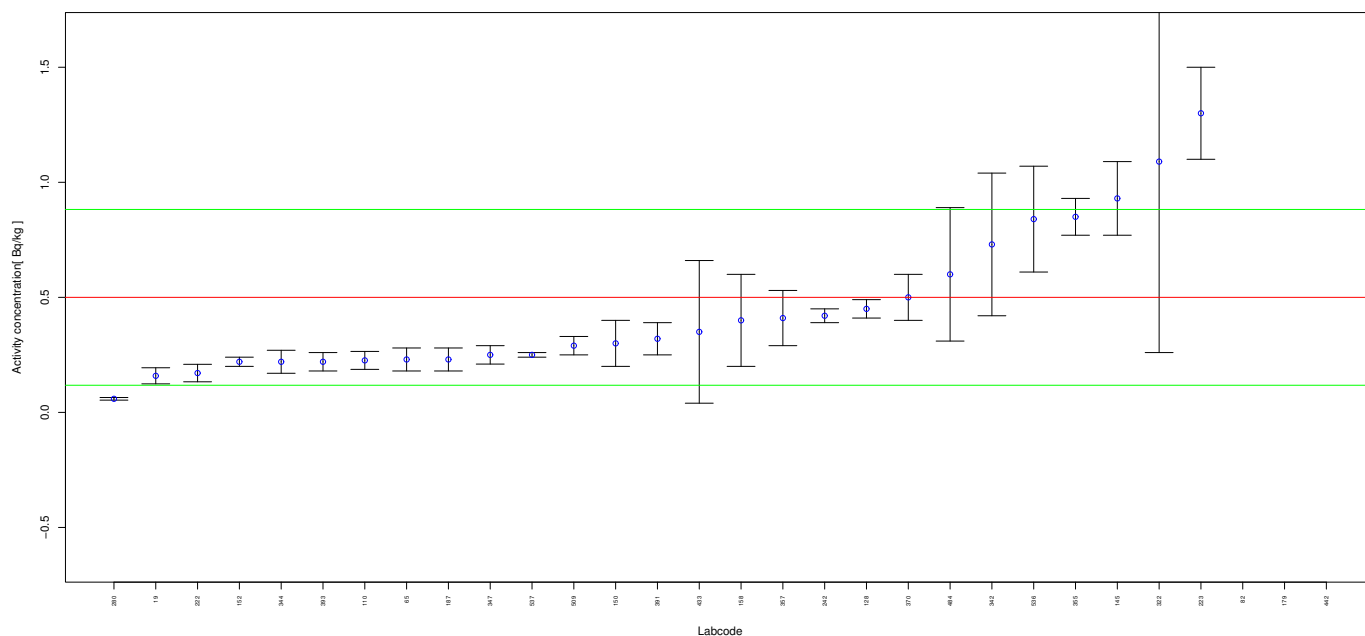


Figure 73. Reported results and evaluation parameters for Cs-137 in Sample 4.

Table 77. IC Evaluation results for Cs-137 in Sample 4, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Rep. Value	Rep. Unc.	Z-Score	Z-Score Evaluation
19	0.159	0.035	-0.89	A
65	0.23	0.05	-0.71	A
82	2.57	0.46	5.42	N
110	0.226	0.039	-0.72	A
128	0.45	0.04	-0.13	A
145	0.93	0.16	1.13	A
150	0.3	0.1	-0.52	A
152	0.22	0.02	-0.73	A
158	0.4	0.2	-0.26	A
179	2.96	1.05	6.44	N
187	0.23	0.05	-0.71	A
222	0.171	0.038	-0.86	A
223	1.3	0.2	2.09	Q
242	0.42	0.03	-0.21	A
280	0.059	0.0057	-1.15	A
322	1.09	0.83	1.54	A
342	0.73	0.31	0.60	A
344	0.22	0.05	-0.73	A
347	0.25	0.04	-0.65	A
355	0.85	0.08	0.92	A
357	0.41	0.12	-0.24	A
370	0.5	0.1	0.00	A
391	0.32	0.07	-0.47	A
393	0.22	0.04	-0.73	A
433	0.35	0.31	-0.39	A
442	15.61951	1.27171	39.58	N

Table 77. IC Evaluation results for Cs-137 in Sample 4, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Rep. Value	Rep. Unc.	Z-Score	Z-Score Evaluation
484	0.6	0.29	0.26	A
509	0.29	0.04	-0.55	A
536	0.84	0.23	0.89	A
537	0.25	0.01	-0.65	A

Reported results for Ac-228 Determination in Sample 4

Table 78. Target values

Parameter	Value
Robust Mean, Bq/kg	4.86
Robust SD, Bq/kg	4.18

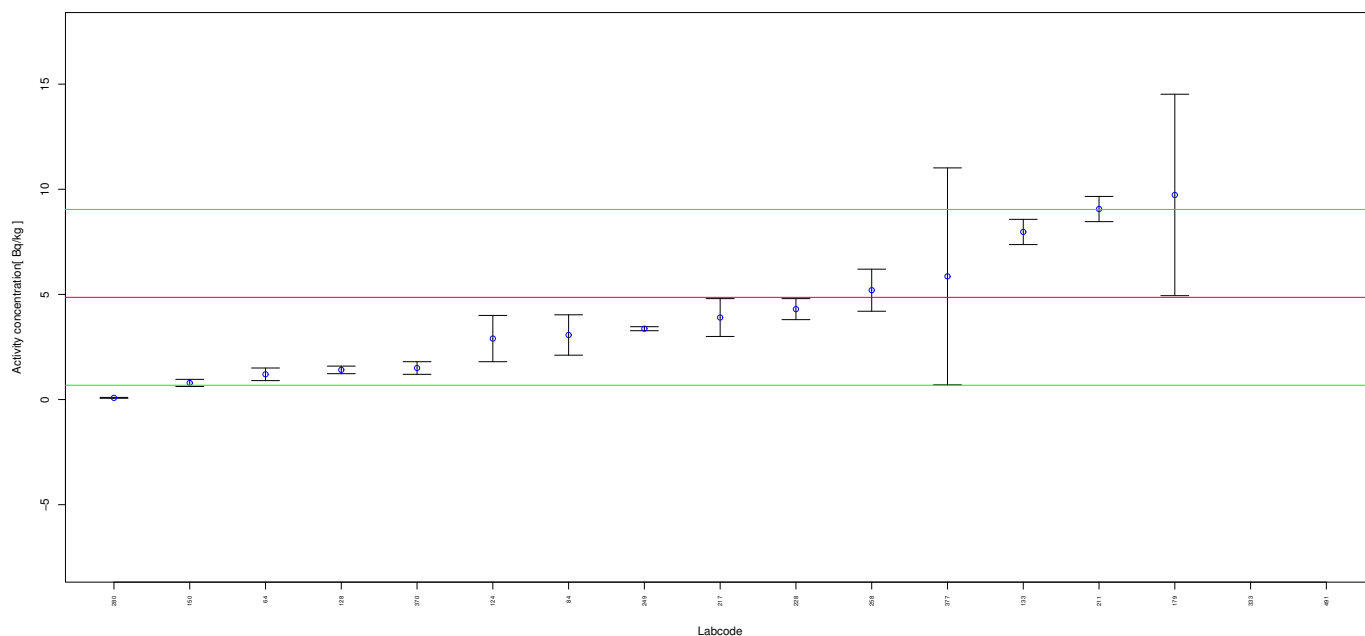


Figure 74. Reported results and evaluation parameters for Ac-228 in Sample 4.

Table 79. IC Evaluation results for Ac-228 in Sample 4, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Rep. Value	Rep. Unc.	Z-Score	Z-Score Evaluation
64	1.2	0.3	-0.88	A
84	3.07	0.96	-0.43	A
124	2.9	1.1	-0.47	A
128	1.41	0.18	-0.83	A
133	7.97	0.6	0.74	A
150	0.79	0.17	-0.97	A
179	9.73	4.79	1.17	A
211	9.06	0.6	1.00	A
217	3.9	0.9	-0.23	A
228	4.3	0.5	-0.13	A
249	3.369288	0.095688	-0.36	A
258	5.2	1	0.08	A
280	0.081	0.021	-1.14	A
333	25.181	4.95	4.86	N
370	1.5	0.3	-0.80	A
377	5.858558	5.1582	0.24	A
491	36.493	2.445	7.57	N

Reported results for Bi-214 Determination in Sample 4

Table 80. Target values

Parameter	Value
Robust Mean, Bq/kg	4.37
Robust SD, Bq/kg	3.63

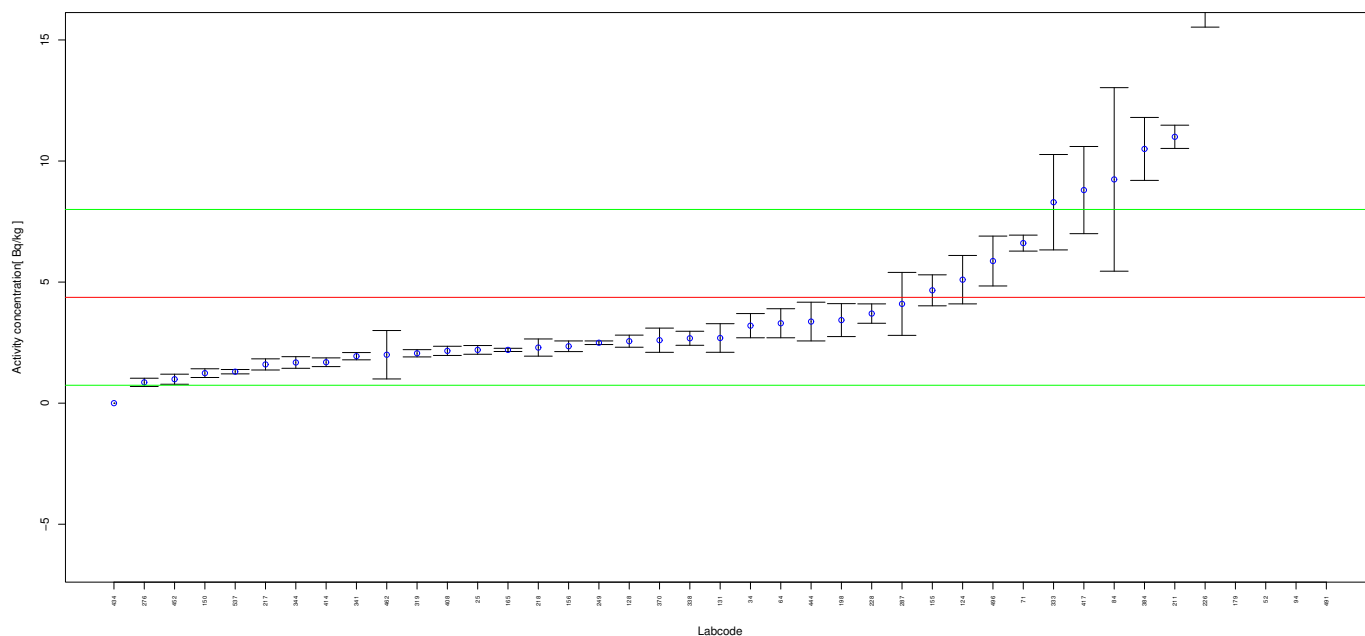


Figure 75. Reported results and evaluation parameters for Bi-214 in Sample 4.

Table 81. IC Evaluation results for Bi-214 in Sample 4, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Rep. Value	Rep. Unc.	Z-Score	Z-Score Evaluation
25	2.2	0.18	-0.60	A
34	3.2	0.5	-0.32	A
52	21.61	2.01	4.75	N
64	3.3	0.6	-0.29	A
71	6.61	0.33	0.62	A
84	9.24	3.79	1.34	A
94	39.5	4.15	9.68	N
124	5.1	1	0.20	A
128	2.56	0.25	-0.50	A
131	2.691456	0.590264	-0.46	A
150	1.24	0.18	-0.86	A
155	4.66	0.64	0.08	A
156	2.35	0.22	-0.56	A
165	2.2	0.066	-0.60	A
179	18.92	2.54	4.01	N
198	3.43	0.68	-0.26	A
211	11	0.48	1.83	A
217	1.6	0.23	-0.76	A
218	2.29652	0.35504	-0.57	A
226	16.78	1.25	3.42	N
228	3.7	0.4	-0.18	A
249	2.495709	0.074257	-0.52	A
276	0.86	0.17	-0.97	A
287	4.1	1.3	-0.07	A
319	2.06	0.15	-0.64	A
333	8.299	1.97	1.08	A

Table 81. IC Evaluation results for Bi-214 in Sample 4, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Rep. Value	Rep. Unc.	Z-Score	Z-Score Evaluation
338	2.68	0.29	-0.47	A
341	1.94	0.15	-0.67	A
344	1.68	0.24	-0.74	A
370	2.6	0.5	-0.49	A
384	10.5	1.3	1.69	A
408	2.16	0.19	-0.61	A
414	1.69	0.18	-0.74	A
417	8.8	1.8	1.22	A
434	0	0	-1.20	A
444	3.37	0.8	-0.28	A
452	0.9894	0.207774	-0.93	A
462	2	1	-0.65	A
491	58.345	3.505	14.87	N
496	5.87	1.03	0.41	A
537	1.3	0.09	-0.85	A

Reported results for Pb-214 determination in Sample 4

Table 82. Target values

Parameter	Value
Robust Mean, Bq/kg	3.50
Robust SD, Bq/kg	2.33

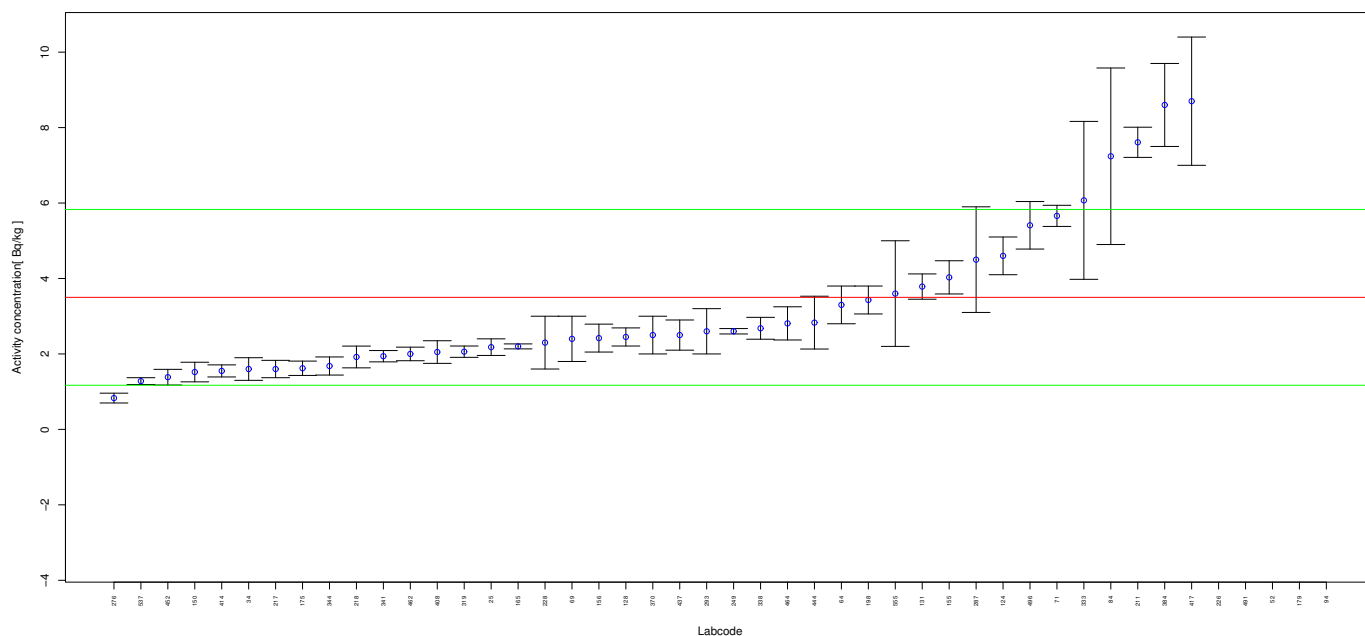


Figure 76. Reported results and evaluation parameters for Pb-214 in Sample 4.

Table 83. IC Evaluation results for Pb-214 in Sample 4, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Rep. Value	Rep. Unc.	Z-Score	Z-Score Evaluation
25	2.18	0.22	-0.57	A
34	1.6	0.3	-0.82	A
52	21.61	2.01	7.77	N
64	3.3	0.5	-0.09	A
69	2.4	0.6	-0.47	A
71	5.66	0.28	0.93	A
84	7.24	2.34	1.61	A
94	39.5	4.15	15.45	N
124	4.6	0.5	0.47	A
128	2.45	0.24	-0.45	A
131	3.785761	0.335417	0.12	A
150	1.52	0.26	-0.85	A
155	4.03	0.44	0.23	A
156	2.42	0.37	-0.46	A
165	2.2	0.066	-0.56	A
175	1.62	0.19	-0.81	A
179	33.39	3.72	12.83	N
198	3.43	0.37	-0.03	A
211	7.61	0.4	1.76	A
217	1.6	0.23	-0.82	A
218	1.9196	0.28843	-0.68	A
226	14.83	1.32	4.86	N
228	2.3	0.7	-0.52	A
249	2.601051	0.071483	-0.39	A
276	0.83	0.13	-1.15	A
287	4.5	1.4	0.43	A

Table 83. IC Evaluation results for Pb-214 in Sample 4, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Rep. Value	Rep. Unc.	Z-Score	Z-Score Evaluation
293	2.6	0.6	-0.39	A
319	2.06	0.15	-0.62	A
333	6.071	2.093	1.10	A
338	2.68	0.29	-0.35	A
341	1.94	0.15	-0.67	A
344	1.68	0.24	-0.78	A
370	2.5	0.5	-0.43	A
384	8.6	1.1	2.19	Q
408	2.05	0.3	-0.62	A
414	1.55	0.16	-0.84	A
417	8.7	1.7	2.23	Q
437	2.5	0.4	-0.43	A
444	2.83	0.7	-0.29	A
452	1.384	0.2076	-0.91	A
462	2	0.18	-0.64	A
464	2.81	0.44	-0.30	A
491	18.106	1.795	6.27	N
496	5.41	0.63	0.82	A
537	1.28	0.09	-0.95	A
555	3.6	1.4	0.04	A

Reported results for Ra-226 determination in Sample 4

Table 84. Target values

Parameter	Value
Robust Mean, Bq/kg	4.40
Robust SD, Bq/kg	3.59

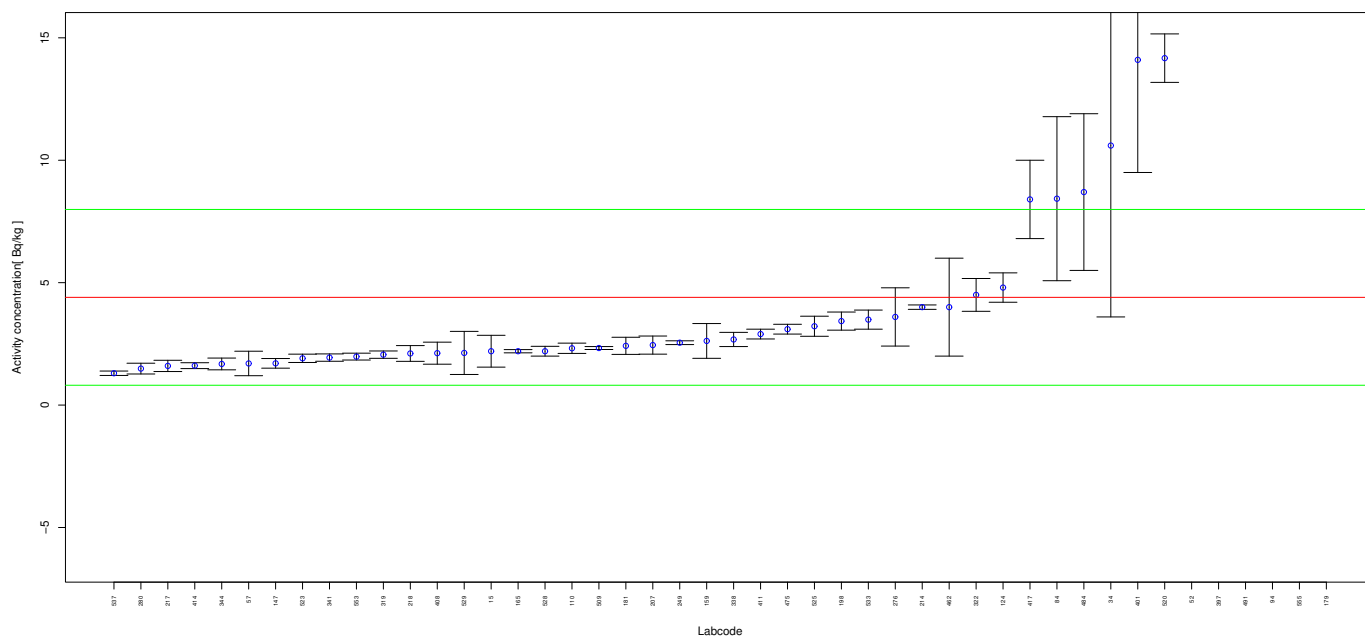


Figure 77. Reported results and evaluation parameters for Ra-226 in Sample 4.

Table 85. IC Evaluation results for Ra-226 in Sample 4, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Rep. Value	Rep. Unc.	Z-Score	Z-Score Evaluation
15	2.2	0.65	-0.61	A
34	10.6	7	1.73	A
52	21.61	2.01	4.79	N
57	1.7	0.5	-0.75	A
84	8.43	3.35	1.12	A
94	39.5	4.15	9.78	N
110	2.32	0.21	-0.58	A
124	4.8	0.6	0.11	A
147	1.7046	0.1971	-0.75	A
159	2.62	0.71	-0.50	A
165	2.2	0.066	-0.61	A
179	124.83	18.33	33.55	N
181	2.42	0.35	-0.55	A
198	3.43	0.37	-0.27	A
207	2.45	0.37	-0.54	A
214	4	0.09	-0.11	A
217	1.6	0.23	-0.78	A
218	2.10806	0.32174	-0.64	A
249	2.54838	0.076967	-0.52	A
276	3.6	1.19	-0.22	A
280	1.49	0.22	-0.81	A
319	2.06	0.15	-0.65	A
322	4.5	0.67	0.03	A
338	2.68	0.29	-0.48	A
341	1.94	0.15	-0.69	A
344	1.68	0.24	-0.76	A

Table 85. IC Evaluation results for Ra-226 in Sample 4, Rep. Value and Rep. Unc. in Bq/kg

Labcode	Rep. Value	Rep. Unc.	Z-Score	Z-Score Evaluation
397	32.72	1.12	7.89	N
401	14.1	4.6	2.70	Q
408	2.12	0.45	-0.64	A
411	2.9	0.2	-0.42	A
414	1.61	0.12	-0.78	A
417	8.4	1.6	1.11	A
462	4	2	-0.11	A
475	3.1	0.2	-0.36	A
484	8.7	3.2	1.20	A
491	38.226	1.597	9.42	N
509	2.33	0.06	-0.58	A
520	14.17	0.99	2.72	Q
523	1.91	0.17	-0.69	A
525	3.22	0.41	-0.33	A
528	2.2	0.2	-0.61	A
529	2.13	0.88	-0.63	A
533	3.49	0.39	-0.25	A
537	1.3	0.09	-0.86	A
553	1.98	0.14	-0.67	A
555	48.9	6.8	12.40	N

4 Contributors to Evaluation and Report

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