

IAEA Analytical Quality in Nuclear Applications Series No. 8

Worldwide Open Proficiency Test on the Determination of Radionuclides in Spinach, Soil and Water

IAEA-CU-2007-03



IAEA

International Atomic Energy Agency

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on the Determination of Radionuclides
in Spinach, Soil and Water
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Worldwide Open Proficiency Test on the Determination of Radionuclides in Spinach, Soil and Water

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FOREWORD

The results of analytical measurements play a vital role in our daily lives. Analytical data may be the basis upon which economic, legal or environmental management decisions are made, and they are essential in international trade, environmental protection, safe transportation, law enforcement, consumer safety and the preservation of human health.

This summary report presents the results of the worldwide proficiency test (PT) on the determination of radionuclides in spinach, soil and water. Methodologies, data evaluation approach, summary evaluation of each nuclide and individual evaluation reports for each laboratory are also described.

This proficiency test was mainly focused on the assessment of the analytical performance in the determination of nuclides in different matrices. Therefore, the property values of the PT samples were traceable to international standards. Additionally, the evaluation of the data focused also on the uncertainty estimations reported by participants. The number of samples, their matrix interferences and concentration levels of the analytes were designed in a way to enable enhancing identification of potential analytical problems. Finally, every participant received an individual report shortly after the deadline to provide quick feedback to the participants.

The IAEA wishes to acknowledge the agreement of the participating laboratories to the inclusion of their data, results and names and to thank the following institutes for their contribution in the characterization of the spinach sample IAEA-330: STUK-Radiation and Nuclear Safety Authority, Radionuclide Analytics, Helsinki, Finland; Institute of Isotopes, Hungarian Academy of Sciences, Budapest, Hungary; The Hungarian Agricultural Authority, Central Radioanalytical Laboratory, Budapest, Hungary; Korea Institute of Nuclear Safety, Daejeon, Republic of Korea; Nuclear and Technological Institute, Department of Radiological Protection and Nuclear Safety, Sacavém, Portugal. The IAEA also acknowledges all the contributors to the drafting and review of this report. The IAEA officer responsible for this publication was A. Shkhashiro of the Agency's Laboratories, Seibersdorf.

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CONTENTS

1.	INTRODUCTION.....	1
2.	MATERIALS AND METHODS.....	3
2.1.	Proficiency test objectives	3
2.2.	Participants.....	3
2.3.	Composition and preparation of proficiency test materials	3
2.3.1.	Preparation of the spiked soil IAEA-444.....	5
2.3.2.	Preparation of the spiked water IAEA-445.....	12
2.3.3.	Preparation of the natural spinach sample IAEA-330	12
2.4.	Reference time	15
3.	PERFORMANCE CRITERIA.....	17
3.1.	Relative bias.....	17
3.2.	The z-score value	17
3.3.	The u-score value	18
3.4.	Evaluation criteria.....	18
3.4.1.	Trueness	18
3.4.2.	Precision.....	19
3.5.	Evaluation criteria for Pu-238, Pu-239+240 and Am-241	19
4.	RESULTS AND DISCUSSION	21
4.1.	General	21
4.2.	Results of Cd-109 analysis.....	21
4.3.	Results of Pb-210 analysis	21
4.4.	Technical information provided by the participants	21
4.5.	Recommendations to the laboratories	22
4.5.1.	Laboratories group A	22
4.5.2.	Laboratories group B	23
4.5.3.	Laboratories groups C and D	24
4.5.4.	Laboratories group E.....	24
4.6.	Comparison of participants performance in 2006 PT and 2007 PT.....	25
5.	CONCLUSIONS.....	26
	REFERENCES.....	27
APPENDIX I.	SUMMARY EVALUATION AND REPORTED TECHNICAL INFORMATION SORTED BY LABORATORY CODE	29
APPENDIX II.	PERFORMANCE EVALUATION TABLES SORTED BY RADIONUCLIDE	59
APPENDIX III.	S-SHAPE AND Z-SCORE CHARTS	187
APPENDIX IV.	LIST OF PARTICIPATING LABORATORIES	207
	LIST OF CONTRIBUTORS TO DRAFTING AND REVIEW	245

1. INTRODUCTION

Timely, comprehensive and accurate analytical information is essential in numerous fields to protect natural resources and public health. Hundreds of laboratories in the IAEA Member States are involved in a broad spectrum of environmental monitoring and research programmes and advanced modelling efforts; and have been gathering data about the level of contamination in water, vegetation and land resources.

Analytical data may also be the basis upon which economic, legal or environmental management decisions are made, and they are also essential in international trade, environmental protection, law enforcement, consumer safety and the preservation of human health. As an incorrect decision can be extremely costly and detrimental, it is essential that such measurements are accurate, reliable, cost effective and defensible. In addition, measurements performed by laboratories located worldwide should yield traceable and comparable results.

This environmental radioactivity proficiency test (PT) is designed to identify analytical problems, to support MS laboratories to maintain their accreditation and to provide a regular forum for discussion and technology transfer in this area. The study is planned to run approximately once every eighteen months by the IAEA. The range of sample types available for analysis has been mainly environmental.

In this PT, three samples were available for analysis: spiked water, spiked soil and natural spinach. The main task of the participating laboratories was to identify and/or traceably quantify the activity levels of radionuclides present in the three different matrices. The tasks of the IAEA were to prepare and distribute the samples to the participating laboratories, to collect and interpret analysis results and to compile a comprehensive report.

The certified massic activity values of all radionuclides used in this PT were traceable to national standards of radioactivity. This traceability to national standards in turn is linked to an international level to the ultimate reference point of all measurements, the SI reference value maintained by the Bureau International des Poids et Mesures (BIPM).

In this PT 975 test samples (reference materials) were prepared and distributed to 325 participants from 78 countries in October 2007. The deadline for receiving the results from the participants was set at 2nd of February 2008. Three different matrices were offered: spinach, soil and water.

The participating laboratories were requested to analyse eight nuclides (alpha, beta and gamma emitters) in the samples employing the methods used in their routine work, so that their performance on the test samples could be directly related to the real performance of the laboratory. Each laboratory was given a confidential code to assure the anonymity of the evaluation results. Results were reported to the IAEA by 270 of the 325 registered laboratories. The analytical results of the participating laboratories were compared with the reference values assigned to the reference materials, and a rating system was applied.

The results of this proficiency test have demonstrated that the overall performance was 69% comparing to 64% in the last IAEA world wide PT in 2006, which could suggest a slight improvement in the overall analytical performance. Cd-109 and Pb-210 performance levels were similar to the last PT, where it was found that around 50% of the participating laboratories did not fulfill the acceptance criteria for these two nuclides.

Figure 1.1 shows the summary of the analytical data evaluation of this proficiency test. From the 4850 measurement results reported, 69% of these were “Acceptable”.

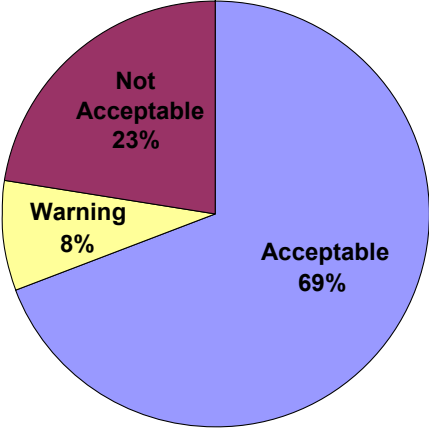


Fig. 1.1: Summary evaluation of all reported data from 4850 measurement results.

2. MATERIALS AND METHODS

2.1. Proficiency test objectives

The measurement of spinach, soil and water samples containing a mixture of radionuclides with an unknown (to the participants) composition was aiming at (i) Assessment of the analytical performance of the participating laboratories from all over the world, (ii) testing the international comparability of radiological measurements and (iv) encouraging the participating laboratories in finding remedial actions where shortcoming in analytical performance are detected.

2.2. Participants

A total of 275 laboratories reported their results to the IAEA (184 from Europe, 39 from Asia, 26 from North America, 17 from Latin America, 6 from Africa and 3 from Australia). Figures 2.1 and 2.2 show the geographical distribution of the participants. A full listing of participants is given in Appendix IV.

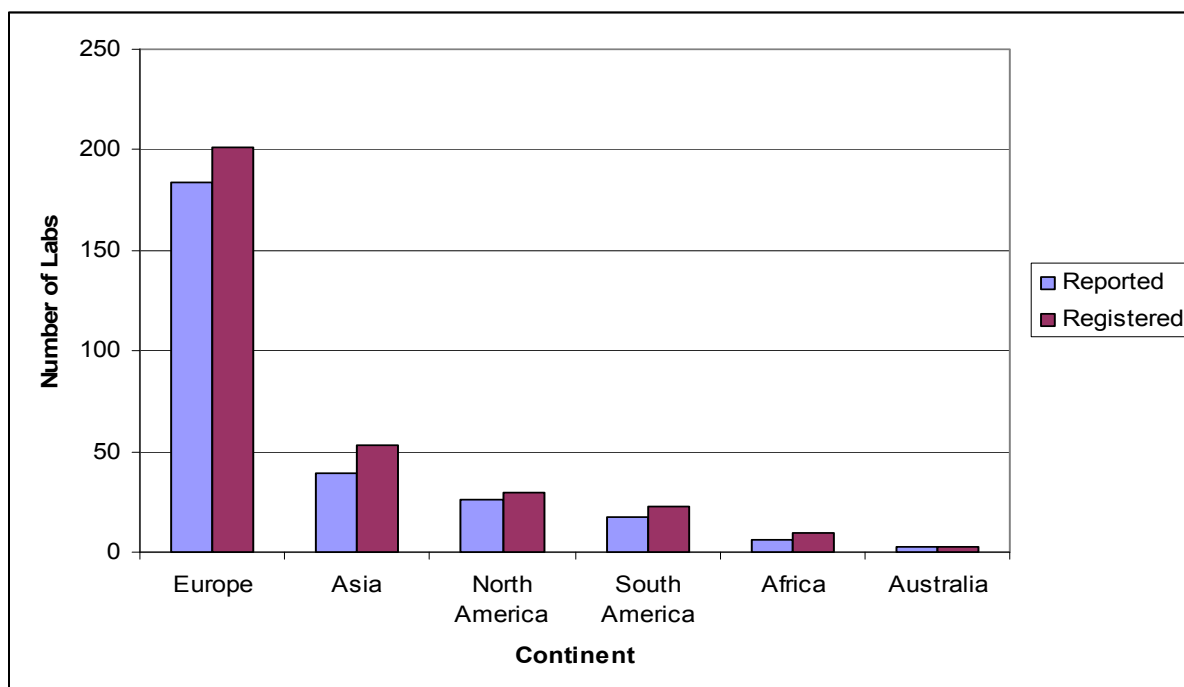


Fig. 2.1: Geographical distribution of the participants.

2.3. Composition and preparation of proficiency test materials

The following proficiency test design was applied:

- one natural spinach sample (100g)
- one spiked soil sample (200 g)
- one spiked water sample (500 ml)

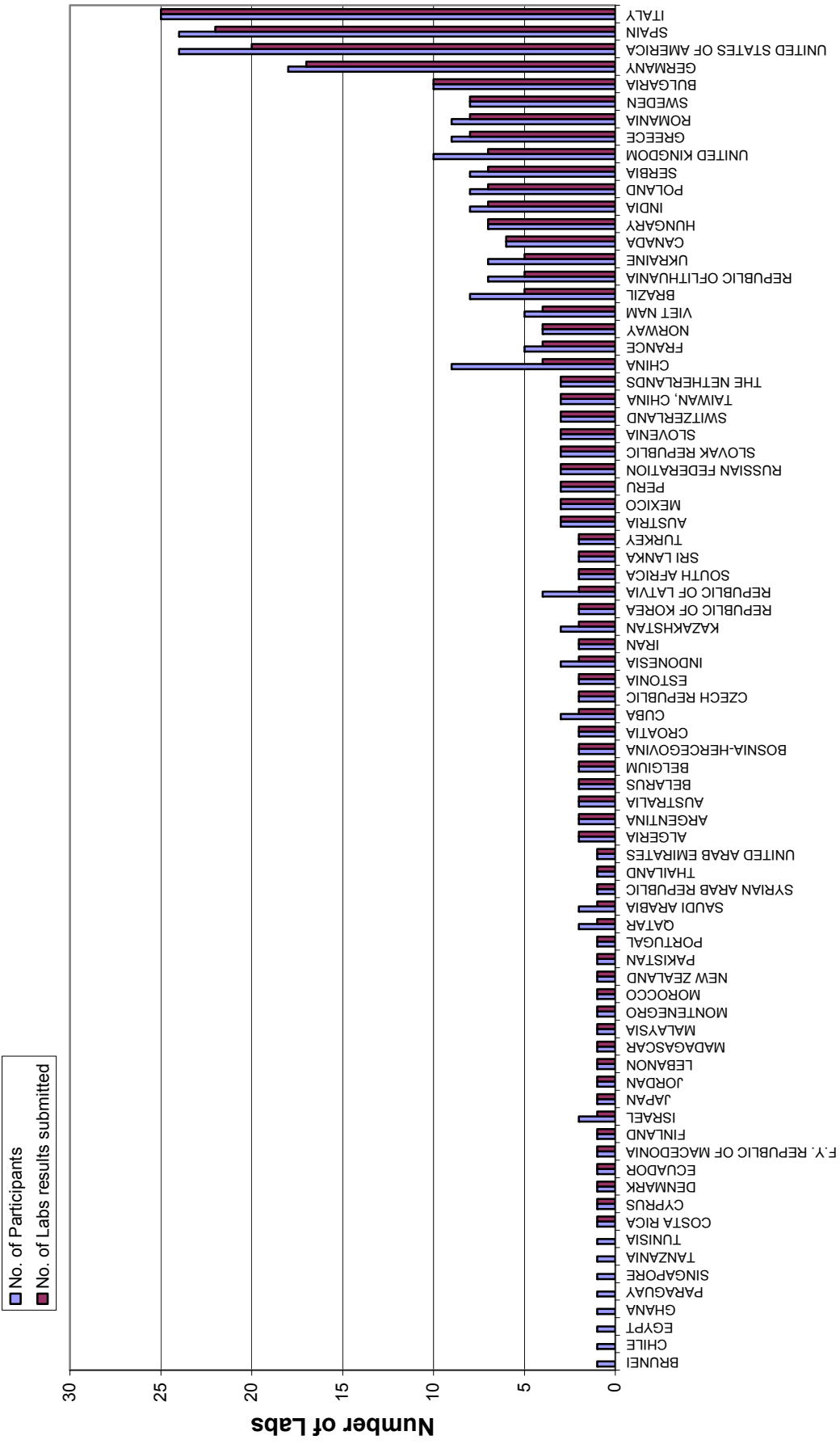


Fig. 2.2: Participation distribution per country.

2.3.1. Preparation of the spiked soil IAEA-444

A soil from China was used to prepare a spiked mineral matrix with 8 gamma emitting radionuclides. Before using the soil for spiking, it was milled and sieved to collect the appropriate fraction at mesh size less than 0.25 mm, and then homogenised.

The matrix of Chinese soil was characterized and a number of samples were pre-screened for radionuclides prior to spiking. The results have shown that the material is free from radionuclides, except for Cs-137, which was present at 2.6 ± 0.2 Bq/kg based on dry mass. (Ref. date: 2006-01-01). In addition, Pb-210 was found at 48 ± 1.5 Bq/kg dry mass. The moisture content was found to be 2.3 ± 0.5 %.

The preparation of the spiked soil sample was performed according to a validated procedure, full details can be found in [1].

The target values were calculated from the certified activity values assigned to each radionuclide, taking into account the successive dilution steps, the mass of spiking solutions and the amount of matrix being spiked. The target values together with the respective uncertainties are presented in Table 2.

To test the homogeneity of the spiked soil samples, 4 bottles were randomly selected and three sample portions at 50 g from each bottle were measured by three gamma-ray spectrometers.

The first is a n-type coaxial Ge detector (OX) model GR3019 (Canberra); of 35% efficiency relative to 3”x3” of NaI(Tl) scintillation detector and resolution of 1.85 keV at 1.332 keV.

The second is a broad energy type Ge detector (BE) model BE2825 (Canberra); energy resolutions are 0.670 and 1.78 keV at 122 keV and 1332 keV gamma-rays, respectively.

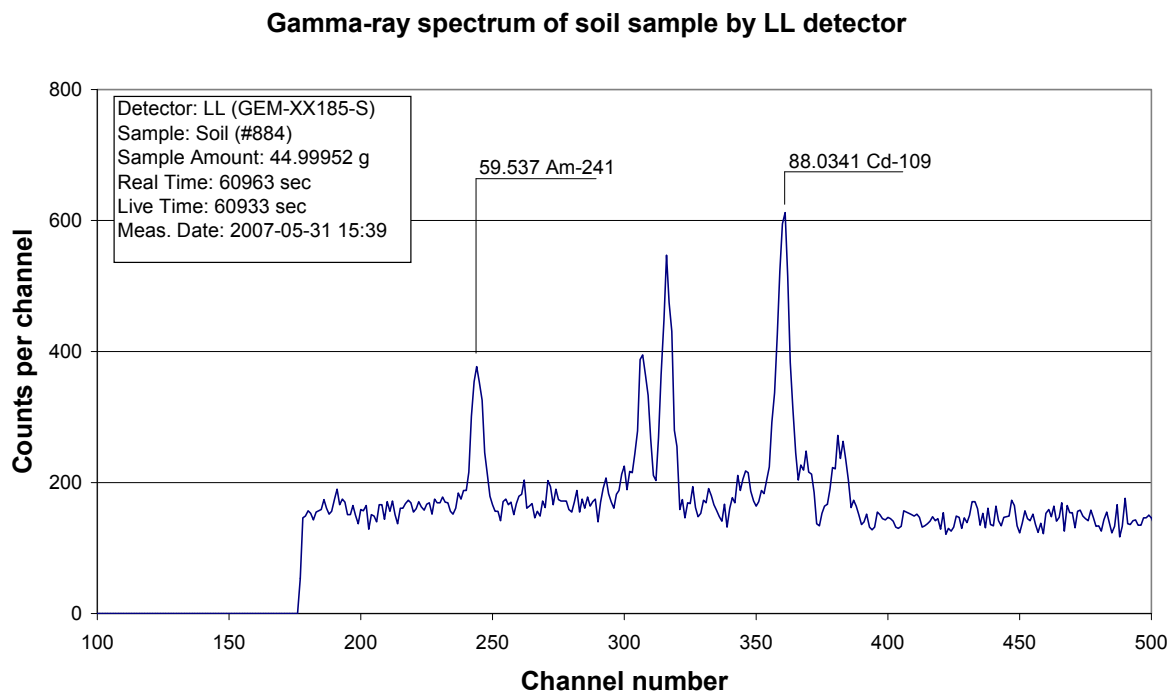
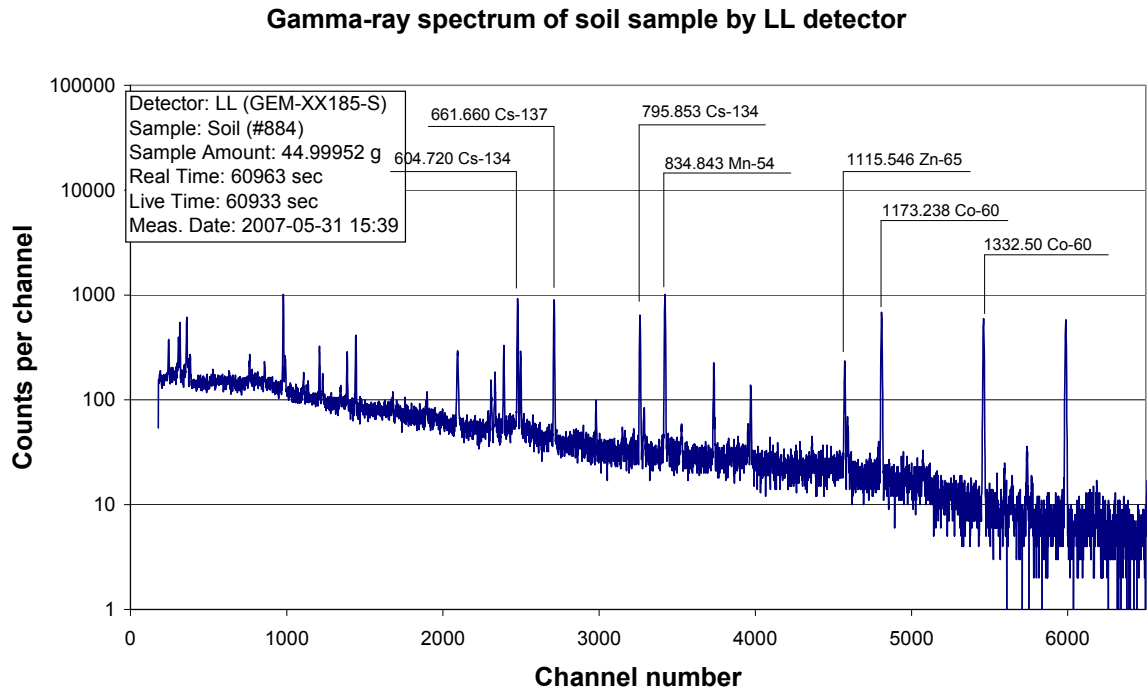
The third is a p-type coaxial Ge detector (LL) model GEM-XX185-S (Ortec); of 60% efficiency relative to 3”x3” of NaI(Tl) scintillation detector and resolution of 1.81 keV at 1.332 keV.

The detectors were mounted in a 10 cm thick lead shield. Canberra digital electronics and GENIE-2000 software were used. The measurements were performed at the Chemistry Unit of Seibersdorf laboratories. The OX system was used for measurement of whole energy region of gamma-rays, and BE and LL systems were used for low and high energy regions of gamma-rays, respectively. Figures 2.3, 2.4, 2.5 and 2.6 present examples of the obtained spectra.

Table 2.1 lists the measurement live time, repeatability relative standard deviation of the method (Method RSD) and “between&within bottles” relative standard deviation (BB RSD) of the homogeneity test.

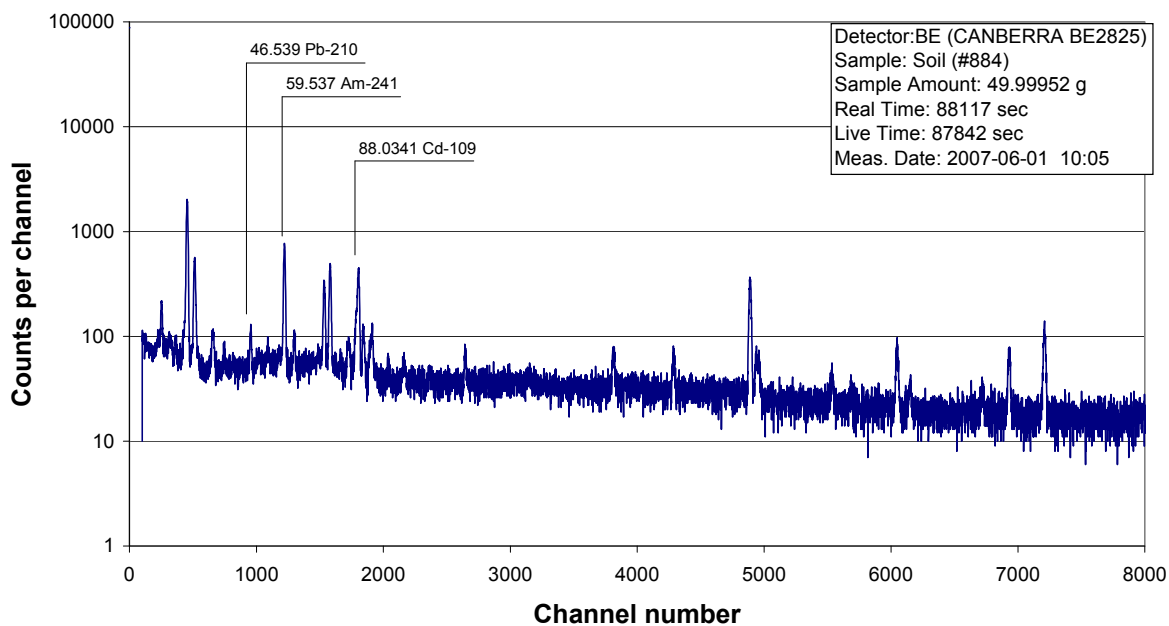
The measurement results of the homogeneity test showed that there is no significant difference between the BB RSD and the Method RSD for the 12 measured sample portions, which indicates satisfactory homogeneity of the material. Figures 2.7-2.16 show a graphical presentation of the homogeneity test of the soil samples.

To control the quality of the spiked soil, all PT samples were measured for 900 seconds and the spectra were checked for any inconsistency or outlier results. Figures 2.17 and 2.18 are example graphs of the quality control tests.

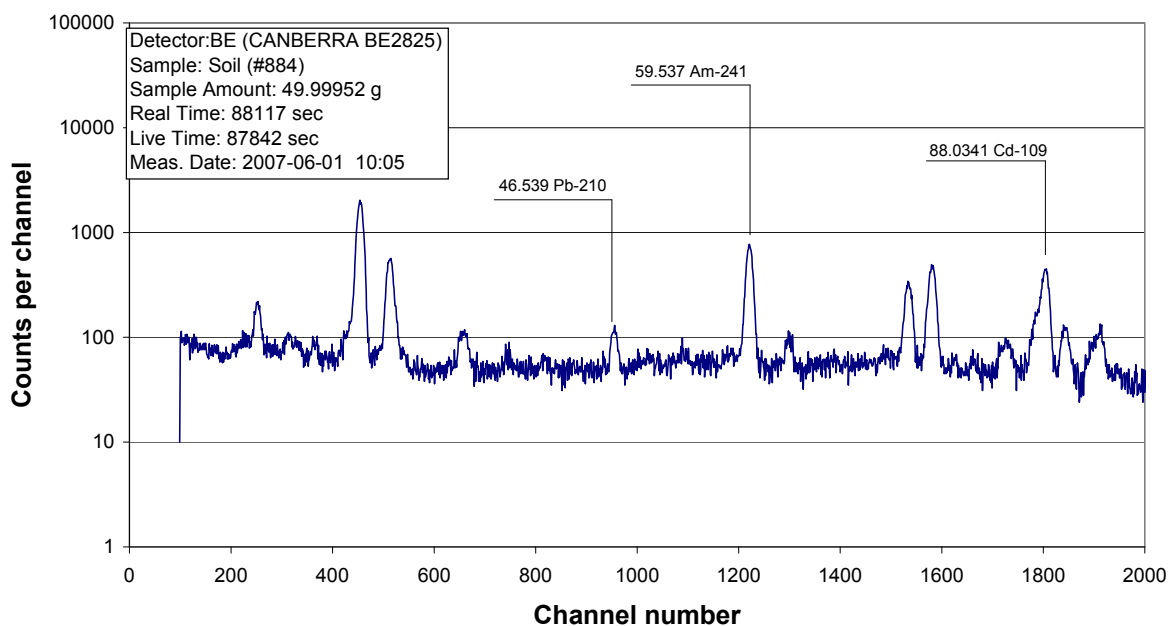


Figs 2.3, 2.4: Gamma-ray spectrum of the low and high energy region of the soil sample.

Gamma-ray spectrum of Soil sample by BE detector

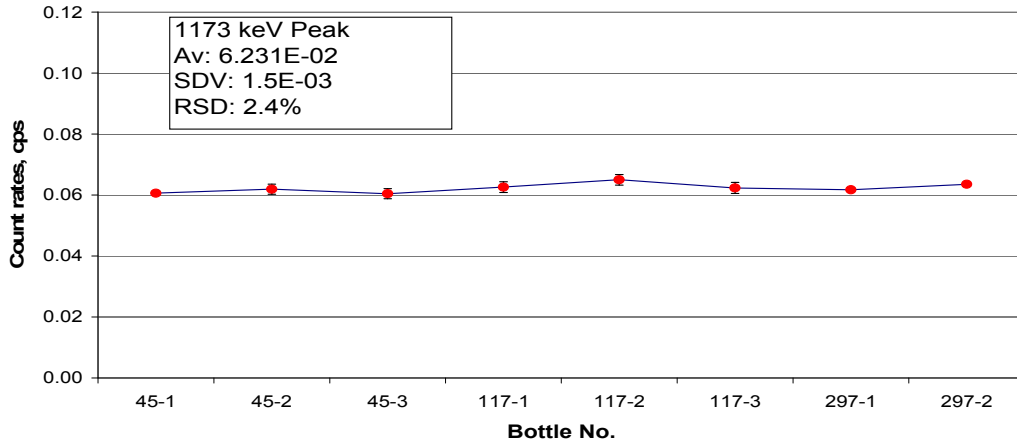


Gamma-ray spectrum of Soil sample by BE detector

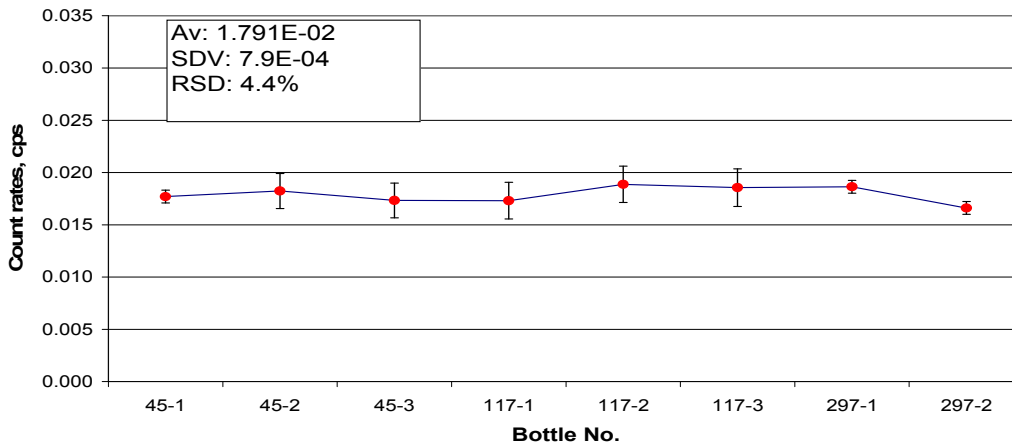


Figs 2.5, 2.6: Low energy region of gamma spectrum of the soil sample using broad energy range detector.

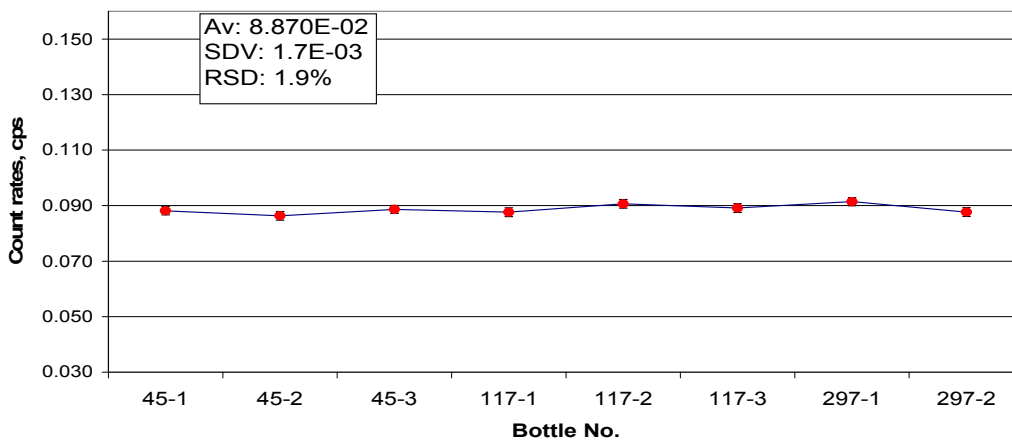
Homogeneity test of Co-60 in soil sample



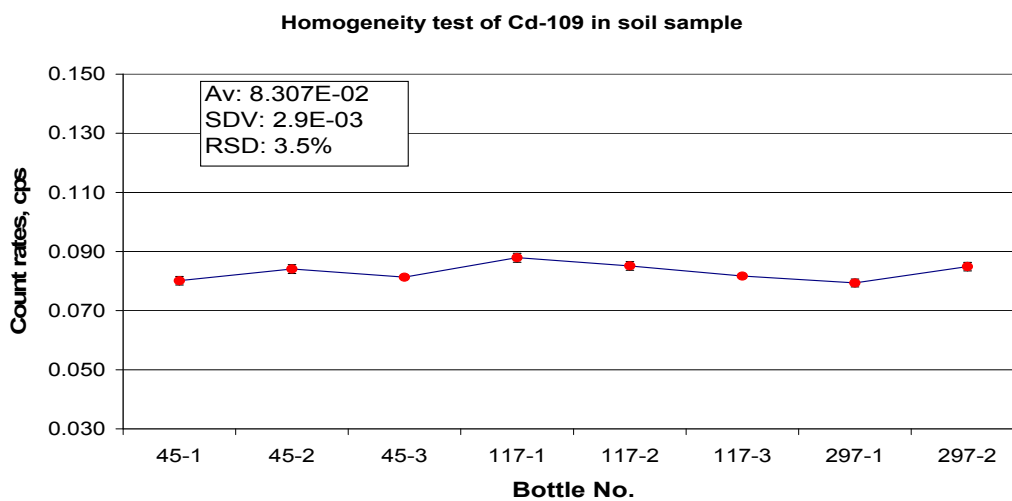
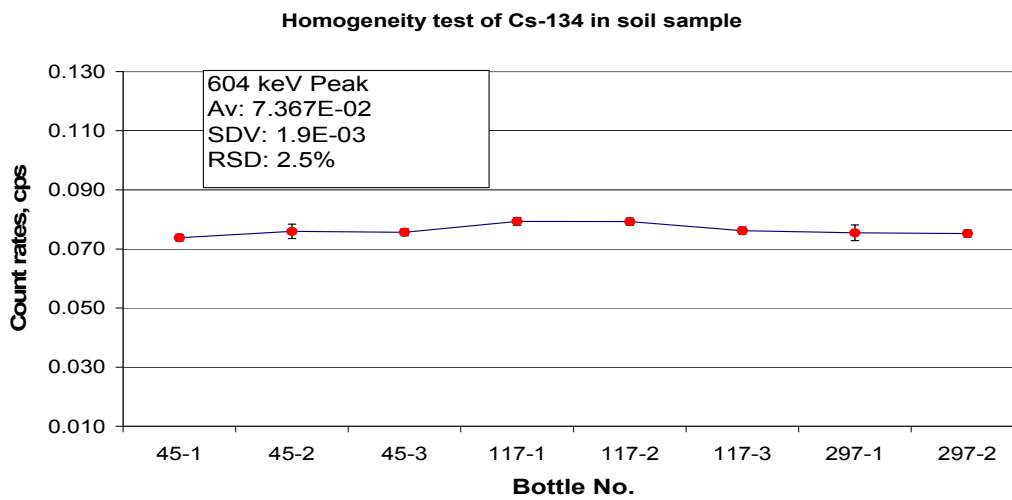
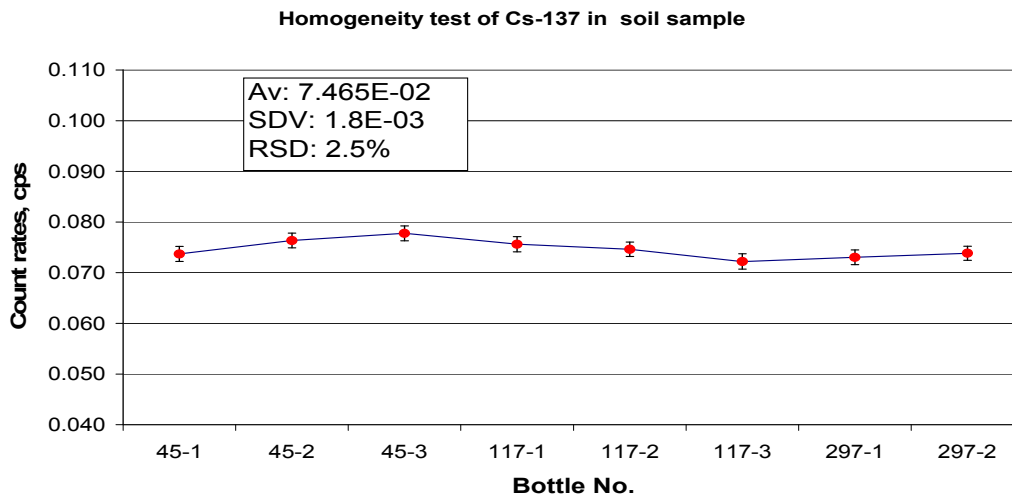
Homogeneity test of Zn-65 in soil sample



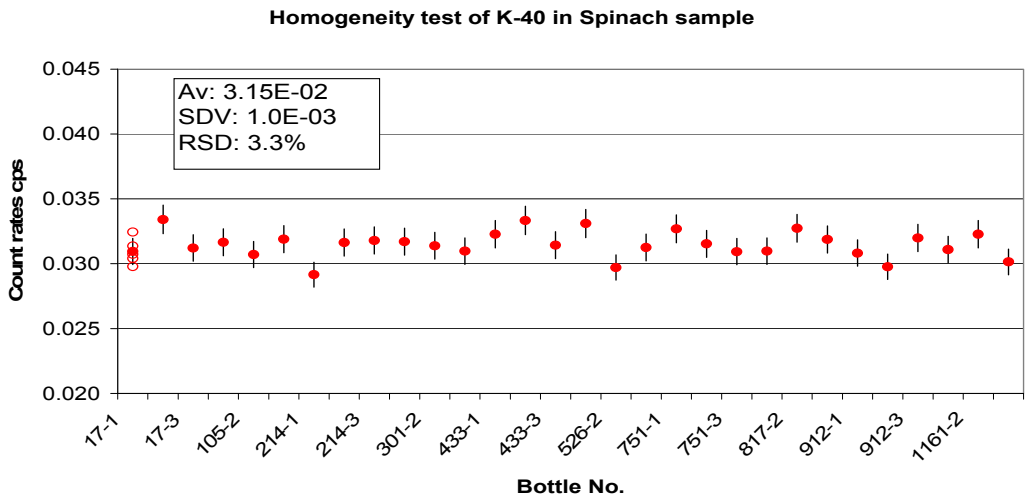
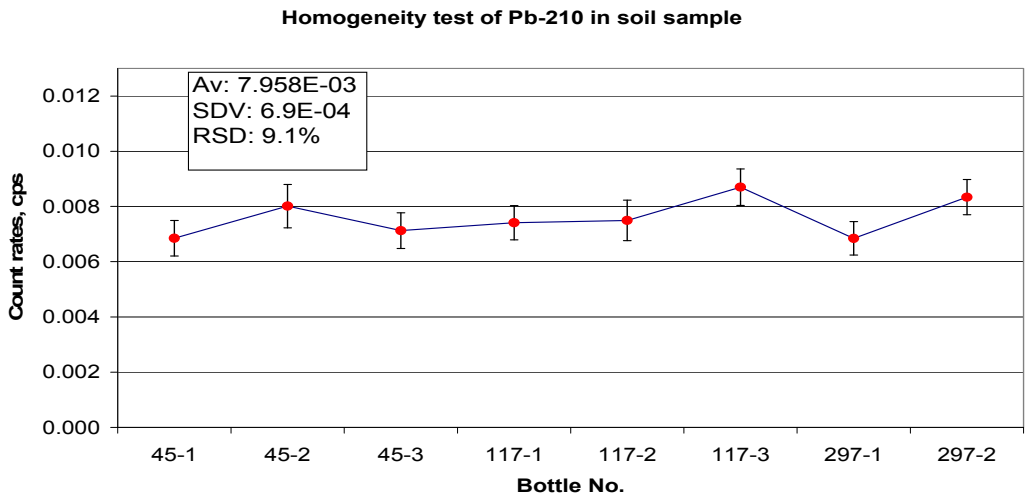
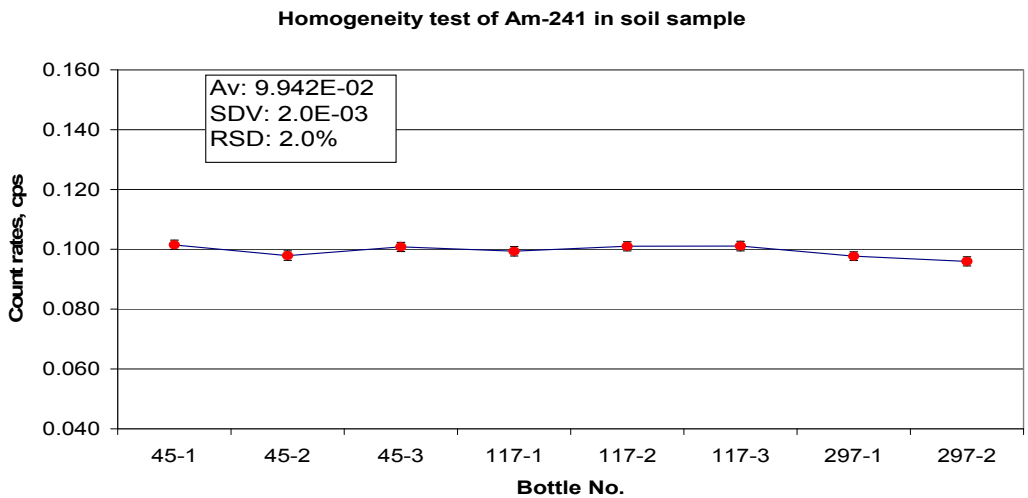
Homogeneity test of Mn-54 in soil sample



Figs 2.7, 2.8, 2. 9: Graphical representation of homogeneity test results.



Figs 2.10, 2.11, 2.12: Graphical representation of homogeneity test results.



Figs 2.13, 2.14: 2.15 Graphical representations of homogeneity test results.

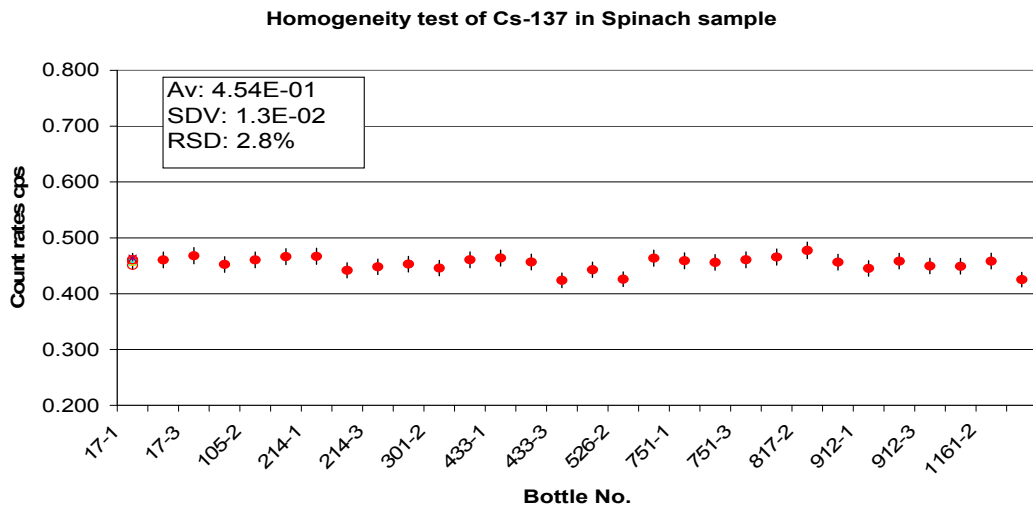
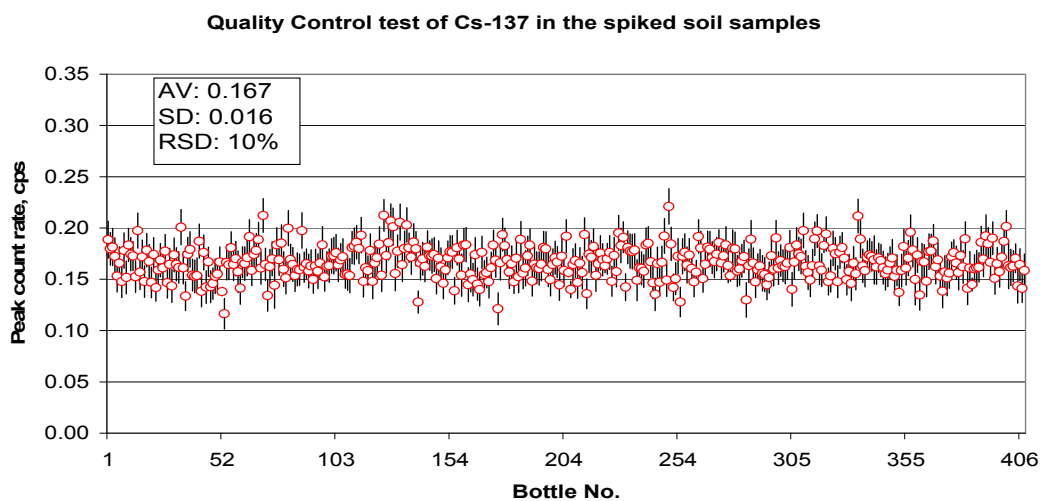
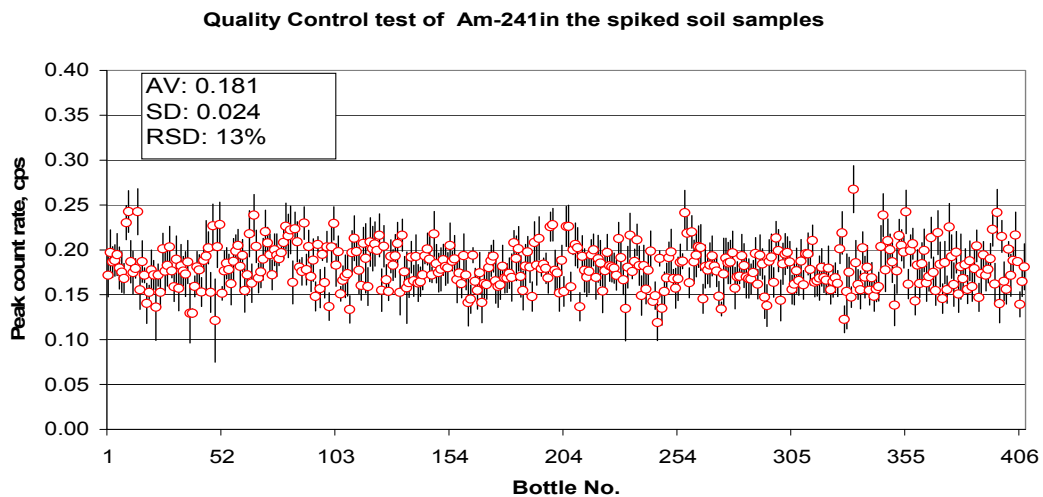


Fig. 2.16: Graphical representation of homogeneity test results.



Figs 2.17, 2.18: Quality control test of the spiked soil samples, measuring time 900 seconds.

TABLE 2.1. HOMOGENEITY TEST PARAMETERS

Nuclide	Meas. Live Time, sec	Method RSD (%)	Between Bottles RSD (%)
Mn-54	43200	2.3	1.9
Co-60	43200	2.1	2.4
Zn-65	43200	4.0	4.4
Cd-109	80000	4.6	3.5
Cs-134	43200	4.2	2.5
Cs-137	43200	3.3	2.5
Pb-210	80000	10.4	9.1
Am-241	80000	1.4	2.0

2.3.2. Preparation of the spiked water IAEA-445

The water sample was gravimetrically prepared in one batch. A portion of 220 kg of acidified demineralised water was spiked with a mixture of certified single radionuclide solutions traceable to a national standard of radioactivity. Then a pump with multiple outlets was used to homogenise the bulk water sample in a tank of 600 L. Three water sample portions at 100 g were analysed by gamma spectrometry. The relative standard deviation of each analyte was calculated. It was found that the relative standard deviations of all analytes were below the method repeatability relative standard deviation, which demonstrates satisfactory homogeneity of the water sample.

The final target activity concentration for each radionuclide was calculated from the certified activity values assigned to each radionuclide, taking into account the successive dilution steps, the mass of spiking mixture and the amount of water being spiked as determined from weighing. The combined standard uncertainty includes two major components: uncertainty of the certified solution and weighing uncertainty.

Table 2.2 lists the target values and the associated combined uncertainty in the water sample and the identification of certified solutions used in this PT is listed in Table 2.3.

2.3.3. Preparation of the natural spinach sample IAEA-330

The IAEA-330 spinach sample was collected in Chernobyl area. The spinach was dried, milled and sieved to collect the appropriate fraction at mesh size less than 0.35 mm, and then homogenised. The homogeneity of K-40 and Cs-137 was tested by analysing 10 samples at 3 replicates each at 10 g sample portion using the gamma spectrometry instrumentation set-up described above.

The homogeneity test results provided experimental evidence that satisfactory level of within and between bottles homogeneity have been attained.

The target values of K-40 and Cs-137 in the spinach material were derived from the results of 12 bottles analysed at the Chemistry Unit of Seibersdorf laboratories using gamma spectrometry.

The target values of α and β emitting nuclides were derived based on the measurement results of 30 bottles at the Chemistry Unit of Seibersdorf Laboratories according to the following method.

- *Treatment of the spinach sample IAEA-330*

The sample (95 g dry mass) was ashed at 600°C. The sample decomposition was carried out using the conventional wet digestion procedures [2]. After addition of Sr carrier, U-232, Pu-242 and Am-243 tracers as described in the combined procedure of Sr-90, Am-241 and Pu isotopes [3].

- *Radiochemical Separations*

The radiochemical separation of Pu and Am was carried out using anion exchange column BioRad AG 1-X8 and 1-X4, 100-200 mesh. Strontium was separated using Sr resin (Eichrom Tec., USA) according to a sequential combined procedure [2].

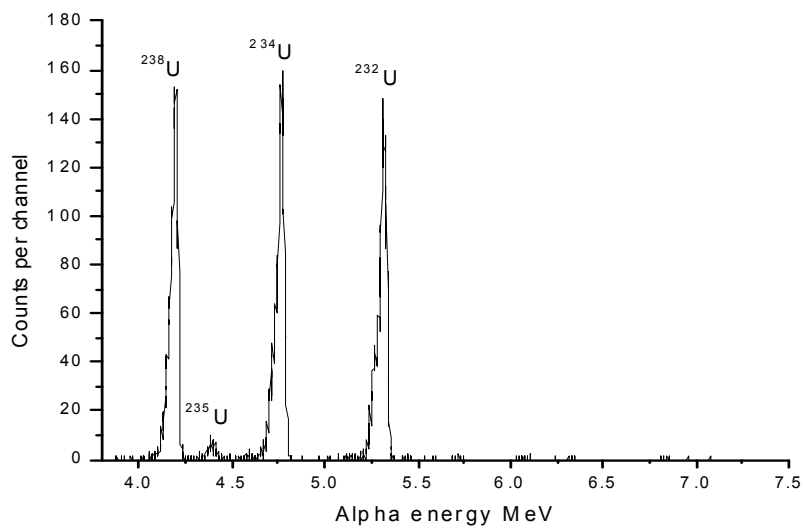
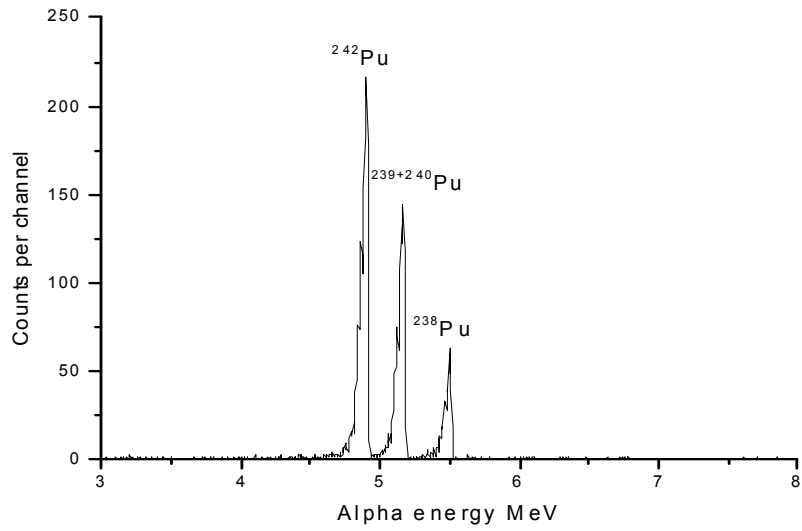
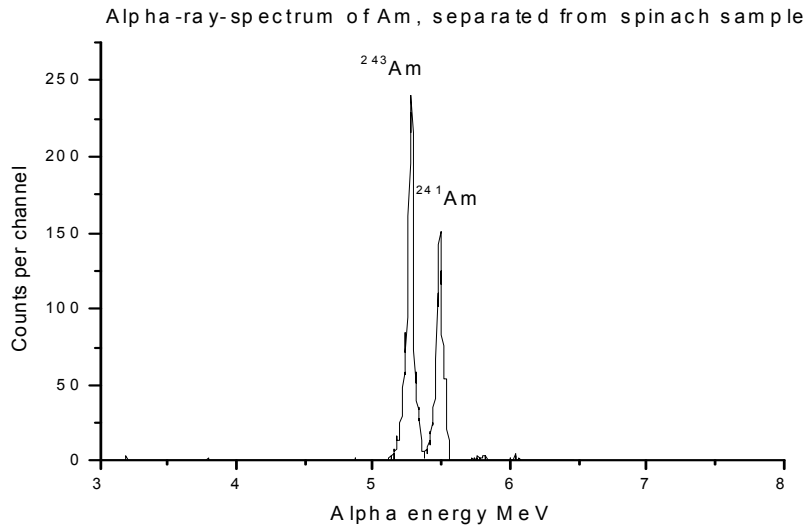
For the separation of uranium, the supernatant obtained from Ca-oxalate precipitation was evaporated to dryness, the oxalate was decomposed by digestion and repeated evaporation with 65% HNO₃. The residues were dissolved in 15-30 ml 3 M HNO₃, and then loaded on UTEVA resin column (Bed volume; 1.4 ml, column length: 26 mm) pre-conditioned with 20 ml 3 M HNO₃. The column was washed with 30 ml 3 M HNO₃, followed by 20 ml 6 M HCl. Uranium fraction was eluted with 6ml of H₂O, and then evaporated with 2 ml 65% HNO₃. After electro-deposition on a stainless steel discs, uranium was determined by alpha-spectrometry.

- *Instrumentation*

Pu-239+240, Am-241 and Uranium isotopes were measured by alpha-spectrometer system EG & G ORTEC OCTETE, with EG & G Ultra BU-020-450 and Canberra AMX 884 multiplexer, RPI 554, ADC 8701, and AIM556 modules. The alpha spectra were evaluated using Canberra Genie 2000 software.

Sr-90 was measured by liquid scintillation counter WALLAC QUANTULUS 1220, PerkinElmer, USA. The scintillation spectra of Sr-90 were evaluated using Wallac WINQ v. 1.1 and EASY view v.1.0.3.4.

Typical alpha-spectra of Pu, Am and U sources, separated from the spinach candidate reference material IAEA-330 are shown in Figures 2.19, 2.20 and 2.21. Measurement times: 699000 s for Am, 790000 s for Pu and 230000 s for U. Typical chemical recoveries were between 60-90 %.



Figs 2.19, 2.20, 2.21: Alpha-ray spectra of Am, Pu and U separated from spinach IAEA-330.

To derive the target values of the spinach sample, a robust approach proposed by David L. Duewer [4] was applied on the analytical results reported by the Seibersdorf laboratories and the Mixture Model Median (MM-median) was calculated. The MM-median is a direct analogue of the median. It is the location which divides the Mixture Model Probability Density Function (MM-PDF) into two sections of equal area.

To estimate the standard uncertainty associated with the target values of the spinach sample the MM-median based Standard Deviation $S(\text{MM-median})$ was calculated from the span of the central 50% of the MM-PDF density.

To confirm the target values, 5 expert laboratories from Finland, Hungary, Republic of Korea and Portugal analysed the spinach sample. Each laboratory received 3 bottles, and was asked to analyse the analytes of interest in each bottle. The obtained results from the expert laboratories were used to confirm the IAEA target values. In total 30 and 15 bottles were analysed in Seibersdorf laboratories and expert laboratories respectively during the characterisation campaign of the spinach material.

The IAEA derived target values were in good agreement with the expert laboratories results.

The target values of the spinach material with the respective uncertainties are presented in Table 2.2.

Figures 2.22 and 2.23 show the PT materials sets.



Fig. 2.22: A set of the PT material.



Fig.2.23: Distribution of the PT sets.

2.4. Reference time

The reference time for all activity concentrations is 15 October 2007.

TABLE 2.2. THE TARGET VALUES AND THE RESPECTIVE STANDARD COMBINED UNCERTAINTIES USED IN THE EVALUATION IN THIS PT

Radionuclide	IAEA-444 Spiked soil sample		IAEA-445 Spiked water sample		IAEA-330 Spinach sample	
	Target value	Combined standard uncertainty	Target value	Combined standard uncertainty	Target value	Combined standard uncertainty
	Bq.kg ⁻¹ (dry mass)		Bq.kg ⁻¹		Bq.kg ⁻¹ (dry mass)	
K-40	-	-	-	-	1188	30
Mn-54	61.0	1.24	4.74	0.02	-	-
Co-60	82.6	2.0	7.52	0.06	-	-
Zn-65	29.9	0.99	13.06	0.15	-	-
Sr-90	-	-	-	-	20.1	2.1
Cd-109	248.7	5.18	34.96	0.20	-	-
Cs-134	59.4	1.73	7.65	0.10	-	-
Cs-137	68.5	1.38	8.12	0.06	1235	35
Pb-210	48.0	1.5	29.34	0.5	-	-
U-234	-	-	-	-	1.02	0.07
U-238	-	-	-	-	0.95	0.05
Pu-238	-	-	-	-	0.023	0.013
Pu-239+240	-	-	-	-	0.049	0.028
Am-241	55.6	1.60	7.11	0.05	0.062	0.034

For all samples the reference date is 15 October 2007, the combined standard uncertainty is expressed at 1 σ level.

TABLE 2.3. THE IDENTIFICATION OF THE CERTIFIED SOLUTIONS OF EACH RADIONUCLIDE USED IN SPIKING THE SOIL AND WATER SAMPLES IN THIS PT

Nuclide	Source manufacturer and batch number
Mn-54	AMERSHAM: MFZ64; NO S3/28/12
Co-60	CERCA-LEA FRAMATOME: CO60-ELSB50; NO 72452
Zn-65	CERCA-LEA FRAMATOME: ZN65-ELSB50; NO 7020
Cd-109	AMERSHAM: CUZ64;NO S3/36/23
Cs-134	CERCA-LEA FRAMATOME: CS134-ELSB50; NO 70823
Cs-137	AMERSHAM: CDZ64; NO S4/14/70
Pb-210	SRM 4337, NIST, Reference date 15-06-2007.
Am-241	CERCA-LEA FRAMATOME: AM241-ELSB30; NO 5104

3. PERFORMANCE CRITERIA

Currently most laboratories produce test results accompanied, at best, with an indication of their repeatability only and provide no indication of their analytical uncertainty. However, new requirements coming into force (ISO/IEC 17025:2005) [5] require that laboratories have to express their measurement uncertainty.

Several rating systems have been developed for determining a laboratory's performance and the meaning of the results of the different scoring systems are not always comparable. Among various statistics, z-scores and u-scores are most often used. The drawback of z-scores is that the uncertainty of the participant's measurement result is not taken into account for the evaluation of performance. In the case of u-scores, the evaluation includes uncertainties of the participant measurements and the uncertainty of the assigned value. Laboratories performing well in classical proficiency testing (z-scores) will not necessarily exhibit the same level of performance when their analytical uncertainties are considered in the evaluation.

The proficiency testing scoring system applied by the Chemistry Unit in the Agency's laboratories takes into consideration the trueness and the precision of the reported data and it includes in the evaluation both the total combined uncertainty associated with the target value of proficiency testing samples and the total uncertainty reported by the participating laboratories. According to the newly adopted approach, the reported results are evaluated against the acceptance criteria for accuracy and precision and assigned the status "acceptable" or "not acceptable" accordingly. A result must pass both criteria to be assigned the final status of "acceptable". The advantage of this approach is that it checks the credibility of uncertainty statement given by the participating laboratories, and results are no longer compared against fixed criteria but participants establish their individual acceptance range on the basis of the uncertainties assigned to the values. Such an approach highlights not only methodological problems affecting the accuracy of the reported data but also identifies shortcomings in uncertainty estimation.

In addition, three other statistical parameters namely: z-score, IAEA/Laboratory result ratio and relative bias are calculated as complementary information for the participating laboratories.

3.1. Relative bias

The first stage in producing a score for a result $Value_{reported}$ (a single measurement of analyte concentration in a test material) is obtaining the estimate of the bias. To evaluate the bias of the reported results, the relative bias between the reported value and the target value is calculated and expressed as a percentage:

$$Bias_{relative} = \frac{Value_{reported} - Value_{target}}{Value_{target}} \times 100\% \quad (1)$$

3.2. The z-score value

The z-score is calculated from the laboratory results, the target value and a standard deviation in accordance with the following equation:

$$z_{Score} = \frac{Value_{reported} - Value_{target}}{\sigma} \quad (2)$$

On the basis of the “fitness for purpose” principle, the target standard deviation (σ) is:

$$0.10 \times Value_{target}$$

The laboratory performance is evaluated as satisfactory if $|z_{Score}| \leq 2$; questionable for $2 < |z_{Score}| < 3$, and unsatisfactory for $|z_{Score}| \geq 3$.

3.3. The u-score value

The value of the u_{test} was calculated according to the following equation [6]

$$u_{test} = \frac{|Value_{target} - Value_{reported}|}{\sqrt{u_{target}^2 + u_{reported}^2}} \quad (3)$$

This value is compared with the critical value listed in the t-statistic tables to determine if the reported result differs significantly from the expected value at a given level of probability. The advantage of the u_{test} is that it takes into consideration the propagation of measurement uncertainties when defining the normalized error. This is especially useful when evaluating results, which uncertainty may overlap with the reference interval.

It should be noted that the choice of the significance level is subjective. For this proficiency test we have set the limiting value for the u-test parameter to 2.58 for a level of probability at 99% to determine if a result passes the test ($u < 2.58$).

3.4. Evaluation criteria

The proficiency test results were evaluated against the acceptance criteria for trueness and precision and assigned the status “Acceptable”, “Warning” or “Not Acceptable” accordingly [7].

3.4.1. Trueness

The participant result is assigned “Acceptable” status for trueness if:

$$A1 \leq A2$$

where:

$$A1 = |Value_{target} - Value_{reported}|$$

$$A2 = 2.58 \times \sqrt{u_{target}^2 + u_{reported}^2}$$

3.4.2. Precision

For evaluation of precision an estimator P is calculated for each participant, according to the following formula:

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

P directly depends on the measurement uncertainty claimed by the participant. The Limit of Acceptable Precision (LAP) for each analyte respectively is defined for the respective proficiency test in advance, including any adjustment due to the concentration or activity level of the analytes concerned and the complexity of the analytical problem. Participants' results are scored as "acceptable" for precision when $P \leq LAP$. The LAP value used in the evaluation of all radionuclides is listed in Table 3.1.

In the final evaluation, both scores for trueness and precision are combined. A result must obtain an "acceptable" score in both criteria to be assigned the final score "acceptable". Obviously, if a score of "not acceptable" was obtained for both trueness and precision, the final score will also be "not acceptable". In cases where either precision or trueness is "not acceptable", a further check is applied. The reported result relative bias (R. Bias) is compared with the maximum acceptable bias (MAB). If $R. Bias \leq MAB$, the final score will be "warning". "Warning" will reflect mainly two situations. The first situation will be a result with small measurement uncertainty; however its bias is still within MAB. The second situation will appear when results close to the assigned property value are reported, but the associated uncertainty is large. If $R. Bias > MAB$, the result will be "Not Acceptable". The MAB value used in the evaluation of all radionuclides is listed in Table 3.1.

3.5. Evaluation criteria for Pu-238, Pu-239+240 and Am-241

As it can be noticed from Table 2, the uncertainty associated with the target values of Pu-238, Pu-239+240 and Am-241 are relatively high due to the low activity of these analytes and relatively high uncertainty associated with the between bottles heterogeneity. Therefore, for the purpose of evaluation in this PT the Upper Limit of Evaluation (ULE) was introduced for these three nuclides. The ULE was calculated as the following:

$$ULE = Value_{target} + 2S(MM\text{-}median)$$

The participant result was assigned acceptable score if:

$$Value_{reported} - Uncertainty_{reported} < ULE$$

If the evaluation approach and/or acceptance criteria applied in this PT are not appropriate for the types of analyses and application performed in one of the participating laboratories, it is suggested to apply a self- scoring evaluation system which could fits specific requirements.

TABLE 3.1. VALUES OF LAP, MAB AND ULE USED FOR THE EVALUATION IN THIS PROFICIENCY TEST

	LAP (%)			MAB (%)		ULE [Bq/kg]	
	Soil	Water	Spinach	Soil	Water	Spinach	
	IAEA-444	IAEA-445	IAEA-330	IAEA-444	IAEA-445	IAEA-330	
K-40	-	-	15	-	-	15	-
Mn-54	15	10	-	15	10	-	-
Co-60	15	10	-	15	10	-	-
Zn-65	15	10	-	15	10	-	-
Sr-90	-	-	15	-	-	15	-
Cd-109	20	15	-	20	15	-	-
Cs-134	15	10	-	15	10	-	-
Cs-137	15	10	15	15	10	15	-
Pb-210	20	25	-	20	25	-	-
U-234	-	-	20	-	-	20	-
U-238	-	-	20	-	-	20	-
Pu-238	-	-	-	-	-	-	0.05
Pu-239+240	-	-	-	-	-	-	0.11
Am-241	20	15	-	20	15	-	0.13

4. RESULTS AND DISCUSSION

4.1. General

There were 4850 measurement results reported to the IAEA in this PT from 270 laboratories in 75 countries. The participants' data along with the statistical performance evaluation were compiled and presented in two tables which constitute an integral part of this report. Appendix I shows a summary evaluation for each laboratory and an extraction of the reported information in the PT questionnaire regarding the applied analytical technique. Performance evaluation tables sorted by analyte are reported in Appendix II. The S-shape and Z-score charts of evaluated analytes are presented in Appendix III, list of participants in Appendix IV.

The overall evaluation showed that 69% of all reported results fulfilled the PT criteria.

Table 4.1 shows the distribution of results scored as acceptable/warning/not acceptable for all evaluated nuclides.

The results' evaluation shows that there are no specific measurement problems for K-40, Mn-54, Co-60, Zn-65, Cs-134, Cs-137, and Am-241.

4.2. Results of Cd-109 analysis

In the case of Cd-109 in soil only 42% of all reported results respectively were in agreement with the IAEA target values. The analytical problem in determination of this nuclide is persisting. However, 59% of reported "not acceptable" results in 2006 PT were improved to "acceptable or warning" status, which indicate an important improvement in the Cd-109 quality of results.

It is known that, the main reason for the "Not Acceptable" scores in Cd-109 results could be attributed to the overestimation of peak area due to unresolved interference around the region of the 88 keV in a densely populated X-ray region which is difficult to resolve. The Cd-109 was the most problematic nuclide.

4.3. Results of Pb-210 analysis

Pb-210 was also a problematic nuclide, where results show a significant bias and incomparability among the laboratories. Comparing the performance for this analyte in 2006 and 2007 it was found that 55% of reported "not acceptable" results in 2006 PT were improved to "acceptable or warning" status, which indicates also an improvement in the quality of the Pb-210 measurement results.

It is suggested that the major sources of bias and incomparability in Pb-210 results could be attributed to the inappropriate detector calibration and/or the overestimation or underestimation of the self attenuation factor. As an example of practical approach for self absorption correction the approach suggested by Cutshall, Larsen and Olsen [8]. In certain laboratories the efficiency calibration was extrapolated, which led to large discrepancies.

4.4. Technical information provided by the participants

Appendix I contains the summary evaluation of each laboratory along with the summary of the reported technical information. For each laboratory, Appendix I lists the radionuclides which did not pass the test and which should be investigated for corrective actions.

TABLE 4.1. SUMMARY EVALUATION OF ALL NUCLIDES IN THE THREE SAMPLES

Nuclide	No. of reported results			“Acceptable” results (%)			“Warning” results (%)			“Not Acceptable” results (%)		
	soil	water	spinach	soil	water	spinach	soil	water	spinach	soil	water	spinach
K-40	-	-	256	-	-	72	-	-	6	-	-	22
Mn-54	268	263	-	75	69	-	8	10	-	17	21	-
Co-60	267	263	-	80	76	-	8	8	-	12	16	-
Zn-65	262	259	-	74	70	-	7	10	-	19	20	-
Sr-90	-	-	95	-	-	53	-	-	16	-	-	31
Cd-109	242	234	-	48	66	-	5	11	-	47	23	-
Cs-134	267	262	-	71	54	-	10	11	-	19	35	-
Cs-137	270	266	258	79	78	78	9	9	5	12	13	17
Pb-210	158	168	-	54	62	-	11	9	-	35	29	-
U-234	-	-	72	-	-	60	-	-	8	-	-	32
U-238	-	-	76	-	-	57	-	-	9	-	-	34
Pu-238	-	-	54	-	-	67	-	-	-	-	-	33
Pu-239+240	-	-	62	-	-	65	-	-	-	-	-	35
Am-241	240	231	57	72	72	37	10	9	-	18	19	33

From Appendix I it can be found that the majority of the participating laboratories calibrated their system using multi gamma standard source. There was no significant difference observed between the percentage of acceptable results of the laboratories which used multi gamma standard source and those which used computational approach.

4.5. Recommendations to the laboratories

Based on the performance evaluation results the participating laboratories could be distributed into five groups, Figure 4.24 shows this distribution.

4.5.1. Laboratories group A

Thirty-four laboratories reported their results without any “not acceptable” score. Table 4.2 lists the codes of these laboratories. Only one participant lab code 189 reported all the analytes (24 results) and obtained 100% acceptable results. Participants with codes 12,104, 116, 144, 202, 229, 288 and 311 reported few of the α , β emitting radionuclides. It is recommended to this group of laboratory to maintain the statistical control of the analytical process and to monitor it. This group of laboratories reported satisfactory analytical results for the scope and evaluation criteria of this PT.

TABLE 4.2. LABORATORIES GROUPS ACCORDING TO THE ANALYTICAL PERFORMANCE

Group	Laboratory code
Group A	4, 10, 12, 53, 55, 70, 88, 104, 111, 116, 121, 128, 133, 144, 145, 149, 178, 189, 202, 209, 210, 229, 245, 259, 263, 264, 271, 272, 273, 275, 288, 292, 307, 311
Group B	15, 20, 24, 25, 29, 34, 35, 43, 48, 51, 56, 63, 64, 77, 82, 105, 107, 110, 112, 113, 115, 134, 140, 143, 155, 187, 188, 196, 199, 200, 203, 215, 218, 226, 227, 234, 237, 249, 252, 269, 287, 304, 312, 318 7, 8, 13, 28, 49, 62, 65, 78, 84, 90, 97, 119, 131, 138, 139, 142, 160, 161, 166, 186, 190, 207, 214, 224, 254, 257, 260, 261, 262, 265, 285, 290, 293, 296, 297, 310, 317, 319, 322
Group C	2, 6, 14, 33, 36, 44, 67, 87, 93, 99, 101, 117, 126, 135, 137, 150, 156, 174, 177, 192, 201, 228, 233, 235, 238, 239, 242, 244, 250, 253, 295 5, 9, 11, 19, 76, 120, 122, 124, 146, 147, 163, 204, 208, 240, 241, 277, 278, 291, 299, 305, 316
Group D	3, 18, 23, 27, 31, 59, 71, 86, 123, 154, 169, 172, 184, 197, 213, 217, 222, 225, 270, 280, 321 1, 45, 60, 69, 92, 157, 158, 185, 198, 220, 248, 286, 320 21, 37, 73, 75, 114, 125, 127, 130, 162, 164, 165, 168, 173, 179, 206, 212, 223, 230, 268, 281, 300, 302, 306
Group E	50, 148, 151, 152, 246, 255, 256, 258, 80, 81, 85, 175, 236, 251, 284, 309 26, 30, 42, 103, 153, 167, 182, 16, 39, 95, 98, 118, 132, 191, 231, 308 91, 96, 129, 232 79, 89, 108, 195, 243

4.5.2. Laboratories group B

Forty-five and thirty-nine laboratories had only one or two “not acceptable” results respectively.

The not acceptable performance mainly due to Cd-109, Cs-134 and Pb-210 and partially due to α and β emitting radionuclides.

The results of Cd-109 in water reported by this group were in general acceptable, in contrary to the results of the same analyte in soil, which indicates that the matrix effect correction still has to be optimized.

The quality of reported results, by this group of laboratories, fits the criteria of this PT. However, further investigation should be undertaken to investigate the root cause of the specific nuclide shortcoming and corrective action should be applied to rectify the situation.

4.5.3. Laboratories groups C and D

In group C thirty-one and twenty-one laboratories scored three or four “not acceptable” results respectively. Group D combines laboratories which scored 5-8 “not acceptable” results.

These laboratories reported acceptable results for the regularly and more common nuclides, the root cause of not acceptable performance should be investigated and corrective actions to be implemented.

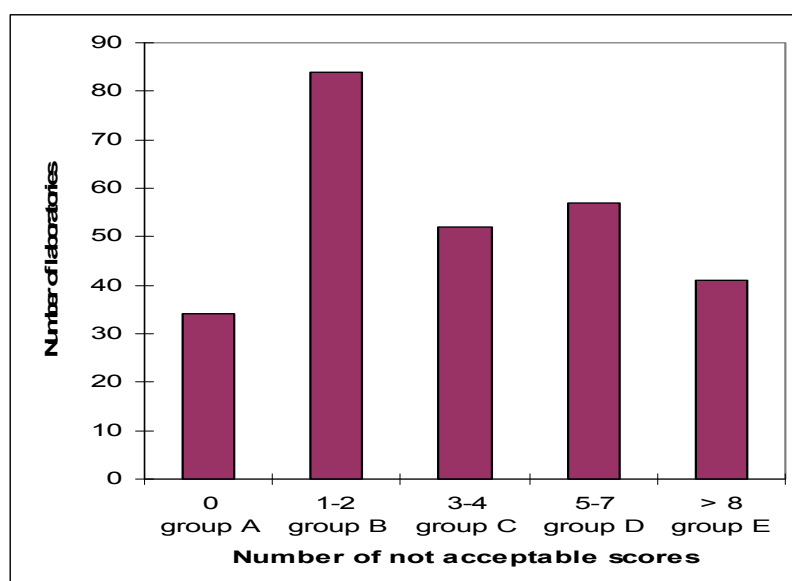


Fig. 4.24: Laboratories' grouping according to their performance.

4.5.4. Laboratories group E

This group of laboratories scored more than 9 “not acceptable” results. The quality control mechanism should be revised in these laboratories, efficiency calibration should be validated using matrix reference materials and the statistical control of the analytical system should be checked at regular intervals.

The analyst should set up a procedure to check the validity of each produced result either using in-house reference material for precision control or using spiked matrix material to check the trueness of the measurement results. The calibration standard should contain the same analytes of interest if possible, or single standard solutions should be used to check the applied corrections and the efficiency calibration.

It is recommended to reanalyse the PT samples after the introduction of the appropriate corrective actions and to check if the target values were obtained. The Chemistry Unit at Seibersdorf Laboratories is ready to provide the participants with the technical advice upon a specific request from the participants of this group.

4.6. Comparison of participants performance in 2006 PT and 2007 PT

There were 175 laboratories that participated in the 2006 and 2007 proficiency tests. From the stored data it was possible to track the performance of the laboratories for each analyte. The “not acceptable” results reported by this group of participants were tracked and compared. From the comparison it was found that in average more than 60% of “not acceptable” results reported in 2006 PT were improved to “acceptable” or “warning” status (see Table 4.3). This clearly suggests that most of the participants were able to identify the analytical problem occurred during the participation in the 2006 PT and were able to improve their performance in the current PT.

In the contrary, some of the participants were not able to keep their good performance demonstrated in the 2006 PT and the quality of their reported results in 2007 was worse than those reported in 2006. Around 15% of the reported results by the 2006 PT participants moved down from “acceptable” in 2006 to “not acceptable”. This suggests that one shot of participation in a PT is not a sufficient evidence for a good and stable performance, only continuous participation in PTs demonstrates the stability of the analytical system performance.

Table 4.3 shows the percentage of positive or negative development of the analytical performance per analyte.

TABLE 4.3. COMPARISON OF ANALYTICAL PERFORMANCE BETWEEN THE TWO PTS IN 2006 AND 2007

	Positive Development From “N” in 2006 PT to “A” in 2007 PT	Negative Development From “A” in 2006 PT to “N” in 2007 PT
Am-241	78.2	10
Cd-109	59.0	22.6
Co-60	67.5	6.1
Cs-134	67.6	16.9
Cs-137	74.2	7.4
K-40	76.7	17.9
Mn-54	59.7	8.3
Pb-210	54.9	20.4
Zn-65	70.5	12.4

5. CONCLUSIONS

The IAEA-CU-2007-03 proficiency test was successfully completed with high levels of reporting back the analytical results, as 85% of the registered laboratories reported their results to the IAEA. Most participants were able to quantify all of the nuclides in the three matrices. Of all the reported results, 23% did not pass the PT acceptance criteria.

A slight improvement in the overall performance was observed in comparison with the performance level in 2006 PT. More evident improvement in the performance level was observed in the group of laboratories who participated in both PTs in 2006 and 2007, where more than 60% of the “not acceptable” results reported in 2006 PT were improved to “acceptable” or “warning” status in this current PT. This indicates the positive effect of proficiency testing in identifying the analytical problem and improving the analytical performance.

This PT provides the possibility to improve the worldwide comparability and reliability of the determination of radionuclides in environmental matrices.

REFERENCES

- [1] SHAKHASHIRO, A., GONDIN DA FONSECA AZEREDO, A.M., SANSONE, U., FAJGELJ, A., Matrix Materials For Proficiency Testing: Optimization of a Procedure for Spiking Soil With Gamma-Emitting Radionuclides, *Anal Bioanal Chem*, DOI 10.1007/s00216-006-0772-z, August 2006.
- [2] INTERNATIONAL ATOMIC ENERGY AGENCY, Report of the First Research Coordination Meeting on the Coordinated Research Programme “Development and selection of analytical techniques for measuring accidentally released radionuclides in environment”, IAEA/AL/082, p. 30, December 1994, available c/o aqcs@iaea.org.
- [3] INTERNATIONAL ATOMIC ENERGY AGENCY, SHAKHASHIRO, A., RADECKI, Z., TRINKL, A., SANSONE, U. and BENESCH, T., “Final Report on the Proficiency Test of the Analytical Laboratories for the Measurement of Environmental Radioactivity (ALMERA) Network”, IAEA/AL/152, p.242, August 2005, available c/o aqcs@iaea.org.
- [4] DUEWER, D.L., A Robust Approach for the Determination of CCQM Key Comparison Reference Values and Uncertainties, Working document CCQM/04-15, BIPM, 2004. www.bipm.info/cc/CCQM/Allowed/10/CCQM04-15.pdf
- [5] INTERNATIONAL ORGANIZATION FOR STANDARDIZATION, ISO/IEC 17025:2005, General Requirements for the Competence of Testing and Calibration Laboratories, ISO, Geneva, Switzerland.
- [6] BROOKES, C.J., BETTELEY, I.G., LOXTON, S.M., *Fundamentals of Mathematics and Statistics*, Wiley (1979).
- [7] SHAKHASHIRO, A., FAJGELJ, A., SANSONE, U., “Comparison of different approaches to evaluate Proficiency Test Data”, presented and accepted in the publications of the International Workshop on Combining and Reporting Analytical Results: The Role of (metrological) Traceability and (measurement) Uncertainty for Comparing Analytical Results held in Rome on 6-8 March 2006, *Combining and Reporting Analytical Results* (BELLI, M., FAJGELJ, A., SANSONE, U. Eds) RSC Publishing, Cambridge (2006).
- [8] CUTSHALL, N.H., LARSEN, I.L. and OLSEN, C.R., Direct analysis of Pb-210 in sediment samples: self-absorption corrections, *Nuclear Instruments and Methods*. 206 (1983) 309–312.

APPENDIX I. SUMMARY EVALUATION AND REPORTED TECHNICAL INFORMATION SORTED BY LABORATORY CODE

The summary technical information on the analytical procedure is presented as reported by the participants against the percentage of score, for each participating laboratory the nuclides which need some corrective actions were listed. The following codes were used:

- For performance evaluation A: Acceptable, W: Warning, N: Not Acceptable.
- For applied corrections: 1: Moisture Content, 2: Decay Correction, 3: Self Attenuation, 4: Random Summing, 5: Coincidence Summing, 6: Cascade Correction, 7: Background Correction, NR: Not reported.

Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the IAEA or any of its staff members thereof.

In these tables, individual laboratory data is presented in ascending order of the laboratory code.

TABLE I.1: SUMMARY OF TECHNICAL INFORMATION REPORTED BY THE PARTICIPANTS SORTED BY LABORATORY CODE

Lab. code	Number of reported results	% A		% W		% N		Gamma Software	Method of efficiency calibration	Applied corrections	Nuclides need corrective actions		
						Spinach	Soil				Water		
1	16	50.00	12.50	37.50			GENIE 2000	Multinuclide standard	2, 7	K-40	Cd-109; Cs-134	Cs-134; Cs-137; Pb-210	
2	19	73.68	10.53	15.79			NR	Mathematical approach	1, 2, 3, 4, 5, 6, 7	Am-241		Cd-109; Mn-54	
3	23	78.26	0.00	21.74			NR	Multinuclide standard	2, 3	Sr-90; U-234; U-238	Pb-210	Pb-210	
4	18	100.00	0.00	0.00			Genie ESP	Multinuclide standard	1, 2, 3, 4, 5, 6, 7				
5	22	81.82	0.00	18.18			Gamma Vision 6.06	Multinuclide standard	1, 2, 3, 5, 6, 7	Pu-238; U-238	Cd-109	Cd-109	
6	16	81.25	0.00	18.75			Assayer	Multinuclide standard	1, 2, 7		Am-241; Zn-65	Cd-109	
7	18	88.89	0.00	11.11			Gamma vision	Multinuclide standard	1, 2, 3, 7		Pb-210	Pb-210	
8	18	83.33	5.56	11.11			GammaVision Model A66-B32 Version 5.20	Mathematical approach	1, 2, 3, 5, 7		Cd-109; Pb-210		
9	24	70.83	12.50	16.67			Self made for gamma spectrometry	Multinuclide standard	1, 2, 3, 5, 7	K-40		Am-241; Cd-109; Pb-210	
10	17	94.12	5.88	0.00			Interwinner	Multinuclide standard	1				
11	21	80.95	0.00	19.05			NR	Multinuclide standard	2, 7	Am-241; Pu-239+240;		Cd-109	

Lab. code	Number of reported results	% A	% W	% N	Gamma Software	Method of efficiency calibration	Applied corrections	Nuclides need corrective actions		
								Spinach	Soil	Water
								Sr-90		
12	20	85.00	15.00	0.00	GENIE 2000	Selective standard nuclides	1, 2, 7			
13	22	90.91	0.00	9.09	GENIE 2000 v.1.4	Multinuclide standard	1, 2, 7	Sr-90; U-238		
14	18	83.33	0.00	16.67	GENIE 2000	Multinuclide standard	1, 2, 7	Cd-109; Pb-210		Pb-210
15	15	93.33	0.00	6.67	Gamma Vision 32 A66-B32	Multinuclide standard	1, 2, 7	K-40		
16	21	33.33	14.29	52.38	GammaTrac, Oxford.	Multinuclide standard	1, 2, 3, 6, 7	K-40; Pu-238; Pu-239+240; Sr-90	Cd-109; Cs-134; Pb-210	Cd-109; Co-60; Pb-210; Zn-65
18	24	75.00	4.17	20.83	GENIE 2000 Version 3.1	Multinuclide standard	1, 2, 3, 4, 5, 7	Am-241; Pu-238; Pu-239+240; Sr-90		Cs-134
19	14	57.14	14.29	28.57	gammavision	Multinuclide standard	NR	K-40	Co-60; Cs-137	Cs-134
20	23	95.65	0.00	4.35	GENIE 2000	Multinuclide standard	1, 2, 7			Cd-109
21	18	50.00	11.11	38.89	Gama Vision	Multinuclide standard	1, 2, 7	Cs-137; K-40	Am-241; Cd-109	Am-241; Cs-134; Pb-210

Lab. code	Number of reported results	% A			% W			Gamma Software	Method of efficiency calibration	Applied corrections	Nuclides need corrective actions		
		%	%	%	%	%	%				Spinach	Soil	Water
23	24	79.17	0.00	20.83	Developed in our Lab Matlab TM			Multinuclide standard	1, 2, 7	Am-241; Pu-238; Pu-239+240; Sr-90; U-234			
24	21	85.71	9.52	4.76	SpecDec	Selective standard nuclides	1, 2, 7	Sr-90					
25	13	84.62	7.69	7.69	GENIE 2000	Multinuclide standard	1, 2, 7				Cs-134		
26	17	17.65	23.53	58.82	GENIE PC	Multinuclide standard	2, 3, 4, 5, 7	Cs-137; U-238	Co-60; Cs-134; Mn-54; Zn-65				
27	24	66.67	12.50	20.83	GENIE 2000	Multinuclide standard	2, 7	Am-241; Cs-137; K-40; Pu-238		Cd-109			
28	18	83.33	5.56	11.11	GENIE 2000	Multinuclide standard	2, 3, 6, 7			Cd-109	Am-241		
29	14	92.86	0.00	7.14	GENIE 2000	Multinuclide standard	1, 2, 7				Zn-65		
30	21	38.10	14.29	47.62	GENIE 2000	Multinuclide standard	1, 2, 7	Cs-137; K-40	Cd-109; Cs-134; Pb-210; Zn-65		Am-241; Cd-109; Mn-54; Zn-65		
31	11	54.55	0.00	45.45	GammaVision 32	Multinuclide standard	2, 7		Am-241; Cd-109		Am-241; Cs-134; Cs-137		
33	17	82.35	0.00	17.65	Maestro-32 , Gamma	Multinuclide standard	1, 2, 3			Cd-109	Am-241; Pb-210		

Lab. code	Number of reported results	% A	% W	% N	Gamma Software	Method of efficiency calibration	Applied corrections	Nuclides need corrective actions				
								Spinach	Soil	Water		
34	16	87.50	6.25	6.25	GENIE 2000,	Multinuclide standard	1, 2, 5, 6, 7	Am-241				
35	18	83.33	11.11	5.56	GENIE 2000	Multinuclide standard	1, 2, 3, 4, 5, 7				Cs-134	
36	21	76.19	9.52	14.29	Gammavision	Multinuclide standard	2, 7	Pb-210			Pb-210	
37	18	38.89	22.22	38.89	Pulse Height Analysis Software	Multinuclide standard	1, 2, 7				Cd-109; Co-60; Cs-137; Mn-54; Pb-210; Zn-65	Cd-109
39	18	38.89	0.00	61.11	GENIE 2000	Multinuclide standard	7	Cs-137				Cd-109; Cs-134; Mn-54; Pb-210; Zn-65
42	17	35.29	5.88	58.82	GENIE 2000	Multinuclide standard	2, 4, 7	Pu-238; Pu-239+240				Cd-109; Co-60; Cs-134; Cs-137; Mn-54; Zn-65
43	19	94.74	0.00	5.26	WinQ for Sr-90; Apex/Genie for K-40, Cs-137	Multinuclide standard	1, 2, 7					Cd-109
44	13	69.23	7.69	23.08	GammaTrac	Multinuclide standard	1, 2, 7					Co-60; Mn-54; Zn-65
45	16	56.25	6.25	37.50	ANGES for spectrum/ROI processing	Multinuclide standard	1, 2, 7					Am-241; Cd-109; Co-60; Cs-134; Zn-65

Lab. code	Number of reported results	% A			% W			Gamma Software	Method of efficiency calibration	Applied corrections	Nuclides need corrective actions		
		%	%	N	%	%	N				Spinach	Soil	Water
48	18	72.22	22.22	5.56	5.56		Gamma Vision by	Multinuclide standard	1, 2, 3, 7		Zn-65		
49	18	88.89	0.00	11.11	11.11		GENIE 2000	Other	1, 2, 3, 4, 7		Pb-210		Cd-109
50	23	56.52	8.70	34.78	34.78		GENIE 2000	Multinuclide standard	1, 2, 3, 7	Pu-238; Pu-239+240; U-234; U-238	Cd-109		Am-241; Cs-137; Pb-210
51	15	86.67	6.67	6.67	6.67		GammaVision 6	Multinuclide standard	1, 2, 7				Cs-134
52	18	61.11	33.33	5.56	5.56		Apex	Mathematical approach	2, 3				Cs-134
53	18	83.33	16.67	0.00	0.00		GENIE 2000	Multinuclide standard	1, 2, 7				
55	18	88.89	11.11	0.00	0.00		Genie -2000\, -USA	Multinuclide standard	1, 2, 7				
56	18	94.44	0.00	5.56	5.56		GENIE 2000	Mathematical approach	1, 2, 3, 7				Cd-109
59	23	78.26	0.00	21.74	21.74		Gamma vision - Alpha vision	Multinuclide standard	1, 2, 4, 5, 7				Cd-109; Pb-210
60	8	25.00	0.00	75.00	75.00		Inter Winner	Selective standard nuclides	1, 7				Am-241; Pb-210
62	24	87.50	4.17	8.33	8.33		GENIE	Multinuclide standard	1, 2, 7				Cd-109
63	19	68.42	26.32	5.26	5.26		GENIE 2000	Multinuclide standard	2, 4, 6, 7				Cs-137

Lab. code	Number of reported results	% A	% W	% N	Gamma Software	Method of efficiency calibration	Applied corrections	Nuclides need corrective actions		
								Spinach	Soil	Water
64	18	83.33	11.11	5.56	GENIE 2000	Multinuclide standard	1, 2, 3, 7			Cs-134
65	22	81.82	9.09	9.09	Apex Gamma	Multinuclide standard	1, 2, 7	Pu-238; Pu-239+240		
66	5	80.00	0.00	20.00	NR	Multinuclide standard	NR	Sr-90		
67	14	64.29	14.29	21.43	GENIE 2000 with ProCount	Multinuclide standard	1, 2, 7		Cd-109	Cd-109; Cs-134
69	24	62.50	12.50	25.00	Genie-VMS 4.2	Multinuclide standard	1, 2, 3, 7	Am-241; K-40	Cd-109; Pb-210; Zn-65	Cs-134
70	16	75.00	25.00	0.00	InterWinner 6.0	Multinuclide standard	1, 2, 7			
71	11	45.45	9.09	45.45	Gamma vision 32	Multinuclide standard	1, 2, 7	K-40	Zn-65	Co-60; Cs-134; Mn-54
73	18	55.56	5.56	38.89	GENIE 2000 v. 3.0	Multinuclide standard	1, 2, 7		Am-241; Pb-210	Am-241; Cd-109; Cs-134; Mn-54; Pb-210
75	15	40.00	13.33	46.67	NR	NR	NR		Am-241; Cd-109; Cs-134	Co-60; Cs-134; Cs-137; Pb-210
76	4	0.00	0.00	100.00	NR	Multinuclide standard	NR		Cs-137; Mn-54	Cs-137; Mn-54
77	19	57.89	36.84	5.26	GENIE 2000	Multinuclide standard	1, 2, 3, 7		Zn-65	

Lab. code	Number of reported results	% A	% W	% N	Gamma Software	Method of efficiency calibration	Applied corrections	Nuclides need corrective actions		
								Spinach	Soil	Water
78	18	83.33	5.56	11.11	Gamma Vision 32 Version 5.30	Multinuclide standard	1, 2, 3, 7	Pb-210		Cs-134
79	16	0.00	12.50	87.50	GENIE 2000	Other	2, 7	Cs-137; K-40	Am-241; Co-60; Cs-134; Cs-137; Mn-54; Zn-65	Am-241; Co-60; Cs-134; Cs-137; Mn-54; Zn-65
80	19	47.37	5.26	47.37	own software	Selective standard nuclides	2, 7	Cs-137; K-40	Co-60; Cs-137; Mn-54; Pb-210	Am-241; Cs-134; Pb-210
81	18	50.00	0.00	50.00	Meastro 32	Multinuclide standard	1, 2, 7	Am-241; Pu-238; Pu-239+240; Sr-90; U-234; U-238	Cs-134; Zn-65	Cs-137
82	16	93.75	0.00	6.25	NR	NR	1, 2, 7		Pb-210	
84	16	81.25	6.25	12.50	GENIE ESP VMS Procount	Multinuclide standard	2, 7		Cd-109	Am-241
85	24	58.33	4.17	37.50	Accuspec	Multinuclide standard	1, 2, 3, 7	Am-241; Pu-238; Pu-239+240; Sr-90; U-238	Mn-54; Pb-210	Am-241; Cd-109
86	12	16.67	41.67	41.67	GENIE 2000	Multinuclide standard	1, 2, 7	Cs-137	Cd-109; Cs-134	Mn-54; Zn-65
87	18	83.33	0.00	16.67	GAMMA VISION V.6.06	Multinuclide standard	1, 2, 6, 7			Cs-134; Mn-54; Pb-210

Lab. code	Number of reported results	% A	% W	% N	Gamma Software	Method of efficiency calibration	Applied corrections	Nuclides need corrective actions		
								Spinach	Soil	Water
88	16	87.50	12.50	0.00	Interwinner 5.0	Multinuclide standard	1, 2, 4, 7			
89	16	0.00	12.50	87.50	GENIE 2000	Multinuclide standard	7	Cs-137; K-40 Zn-65	Am-241; Cd-109; Cs-134; Mn-54; Zn-65	Am-241; Cd-109; Co-60; Cs-134; Cs-137; Mn-54; Zn-65;
90	24	87.50	4.17	8.33	Gamma Vision	Selective standard nuclides	1, 2	U-234; U-238		
91	13	7.69	0.00	92.31	InterWinner 6.0	Multinuclide standard	3, 7	Cs-137; K-40 Mn-54; Zn-65	Cd-109; Cs-134; Cs-137; Mn-54; Zn-65	Co-60; Cs-134; Cs-137; Mn-54; Zn-65
92	18	38.89	27.78	33.33	GENIE 2000	Multinuclide standard	NR	Cs-137; K-40	Cd-109; Cs-134	Cs-134; Pb-210
93	18	66.67	16.67	16.67	InterWinner 6.1	Multinuclide standard	1, 2, 7			Co-60; Cs-137; Pb-210
95	18	38.89	0.00	61.11	GENIE2k	Multinuclide standard	2, 7	Cs-137; K-40	Am-241; Cd-109; Co-60; Cs-134; Cs-137; Mn-54; Pb-210; Zn-65	Cs-134; Cs-134; Cs-134
96	22	45.45	0.00	54.55	Gamma Vision G53W4.21	Multinuclide standard	1, 7	Cs-137; K-40; Sr-90; U-234; U-238	Am-241; Cd-109; Co-60; Cs-137; Mn-54; Zn-65	

Lab. code	Number of reported results	% A	% W	% N	Gamma Software	Method of efficiency calibration	Applied corrections	Nuclides need corrective actions		
								Spinach	Soil	Water
97	14	42.86	42.86	14.29	GENIE 2000	Multinuclide standard	1, 2, 7	Cd-109		
98	15	20.00	6.67	73.33	software for gamma spectrometry	Multinuclide standard	1, 2, 7	Cd-109; Co-60; Cs-137; Mn-54; Zn-65	Cd-109; Co-60; Cs-134; Cs-137; Mn-54; Zn-65	
99	18	72.22	11.11	16.67	GENIE 2000	Multinuclide standard	1, 2, 3, 4, 6, 7	Pb-210	Am-241; Pb-210	
101	16	81.25	0.00	18.75	In house	Selective standard nuclides	1, 2, 3, 5, 6, 7	Am-241; Cd-109; Cs-134		
102	22	54.55	9.09	36.36	GENIE-2000	Multinuclide standard	3	Pu-238; Pu-239+240; U-234; U-238	Am-241; Cd-109; Pb-210	Mn-54
103	23	26.09	30.43	43.48	VMS	Multinuclide standard	2, 3, 6, 7	Am-241; Cs-137; K-40; Pu-239+240	Pb-210	Am-241; Cs-134; Mn-54; Pb-210; Zn-65
104	21	100.00	0.00	0.00	In House	Multinuclide standard	2, 7			
105	24	95.83	0.00	4.17	Gamma-Vision 6.01	Multinuclide standard	1, 2, 3, 4, 5, 6, 7			Mn-54
107	18	88.89	5.56	5.56	GammaVision for analysis, Maestro for data acquisition	Multinuclide standard	1, 2, 3, 7			Cs-134

Lab. code	Number of reported results	% A	% W	% N	Gamma Software	Method of efficiency calibration	Applied corrections	Nuclides need corrective actions		
								Spinach	Soil	Water
108	19	26.32	0.00	73.68	INTERWINNER VERSION 4.1 and for alpha counting MAESTRO OCTE-	Multinuclide standard	2, 7	Cs-137; K-40; Pu-238; Pu-239+240	Cd-109; Co-60; Cs-134; Cs-137; Mn-54; Zn-65	Co-60; Cs-134; Mn-54; Zn-65
110	16	87.50	6.25	6.25	GENIE 2000 version V1.3,1999	Multinuclide standard	1, 2, 3, 4, 5, 6, 7		Cs-134	
111	5	100.00	0.00	0.00	GENIE 2000	Other	7			
112	22	81.82	13.64	4.55	GENIE-2000 2.1	Multinuclide standard	1, 2, 3, 6, 7			Cd-109
113	24	91.67	4.17	4.17	GENIE 2000	Selective standard nuclides	1, 2, 3, 5, 7		Cd-109	
114	24	62.50	8.33	29.17	EASY View 1224- 534 Spectrum GENIE 2000; Gamma Vision	Multinuclide standard	2, 3, 7	Pu-238; Pu-239+240; U-234; U-238	Cd-109	Am-241; Cd-109
115	18	94.44	0.00	5.56	GENIE 2000	Mathematical approach	1, 2, 3, 4, 5, 6, 7		Cd-109	
116	20	100.00	0.00	0.00	SEIKO EG&G	Multinuclide standard	2, 3, 5, 7			
117	18	83.33	0.00	16.67	GSA Wingamma	Multinuclide standard	2, 7		Pb-210	Cs-137; Zn-65

Lab. code	Number of reported results	% A			% W			% N			Gamma Software	Method of efficiency calibration	Applied corrections	Nuclides need corrective actions		
									Spinach	Soil				Water		
118	22	50.00	0.00	50.00	50.00	0.00	50.00	GENIE 2000	Multinuclide standard	1, 2, 7	Am-241	Am-241; Cd-109; Co-60; Cs-134; Cs-137; Mn-54; Pb-210; Zn-65				
119	20	90.00	0.00	10.00	GammaW for Windows	Multinuclide standard	1, 2, 5, 7		Cd-109; Pb-210							
120	16	75.00	0.00	25.00	GENIE 2000	Selective standard nuclides	1, 2, 7		Cd-109		Am-241; Cd-109; Zn-65					
121	16	100.00	0.00	0.00	Gamma vision 32	Multinuclide standard	2, 7									
122	18	50.00	27.78	22.22	Genie-2000 & LabSOCS	Mathematical approach	1, 2, 3, 4, 5, 6, 7		Co-60; Zn-65		Co-60; Zn-65					
123	13	38.46	23.08	38.46	Aptec Version 7.04.00.03	Multinuclide standard	1, 2, 7		Sr-90		Co-60; Cs-134					
124	22	68.18	13.64	18.18	IW 4.1 for gamma and manual for alpha	Selective standard nuclides	1, 7		K-40		Cd-109; Pb-210	Pb-210				
125	11	18.18	18.18	63.64	NR	NR	NR				Co-60; Zn-65	Co-60; Cs-134; Cs-137; Mn-54; Zn-65				
126	21	80.95	4.76	14.29	Various	Other	1, 2, 3, 7		Sr-90; U-234		Cd-109					

Lab. code	Number of reported results	% A	% W	% N	Gamma Software	Method of efficiency calibration	Applied corrections	Nuclides need corrective actions		
								Spinach	Soil	Water
127	21	66.67	0.00	33.33	GENIE-2000	Multinuclide standard	2, 7	Sr-90	Am-241; Cd-109; Cs-134; Pb-210	Co-60; Cs-134
128	15	100.00	0.00	0.00	Genie-2000; Sr-90 Berthold LB 770W in-PC	Multinuclide standard	1, 2, 5, 7			
129	20	20.00	20.00	60.00	Target	Other	2, 6, 7	K-40; Pu-239+240; Sr-90;	Am-241; Mn-54; Zn-65	Co-60; Cs-134; Cs-137; Mn-54; Pb-210; Zn-65
130	18	44.44	16.67	38.89	Gamma Vision 5.2	Multinuclide standard	1, 2, 3, 5, 6, 7		Am-241; Cd-109; Co-60; Cs-134; Mn-54; Zn-65	Am-241
131	23	82.61	8.70	8.70	APEX for gamma	Selective standard nuclides	1, 7	Am-241	Cd-109	
132	12	0.00	8.33	91.67	NR	NR	NR		Cd-109; Co-60; Cs-134; Cs-137; Mn-54; Zn-65	Co-60; Cs-134; Cs-137; Mn-54; Zn-65
133	18	61.11	38.89	0.00	GENIE-2000	Mathematical approach	1, 2, 3, 7			
134	12	91.67	0.00	8.33	EMCAPLUS 3.0	Selective standard nuclides	2, 7			Co-60
135	20	85.00	0.00	15.00	ISOCS, GENIE 2000	Multinuclide standard	1, 2, 3, 4, 5, 6, 7		Pb-210	Mn-54; Pb-210

Lab. code	Number of reported results	% A	% W	% N	Gamma Software	Method of efficiency calibration	Applied corrections	Nuclides need corrective actions		
								Spinach	Soil	Water
136	17	70.59	5.88	23.53	Gamma Vision	Multinuclide standard	2, 3, 7	Cd-109		Cd-109; Co-60; Cs-134
137	18	83.33	0.00	16.67	Omnigam	Multinuclide standard	2, 7	Cs-137; K-40		Pb-210
138	9	66.67	11.11	22.22	NR	Multinuclide standard	1, 2, 7	K-40	Am-241	
139	16	87.50	0.00	12.50	Gamma Vision V. 6.00	Multinuclide standard	1, 2, 4, 7	Am-241		Cs-134
140	13	84.62	7.69	7.69	Own	Selective standard nuclides	2, 7			Cs-134
142	18	77.78	11.11	11.11	APEX gamma analysis	Multinuclide standard	1, 2, 3, 4, 5, 6, 7			Cd-109; Pb-210
143	16	81.25	12.50	6.25	Ind., Inc., Genie VMS	Multinuclide standard	1, 2, 3, 7			Cd-109
144	19	84.21	15.79	0.00	GAMMA VISION - 32 Model A66 - B32	Multinuclide standard	1, 2, 4, 7			
145	13	53.85	46.15	0.00	SAMPO 90	Multinuclide standard	2, 7			
146	16	62.50	12.50	25.00	GENIE 2000 Basic Spectroscopy FitzPeaks	Multinuclide standard	1, 2, 3, 7			Cs-134; Mn-54; Zn-65

Lab. code	Number of reported results	% A	% W	% N	Gamma Software	Method of efficiency calibration	Applied corrections	Nuclides need corrective actions		
								Spinach	Soil	Water
147	22	63.64	18.18	18.18	Gamma vision	Multinuclide standard	1, 2, 7	Pu-239+240; Sr-90	Pb-210	Co-60
148	14	35.71	7.14	57.14	APEX - GENIE 2000	Multinuclide standard	1, 2, 7	Cs-137	Cd-109; Co-60; Cs-134; Cs-137; Mn-54; Zn-65	Cs-134
149	17	88.24	11.76	0.00	GENIE 2000 - USA	Multinuclide standard	1, 2, 7			
150	23	86.96	0.00	13.04	GammaVision	Multinuclide standard	2, 3, 5, 7	Pu-238; Pu-239+240; U-234;		
151	19	52.63	5.26	42.11	GENIE 2000	Mathematical approach	1, 2, 3, 4, 5, 6, 7		Am-241; Cd-109; Co-60; Cs-137; Mn-54; Pb-210; Zn-65	Cs-134
152	20	55.00	5.00	40.00	Genie-2000	Multinuclide standard	1, 2, 7		Am-241; Cd-109; Co-60; Cs-134; Cs-137; Mn-54; Zn-65	Cs-134
153	16	37.50	0.00	62.50	NR	NR	NR		Cd-109; Cs-137; Mn-54; Zn-65	Am-241; Cd-109; Co-60; Cs-137; Mn-54; Pb-210
154	19	63.16	10.53	26.32	GENIE 2000	Multinuclide standard	1, 2, 7	Cs-137; K-40	Cd-109; Mn-54	Cs-134

Lab. code	Number of reported results	% A			% W			Gamma Software	Method of efficiency calibration	Applied corrections	Nuclides need corrective actions		
		%	%	%	%	%	%				Spinach	Soil	Water
155	11	90.91	0.00	9.09	GENIE 2000 3.0, Origin 7.0			Other	1, 2, 4, 7	Mn-54			
156	18	83.33	0.00	16.67	GENIE2000			Multinuclide standard	1, 2, 3, 7	Cd-109; Cs-134		Cs-134	
157	18	61.11	5.56	33.33	LabSOCS software v4.0, GENIE 2000 Analysis software			Mathematical approach	1, 2, 3, 7	Co-60; Cs-134; Zn-65	Co-60; Cs-134; Zn-65		
158	6	0.00	0.00	100.00	NR			Selective standard nuclides	NR	Pu-239+240; U-234; U-238;	Cs-134; Cs-137	Am-241	
160	17	76.47	11.76	11.76	Gamma Vision-32 Version 6			Multinuclide standard	1, 2, 7	Pb-210		Cs-134	
161	24	83.33	8.33	8.33	GENIE 2000			Multinuclide standard	1, 2, 3, 7	U-234; U-238			
162	18	55.56	5.56	38.89	SPECTRAN			Multinuclide standard	2, 3, 7	Cd-109; Cs-134		Am-241; Cs-134; Cs-137; Mn-54; Pb-210	
163	24	79.17	4.17	16.67	NR			Multinuclide standard	NR	Am-241;	Cd-109	Mn-54; Zn-65	
164	24	66.67	4.17	29.17	GENIE 2000			Multinuclide standard	1, 2, 7	Cs-137; K-40; Pu-238; Pu-239+240; Sr-90;	Cs-134	Cs-134	

Lab. code	Number of reported results	% A	% W	% N	Gamma Software	Method of efficiency calibration	Applied corrections	Nuclides need corrective actions		
								Spinach	Soil	Water
165	13	38.46	7.69	53.85	Maestro 3.2	Other	1	Cs-137; K-40	Mn-54	Cs-134; Cs-137; Mn-54; Zn-65
166	18	88.89	0.00	11.11	GENIE 2000	Multinuclide standard	1, 2, 3, 5, 6, 7		Cd-109	Pb-210
167	23	52.17	4.35	43.48	home made P.I.M.P. (gamma), final calculations MS Excel	Multinuclide standard	1, 2, 7	Am-241; Mn-54; Pb-210; Zn-65		Cd-109; Co-60; Cs-134; Cs-137; Mn-54; Zn-65
168	14	42.86	7.14	50.00	EG&G Gamma Vision v. 5.1	Multinuclide standard	2, 7	K-40	Cd-109; Cs-137; Mn-54; Zn-65	Co-60; Cs-134
169	18	72.22	0.00	27.78	Gamma vision	Multinuclide standard	2, 3, 7	Cs-137	Cd-109	Cd-109; Cs-134; Pb-210
172	18	66.67	5.56	27.78	GENIE 2000	Multinuclide standard	1, 2, 3, 7	Cs-137; K-40	Cd-109	Mn-54; Pb-210
173	11	27.27	9.09	63.64	Excel, GENIE 2000	Multinuclide standard	1, 2, 7	Cs-137; K-40; Sr-90;	Mn-54	Co-60; Cs-134; Cs-137
174	10	50.00	20.00	30.00	GENIE 2000, Excel	Multinuclide standard	1, 2, 7	Cs-137	Mn-54	Cs-137
175	14	28.57	7.14	64.29	Maestro	Multinuclide standard	1, 2, 7	Cs-137; K-40	Cd-109; Zn-65	Cd-109; Co-60; Cs-137; Mn-54; Zn-65
176	19	73.68	10.53	15.79	Interwinner 6.0	Multinuclide standard	1, 2, 7		Cd-109	Cd-109; Cs-134

Lab. code	Number of reported results	% A	% W	% N	Gamma Software	Method of efficiency calibration	Applied corrections	Nuclides need corrective actions		
								Spinach	Soil	Water
177	18	72.22	11.11	16.67	GENIE	Multinuclide standard	1, 2, 7	Am-241; Pu-239+240		Mn-54
178	18	88.89	11.11	0.00	Gamma Vision-32	Selective standard nuclides	2, 7			
179	21	66.67	0.00	33.33	GAMMA VISION 6.01	Multinuclide standard	1, 2, 7	Am-241; Pu-238; U-234; U-238	Am-241; Cd-109	Am-241
182	16	31.25	6.25	62.50	NR	Selective standard nuclides	2	Pu-239+240; U-234; U-238;	Cd-109; Pb-210	Cd-109; Co-60; Cs-134; Cs-137; Mn-54
184	18	61.11	11.11	27.78	Gamma vision	Multinuclide standard	1, 2, 3, 7	K-40	Cd-109; Pb-210	Pb-210; Zn-65
185	24	50.00	25.00	25.00	Maestro A65-B32	Multinuclide standard	1, 2, 7	Pu-238; Sr-90	Cd-109; Pb-210	Cd-109; Mn-54
186	18	88.89	0.00	11.11	Genie2K	Multinuclide standard	1, 2, 7		Pb-210	Pb-210
187	18	88.89	5.56	5.56	GENIE 2000	Multinuclide standard	2, 5, 6, 7		Zn-65	
188	16	93.75	0.00	6.25	Interwinner 6.0	Multinuclide standard	2, 3, 7	K-40		
189	24	95.83	4.17	0.00	GENIE 2000	Multinuclide standard	1, 2, 7			
190	18	88.89	0.00	11.11	Gamma Trac	Multinuclide standard	1, 2, 3, 6, 7		Cd-109	Cd-109

Lab. code	Number of reported results	% A	% W	% N	Gamma Software	Method of efficiency calibration	Applied corrections	Nuclides need corrective actions			
								Spinach	Soil	Water	
191	16	31.25	0.00	68.75	Gamma Vision 32	Multinuclide standard	NR	Cs-137	Am-241; Cd-109; Co-60; Cs-134; Cs-137; Mn-54; Zn-65	Cd-109; Co-60; Cs-134	
192	21	85.71	0.00	14.29	GENIE 2000	Multinuclide standard	1, 2, 3, 7	U-234	Pb-210	Cs-134	
194	19	57.89	15.79	26.32	GENIE 2000	Multinuclide standard	1, 2, 3, 7	K-40; Sr-90	Cd-109; Pb-210	Zn-65	
195	17	17.65	0.00	82.35	GENIE 2000	Multinuclide standard	1, 2, 7	Cs-137; K-40; Sr-90	Cd-109; Co-60; Cs-134; Cs-137; Mn-54; Zn-65	Co-60; Cs-137; Mn-54; Pb-210; Zn-65	
196	21	85.71	9.52	4.76	Inter Winner 6	Multinuclide standard	2, 3, 5, 7		Pb-210		
197	19	63.16	10.53	26.32	NR	Multinuclide standard	1, 2, 3, 7	Cs-137; K-40; Sr-90		Cd-109; Cs-134	
198	16	43.75	18.75	37.50	GENIE-2000	Multinuclide standard	1, 2, 7		Am-241; Cd-109; Mn-54	Am-241; Co-60; Cs-134	
199	17	94.12	0.00	5.88	GENIE 2000	Multinuclide standard	1, 2, 3, 7	Sr-90;			
200	18	94.44	0.00	5.56	GENIE 2000	Mathematical approach	1, 2, 3, 4, 5, 6, 7		Cd-109		
201	15	73.33	6.67	20.00	GENIE 2000	Multinuclide standard	1, 2, 7		Cd-109; Cs-134	Cs-134	
202	21	100.00	0.00	0.00	Gamma Vision (Ametek)	Multinuclide standard	1, 2, 3, 4, 7				

Lab. code	Number of reported results	% A	% W	% N	Gamma Software	Method of efficiency calibration	Applied corrections	Nuclides need corrective actions		
								Spinach	Soil	Water
203	21	95.24	0.00	4.76	INTERWINNER 6.0	Multinuclide standard	1, 2, 3, 4, 5, 7	Sr-90;		
204	18	72.22	5.56	22.22	GENIE 2000	Multinuclide standard	2, 7	Co-60; Cs-137; Mn-54	Zn-65	
206	15	53.33	0.00	46.67	GENIE 2000	Multinuclide standard	2	Cd-109		Am-241; Cd-109; Co-60; Cs-137; Mn-54; Zn-65
207	18	83.33	5.56	11.11	GENIE 2000v 1.2	Multinuclide standard	1, 2, 7			Cs-137; Mn-54
208	24	79.17	4.17	16.67	GENIE 2000	Multinuclide standard	1, 2, 3, 5, 6, 7			Cs-137; K-40; U-234; U-238
209	18	100.00	0.00	0.00	GENIE 2000	Mathematical approach	1, 2, 3, 4, 5, 6, 7			
210	16	81.25	18.75	0.00	GENIE 2000 Version 3.0	Multinuclide standard	1, 2, 5, 7			
212	15	46.67	6.67	46.67	NR	NR	1, 2, 7			Am-241; Cd-109; Co-60; Cs-134; Cs-137; Mn-54; Zn-65
213	18	66.67	5.56	27.78	Gamma Vision 5.10	Multinuclide standard	1, 2, 7			Am-241; Cs-134
214	18	77.78	11.11	11.11	Gamma Vision 32 v.	Multinuclide standard	2, 3, 7			Cs-134; Pb-210

Lab. code	Number of reported results	% A	% W	% N	Gamma Software	Method of efficiency calibration	Applied corrections	Nuclides need corrective actions			
								Spinach	Soil	Water	
6.01											
215	18	94.44	0.00	5.56	GENIE 2000	Multinuclide standard	1, 2, 7				Zn-65
216	17	76.47	11.76	11.76	MAESTRO-32 AND OMNIGAM	Multinuclide standard	1, 2, 7	Am-241			Am-241
217	19	47.37	26.32	26.32	GENIE 2000	Selective standard nuclides	1, 2, 7	K-40	Am-241; Cd-109		Cs-137; Mn-54
218	15	93.33	0.00	6.67	ASAP	Selective standard nuclides	2, 3, 5		Cd-109		
220	17	41.18	23.53	35.29	GENIE 2000	Multinuclide standard	2, 3, 4, 5, 6, 7	Cs-137			Cd-109; Mn-54; Pb-210
222	18	50.00	22.22	27.78	GENIE 2000 -PC	Multinuclide standard	2, 7	Cs-137; K-40; U-238			Cs-137; Mn-54
223	15	26.67	26.67	46.67	GENIE 2000	Multinuclide standard	1, 2, 5, 7	Cs-137; K-40			Am-241; Co-60; Mn-54
224	2	0.00	0.00	100.00	OXFR OASIS ver. 4.0	Multinuclide standard	1, 7	U-234; U-238			
225	16	62.50	6.25	31.25	GENIE 2000	Multinuclide standard	1, 2, 4, 7				Am-241; Cs-134; Zn-65
226	16	75.00	18.75	6.25	Ecogamma	Multinuclide standard	3, 7				Sr-90

Lab. code	Number of reported results	% A	% W	% N	Gamma Software	Method of efficiency calibration	Applied corrections	Nuclides need corrective actions		
								Spinach	Soil	Water
227	16	93.75	0.00	6.25	GENIE 2000 Ver 3.0b	Multinuclide standard	1, 2, 7		Cd-109	
228	21	80.95	4.76	14.29	GammaVision (Ametek)	Multinuclide standard	1, 2, 4, 7			Am-241; Cd-109; Cs-134
229	21	90.48	9.52	0.00	NR	Multinuclide standard	7			
230	18	50.00	11.11	38.89	GENIE 2000	Multinuclide standard	2, 3, 7	Cs-137; K-40	Cd-109; Mn-54; Pb-210	Cs-134; Pb-210
231	20	25.00	20.00	55.00	GENIE 2000 (Alpha Analyst)	Multinuclide standard	1, 2, 3, 7	K-40; U-234; U-238	Cs-134	Cd-109; Co-60; Cs-134; Cs-137; Mn-54; Pb-210; Zn-65;
232	18	16.67	16.67	66.67	GENIE2K	Mathematical approach	2, 3, 5, 6, 7		Am-241; Co-60; Cs-134; Cs-137; Mn-54; Pb-210; Zn-65	Co-60; Cs-134; Cs-137; Mn-54; Zn-65
233	17	64.71	17.65	17.65	GENIE 2000	Multinuclide standard	1, 2, 7		Cd-109; Cs-134	Pb-210
234	12	66.67	25.00	8.33	GammaVision	Selective standard nuclides	1, 2, 3, 5, 7			Zn-65
235	18	77.78	5.56	16.67	GammaTrack	Multinuclide standard	1, 2, 3, 4, 5, 6, 7	Cs-137		Am-241; Pb-210

Lab. code	Number of reported results	% A	% W	% N	Gamma Software	Method of efficiency calibration	Applied corrections	Nuclides need corrective actions		
								Spinach	Soil	Water
236	18	44.44	5.56	50.00	Self-made\, Gamma-Analysis	Mathematical approach	2, 3, 7	K-40	Am-241; Cd-109; Co-60; Cs-134; Cs-137; Mn-54; Pb-210; Zn-65	
237	24	95.83	0.00	4.17	Interwinner 5.0	Multinuclide standard	1, 2, 4, 5, 6, 7			Zn-65
238	10	40.00	30.00	30.00	Gamma Vision 6.01	Selective standard nuclides	2, 7		Cd-109; Pb-210; Zn-65	
239	21	85.71	0.00	14.29	GENIE-VMS	Multinuclide standard	2, 7	U-234; U-238		Pb-210
240	19	57.89	21.05	21.05	Gamma Vision	Multinuclide standard	1, 2, 3, 7		Cd-109; Cs-134; Zn-65	Cd-109
241	16	68.75	6.25	25.00	GENIE 2000 v 3.1	Mathematical approach	2, 7	Cs-137; K-40	Cd-109	Cs-134
242	16	50.00	31.25	18.75	GENIE 2000 Version 3.1	Multinuclide standard	2	Cs-137	Am-241	Am-241
243	20	20.00	0.00	80.00	MAESTRO II EGG&	Selective standard nuclides	1, 2, 3, 7	Cs-137; U-238	Am-241; Cd-109; Co-60; Cs-134; Cs-137; Mn-54; Pb-210; Zn-65	Am-241; Cd-109; Co-60; Cs-134; Cs-137; Mn-54; Pb-210; Zn-65
244	8	62.50	0.00	37.50	NR	NR	NR			Cd-109; Cs-134; Zn-65

Lab. code	Number of reported results	% A	% W	% N	Gamma Software	Method of efficiency calibration	Applied corrections	Nuclides need corrective actions			
								Spinach	Soil	Water	
245	18	94.44	5.56	0.00	NR	Multinuclide standard	1, 2, 3, 4, 7				
246	16	37.50	12.50	50.00	GENIE -VMS	Multinuclide standard	2, 7	Am-241; Cd-109	Am-241; Co-60; Cs-134; Cs-137; Zn-65		
248	24	58.33	16.67	25.00	GENIE 2000 V3.1	Multinuclide standard	2, 3, 7	Am-241; U-234; U-238	Pb-210	Co-60; Cs-134	
249	21	95.24	0.00	4.76	Gamma Vision 5.1\,	Multinuclide standard	1, 2, 7	K-40			
250	23	86.96	0.00	13.04	GENIE 2000	Multinuclide standard	2, 7	Pu-239+240	Cd-109	Pb-210	
251	21	42.86	14.29	42.86	GENIE 2000	Multinuclide standard	1, 2, 4, 5, 7	Cs-137	Am-241; Cd-109; Cs-134; Cs-137	Am-241; Cd-109; Co-60; Cs-134	
252	16	93.75	0.00	6.25	GammaTrac	Multinuclide standard	1, 2, 3, 7			Cd-109	
253	19	84.21	0.00	15.79	GENIE 2000 V3.1	Multinuclide standard	1, 2, 3, 4, 5, 7	U-238	Pb-210	Pb-210	
254	18	77.78	11.11	11.11	GENIE 2000	Multinuclide standard	1, 2, 7	K-40	Pb-210		
255	16	50.00	0.00	50.00	NR	Multinuclide standard	NR		Co-60; Cs-134; Cs-137; Mn-54; Zn-65	Am-241; Cd-109; Mn-54	

Lab. code	Number of reported results	%			Gamma Software	Method of efficiency calibration	Applied corrections	Nuclides need corrective actions		
		A	W	N				Spinach	Soil	Water
256	15	40.00	6.67	53.33	GENIE 2000	Selective standard nuclides	7	Am-241; Cs-134; Pb-210; Zn-65	Co-60; Cs-134; Cs-137; Zn-65	
257	18	83.33	5.56	11.11	SPUNAL	Multinuclide standard	1, 2	Cs-137; K-40		
258	14	42.86	0.00	57.14	Software specially prepared for the Laboratory works	Selective standard nuclides	1, 2	Cs-137; K-40	Am-241; Co-60; Cs-134; Cs-137; Mn-54; Zn-65	
259	16	87.50	12.50	0.00	GENIE 2000	Multinuclide standard	1, 7			
260	20	90.00	0.00	10.00	GENIE 2000	Selective standard nuclides	1, 7	Am-241	Cd-109	
261	16	81.25	6.25	12.50	Gamma vision	Multinuclide standard	1, 2, 3, 7		Cd-109; Co-60	
262	18	88.89	0.00	11.11	GENIE 2000	Multinuclide standard	1, 2, 7			Am-241; Cd-109
263	16	100.00	0.00	0.00	Gamma Vision and Gespecor	Multinuclide standard	1, 2, 3, 7			
264	18	88.89	11.11	0.00	Gamma Vision 6.07	Multinuclide standard	1, 2, 3, 4, 7			
265	18	83.33	5.56	11.11	GENIE 2000	Multinuclide standard	1, 2, 5, 7		Am-241	Zn-65

Lab. code	Number of reported results	% A	% W	% N	Gamma Software	Method of efficiency calibration	Applied corrections	Nuclides need corrective actions		
								Spinach	Soil	Water
268	17	17.65	41.18	41.18	MAESTRO	Mathematical approach	2, 7	Am-241; Cd-109; Cs-137; Mn-54	Cd-109; Cs-134; Pb-210	
269	20	75.00	20.00	5.00	GENIE 2000	Multinuclide standard	1, 7		Cs-134	
270	19	57.89	15.79	26.32	Gamma Vision	Multinuclide standard	2, 3, 4, 5, 6, 7	U-234; U-238	Cd-109	Cs-134; Zn-65
271	8	100.00	0.00	0.00	NR	NR	NR			
272	18	94.44	5.56	0.00	Winner 6.0	Multinuclide standard	1, 2, 3, 7			
273	4	100.00	0.00	0.00	AkWin	Selective standard nuclides				
275	18	88.89	11.11	0.00	Genie-VMS	Multinuclide standard	2, 7			
277	16	75.00	0.00	25.00	Gammavision-32 ver. 5.1 (EG&G)	Multinuclide standard	1, 2, 7	K-40	Cd-109	Am-241; Cs-134
278	18	61.11	16.67	22.22	spectran AT	Multinuclide standard	1, 2, 7		Cd-109; Zn-65	Cd-109; Zn-65
279	18	100.00	0.00	0.00	GAMMA-99	Selective standard nuclides	2, 3, 5, 7			
280	17	52.94	17.65	29.41	NR	Multinuclide standard	2, 7		Am-241; Zn-65	Co-60; Cs-134; Mn-54

Lab. code	Number of reported results	% A	% W	% N	Gamma Software	Method of efficiency calibration	Applied corrections	Nuclides need corrective actions		
								Spinach	Soil	Water
281	15	53.33	0.00	46.67	GENIE 2000	Multinuclide standard	2, 7	Cs-137; K-40	Pb-210; Zn-65	Cs-134; Mn-54; Zn-65
284	19	31.58	21.05	47.37	Genie2000 and Tricarb 2200CA software	Multinuclide standard	NR	Cs-137; K-40	Cd-109; Co-60; Cs-137; Mn-54; Zn-65	Cd-109; Pb-210
285	18	66.67	22.22	11.11	GENIE 2000	Multinuclide standard	1, 2, 7		Cd-109	Cs-134
286	20	55.00	15.00	30.00	GammaVision	Multinuclide standard	2, 3, 7		Cd-109; Mn-54	Cd-109; Cs-134; Cs-137; Zn-65
287	17	70.59	23.53	5.88	GENIE 2000	Multinuclide standard	1, 2, 7			Mn-54
288	20	100.00	0.00	0.00	Interwinner	Multinuclide standard	1, 2, 3, 5, 7			
290	22	86.36	4.55	9.09	Gamma Vision-32	Multinuclide standard	1, 2, 3, 7	Sr-90	Pb-210	
291	21	61.90	19.05	19.05	Gamma vision	Multinuclide standard	1, 2, 4, 7	U-234; U-238		Mn-54; Zn-65
292	18	100.00	0.00	0.00	InterWinner 4.1.	Multinuclide standard	1, 7			
293	21	85.71	4.76	9.52	WINNER 6.0	Multinuclide standard	1, 2, 7		Am-241	Cs-134
295	20	80.00	5.00	15.00	GENIE 2000	Multinuclide standard	1, 2, 3, 6, 7		Cd-109	Am-241; Cd-109

Lab. code	Number of reported results	% A	% W	% N	Gamma Software	Method of efficiency calibration	Applied corrections	Nuclides need corrective actions		
								Spinach	Soil	Water
296	20	80.00	10.00	10.00	NR	Multinuclide standard	2, 7	Pu-238; Sr-90		
297	24	83.33	8.33	8.33	Gamma vision 6.01	Multinuclide standard	1, 2, 3, 7	K-40		Mn-54
299	18	77.78	0.00	22.22	Genie2000	Mathematical approach	2	Sr-90	Cs-134	Am-241; Zn-65
300	17	35.29	23.53	41.18	GammaVision-32 V5.31	Multinuclide standard	1, 2, 7	K-40	Am-241; Pb-210	Co-60; Cs-137; Mn-54; Zn-65
302	16	56.25	0.00	43.75	NR	NR	NR		Cd-109; Pb-210	Cd-109; Cs-134; Mn-54; Pb-210; Zn-65
304	18	83.33	11.11	5.56	VISU GAMMA	Multinuclide standard	1, 2, 7		Cd-109	
305	20	80.00	0.00	20.00	LSRM-2000	Multinuclide standard	1, 2, 3, 6, 7	Pu-239+240	Cd-109	Am-241; Cd-109
306	18	61.11	0.00	38.89	Silena EMCAPLUS	Other	1, 2, 3, 7		Cd-109; Co-60; Cs-134; Pb-210	Cd-109; Cs-134; Pb-210
307	15	100.00	0.00	0.00	Gamma Vision 6.00	Multinuclide standard	1, 2, 5, 7			
308	19	36.84	5.26	57.89	GammaVision-32	Multinuclide standard	2, 7	K-40	Am-241; Cd-109; Cs-137; Mn-54; Pb-210; Zn-65	Am-241; Cd-109; Cs-134; Pb-210

Lab. code	Number of reported results	% A	% W	% N	Gamma Software	Method of efficiency calibration	Applied corrections	Nuclides need corrective actions		
								Spinach	Soil	Water
309	14	35.71	0.00	64.29	NUCLEUS PCA III	Multinuclide standard	1, 2, 7	Cs-137; K-40	Co-60; Cs-137; Zn-65	Am-241; Cd-109; Cs-134; Mn-54
310	19	89.47	0.00	10.53	WinQ, version 1.2	Selective standard nuclides	1, 2, 7	Cd-109		Cs-134
311	19	100.00	0.00	0.00	INTERGAMMA	Multinuclide standard	1, 2, 3, 7			
312	5	60.00	20.00	20.00	NR	NR	NR	Mn-54		
316	16	75.00	0.00	25.00	NR	NR	NR	Cd-109; Cs-134; Pb-210		Pb-210
317	17	82.35	5.88	11.76	GENIE 2000	Multinuclide standard	2, 6, 7	Cs-134		Cs-134
318	16	87.50	6.25	6.25	gamma vision	Multinuclide standard	1, 2, 5, 7			Cd-109
319	19	73.68	15.79	10.53	InterWinner Version 4.1	Multinuclide standard	1, 2, 7	K-40		Cs-134
320	18	44.44	22.22	33.33	GENIE 2000	Multinuclide standard	1, 2, 7	K-40	Cd-109; Cs-134	Cs-134; Mn-54; Zn-65
321	16	31.25	37.50	31.25	GENIE 2000	Other	1, 2, 7	Cs-137; K-40		Mn-54; Zn-65
322	16	68.75	18.75	12.50	Maestro32	Multinuclide standard	1, 2, 7			Cs-134

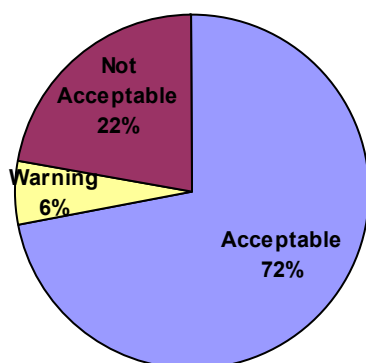
APPENDIX II. PERFORMANCE EVALUATION TABLES SORTED BY RADIONUCLIDE

All results listed in this Appendix are expressed in Bq/kg units at a reference date set to 15 October 2007. The abbreviations and calculation formulas used in the individual evaluation tables are explained in chapter 3 of this report.

The individual laboratory evaluation reports are presented in ascending order of the laboratory code.

Analyte: K-40 in spinach, IAEA-330

Target Value: 1188.0 ± 30.0 [Bq/kg]



Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel Bias	A1	A2	True	P	Prec	Final Score
1	1433	38	2.64	20.7	245	124	N	3.65	A	N
2	1291	30	2.32	8.7	103	109	A	3.43	A	A
3	1377	68	4.92	15.9	189	191	A	5.53	A	A
4	1180	43	3.64	-0.7	8	135	A	4.43	A	A
5	1166	68	5.83	-1.9	22	192	A	6.36	A	A
6	1304	52	3.99	9.8	116	155	A	4.72	A	A
7	1276	71	5.56	7.4	88	199	A	6.11	A	A
8	1053	66	6.27	-11.4	135	187	A	6.76	A	A
9	125	13	10.4	-89.5	1063	84	N	10.7	A	N
10	1112	37	3.33	-6.4	76	123	A	4.18	A	A
11	1207	110	9.11	1.6	19	294	A	9.46	A	A
12	1285	94	7.32	8.2	97	255	A	7.74	A	A
13	1301	99	7.61	9.5	113	267	A	8.02	A	A
14	1260	100	7.94	6.1	72	269	A	8.33	A	A
15	1440	80	5.56	21.2	252	220	N	6.1	A	N
16	1560	139	8.9	31.3	372	366	N	9.25	A	N
18	1441	122	8.43	21.3	253	323	A	8.8	A	A
19	749	27	3.65	-37.0	439	105	N	4.44	A	N
20	1240	75	6.05	4.4	52	208	A	6.55	A	A
21	1736	59	3.4	46.1	548	171	N	4.23	A	N
23	1190	110	9.24	0.2	2	294	A	9.58	A	A
24	1323	98	7.41	11.4	135	264	A	7.83	A	A
25	1190	80	6.7	0.2	2	220	A	7.16	A	A
26	1020	51	5	-14.1	168	153	N	5.6	A	W
27	906	88	9.72	-23.7	282	240	N	10.05	A	N
28	1344	164	12.2	13.1	156	430	A	12.46	A	A
29	1012	92	9.09	-14.8	176	250	A	9.44	A	A
30	1437	32	2.23	21.0	249	113	N	3.37	A	N
33	1292	66	5.11	8.8	104	187	A	5.7	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel Bias	A1	A2	True	P	Prec	Final Score
34	1273	42	3.3	7.2	85	133	A	4.15	A	A
35	1176	69	5.87	-1.0	12	194	A	6.39	A	A
36	1209	78	6.49	1.8	21	217	A	6.97	A	A
37	1335	104	7.81	12.4	147	280	A	8.21	A	A
39	1217	43	3.56	2.4	29	136	A	4.36	A	A
42	1220	60	4.92	2.7	32	173	A	5.53	A	A
43	1335	122	9.11	12.4	147	323	A	9.45	A	A
44	1038	71	6.84	-12.6	150	199	A	7.29	A	A
45	1170	50	4.27	-1.5	18	150	A	4.96	A	A
48	1244	46	3.7	4.7	56	142	A	4.48	A	A
49	1110	27	2.43	-6.6	78	104	A	3.51	A	A
50	1352	35	2.59	13.8	164	119	N	3.62	A	W
51	1247	61	4.89	5.0	59	175	A	5.51	A	A
52	1180	190	16.1	-0.7	8	496	A	16.3	N	W
53	1251	25	2	5.3	63	101	A	3.22	A	A
55	1245	26	2.09	4.8	57	102	A	3.28	A	A
56	1159	65	5.64	-2.4	29	186	A	6.18	A	A
59	1320	88	6.67	11.1	132	240	A	7.13	A	A
60	1100	140	12.73	-7.4	88	369	A	12.98	A	A
62	1260	60	4.76	6.1	72	173	A	5.39	A	A
63	1060	150	14.15	-10.8	128	395	A	14.37	A	A
64	1205	22	1.83	1.4	17	96	A	3.12	A	A
65	1276	181	14.18	7.4	88	473	A	14.41	A	A
66	1170	140	11.97	-1.5	18	369	A	12.23	A	A
67	1245	84	6.75	4.8	57	230	A	7.2	A	A
69	1410	60	4.26	18.7	222	173	N	4.95	A	N
70	1224	50	4.08	3.0	36	150	A	4.8	A	A
71	294	71	24.26	-75.2	894	200	N	24.39	N	N
73	1281	36	2.81	7.8	93	121	A	3.78	A	A
77	1244	15	1.24	4.7	56	87	A	2.81	A	A
78	1226	34	2.77	3.2	38	117	A	3.75	A	A
79	12	0	2.61	-99.0	1177	77	N	3.63	A	N
80	1699	100	5.91	43.0	511	270	N	6.43	A	N
81	1218	42	3.42	2.5	30	132	A	4.25	A	A
84	1316	75	5.66	10.8	128	207	A	6.2	A	A
85	1363	91	6.68	14.7	175	247	A	7.14	A	A
86	1080	30	2.78	-9.1	108	109	A	3.75	A	A
87	1308	45	3.44	10.1	120	140	A	4.27	A	A
88	1300	70	5.38	9.4	112	196	A	5.95	A	A
89	765	20	2.61	-35.6	423	93	N	3.63	A	N
90	1200	100	8.33	1.0	12	269	A	8.71	A	A
91	1951	457	23.44	64.2	763	1183	A	23.58	N	N
92	797	40	5.03	-32.9	391	129	N	5.63	A	N
93	1192	15	1.25	0.4	4	86	A	2.82	A	A
95	608	42	6.91	-48.8	580	133	N	7.35	A	N
96	10300	336	3.26	767.0	9112	870	N	4.13	A	N
97	1263	17	1.34	6.4	75	89	A	2.86	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel Bias	A1	A2	True	P	Prec	Final Score
98	1146	28	2.46	-3.5	42	106	A	3.53	A	A
99	1317	20	1.52	10.9	129	93	N	2.95	A	W
101	1126	45	4	-5.3	63	140	A	4.73	A	A
102	1250	62	4.96	5.2	62	178	A	5.57	A	A
103	926	0	0	-22.1	262	77	N	2.53	A	N
104	1110	70	6.31	-6.6	78	196	A	6.79	A	A
105	1238	29	2.36	4.2	50	108	A	3.46	A	A
107	1200	120	10	1.0	12	319	A	10.31	A	A
108	997	15	1.5	-16.1	191	87	N	2.94	A	N
110	1370	88	6.42	15.3	182	240	A	6.9	A	A
112	1173	54	4.6	-1.3	15	159	A	5.25	A	A
113	1310	29	2.21	10.3	122	108	N	3.36	A	W
114	1168	74	6.32	-1.7	20	206	A	6.81	A	A
115	1110	85	7.66	-6.6	78	233	A	8.06	A	A
116	1140	56	4.91	-4.0	48	164	A	5.52	A	A
117	1170	41	3.5	-1.5	18	131	A	4.32	A	A
118	1092	142	13	-8.1	96	374	A	13.25	A	A
119	1236	52	4.21	4.0	48	155	A	4.91	A	A
120	1360	98	7.21	14.5	172	264	A	7.64	A	A
121	1284	77	6	8.1	96	213	A	6.51	A	A
122	1038	34	3.32	-12.7	150	118	N	4.17	A	W
123	1280	21	1.61	7.8	92	94	A	3	A	A
124	1000	25	2.48	-15.8	188	100	N	3.54	A	N
126	1380	128	9.28	16.2	192	339	A	9.61	A	A
127	1232	50	4.06	3.7	44	150	A	4.78	A	A
128	1354	65	4.8	14.0	166	185	A	5.42	A	A
129	1735	128	7.38	46.1	547	339	N	7.8	A	N
130	1320	60	4.55	11.1	132	173	A	5.2	A	A
131	1290	78	6.05	8.6	102	216	A	6.55	A	A
133	1046	105	10.04	-12.0	142	282	A	10.35	A	A
134	1140	98	8.6	-4.1	48	264	A	8.96	A	A
135	1110	52	4.68	-6.6	78	155	A	5.32	A	A
136	1326	56	4.22	11.6	138	164	A	4.92	A	A
137	1559	27	1.73	31.2	371	104	N	3.06	A	N
138	1510	82	5.45	27.1	322	226	N	6	A	N
139	1199	76	6.34	0.9	11	211	A	6.82	A	A
140	1283	64	4.99	8.0	95	182	A	5.59	A	A
142	1229	35	2.85	3.5	41	119	A	3.81	A	A
143	1233	37	3	3.8	45	123	A	3.92	A	A
144	1276	75	5.88	7.4	88	208	A	6.4	A	A
145	1500	121	8.07	26.3	312	322	A	8.45	A	A
146	1213	95	7.86	2.1	25	258	A	8.26	A	A
147	1336	47	3.52	12.5	148	144	N	4.33	A	W
148	1067	26	2.41	-10.2	121	102	N	3.49	A	W
149	1214	19	1.52	2.2	26	91	A	2.95	A	A
150	1020	80	7.84	-14.1	168	220	A	8.24	A	A
151	1275	55	4.31	7.3	87	162	A	5	A	A

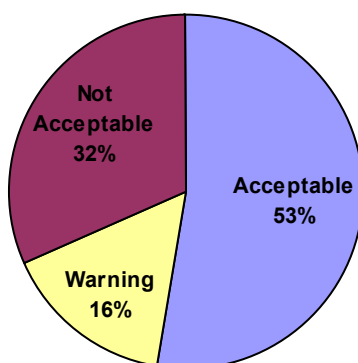
Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel Bias	A1	A2	True	P	Prec	Final Score
152	1459	180	12.34	22.8	271	471	A	12.59	A	A
154	1465	79	5.39	23.3	277	218	N	5.95	A	N
155	1235	33	2.67	4.0	47	115	A	3.68	A	A
156	1260	70	5.56	6.1	72	196	A	6.1	A	A
157	1045	41	3.92	-12.0	143	131	N	4.67	A	W
160	1254	55	4.4	5.6	66	162	A	5.07	A	A
161	1240	85	6.85	4.4	52	233	A	7.31	A	A
162	1260	38	3	6.1	72	125	A	3.92	A	A
163	1252	46	3.67	5.4	64	142	A	4.45	A	A
164	1479	45	3.05	24.5	291	140	N	3.96	A	N
165	138	2	1.6	-88.4	1051	78	N	2.99	A	N
166	1166	37	3.17	-1.9	22	123	A	4.05	A	A
167	1165	53	4.55	-1.9	23	157	A	5.2	A	A
168	1680	56	3.33	41.4	492	164	N	4.18	A	N
169	1259	35	2.76	6.0	71	119	A	3.74	A	A
172	1496	65	4.34	25.9	308	185	N	5.03	A	N
173	1474	40	2.73	24.1	286	130	N	3.72	A	N
174	1389	141	10.12	17.0	201	371	A	10.43	A	A
175	1656	74	4.48	39.4	468	207	N	5.15	A	N
176	1253	34	2.73	5.5	65	117	A	3.72	A	A
177	1210	160	13.22	1.9	22	420	A	13.46	A	A
178	1292	41	3.17	8.8	104	131	A	4.06	A	A
179	1260	70	5.56	6.1	72	196	A	6.1	A	A
182	<236									
184	1424	63	4.42	19.9	236	180	N	5.09	A	N
185	1241	120	9.67	4.5	53	319	A	9.99	A	A
186	1180	70	5.93	-0.7	8	196	A	6.45	A	A
187	1271	65	5.11	7.0	83	185	A	5.7	A	A
188	1379	50	3.6	16.1	191	150	N	4.39	A	N
189	1133	113	9.99	-4.6	55	302	A	10.3	A	A
190	1160	50	4.31	-2.4	28	150	A	5	A	A
191	1050	74	7.05	-11.6	138	206	A	7.49	A	A
192	1213	94	7.75	2.1	25	255	A	8.15	A	A
194	1380	33	2.39	16.2	192	115	N	3.48	A	N
195	1637	19	1.16	37.8	449	92	N	2.78	A	N
196	1130	50	4.42	-4.9	58	150	A	5.09	A	A
197	1398	46	3.29	17.7	210	142	N	4.15	A	N
198	1227	24	1.92	3.3	39	98	A	3.17	A	A
199	1242	118	9.48	4.6	54	314	A	9.81	A	A
200	1089	38	3.45	-8.3	99	124	A	4.28	A	A
202	1157	33	2.85	-2.6	31	115	A	3.81	A	A
203	1153	37	3.2	-3.0	35	123	A	4.08	A	A
204	1308	39	2.98	10.1	120	127	A	3.91	A	A
207	1251	53	4.24	5.3	63	157	A	4.93	A	A
208	972	75	7.72	-18.2	216	208	N	8.12	A	N
209	1160	72	6.21	-2.4	28	201	A	6.7	A	A
210	1316	54	4.1	10.8	128	159	A	4.82	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel Bias	A1	A2	True	P	Prec	Final Score
213	1256	37	2.95	5.7	68	123	A	3.88	A	A
214	1310	80	6.11	10.3	122	220	A	6.61	A	A
215	1089	135	12.42	-8.4	99	357	A	12.67	A	A
216	1528	131	8.55	28.6	340	346	A	8.91	A	A
217	792	118	14.9	-33.3	396	314	N	15.11	N	N
218	1231	80	6.5	3.6	43	220	A	6.97	A	A
220	1200	2	0.18	1.0	12	78	A	2.53	A	A
222	1431	60	4.19	20.5	243	173	N	4.89	A	N
223	956	26	2.72	-19.5	232	102	N	3.71	A	N
225	1193	32	2.69	0.4	5	113	A	3.69	A	A
226	1280	102	7.97	7.7	92	274	A	8.36	A	A
227	1021	63	6.18	-14.1	167	180	A	6.67	A	A
228	1174	24	2.04	-1.2	14	99	A	3.25	A	A
229	1182	115	9.73	-0.5	6	307	A	10.05	A	A
230	4810	167	3.47	304.9	3622	438	N	4.29	A	N
231	1691	59	3.49	42.3	503	171	N	4.31	A	N
232	1320	140	10.61	11.1	132	369	A	10.9	A	A
233	1205	24	2.01	1.5	17	99	A	3.22	A	A
234	1037	28	2.7	-12.7	151	106	N	3.7	A	W
235	1070	51	4.77	-9.9	118	153	A	5.39	A	A
236	1570	27	1.72	32.2	382	104	N	3.06	A	N
237	1213	44	3.63	2.1	25	137	A	4.42	A	A
238	1021	14	1.39	-14.1	167	86	N	2.88	A	W
239	1220	37	3.02	2.7	32	123	A	3.94	A	A
240	1349	36	2.63	13.6	161	120	N	3.65	A	W
241	3963	133	3.36	233.6	2775	352	N	4.2	A	N
242	1187	50	4.19	-0.1	1	150	A	4.89	A	A
243	1124	28	2.51	-5.4	64	106	A	3.56	A	A
245	1185	44	3.71	-0.3	3	137	A	4.49	A	A
246	1270	130	10.24	6.9	82	344	A	10.54	A	A
248	1200	126	10.5	1.0	12	334	A	10.8	A	A
249	1371	45	3.28	15.4	183	140	N	4.14	A	N
250	1308	42	3.21	10.1	120	133	A	4.09	A	A
251	1154	26	2.25	-2.9	34	102	A	3.38	A	A
252	1116	67	6	-6.1	72	189	A	6.51	A	A
253	1321	120	9.08	11.2	133	319	A	9.43	A	A
254	1411	31	2.19	18.8	223	111	N	3.34	A	N
255	1470	124	8.44	23.7	282	329	A	8.81	A	A
256	1302	133	10.2	9.6	114	351	A	10.51	A	A
257	1690	32	1.89	42.3	502	113	N	3.16	A	N
258	631	41	6.5	-46.9	558	131	N	6.98	A	N
259	1255	20	1.59	5.6	67	93	A	2.99	A	A
260	1363	68	4.99	14.7	175	192	A	5.59	A	A
261	1322	75	5.67	11.3	134	208	A	6.21	A	A
262	1244	40	3.22	4.7	56	129	A	4.09	A	A
263	1082	61	5.62	-8.9	106	175	A	6.16	A	A
264	1288	45	3.49	8.4	100	140	A	4.31	A	A

Lab	Rep.	Rep.	Unc.	Rel	A1	A2	True	P	Prec	Final
code	Value	Unc.	[%]	Bias						Score
265	1320	55	4.17	11.1	132	162	A	4.87	A	A
268	1177	259	22.03	-0.9	11	673	A	22.17	N	W
269	1339	54	4.04	12.7	151	160	A	4.76	A	A
270	1217	54	4.42	2.4	29	159	A	5.09	A	A
272	1070	62	5.79	-9.9	118	178	A	6.32	A	A
273	1310	180	13.74	10.3	122	471	A	13.97	A	A
275	1232	18	1.48	3.7	44	91	A	2.93	A	A
277	1679	74	4.41	41.3	491	206	N	5.08	A	N
278	1334	47	3.52	12.3	146	144	N	4.33	A	W
279	1140	58	5.09	-4.0	48	168	A	5.68	A	A
280	1190	59	4.93	0.2	2	170	A	5.54	A	A
281	1622	84	5.21	36.5	434	231	N	5.79	A	N
284	1507	35	2.35	26.9	319	120	N	3.45	A	N
285	1181	126	10.68	-0.6	7	334	A	10.97	A	A
286	1095	32	2.92	-7.8	93	113	A	3.86	A	A
287	1252	20	1.6	5.4	64	93	A	2.99	A	A
288	1170	30	2.56	-1.5	18	109	A	3.6	A	A
290	1140	100	8.77	-4.0	48	269	A	9.13	A	A
291	1310	30	2.29	10.3	122	109	N	3.41	A	W
292	1272	70	5.53	7.1	84	197	A	6.08	A	A
293	1280	53	4.14	7.7	92	157	A	4.85	A	A
295	1170	94	8.03	-1.5	18	255	A	8.42	A	A
296	1074	81	7.51	-9.6	115	222	A	7.92	A	A
297	1410	50	3.55	18.7	222	150	N	4.35	A	N
299	1300	60	4.62	9.4	112	173	A	5.26	A	A
300	1372	32	2.33	15.5	184	113	N	3.44	A	N
304	1300	130	10	9.4	112	344	A	10.31	A	A
305	1160	60	5.17	-2.4	28	173	A	5.76	A	A
306	1091	35	3.21	-8.2	97	119	A	4.08	A	A
307	1200	60	5	1.0	12	173	A	5.6	A	A
308	2365	68	2.88	99.1	1177	192	N	3.83	A	N
309	798	50	6.28	-32.8	390	151	N	6.77	A	N
310	1150	46	4	-3.2	38	142	A	4.73	A	A
311	1349	90	6.67	13.6	161	245	A	7.13	A	A
317	1233	31	2.5	3.8	45	111	A	3.55	A	A
318	1226	73	5.95	3.2	38	204	A	6.47	A	A
319	1388	48	3.46	16.8	200	146	N	4.28	A	N
320	1505	38	2.52	26.7	317	125	N	3.57	A	N
321	1569	62	3.95	32.0	381	178	N	4.69	A	N
322	1300	80	6.15	9.4	112	220	A	6.65	A	A

Analyte: Sr-90 in Spinach, IAEA-330

Target Value: 20.1 ± 2.1 [Bq/kg]



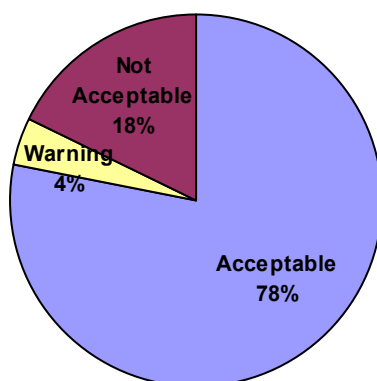
Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
3	28.26	1.79	6.3	40.6	8.2	7.1	N	12.22	A	N
5	20.50	1.20	5.9	2.0	0.4	6.2	A	11.98	A	A
9	19.00	2.00	10.5	-5.5	1.1	7.5	A	14.83	A	A
11	25.00	4.50	18.0	24.4	4.9	12.8	A	20.81	N	N
13	28.00	3.40	12.1	39.3	7.9	10.3	A	16.02	N	N
15	18.30	0.90	4.9	-9.0	1.8	5.9	A	11.55	A	A
16	30.40	3.90	12.8	51.2	10.3	11.4	A	16.55	N	N
18	13.20	2.30	17.4	-34.3	6.9	8.0	A	20.32	N	N
20	21.80	1.70	7.8	8.5	1.7	7.0	A	13.04	A	A
23	32.00	5.00	15.6	59.2	11.9	14.0	A	18.80	N	N
24	11.80	2.00	17.0	-41.3	8.3	7.5	N	19.91	N	N
25	22.20	1.88	8.5	10.5	2.1	7.3	A	13.45	A	A
27	19.70	2.07	10.5	-2.0	0.4	7.6	A	14.82	A	A
30	17.70	2.40	13.6	-11.9	2.4	8.2	A	17.12	N	W
36	31.00	1.37	4.4	54.2	10.9	6.5	N	11.34	A	N
42	18.20	1.10	6.0	-9.5	1.9	6.1	A	12.07	A	A
43	20.68	2.07	10.0	2.9	0.6	7.6	A	14.47	A	A
44	23.65	2.10	8.9	17.7	3.6	7.7	A	13.71	A	A
50	23.00	2.30	10.0	14.4	2.9	8.0	A	14.46	A	A
52	20.20	2.90	14.4	0.5	0.1	9.2	A	17.76	N	W
59	2.60	0.90	34.6	-87.1	17.5	5.9	N	36.16	N	N
60	15.00	0.30	2.0	-25.4	5.1	5.5	A	10.64	A	A
62	17.30	1.30	7.5	-13.9	2.8	6.4	A	12.87	A	A
65	17.10	1.30	7.6	-14.9	3.0	6.4	A	12.92	A	A
66	24.80	3.55	14.3	23.4	4.7	10.6	A	17.72	N	N
69	18.80	3.30	17.6	-6.5	1.3	10.1	A	20.43	N	W
80	14.20	1.30	9.2	-29.4	5.9	6.4	A	13.89	A	A
81	59.02	1.73	2.9	193.6	38.9	7.0	N	10.85	A	N
85	3434.0	1053.0	30.7	1698	3413.	2716	N	32.39	N	N
87	22.48	1.52	6.8	11.8	2.4	6.7	A	12.45	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
88	19.60	2.00	10.2	-2.5	0.5	7.5	A	14.60	A	A
90	23.08	2.60	11.3	14.8	3.0	8.6	A	15.36	N	W
96	3.60	12.20	338.9	-82.1	16.5	31.9	A	339.0	N	N
98	18.20	2.80	15.4	-9.5	1.9	9.0	A	18.60	N	W
103	21.00			4.5						
105	19.91	0.41	2.0	-1.0	0.2	5.5	A	10.65	A	A
108	17.80	1.60	9.0	-11.4	2.3	6.8	A	13.78	A	A
112	18.80	4.30	22.9	-6.5	1.3	12.4	A	25.15	N	W
113	21.40	1.20	5.6	6.5	1.3	6.2	A	11.86	A	A
114	16.56	1.15	6.9	-17.6	3.5	6.2	A	12.55	A	A
116	18.60	1.00	5.4	-7.5	1.5	6.0	A	11.75	A	A
118	19.00	1.50	7.9	-5.5	1.1	6.7	A	13.10	A	A
123	16.21	2.32	14.3	-19.4	3.9	8.1	A	17.72	N	N
124	15.69	0.95	6.1	-21.9	4.4	6.0	A	12.08	A	A
126	83.80	19.10	22.8	316.9	63.7	49.6	N	25.07	N	N
127	33.10	2.85	8.6	64.7	13.0	9.1	N	13.54	A	N
128	16.90	1.10	6.5	-15.9	3.2	6.1	A	12.31	A	A
129	24.00	3.30	13.8	19.4	3.9	10.1	A	17.27	N	N
137	21.20	0.90	4.3	5.5	1.1	5.9	A	11.28	A	A
144	22.30	2.40	10.8	11.0	2.2	8.2	A	15.00	A	A
147	70.00	2.30	3.3	248.3	49.9	8.0	N	10.95	A	N
150	14.70	1.10	7.5	-26.9	5.4	6.1	A	12.85	A	A
151	15.22	0.56	3.7	-24.3	4.9	5.6	A	11.08	A	A
154	20.20	3.40	16.8	0.5	0.1	10.3	A	19.81	N	W
161	17.20	1.10	6.4	-14.4	2.9	6.1	A	12.25	A	A
163	17.65	1.29	7.3	-12.2	2.5	6.4	A	12.75	A	A
164	37.10	2.07	5.6	84.6	17.0	7.6	N	11.84	A	N
167	21.30	1.70	8.0	6.0	1.2	7.0	A	13.15	A	A
173	335.69	0.77	0.2	1570.	315.6	5.8	N	10.45	A	N
177	22.20	3.50	15.8	10.5	2.1	10.5	A	18.91	N	W
185	241.00	45.00	18.7	1099.	220.9	116.2	N	21.40	N	N
189	20.20	0.70	3.5	0.5	0.1	5.7	A	11.01	A	A
192	18.20	0.60	3.3	-9.5	1.9	5.6	A	10.96	A	A
194	31.80	0.60	1.9	58.2	11.7	5.6	N	10.62	A	N
195	9.20	0.50	5.4	-54.2	10.9	5.6	N	11.78	A	N
196	21.40	3.40	15.9	6.5	1.3	10.3	A	19.02	N	W
197	14.00	0.50	3.6	-30.4	6.1	5.6	N	11.04	A	N
199	61.32	4.59	7.5	205.1	41.2	13.0	N	12.85	A	N
202	22.10	1.40	6.3	10.0	2.0	6.5	A	12.22	A	A
203	30.20	0.45	1.5	50.3	10.1	5.5	N	10.55	A	N
208	22.90	3.50	15.3	13.9	2.8	10.5	A	18.51	N	W
213	18.70	1.60	8.6	-7.0	1.4	6.8	A	13.50	A	A
216	23.06	2.59	11.2	14.7	3.0	8.6	A	15.34	N	W
222	<3300									
226	16.00	3.00	18.8	-20.4	4.1	9.5	A	21.46	N	N
228	18.60	1.70	9.1	-7.5	1.5	7.0	A	13.88	A	A
229	18.90	4.00	21.2	-6.0	1.2	11.7	A	23.60	N	W

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
237	17.80	1.10	6.2	-11.4	2.3	6.1	A	12.14	A	A
240	18.90	1.47	7.8	-6.0	1.2	6.6	A	13.02	A	A
248	17.50	7.70	44.0	-12.9	2.6	20.6	A	45.22	N	W
249	19.70	0.70	3.6	-2.0	0.4	5.7	A	11.04	A	A
250	14.90	1.50	10.1	-25.9	5.2	6.7	A	14.51	A	A
251	20.89	1.38	6.6	3.9	0.8	6.5	A	12.36	A	A
256	0.00	0.00		-100.	20.1	5.4	N			
260	17.50	1.80	10.3	-12.9	2.6	7.1	A	14.66	A	A
265	15.40	1.50	9.7	-23.4	4.7	6.7	A	14.28	A	A
280	17.64	0.83	4.7	-12.2	2.5	5.8	A	11.46	A	A
284	23.00	17.00	73.9	14.4	2.9	44.2	A	74.65	N	W
290	24.00	4.00	16.7	19.4	3.9	11.7	A	19.67	N	N
291	18.70	3.50	18.7	-7.0	1.4	10.5	A	21.44	N	W
293	20.90	2.05	9.8	4.0	0.8	7.6	A	14.33	A	A
295	23.60	1.10	4.7	17.4	3.5	6.1	A	11.44	A	A
296	12.50	1.10	8.8	-37.8	7.6	6.1	N	13.66	A	N
297	18.10	0.80	4.4	-10.0	2.0	5.8	A	11.34	A	A
299	30.10	5.60	18.6	49.8	10.0	15.4	A	21.34	N	N
305	15.40	1.10	7.1	-23.4	4.7	6.1	A	12.66	A	A
310	17.60	1.30	7.4	-12.4	2.5	6.4	A	12.80	A	A
319	21.30	0.97	4.6	6.0	1.2	6.0	A	11.40	A	A

Analyte: Cs-137 in spinach, IAEA-330

Target Value: 1235 ± 35 [Bq/kg]



Lab. code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
1	1110	20.1	1.8	-10.1	125	104	N	3.36	A	W
2	1329	35	2.6	7.6	94	128	A	3.87	A	A
3	1344	68.3	5.1	8.8	109	198	A	5.82	A	A
4	1180	24	2.0	-4.5	55	109	A	3.49	A	A
5	1204	69	5.7	-2.5	31	200	A	6.39	A	A
6	1245	42	3.4	0.8	10	141	A	4.41	A	A
7	1184	63	5.3	-4.1	51	186	A	6.03	A	A
8	1107	67	6.1	-10.4	128	195	A	6.68	A	A
9	1135	60	5.3	-8.1	100	179	A	6	A	A
10	1185	50	4.2	-4.1	50	157	A	5.08	A	A
11	1271	120	9.4	2.9	36	323	A	9.86	A	A
12	1180	41	3.5	-4.5	55	139	A	4.48	A	A
13	1247	93	7.5	1.0	12	256	A	7.98	A	A
14	1240	60	4.8	0.4	5	179	A	5.61	A	A
15	1400	70	5.0	13.4	165	202	A	5.75	A	A
16	1080	97.2	9.0	-12.6	155	267	A	9.44	A	A
18	1236	23.22	1.9	0.1	1	108	A	3.4	A	A
19	1223	22	1.8	-1.0	12	107	A	3.36	A	A
20	1205	35	2.9	-2.4	30	128	A	4.06	A	A
21	1784	53	3.0	44.5	549	164	N	4.11	A	N
23	1180	110	9.3	-4.5	55	298	A	9.74	A	A
24	1296	88	6.8	4.9	61	244	A	7.36	A	A
25	1280	45.06	3.5	3.6	45	147	A	4.52	A	A
26	925	92.5	10.0	-25.1	310	255	N	10.39	A	N
27	701	63.5	9.1	-43.2	534	187	N	9.49	A	N
28	1332	53	4.0	7.9	97	164	A	4.89	A	A
29	1054	85	8.1	-14.7	181	237	A	8.55	A	A
30	1455	28	1.9	17.8	220	116	N	3.43	A	N
31	1255	68.54	5.5	1.6	20	199	A	6.15	A	A

Lab. code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
33	1238	63	5.1	0.2	3	186	A	5.82	A	A
34	1224	22	1.8	-0.9	11	107	A	3.36	A	A
35	1176	61	5.2	-4.8	59	181	A	5.91	A	A
36	1175	69.59	5.9	-4.8	60	201	A	6.56	A	A
37	1416	89.48	6.3	14.7	181	248	A	6.93	A	A
39	1011	14.3	1.4	-18.1	224	98	N	3.17	A	N
42	1250	31	2.5	1.2	15	121	A	3.77	A	A
43	1305	118.1	9.1	5.7	70	318	A	9.48	A	A
44	1125	58	5.2	-8.9	110	175	A	5.88	A	A
45	1077	42	3.9	-12.8	158	141	N	4.82	A	W
48	1126	38.24	3.4	-8.8	109	134	A	4.42	A	A
49	1125	60	5.3	-8.9	110	179	A	6.04	A	A
50	1145	27	2.4	-7.3	90	114	A	3.69	A	A
51	1218	60	4.9	-1.4	17	179	A	5.68	A	A
52	1190	66	5.6	-3.6	45	193	A	6.23	A	A
53	1205	20	1.7	-2.4	30	104	A	3.28	A	A
55	1200	20	1.7	-2.8	35	104	A	3.29	A	A
56	1209	64.65	5.4	-2.1	26	190	A	6.05	A	A
59	1265	83	6.6	2.4	30	232	A	7.15	A	A
62	1210	45	3.7	-2.0	25	147	A	4.68	A	A
63	980	80	8.2	-20.7	255	225	N	8.64	A	N
64	1209	17	1.4	-2.1	26	100	A	3.16	A	A
65	1176	161	13.7	-4.8	59	425	A	13.98	A	A
66	1140	130	11.4	-7.7	95	347	A	11.75	A	A
67	1134	25	2.2	-8.2	101	111	A	3.59	A	A
69	1240	80	6.5	0.4	5	225	A	7.05	A	A
70	1263	49	3.9	2.3	28	155	A	4.8	A	A
71	1125	107.23	9.5	-8.9	110	291	A	9.95	A	A
73	1154	24	2.1	-6.6	81	109	A	3.52	A	A
77	1195	13.74	1.2	-3.3	40	97	A	3.06	A	A
78	1239	37	3.0	0.3	4	131	A	4.12	A	A
79	12	0.1	0.9	-99.1	1223	90	N	2.96	A	N
80	1657	76.22	4.6	34.2	422	216	N	5.4	A	N
81	1203	24.9	2.1	-2.6	32	111	A	3.51	A	A
84	1253	59	4.7	1.5	18	177	A	5.49	A	A
85	1183	76	6.4	-4.2	52	216	A	7.02	A	A
86	1023	7	0.7	-17.2	212	92	N	2.92	A	N
87	1255	31	2.5	1.6	20	121	A	3.76	A	A
88	1240	60	4.8	0.4	5	179	A	5.61	A	A
89	717	11	1.5	-41.9	518	95	N	3.22	A	N
90	1200	100	8.3	-2.8	35	273	A	8.8	A	A
91	2475	239.9	9.7	100.4	1240	625	N	10.1	A	N
92	820	33.77	4.1	-33.6	415	125	N	5	A	N
93	1269	6.2	0.5	2.7	34	92	A	2.88	A	A
95	718	48	6.7	-41.9	517	153	N	7.26	A	N
96	9760	288	3.0	690.3	8525	749	N	4.09	A	N
97	1286	8.58	0.7	4.1	51	93	A	2.91	A	A

Lab. code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
98	1207	5.1	0.4	-2.3	28	91	A	2.87	A	A
99	1306	60	4.6	5.8	71	179	A	5.4	A	A
101	1167	46.1	4.0	-5.6	69	149	A	4.86	A	A
102	1289	29	2.3	4.4	54	117	A	3.62	A	A
103	925	0.03	0.0	-25.1	310	90	N	2.83	A	N
104	1150	70	6.1	-6.9	85	202	A	6.71	A	A
105	1208	21.07	1.7	-2.2	27	105	A	3.33	A	A
107	1300	130	10.0	5.3	65	347	A	10.39	A	A
108	1048	9.43	0.9	-15.1	187	94	N	2.97	A	N
110	1240	76	6.1	0.4	5	216	A	6.75	A	A
112	1168	26	2.2	-5.4	67	112	A	3.6	A	A
113	1220	26	2.1	-1.2	15	112	A	3.55	A	A
114	1212	72.9	6.0	-1.9	23	209	A	6.65	A	A
115	1159	86	7.4	-6.2	77	240	A	7.95	A	A
116	1130	55	4.9	-8.5	105	168	A	5.63	A	A
117	1148	37	3.2	-7.0	87	131	A	4.29	A	A
118	1147	69	6.0	-7.1	88	200	A	6.65	A	A
119	1250	51	4.1	1.2	15	160	A	4.97	A	A
120	1410	95	6.7	14.2	175	261	A	7.31	A	A
121	1240	74	6.0	0.4	5	211	A	6.61	A	A
122	1111	32.66	2.9	-10.0	124	124	N	4.08	A	W
123	1230	20.25	1.7	-0.4	5	104	A	3.28	A	A
124	1230	24.9	2.0	-0.4	5	111	A	3.48	A	A
126	1390	129	9.3	12.6	155	345	A	9.7	A	A
127	1128	33	2.9	-8.7	107	124	A	4.07	A	A
128	1255	60	4.8	1.6	20	179	A	5.56	A	A
129	1177	13.7	1.2	-4.7	58	97	A	3.06	A	A
130	1335	40	3.0	8.1	100	137	A	4.12	A	A
131	1270	72	5.7	2.8	35	207	A	6.34	A	A
133	1111	108	9.7	-10.0	124	293	A	10.13	A	A
134	1253	30.4	2.4	1.4	18	120	A	3.73	A	A
135	1190	65	5.5	-3.6	45	190	A	6.15	A	A
136	1263	51	4.0	2.3	28	160	A	4.93	A	A
137	1552	17	1.1	25.7	317	100	N	3.04	A	N
138	1592	138.76	8.7	28.9	357	369	A	9.17	A	A
139	1249	76	6.1	1.1	14	216	A	6.71	A	A
140	1320	66	5.0	6.9	85	193	A	5.75	A	A
142	1271	24	1.9	2.9	36	109	A	3.41	A	A
143	1182	32	2.7	-4.3	53	122	A	3.92	A	A
144	1140	65	5.7	-7.7	95	190	A	6.37	A	A
145	1120	67.4	6.0	-9.3	115	196	A	6.65	A	A
146	1164	86.85	7.5	-5.7	71	242	A	7.98	A	A
147	1180	30	2.5	-4.5	55	119	A	3.81	A	A
148	1019	8.84	0.9	-17.5	216	93	N	2.96	A	N
149	1194	15.5	1.3	-3.3	41	99	A	3.12	A	A
150	1080	80	7.4	-12.6	155	225	A	7.93	A	A
151	1257	53	4.2	1.8	22	164	A	5.08	A	A

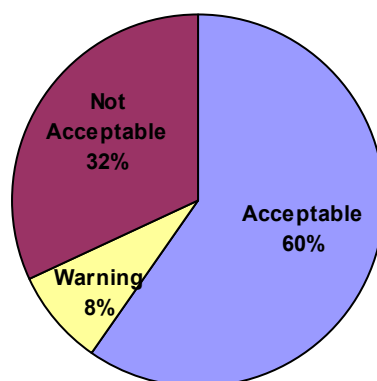
Lab. code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
152	1345	21	1.6	8.9	110	105	N	3.24	A	W
154	1514	47	3.1	22.6	279	151	N	4.2	A	N
156	1170	60	5.1	-5.3	65	179	A	5.86	A	A
157	1101	39	3.5	-10.9	134	135	A	4.54	A	A
160	1222	67.7	5.5	-1.1	13	197	A	6.22	A	A
161	1220	80	6.6	-1.2	15	225	A	7.14	A	A
162	1114	36.1	3.2	-9.8	121	130	A	4.3	A	A
163	1226	43.85	3.6	-0.7	9	145	A	4.56	A	A
164	1494	20.18	1.4	20.9	259	104	N	3.14	A	N
165	172	1.6	0.9	-86.1	1063	90	N	2.98	A	N
166	1165	38.55	3.3	-5.7	70	134	A	4.36	A	A
167	1216	40	3.3	-1.5	19	137	A	4.34	A	A
168	1268	25	2.0	2.7	33	111	A	3.45	A	A
169	658	19.76	3.0	-46.7	577	104	N	4.13	A	N
172	1530	33.7	2.2	23.9	295	125	N	3.59	A	N
173	1752	20.05	1.1	41.9	517	104	N	3.06	A	N
174	1633	84.04	5.2	32.2	398	235	N	5.88	A	N
175	1778	35.18	2.0	44.0	543	128	N	3.46	A	N
176	1212	26.2	2.2	-1.9	23	113	A	3.56	A	A
177	1260	60	4.8	2.0	25	179	A	5.54	A	A
178	1212	21	1.7	-1.9	23	105	A	3.32	A	A
179	1230	90	7.3	-0.4	5	249	A	7.85	A	A
182	1076	12.9	1.2	-12.9	160	96	N	3.08	A	W
184	1428	67	4.7	15.6	193	195	A	5.48	A	A
185	1227	120	9.8	-0.7	8	323	A	10.18	A	A
186	1170	70	6.0	-5.3	65	202	A	6.62	A	A
187	1239	33	2.7	0.3	4	124	A	3.89	A	A
188	1346	62.6	4.7	9.0	111	185	A	5.45	A	A
189	1144	80.1	7.0	-7.4	91	226	A	7.55	A	A
190	1150	50	4.4	-6.9	85	157	A	5.19	A	A
191	988	70	7.1	-20.0	247	202	N	7.63	A	N
192	1138	68	6.0	-7.9	97	197	A	6.61	A	A
194	1240	26	2.1	0.4	5	112	A	3.53	A	A
195	1590	15	0.9	28.7	355	98	N	2.99	A	N
196	1160	50	4.3	-6.1	75	157	A	5.16	A	A
197	1508	24	1.6	22.1	273	109	N	3.25	A	N
198	1185	10.4	0.9	-4.0	50	94	A	2.97	A	A
199	1252	63.8	5.1	1.4	17	188	A	5.83	A	A
200	1148	40.9	3.6	-7.1	87	139	A	4.55	A	A
201	1150	39	3.4	-6.9	85	135	A	4.42	A	A
202	1198	33	2.8	-3.0	37	124	A	3.95	A	A
203	1184	27.2	2.3	-4.1	51	114	A	3.65	A	A
204	1280	30	2.3	3.6	45	119	A	3.68	A	A
206	1167	82	7.0	-5.5	68	230	A	7.58	A	A
207	1377	57	4.1	11.5	142	173	A	5.02	A	A
208	1004	75	7.5	-18.7	231	214	N	7.99	A	N
209	1250	78	6.2	1.2	15	221	A	6.85	A	A

Lab. code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
210	1231	6	0.5	-0.3	4	92	A	2.88	A	A
213	1142	28	2.5	-7.5	93	116	A	3.75	A	A
214	1230	20	1.6	-0.4	5	104	A	3.27	A	A
215	1147	69.74	6.1	-7.1	88	201	A	6.71	A	A
216	1440	116.9	8.1	16.6	205	315	A	8.6	A	A
217	1271	9	0.7	2.9	36	93	A	2.92	A	A
218	1178	76	6.5	-4.6	57	216	A	7.05	A	A
220	1700	3.46	0.2	37.7	465	91	N	2.84	A	N
222	1641	49	3.0	32.9	406	155	N	4.12	A	N
223	968	11	1.1	-21.6	267	95	N	3.05	A	N
225	1304	38.28	2.9	5.6	69	134	A	4.08	A	A
226	1210	91	7.5	-2.0	25	252	A	8.04	A	A
227	1087	47.93	4.4	-12.0	148	153	A	5.24	A	A
228	1188	23	1.9	-3.8	47	108	A	3.43	A	A
229	1170	108	9.2	-5.3	65	293	A	9.66	A	A
230	1521	39	2.6	23.2	286	135	N	3.82	A	N
231	1079	11.66	1.1	-12.6	156	95	N	3.03	A	W
232	1220	57	4.7	-1.2	15	173	A	5.46	A	A
233	1185	11.46	1.0	-4.1	50	95	A	2.99	A	A
234	1067	26.81	2.5	-13.6	168	114	N	3.79	A	W
235	1048	27	2.6	-15.1	187	114	N	3.83	A	N
236	1163	14	1.2	-5.8	72	97	A	3.08	A	A
237	1212	33	2.7	-1.9	23	124	A	3.93	A	A
238	1170	3.83	0.3	-5.3	65	91	A	2.85	A	A
239	1170	35.1	3.0	-5.3	65	128	A	4.13	A	A
240	1171	27.52	2.4	-5.2	65	115	A	3.68	A	A
241	4308	147.39	3.4	248.8	3073	391	N	4.44	A	N
242	1001	16.2	1.6	-19.0	234	100	N	3.26	A	N
243	878	34.2	3.9	-28.9	357	126	N	4.82	A	N
245	1153	36	3.1	-6.6	82	130	A	4.22	A	A
246	1140	114	10.0	-7.7	95	308	A	10.39	A	A
248	1160	122	10.5	-6.1	75	327	A	10.89	A	A
249	1316	36	2.7	6.6	81	130	A	3.94	A	A
250	1170	26	2.2	-5.3	65	112	A	3.6	A	A
251	1033	9	0.9	-16.4	202	93	N	2.96	A	N
252	1198	28	2.3	-3.0	37	116	A	3.67	A	A
253	1275	77	6.0	3.2	40	218	A	6.67	A	A
254	1313	24.1	1.8	6.3	78	110	A	3.38	A	A
255	1434	72	5.0	16.1	199	207	A	5.77	A	A
256	1553	157.93	10.2	25.8	318	417	A	10.56	A	A
257	1640	28	1.7	32.8	405	116	N	3.31	A	N
258	668	30.1	4.5	-45.9	567	119	N	5.32	A	N
259	1213	20	1.7	-1.8	22	104	A	3.28	A	A
260	1324	30	2.3	7.2	89	119	A	3.63	A	A
261	1348	44	3.3	9.2	113	145	A	4.32	A	A
262	1178	31	2.6	-4.6	57	121	A	3.87	A	A
263	1158	60.18	5.2	-6.2	77	180	A	5.92	A	A

Lab. code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
264	1205	30	2.5	-2.4	30	119	A	3.77	A	A
265	1280	43	3.4	3.6	45	143	A	4.4	A	A
268	1133	248.5	21.9	-8.3	102	647	A	22.12	N	W
269	1275	39.4	3.1	3.2	40	136	A	4.19	A	A
270	1062	44.77	4.2	-14.0	173	147	N	5.08	A	W
272	1156	66	5.7	-6.4	79	193	A	6.37	A	A
273	1010	135	13.4	-18.2	225	360	A	13.66	A	A
275	1208	4.57	0.4	-2.2	28	91	A	2.86	A	A
277	1352	51	3.8	9.5	117	160	A	4.72	A	A
278	1205	21	1.7	-2.4	30	105	A	3.33	A	A
279	1178	56	4.8	-4.6	57	170	A	5.53	A	A
280	1095	25.73	2.4	-11.3	140	112	N	3.68	A	W
281	1614	80.88	5.0	30.7	379	227	N	5.76	A	N
284	1475	12.7	0.9	19.4	240	96	N	2.96	A	N
285	1166	59.44	5.1	-5.6	69	178	A	5.83	A	A
286	1141	33	2.9	-7.6	94	124	A	4.05	A	A
287	1213	16	1.3	-1.8	22	99	A	3.13	A	A
288	1240	30	2.4	0.4	5	119	A	3.73	A	A
290	1190	60	5.0	-3.6	45	179	A	5.78	A	A
291	1180	20	1.7	-4.5	55	104	A	3.3	A	A
292	1300	33.7	2.6	5.3	65	125	A	3.84	A	A
293	1267	37	2.9	2.6	32	131	A	4.07	A	A
295	1285	77	6.0	4.1	50	218	A	6.63	A	A
296	1159	83.6	7.2	-6.2	76	234	A	7.75	A	A
297	1260	40	3.2	2.0	25	137	A	4.26	A	A
299	1300	70	5.4	5.3	65	202	A	6.08	A	A
300	1328	20	1.5	7.5	93	104	A	3.21	A	A
304	1450	150	10.3	17.4	215	397	A	10.73	A	A
305	1130	46	4.1	-8.5	105	149	A	4.96	A	A
306	1142	35	3.1	-7.5	93	128	A	4.17	A	A
307	1190	50	4.2	-3.6	45	157	A	5.07	A	A
308	1336	35	2.6	8.2	101	128	A	3.86	A	A
309	948	37.4	4.0	-23.3	287	132	N	4.86	A	N
310	1200	46	3.8	-2.8	35	149	A	4.77	A	A
311	1276	70	5.5	3.3	41	202	A	6.17	A	A
317	1135	21.08	1.9	-8.1	100	105	A	3.39	A	A
318	1172	66	5.6	-5.1	63	193	A	6.3	A	A
319	1310	40	3.1	6.1	75	137	A	4.17	A	A
320	1355	17	1.3	9.7	120	100	N	3.1	A	W
321	1467	29.75	2.0	18.8	232	119	N	3.48	A	N
322	1230	70	5.7	-0.4	5	202	A	6.36	A	A

Analyte: U-234 in spinach, IAEA-330

Target Value: 1.02 ± 0.07 [Bq/kg]

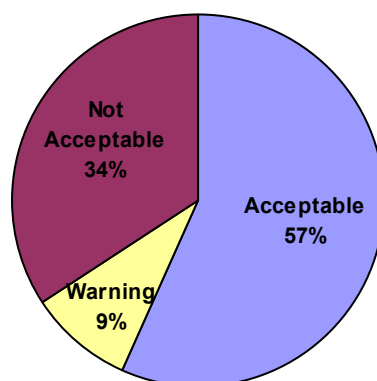


Lab. code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
3	1.60	0.40	25.00	56.86	0.58	1.05	A	25.92	N	N
5	1.27	0.09	6.71	24.12	0.25	0.28	A	9.60	A	A
9	0.96	0.12	12.50	-5.88	0.06	0.36	A	14.26	A	A
11	1.00	0.10	10.00	-1.96	0.02	0.31	A	12.13	A	A
12	0.87	0.05	5.75	-14.71	0.15	0.22	A	8.95	A	A
13	1.36	0.17	12.50	33.33	0.34	0.47	A	14.26	A	A
18	0.92	0.07	7.61	-9.80	0.10	0.26	A	10.25	A	A
20	0.98	0.08	7.96	-3.92	0.04	0.27	A	10.51	A	A
23	1.67	0.06	3.59	63.73	0.65	0.24	N	7.75	A	N
24	1.10	0.13	11.82	7.84	0.08	0.38	A	13.67	A	A
27	1.03	0.05	4.74	0.98	0.01	0.22	A	8.34	A	A
30	0.96	0.15	15.38	-5.69	0.06	0.42	A	16.85	A	A
36	0.87	0.21	24.31	-14.51	0.15	0.58	A	25.26	N	W
50	99.30	6.90	6.95	9635	98.28	17.80	N	9.77	A	N
59	0.96	0.05	5.21	-5.88	0.06	0.22	A	8.62	A	A
60	3.30	0.20	6.06	223.5	2.28	0.55	N	9.16	A	N
62	1.02	0.08	7.84	0.00	0.00	0.27	A	10.42	A	A
65	1.03	0.06	6.19	1.37	0.01	0.24	A	9.24	A	A
66	1.58	0.22	13.92	54.90	0.56	0.60	A	15.52	A	A
69	1.20	0.10	8.33	17.65	0.18	0.31	A	10.80	A	A
80	0.85	0.16	18.50	-16.27	0.17	0.45	A	19.73	A	A
81	1.94	0.24	12.37	90.20	0.92	0.65	N	14.15	A	N
85	1.20	0.30	25.00	17.65	0.18	0.79	A	25.92	N	W
90	1.47	0.12	8.16	44.12	0.45	0.36	N	10.66	A	N
96	18.99	4.82	25.38	1761	17.97	12.44	N	26.29	N	N
102	0.74	0.04	5.41	-27.45	0.28	0.21	N	8.74	A	N
103	1.09	0.86	78.62	6.86	0.07	2.22	A	78.92	N	W
105	1.06	0.04	4.15	4.02	0.04	0.21	A	8.02	A	A
113	0.93	0.07	7.53	-8.82	0.09	0.26	A	10.19	A	A

Lab. code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
114	2.38	0.22	9.21	133	1.36	0.59	N	11.49	A	N
116	0.95	0.05	5.67	-6.57	0.07	0.23	A	8.90	A	A
118	1.03	0.10	9.71	0.98	0.01	0.31	A	11.89	A	A
124	1.06	0.21	19.81	3.92	0.04	0.57	A	20.97	N	W
126	0.81	0.16	20.37	-21.08	0.21	0.46	A	21.50	N	N
127	1.02	0.06	5.99	-0.10	0.00	0.24	A	9.11	A	A
129	1.00	0.80	80.00	-1.96	0.02	2.07	A	80.29	N	W
131	1.00	0.10	10.00	-1.96	0.02	0.31	A	12.13	A	A
135	1.40	0.20	14.29	37.25	0.38	0.55	A	15.85	A	A
150	1.35	0.09	6.67	32.35	0.33	0.29	N	9.57	A	N
152	0.75	0.10	13.33	-26.47	0.27	0.31	A	15.00	A	A
158	110.8	10.00	9.03	10762	109	25.80	N	11.34	A	N
161	0.26	0.06	23.08	-74.51	0.76	0.24	N	24.08	N	N
163	1.06	0.08	7.23	4.41	0.04	0.27	A	9.97	A	A
164	0.78	0.08	9.76	-23.99	0.24	0.27	A	11.93	A	A
167	1.32	0.10	7.58	29.41	0.30	0.31	A	10.22	A	A
176	<85									
177	1.20			17.65						
179	7.76	0.05	0.68	660	6.74	0.23	N	6.90	A	N
182	10.98	1.36	12.39	976	9.96	3.51	N	14.16	A	N
185	0.90	0.40	44.44	-11.76	0.12	1.05	A	44.97	N	W
189	1.18	0.05	4.24	15.69	0.16	0.22	A	8.07	A	A
192	1.56	0.15	9.62	52.94	0.54	0.43	N	11.81	A	N
196	1.70	0.30	17.65	66.67	0.68	0.79	A	18.93	A	A
202	0.93	0.15	16.06	-8.43	0.09	0.43	A	17.46	A	A
203	0.78	0.08	10.26	-23.53	0.24	0.27	A	12.34	A	A
208	0.25	0.04	14.98	-75.78	0.77	0.20	N	16.48	A	N
222	<7200									
224	0.47	0.03	6.38	-53.92	0.55	0.20	N	9.37	A	N
228	1.01	0.10	9.80	-0.98	0.01	0.31	A	11.97	A	A
229	0.99	0.08	7.89	-3.04	0.03	0.27	A	10.45	A	A
231	1.53	0.11	7.19	49.90	0.51	0.34	N	9.94	A	N
237	1.09	0.08	7.34	6.86	0.07	0.27	A	10.05	A	A
239	6.58	0.41	6.23	545	5.56	1.07	N	9.27	A	N
248	0.79	0.04	5.06	-22.55	0.23	0.21	N	8.53	A	N
249	0.97	0.09	9.28	-4.90	0.05	0.29	A	11.54	A	A
250	1.12	0.07	6.25	9.80	0.10	0.26	A	9.28	A	A
256	0.00	0.00		-100	1.02	0.18	N			
269	1.10	0.07	6.10	7.65	0.08	0.25	A	9.18	A	A
270	12405	429	3.46	12160	12403	1106.	N	7.68	A	N
286	1.02	0.04	3.92	0.00	0.00	0.21	A	7.90	A	A
288	1.38	0.20	14.49	35.29	0.36	0.55	A	16.04	A	A
291	2.20	0.20	9.09	115	1.18	0.55	N	11.39	A	N
293	0.96	0.08	8.13	-6.27	0.06	0.27	A	10.64	A	A
295	0.79	0.09	11.39	-22.55	0.23	0.29	A	13.30	A	A
297	1.05	0.10	9.52	2.94	0.03	0.31	A	11.74	A	A
305	1.22	0.20	16.39	19.61	0.20	0.55	A	17.77	A	A

Analyte: U-238 in spinach, IAEA-330

Target Value: 0.95 ± 0.05 [Bq/kg]



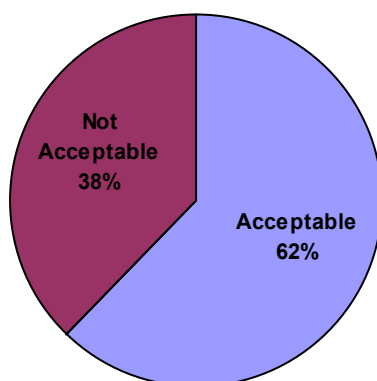
Lab. code	Rep. Value	Rep. Unc.	Unc. [%]	A1	A2	True	P	Prec	Final Score
3	1.60	0.40	25.00	0.65	1.04	A	25.55	N	N
5	1.25	0.08	6.71	0.30	0.25	N	8.53	A	N
9	0.91	0.05	5.49	0.04	0.18	A	7.61	A	A
11	1.00	0.10	10.00	0.05	0.29	A	11.30	A	A
12	0.78	0.04	5.13	0.17	0.17	N	7.35	A	W
13	1.42	0.17	11.97	0.47	0.46	N	13.08	A	N
18	0.96	0.07	7.29	0.01	0.22	A	8.99	A	A
20	0.92	0.01	0.79	0.03	0.13	A	5.32	A	A
23	1.03	0.04	3.88	0.08	0.17	A	6.54	A	A
24	0.91	0.10	10.99	0.04	0.29	A	12.18	A	A
26	21.30	4.26	20.00	20.35	10.99	N	20.68	N	N
27	0.95	0.05	4.93	0.00	0.18	A	7.21	A	A
30	1.00	0.15	14.81	0.05	0.40	A	15.72	A	A
36	0.82	0.20	24.97	0.13	0.54	A	25.52	N	W
50	57.50	4.00	6.96	56.55	10.32	N	8.72	A	N
59	0.85	0.05	5.88	0.10	0.18	A	7.89	A	A
60	1.50	0.01	0.67	0.55	0.13	N	5.31	A	N
62	1.03	0.08	7.77	0.08	0.24	A	9.38	A	A
64	<21.3								
65	0.94	0.08	8.08	0.01	0.23	A	9.64	A	A
66	1.44	0.21	14.58	0.49	0.56	A	15.50	A	A
69	1.10	0.10	9.09	0.15	0.29	A	10.50	A	A
77	<14.1								
80	0.77	0.15	19.30	0.18	0.40	A	20.00	N	W
81	0.59	0.08	12.94	0.35	0.24	N	13.97	A	N
85	1.20	0.30	25.00	0.25	0.78	A	25.55	N	N
90	1.30	0.11	8.46	0.35	0.31	N	9.96	A	N
96	10.41	3.69	35.45	9.46	9.52	A	35.84	N	N
102	1.45	0.07	4.83	0.50	0.22	N	7.14	A	N

Lab. code	Rep. Value	Rep. Unc.	Unc. [%]	A1	A2	True	P	Prec	Final Score
103	1.01	0.83	82.38	0.06	2.15	A	82.54	N	W
105	1.00	0.04	4.18	0.05	0.17	A	6.72	A	A
113	0.86	0.07	7.98	0.08	0.22	A	9.56	A	A
114	1.98	0.23	11.45	1.03	0.60	N	12.60	A	N
116	0.86	0.05	5.80	0.09	0.18	A	7.83	A	A
118	1.04	0.10	9.62	0.09	0.29	A	10.96	A	A
124	0.89	0.20	22.47	0.06	0.53	A	23.08	N	W
126	0.99	0.18	17.91	0.04	0.48	A	18.66	A	A
127	0.89	0.06	6.27	0.06	0.19	A	8.19	A	A
129	0.80	0.20	25.00	0.15	0.53	A	25.55	N	W
131	1.00	0.10	10.00	0.05	0.29	A	11.30	A	A
135	1.10	0.20	18.18	0.15	0.53	A	18.93	A	A
146	<11.75	0.03							
150	1.01	0.07	6.93	0.06	0.22	A	8.70	A	A
152	0.73	0.09	12.33	0.22	0.27	A	13.41	A	A
158	110.60	10.00	9.04	109.65	25.80	N	10.46	A	N
161	0.42	0.06	14.29	0.53	0.20	N	15.22	A	N
163	0.99	0.07	7.24	0.04	0.23	A	8.95	A	A
164	0.82	0.08	9.34	0.13	0.24	A	10.72	A	A
167	1.18	0.09	7.63	0.23	0.27	A	9.27	A	A
176	<6.234								
177	0.99								
179	6.88	0.09	1.32	5.93	0.27	N	5.43	A	N
182	12.52	1.88	15.02	11.57	4.85	N	15.91	A	N
185	0.90	0.40	44.44	0.05	1.04	A	44.75	N	W
189	1.13	0.05	4.42	0.18	0.18	A	6.88	A	A
192	0.94	0.15	15.96	0.01	0.41	A	16.80	A	A
196	1.60	0.30	18.75	0.65	0.78	A	19.47	A	A
202	0.95	0.15	15.74	0.00	0.41	A	16.60	A	A
203	0.77	0.08	10.39	0.18	0.24	A	11.65	A	A
208	0.24	0.04	14.83	0.71	0.16	N	15.74	A	N
222	91.00	35.00	38.46	90.05	90.30	A	38.82	N	N
224	0.63	0.03	4.76	0.32	0.15	N	7.10	A	N
228	1.09	0.11	10.09	0.14	0.31	A	11.38	A	A
229	0.92	0.07	7.82	0.03	0.23	A	9.42	A	A
231	0.32	0.09	27.55	0.63	0.26	N	28.05	N	N
237	1.02	0.08	7.84	0.07	0.24	A	9.45	A	A
239	6.15	0.39	6.34	5.20	1.01	N	8.24	A	N
243	12.70	1.75	13.78	11.75	4.52	N	14.75	A	N
248	0.72	0.03	4.17	0.23	0.15	N	6.71	A	N
249	0.91	0.09	9.89	0.04	0.27	A	11.20	A	A
250	1.08	0.07	6.48	0.13	0.22	A	8.35	A	A
253	3.21	0.39	12.15	2.26	1.01	N	13.24	A	N
256	0.00	0.00		0.95	0.13	N			
269	1.02	0.06	6.08	0.07	0.21	A	8.04	A	A
270	794.00	32.00	4.03	793.05	82.56	N	6.63	A	N
286	0.94	0.04	4.26	0.01	0.17	A	6.77	A	A

Lab. code	Rep. Value	Rep. Unc.	Unc. [%]	A1	A2	True	P	Prec	Final Score
287	<9.0								
288	1.27	0.20	15.75	0.32	0.53	A	16.60	A	A
291	2.20	0.20	9.09	1.25	0.53	N	10.50	A	N
293	0.93	0.08	8.22	0.02	0.24	A	9.76	A	A
295	0.74	0.08	10.81	0.21	0.24	A	12.02	A	A
297	1.05	0.10	9.52	0.10	0.29	A	10.88	A	A
305	1.44	0.27	18.75	0.49	0.71	A	19.47	A	A

Analyte: Pu-238 in spinach, IAEA- 330

Upper limit of evaluation=0.05 [Bq/kg]

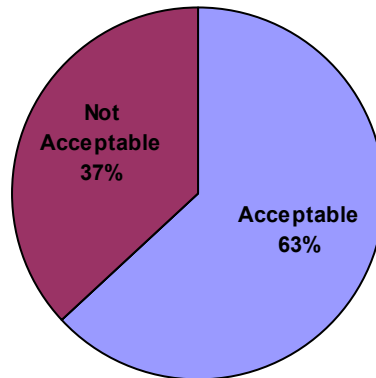


Lab code	Rep. Value	Reported Unc.	Unc. [%]	Final Score
3	0.02	0.01	25.78	A
5	0.10	0.03	33.50	N
9	0.06	0.07	116.67	A
13	<0.038			
16	0.15	0.03	20.00	N
18	0.06	0.01	15.00	N
23	1.28	0.08	6.25	N
27	0.07	0.01	18.74	N
42	8.85	0.95	10.73	N
50	4.90	0.30	6.12	N
62	0.04	0.01	28.89	A
63	0.02	0.01	50.00	A
65	0.11	0.04	37.74	N
69	0.04	0.11	275.00	A
81	0.58	0.07	12.93	N
85	1.96	0.40	20.41	N
90	<0.34			
96	0.29	0.41	141.38	A
102	28.80	3.00	10.42	N
103	0.06	0.03	48.45	A
104	0.03	0.00	6.64	A
105	0.03	0.00	8.87	A
108	0.16	0.07	43.75	N
111	0.01	0.00	19.66	A
112	0.01	0.00	17.12	A
113	0.03	0.00	13.43	A
114	0.44	0.08	18.37	N
116	0.01	0.00	31.91	A
119	0.05	0.01	32.61	A

Lab code	Rep. Value	Reported Unc.	Unc. [%]	Final Score
129	0.06	0.03	50.00	A
131	0.03	0.01	33.33	A
147	<0.94			
150	0.10			
161	0.01	0.01	58.33	A
163	0.05	0.02	41.63	A
164	0.12	0.01	7.29	N
167	0.03	0.01	16.67	A
177	<3.3			
179	0.21	0.00	1.87	N
182	0.00	0.00		-
185	2.80	0.40	14.29	N
189	0.01	0.00	7.14	A
208	<0.067			
217	0.00	0.00	97.06	A
222	<52			
228	0.00	0.00		-
237	<0.08			
239	0.03	0.01	28.59	A
248	0.03	0.01	33.33	A
251	0.02	0.02	111.11	A
253	0.00	0.50		-
256	0.00	0.00		-
260	0.04	0.00	12.85	A
269	0.03	0.01	19.23	A
290	0.03	0.01	40.00	A
296	0.18	0.06	33.33	N
297	<0.050			
311	0.03	0.00	13.33	A

Analyte: Pu-239+240 in spinach, IAEA-330

ULE=0.11 [Bq/kg]

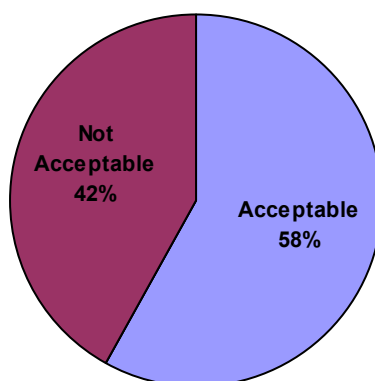


Lab code	Rep. Value	Reported Unc.	Unc. [%]	Final Score
3	0.05	0.01	15.95	A
5	0.03	0.01	43.17	A
9	0.15	0.17	113.33	A
11	0.39	0.05	12.82	N
13	<0.062			
16	0.43	0.07	16.28	N
18	0.13	0.02	15.38	N
20	0.03	0.01	22.81	A
23	0.68	0.06	8.82	N
27	0.11	0.02	14.67	A
42	7.31	0.57	7.80	N
50	8.60	0.50	5.81	N
59	0.07	0.01	14.29	A
62	0.07	0.01	9.86	A
63	0.04	0.01	25.00	A
65	0.26	0.04	14.12	N
69	0.10	0.20	200.00	A
81	0.89	0.12	13.48	N
85	5.06	1.10	21.74	N
90	0.16	0.08	50.00	A
96	0.09	0.20	221.74	A
102	2.01	0.21	10.23	N
103	0.18	0.05	29.66	N
104	0.04	0.01	21.14	A
105	0.05	0.00	6.95	A
108	0.68	0.07	10.29	N
111	0.03	0.00	15.26	A
112	0.03	0.00	10.94	A

Lab code	Rep. Value	Reported Unc.	Unc. [%]	Final Score
113	0.04	0.01	14.04	A
114	0.29	0.08	26.48	N
116	0.04	0.01	13.89	A
119	0.06	0.02	36.51	A
124	0.12	0.04	33.33	A
129	0.20	0.05	25.00	N
131	0.11	0.02	18.18	A
147	1.20	0.20	16.67	N
150	0.14			
158	30.50	3.00	9.84	N
161	0.04	0.03	80.00	A
163	0.04	0.02	48.71	A
164	0.25	0.02	6.48	N
167	0.06	0.08	133.33	A
177	16.40	1.10	6.71	N
179	0.09	0.00	0.87	A
182	0.83	0.07	8.43	N
185	0.10	0.50	500.00	A
189	0.04	0.00	4.76	A
208	<0.068			
217	0.03	0.01	18.18	A
222	<93			
237	<0.08			
239	0.10	0.02	16.50	A
248	0.08	0.01	12.50	A
250	0.15	0.03	20.00	N
251	0.06	0.03	52.63	A
253	0.00	0.23		-
256	0.00	0.00		-
260	0.03	0.00	13.38	A
269	0.05	0.01	17.02	A
290	0.07	0.01	13.85	A
296	0.04	0.02	61.11	A
297	0.04	0.01	23.26	A
305	0.28	0.04	14.29	N
311	0.07	0.01	12.50	A

Analyte: Am-241 in spinach, IAEA-330

ULE=0.13 [Bq/kg]

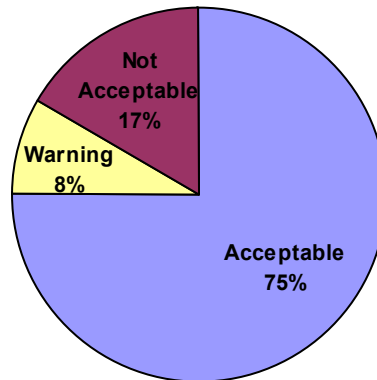


Lab code	Rep. Value	Reported Unc.	Unc. [%]	Final Score
2	1.27	0.50	39.37	N
5	0.06	0.04	67.08	A
9	0.10	0.07	70.00	A
11	2.70	0.30	11.11	N
18	0.23	0.03	13.04	N
20	0.04	0.01	20.00	A
23	0.44	0.04	9.09	N
27	0.21	0.02	8.96	N
59	0.77	0.07	9.09	N
60	4.00	0.30	7.50	N
62	0.15	0.02	10.60	N
63	0.05	0.01	20.00	A
64	<2.57			
65	0.16	0.03	19.62	A
69	0.60	0.20	33.33	N
77	<1.3			
81	0.16	0.02	12.80	N
84	0.00	0.00		-
85	2.18	0.30	13.76	N
90	<0.4			
103	0.89	0.08	9.38	N
104	0.11	0.00	3.60	A
105	0.03	0.00	11.68	A
111	0.05	0.00	9.56	A
112	0.04	0.00	11.69	A
113	0.05	0.01	15.57	A
114	0.12	0.02	16.67	A
116	0.04	0.00	10.02	A

Lab code	Rep. Value	Reported Unc.	Unc. [%]	Final Score
118	2.30			
131	0.30	0.04	13.33	N
136	2.20	2.10	95.45	A
146	<21.45	0.05		
147	<1.6			
161	0.03	0.01	21.21	A
163	3.42	0.23	6.70	N
164	0.02	0.00	7.01	A
167	0.10	0.01	13.40	A
176	<0.955			
177	9.93	0.75	7.55	N
179	0.34	0.00	1.14	N
185	0.10	0.50	500.00	A
189	0.04	0.00	11.43	A
208	<0.074			
222	<18			
228	0.00	0.00		-
237	0.16	0.05	31.25	A
239	0.07	0.02	33.79	A
243	<0.158			
248	0.18	0.01	5.56	N
250	<0.921			
251	0.07	0.04	50.67	A
256	0.00	0.00		-
260	0.30	0.03	9.60	N
287	<1.2			
290	0.07	0.01	17.14	A
295	0.17	0.05	29.41	A
296	0.02	0.02	82.61	A
297	<0.049			
308	<4.16			
311	0.09	0.03	29.41	A

Analyte: Mn-54 in spiked soil, IAEA-444

Target Value: 61.0 ± 1.24 [Bq/kg]



Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
1	57.10	1.30	2.28	-6.39	3.90	4.64	A	3.05	A	A
2	68.70	2.00	2.91	12.62	7.70	6.07	N	3.55	A	W
3	67.31	3.31	4.92	10.34	6.31	9.12	A	5.32	A	A
4	62.30	1.20	1.93	2.13	1.30	4.45	A	2.80	A	A
5	65.60	3.50	5.34	7.54	4.60	9.58	A	5.71	A	A
6	67.80	2.50	3.69	11.15	6.80	7.20	A	4.21	A	A
7	59.10	3.30	5.58	-3.11	1.90	9.10	A	5.94	A	A
8	65.78	2.35	3.57	7.84	4.78	6.86	A	4.11	A	A
9	62.00	9.00	14.52	1.64	1.00	23.44	A	14.66	A	A
10	58.98	1.70	2.88	-3.31	2.02	5.43	A	3.53	A	A
11	67.10	6.20	9.24	10.00	6.10	16.31	A	9.46	A	A
12	62.00	2.00	3.23	1.64	1.00	6.07	A	3.81	A	A
13	65.60	5.00	7.62	7.54	4.60	13.29	A	7.89	A	A
14	63.00	3.20	5.08	3.28	2.00	8.85	A	5.47	A	A
15	65.00	3.00	4.62	6.56	4.00	8.38	A	5.04	A	A
16	60.50	5.60	9.26	-0.82	0.50	14.80	A	9.48	A	A
18	62.60	1.42	2.27	2.62	1.60	4.86	A	3.05	A	A
19	60.10	3.80	6.32	-1.48	0.90	10.31	A	6.64	A	A
20	65.00	3.50	5.38	6.56	4.00	9.58	A	5.76	A	A
21	69.10	1.20	1.74	13.28	8.10	4.45	N	2.67	A	W
23	63.00	6.00	9.52	3.28	2.00	15.81	A	9.74	A	A
24	67.20	3.90	5.80	10.16	6.20	10.56	A	6.15	A	A
25	65.00	4.35	6.69	6.56	4.00	11.67	A	6.99	A	A
26	46.20	6.93	15.00	-24.26	14.80	18.16	A	15.14	N	N
27	63.00	6.68	10.60	3.28	2.00	17.53	A	10.80	A	A
28	62.30	1.80	2.89	2.13	1.30	5.64	A	3.53	A	A
29	58.50	4.70	8.03	-4.10	2.50	12.54	A	8.29	A	A
30	60.50	1.40	2.31	-0.82	0.50	4.83	A	3.08	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
31	65.67	3.20	4.87	7.66	4.67	8.85	A	5.28	A	A
33	64.20	3.70	5.76	5.25	3.20	10.07	A	6.11	A	A
34	62.40	1.70	2.72	2.30	1.40	5.43	A	3.40	A	A
35	60.00	3.10	5.17	-1.64	1.00	8.61	A	5.55	A	A
36	63.59	4.03	6.34	4.25	2.59	10.88	A	6.66	A	A
37	86.25	1.50	1.74	41.39	25.25	5.03	N	2.68	A	N
39	51.30	1.30	2.53	-15.90	9.70	4.64	N	3.25	A	N
42	97.10	3.69	3.80	59.18	36.10	10.04	N	4.31	A	N
43	63.87	5.13	8.03	4.70	2.87	13.62	A	8.29	A	A
44	64.10	4.20	6.55	5.08	3.10	11.30	A	6.86	A	A
45	62.90	2.90	4.61	3.11	1.90	8.14	A	5.04	A	A
48	68.57	2.61	3.81	12.41	7.57	7.46	N	4.32	A	W
49	63.30	2.60	4.11	3.77	2.30	7.43	A	4.58	A	A
50	66.50	1.40	2.11	9.02	5.50	4.83	N	2.93	A	W
51	63.50	3.30	5.20	4.10	2.50	9.10	A	5.58	A	A
52	66.40	1.50	2.26	8.85	5.40	5.02	N	3.04	A	W
53	64.40	1.40	2.17	5.57	3.40	4.83	A	2.98	A	A
55	63.90	1.10	1.72	4.75	2.90	4.28	A	2.66	A	A
56	67.60	3.10	4.59	10.82	6.60	8.61	A	5.02	A	A
59	62.50	4.10	6.56	2.46	1.50	11.05	A	6.87	A	A
62	67.90	3.30	4.86	11.31	6.90	9.10	A	5.27	A	A
63	68.00	8.00	11.76	11.48	7.00	20.89	A	11.94	A	A
64	61.66	0.78	1.27	1.08	0.66	3.78	A	2.39	A	A
65	66.00	10.00	15.15	8.20	5.00	26.00	A	15.29	N	W
67	60.70	3.90	6.43	-0.49	0.30	10.56	A	6.74	A	A
69	69.30	4.00	5.77	13.61	8.30	10.80	A	6.12	A	A
70	62.50	2.60	4.16	2.46	1.50	7.43	A	4.63	A	A
71	72.61	4.56	6.28	19.03	11.61	12.19	A	6.60	A	A
73	63.90	1.80	2.82	4.75	2.90	5.64	A	3.47	A	A
75	57.32	1.14	1.99	-6.04	3.68	4.35	A	2.84	A	A
76	0.17	82.60	48398.6	-99.72	60.83	213.14	A	48398.6	N	N
77	62.27	0.57	0.92	2.08	1.27	3.52	A	2.23	A	A
78	63.80	2.00	3.13	4.59	2.80	6.07	A	3.74	A	A
79	48.90	0.60	1.23	-19.84	12.10	3.55	N	2.37	A	N
80	78.70	3.88	4.93	29.02	17.70	10.51	N	5.33	A	N
81	53.70	5.40	10.06	-11.97	7.30	14.29	A	10.26	A	A
82	64.90	5.80	8.94	6.39	3.90	15.30	A	9.17	A	A
84	62.10	12.40	19.97	1.80	1.10	32.15	A	20.07	N	W
85	43.40	2.90	6.68	-28.85	17.60	8.14	N	6.98	A	N
86	55.00	3.00	5.45	-9.84	6.00	8.38	A	5.82	A	A
87	61.90	2.40	3.88	1.48	0.90	6.97	A	4.38	A	A
88	66.00	4.00	6.06	8.20	5.00	10.80	A	6.39	A	A
89	46.26	0.87	1.88	-24.16	14.74	3.91	N	2.77	A	N
90	61.00	4.00	6.56	0.00	0.00	10.80	A	6.87	A	A
91	86.15	5.06	5.87	41.23	25.15	13.44	N	6.22	A	N
92	56.98	1.11	1.95	-6.59	4.02	4.29	A	2.82	A	A
93	61.90	0.80	1.29	1.48	0.90	3.81	A	2.41	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
95	99.20	6.50	6.55	62.62	38.20	17.07	N	6.86	A	N
96	77.20	2.90	3.76	26.56	16.20	8.14	N	4.27	A	N
97	68.60	0.90	1.31	12.46	7.60	3.95	N	2.42	A	W
98	48.30	1.20	2.48	-20.82	12.70	4.45	N	3.21	A	N
99	68.20	4.50	6.60	11.80	7.20	12.04	A	6.90	A	A
101	59.20	2.40	4.05	-2.95	1.80	6.97	A	4.54	A	A
102	64.00	3.00	4.69	4.92	3.00	8.38	A	5.11	A	A
103	59.30	0.00	0.00	-2.79	1.70	3.20	A	2.03	A	A
104	62.50	3.50	5.60	2.46	1.50	9.58	A	5.96	A	A
105	61.41	2.82	4.59	0.67	0.41	7.95	A	5.02	A	A
107	68.00	7.00	10.29	11.48	7.00	18.34	A	10.49	A	A
108	99.24	1.04	1.05	62.69	38.24	4.18	N	2.29	A	N
110	60.73	3.19	5.25	-0.44	0.27	8.83	A	5.63	A	A
112	61.20	1.90	3.10	0.33	0.20	5.85	A	3.71	A	A
113	60.73	1.99	3.28	-0.44	0.27	6.05	A	3.86	A	A
114	63.40	3.20	5.05	3.93	2.40	8.85	A	5.44	A	A
115	65.70	3.00	4.57	7.70	4.70	8.38	A	5.00	A	A
116	60.20	3.10	5.15	-1.31	0.80	8.61	A	5.54	A	A
117	61.90	7.30	11.79	1.48	0.90	19.10	A	11.97	A	A
118	50.50	3.50	6.93	-17.21	10.50	9.58	N	7.22	A	N
119	61.70	2.50	4.05	1.15	0.70	7.20	A	4.53	A	A
120	69.80	5.60	8.02	14.43	8.80	14.80	A	8.28	A	A
121	62.20	3.10	4.98	1.97	1.20	8.61	A	5.38	A	A
122	53.88	2.54	4.72	-11.67	7.12	7.30	A	5.14	A	A
123	59.71	4.46	7.47	-2.11	1.29	11.94	A	7.74	A	A
124	62.72	1.44	2.30	2.82	1.72	4.90	A	3.07	A	A
125	69.31	1.95	2.81	13.62	8.31	5.96	N	3.47	A	W
126	74.20	6.82	9.19	21.64	13.20	17.88	A	9.41	A	A
127	59.10	1.96	3.32	-3.11	1.90	5.98	A	3.89	A	A
128	64.00	2.20	3.44	4.92	3.00	6.52	A	3.99	A	A
129	70.98	1.17	1.65	16.36	9.98	4.40	N	2.62	A	N
130	51.20	3.10	6.05	-16.07	9.80	8.61	N	6.39	A	N
131	68.00	6.00	8.82	11.48	7.00	15.81	A	9.05	A	A
132	6.10	5.00	81.94	-90.00	54.90	13.29	N	81.97	N	N
133	62.70	6.40	10.21	2.79	1.70	16.82	A	10.41	A	A
134	60.90	2.20	3.61	-0.16	0.10	6.52	A	4.15	A	A
135	60.50	3.00	4.96	-0.82	0.50	8.38	A	5.36	A	A
136	68.20	2.90	4.25	11.80	7.20	8.14	A	4.71	A	A
137	63.50	1.20	1.89	4.10	2.50	4.45	A	2.78	A	A
138	58.50	3.93	6.72	-4.10	2.50	10.63	A	7.02	A	A
139	58.40	3.70	6.34	-4.26	2.60	10.07	A	6.65	A	A
140	69.00	4.00	5.80	13.11	8.00	10.80	A	6.14	A	A
142	64.40	2.10	3.26	5.57	3.40	6.29	A	3.84	A	A
143	64.30	3.30	5.13	5.41	3.30	9.10	A	5.52	A	A
144	59.90	4.00	6.68	-1.80	1.10	10.80	A	6.98	A	A
145	67.30	5.35	7.95	10.33	6.30	14.17	A	8.21	A	A
146	63.51	4.94	7.78	4.11	2.51	13.14	A	8.04	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
147	64.60	1.70	2.63	5.90	3.60	5.43	A	3.33	A	A
148	47.51	1.08	2.27	-22.11	13.49	4.24	N	3.05	A	N
149	62.90	1.00	1.59	3.11	1.90	4.11	A	2.58	A	A
150	61.00	5.00	8.20	0.00	0.00	13.29	A	8.45	A	A
151	48.70	2.10	4.31	-20.16	12.30	6.29	N	4.77	A	N
152	50.50	1.60	3.17	-17.21	10.50	5.22	N	3.76	A	N
153	73.82	3.23	4.38	21.02	12.82	8.93	N	4.82	A	N
154	73.20	2.90	3.96	20.00	12.20	8.14	N	4.45	A	N
155	70.90	1.00	1.41	16.23	9.90	4.11	N	2.47	A	N
156	63.50	3.70	5.83	4.10	2.50	10.07	A	6.17	A	A
157	58.50	1.90	3.25	-4.10	2.50	5.85	A	3.83	A	A
160	64.59	2.58	3.99	5.89	3.59	7.39	A	4.48	A	A
161	57.80	5.60	9.69	-5.25	3.20	14.80	A	9.90	A	A
162	63.80	2.67	4.18	4.59	2.80	7.60	A	4.65	A	A
163	65.78	2.47	3.75	7.84	4.78	7.13	A	4.27	A	A
164	55.96	2.57	4.59	-8.26	5.04	7.36	A	5.02	A	A
165	73.60	0.60	0.82	20.66	12.60	3.55	N	2.19	A	N
166	65.19	2.26	3.47	6.87	4.19	6.65	A	4.02	A	A
167	73.50	3.20	4.35	20.49	12.50	8.85	N	4.80	A	N
168	77.97	1.91	2.45	27.82	16.97	5.88	N	3.18	A	N
169	63.42	2.34	3.69	3.97	2.42	6.83	A	4.21	A	A
172	68.50	8.30	12.12	12.30	7.50	21.65	A	12.29	A	A
173	39.59	1.55	3.92	-35.10	21.41	5.12	N	4.41	A	N
174	35.77	1.07	2.99	-41.36	25.23	4.23	N	3.62	A	N
175	60.92	1.61	2.64	-0.13	0.08	5.24	A	3.33	A	A
176	62.92	1.80	2.87	3.15	1.92	5.65	A	3.51	A	A
177	69.20	5.50	7.95	13.44	8.20	14.55	A	8.20	A	A
178	56.50	1.30	2.30	-7.38	4.50	4.64	A	3.07	A	A
179	57.85	4.55	7.87	-5.16	3.15	12.17	A	8.12	A	A
182	56.10	3.25	5.79	-8.03	4.90	8.97	A	6.14	A	A
184	53.57	3.42	6.38	-12.18	7.43	9.39	A	6.70	A	A
185	62.00	4.50	7.26	1.64	1.00	12.04	A	7.54	A	A
186	63.60	2.30	3.62	4.26	2.60	6.74	A	4.15	A	A
187	65.40	2.10	3.21	7.21	4.40	6.29	A	3.80	A	A
188	64.40	1.70	2.64	5.57	3.40	5.43	A	3.33	A	A
189	64.90	6.50	10.02	6.39	3.90	17.07	A	10.22	A	A
190	59.00	3.00	5.08	-3.28	2.00	8.38	A	5.48	A	A
191	44.10	2.90	6.58	-27.70	16.90	8.14	N	6.88	A	N
192	64.89	3.59	5.53	6.38	3.89	9.80	A	5.89	A	A
194	65.50	1.30	1.98	7.38	4.50	4.64	A	2.84	A	A
195	86.20	1.10	1.28	41.31	25.20	4.28	N	2.40	A	N
196	64.50	3.00	4.65	5.74	3.50	8.38	A	5.08	A	A
197	61.80	1.80	2.91	1.31	0.80	5.64	A	3.55	A	A
198	70.40	1.00	1.42	15.41	9.40	4.11	N	2.48	A	N
199	63.18	3.41	5.40	3.57	2.18	9.36	A	5.77	A	A
200	61.89	1.90	3.07	1.46	0.89	5.85	A	3.68	A	A
201	65.40	2.80	4.28	7.21	4.40	7.90	A	4.74	A	A

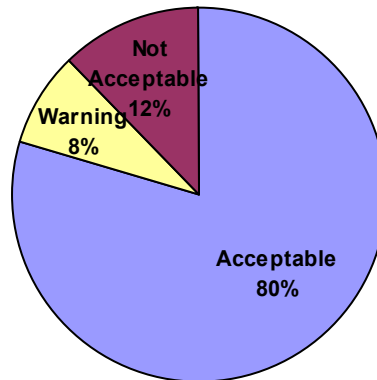
Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
202	63.53	1.78	2.80	4.15	2.53	5.60	A	3.46	A	A
203	61.70	1.50	2.43	1.15	0.70	5.02	A	3.17	A	A
204	73.00	4.00	5.48	19.67	12.00	10.80	N	5.84	A	N
206	64.30	4.30	6.69	5.41	3.30	11.55	A	6.99	A	A
207	68.80	4.10	5.96	12.79	7.80	11.05	A	6.30	A	A
208	54.30	4.00	7.37	-10.98	6.70	10.80	A	7.64	A	A
209	61.00	3.90	6.39	0.00	0.00	10.56	A	6.71	A	A
210	66.00	6.00	9.09	8.20	5.00	15.81	A	9.32	A	A
212	41.30	2.40	5.81	-32.30	19.70	6.97	N	6.16	A	N
213	57.90	2.60	4.49	-5.08	3.10	7.43	A	4.93	A	A
214	63.00	2.00	3.17	3.28	2.00	6.07	A	3.77	A	A
215	61.08	5.08	8.32	0.13	0.08	13.49	A	8.56	A	A
216	70.67	5.64	7.98	15.85	9.67	14.90	A	8.24	A	A
217	69.00	1.40	2.03	13.11	8.00	4.83	N	2.87	A	W
218	61.50	5.00	8.13	0.82	0.50	13.29	A	8.38	A	A
220	62.00	1.87	3.02	1.64	1.00	5.79	A	3.64	A	A
222	74.00	3.00	4.05	21.31	13.00	8.38	N	4.54	A	N
223	56.80	1.30	2.29	-6.89	4.20	4.64	A	3.06	A	A
225	55.41	1.76	3.18	-9.16	5.59	5.55	N	3.77	A	W
226	66.60	5.20	7.81	9.18	5.60	13.79	A	8.07	A	A
227	66.68	3.27	4.90	9.31	5.68	9.02	A	5.31	A	A
228	58.90	1.40	2.38	-3.44	2.10	4.83	A	3.13	A	A
229	65.10	4.20	6.45	6.72	4.10	11.30	A	6.76	A	A
230	78.40	4.70	5.99	28.52	17.40	12.54	N	6.33	A	N
231	53.89	2.82	5.23	-11.66	7.11	7.95	A	5.61	A	A
232	111.26	5.53	4.97	82.39	50.26	14.62	N	5.37	A	N
233	58.61	1.25	2.13	-3.92	2.39	4.54	A	2.95	A	A
234	57.36	1.60	2.79	-5.97	3.64	5.22	A	3.45	A	A
235	62.50	1.80	2.88	2.46	1.50	5.64	A	3.53	A	A
236	2.10	0.22	10.48	-96.56	58.90	3.25	N	10.67	A	N
237	62.20	2.90	4.66	1.97	1.20	8.14	A	5.09	A	A
238	67.31	1.41	2.10	10.34	6.31	4.85	N	2.92	A	W
239	60.80	1.88	3.09	-0.33	0.20	5.81	A	3.70	A	A
240	65.47	1.94	2.96	7.33	4.47	5.94	A	3.59	A	A
241	69.16	2.44	3.53	13.38	8.16	7.06	N	4.07	A	W
242	61.92	3.77	6.09	1.51	0.92	10.24	A	6.42	A	A
243	46.23	2.04	4.41	-24.21	14.77	6.16	N	4.86	A	N
245	58.90	1.61	2.73	-3.44	2.10	5.24	A	3.41	A	A
246	62.40	6.60	10.58	2.30	1.40	17.33	A	10.77	A	A
248	61.00	8.00	13.11	0.00	0.00	20.89	A	13.27	A	A
249	63.00	2.00	3.17	3.28	2.00	6.07	A	3.77	A	A
250	67.30	3.60	5.35	10.33	6.30	9.82	A	5.72	A	A
251	53.20	1.00	1.88	-12.79	7.80	4.11	N	2.77	A	W
252	64.90	1.40	2.16	6.39	3.90	4.83	A	2.96	A	A
253	64.39	3.42	5.31	5.56	3.39	9.39	A	5.69	A	A
254	66.41	1.46	2.20	8.87	5.41	4.94	N	2.99	A	W
255	43.73	2.97	6.79	-28.31	17.27	8.30	N	7.09	A	N

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
256	52.77	5.36	10.16	-13.49	8.23	14.19	A	10.36	A	A
257	60.30	1.30	2.16	-1.15	0.70	4.64	A	2.96	A	A
258	61.50	5.00	8.13	0.82	0.50	13.29	A	8.38	A	A
259	62.70	1.00	1.59	2.79	1.70	4.11	A	2.58	A	A
260	60.00	3.30	5.50	-1.64	1.00	9.10	A	5.86	A	A
261	65.62	2.83	4.31	7.57	4.62	7.97	A	4.77	A	A
262	64.00	2.00	3.13	4.92	3.00	6.07	A	3.73	A	A
263	62.25	3.32	5.33	2.05	1.25	9.14	A	5.71	A	A
264	62.40	1.50	2.40	2.30	1.40	5.02	A	3.15	A	A
265	62.87	3.02	4.80	3.07	1.87	8.42	A	5.22	A	A
268	74.50	2.70	3.62	22.13	13.50	7.67	N	4.16	A	N
269	67.05	1.28	1.91	9.92	6.05	4.60	N	2.79	A	W
270	62.05	2.89	4.66	1.72	1.05	8.11	A	5.08	A	A
271	65.90	3.90	5.92	8.03	4.90	10.56	A	6.26	A	A
272	63.10	3.40	5.39	3.44	2.10	9.34	A	5.76	A	A
275	63.95	0.97	1.52	4.84	2.95	4.06	A	2.54	A	A
277	68.90	2.90	4.21	12.95	7.90	8.14	A	4.67	A	A
278	64.70	1.47	2.27	6.07	3.70	4.96	A	3.05	A	A
279	63.60	2.90	4.56	4.26	2.60	8.14	A	4.99	A	A
280	70.11	3.00	4.28	14.93	9.11	8.38	N	4.74	A	W
281	53.41	2.75	5.15	-12.44	7.59	7.78	A	5.54	A	A
284	84.40	1.70	2.01	38.36	23.40	5.43	N	2.86	A	N
285	64.80	3.36	5.19	6.23	3.80	9.24	A	5.57	A	A
286	71.30	2.20	3.09	16.89	10.30	6.52	N	3.69	A	N
287	65.60	0.90	1.37	7.54	4.60	3.95	N	2.45	A	W
288	63.00	1.40	2.22	3.28	2.00	4.83	A	3.01	A	A
290	65.60	3.30	5.03	7.54	4.60	9.10	A	5.43	A	A
291	60.80	1.40	2.30	-0.33	0.20	4.83	A	3.07	A	A
292	62.00	2.28	3.68	1.64	1.00	6.70	A	4.20	A	A
293	69.99	3.10	4.43	14.74	8.99	8.61	N	4.87	A	W
295	67.00	4.00	5.97	9.84	6.00	10.80	A	6.31	A	A
296	61.60	4.50	7.31	0.98	0.60	12.04	A	7.58	A	A
297	70.00	2.10	3.00	14.75	9.00	6.29	N	3.62	A	W
299	70.30	3.40	4.84	15.25	9.30	9.34	A	5.25	A	A
300	70.00	2.00	2.86	14.75	9.00	6.07	N	3.51	A	W
302	66.80	2.57	3.85	9.51	5.80	7.36	A	4.35	A	A
304	78.00	8.00	10.26	27.87	17.00	20.89	A	10.46	A	A
305	63.90	4.10	6.42	4.75	2.90	11.05	A	6.73	A	A
306	57.20	1.80	3.15	-6.23	3.80	5.64	A	3.75	A	A
307	64.00	3.00	4.69	4.92	3.00	8.38	A	5.11	A	A
308	72.50	2.40	3.31	18.85	11.50	6.97	N	3.88	A	N
309	52.40	3.60	6.87	-14.10	8.60	9.82	A	7.16	A	A
310	60.30	2.20	3.65	-1.15	0.70	6.52	A	4.18	A	A
311	67.00	4.00	5.97	9.84	6.00	10.80	A	6.31	A	A
312	37.30	8.70	23.32	-38.85	23.70	22.67	N	23.41	N	N
316	60.00	3.80	6.33	-1.64	1.00	10.31	A	6.65	A	A
317	61.96	1.30	2.10	1.57	0.96	4.64	A	2.92	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
318	64.10	2.80	4.37	5.08	3.10	7.90	A	4.82	A	A
319	66.60	2.50	3.75	9.18	5.60	7.20	A	4.27	A	A
320	62.40	1.40	2.24	2.30	1.40	4.83	A	3.03	A	A
321	55.61	0.96	1.73	-8.84	5.39	4.05	N	2.67	A	W
322	65.00	4.00	6.15	6.56	4.00	10.80	A	6.48	A	A

Analyte: Co-60 in spiked soil, IAEA-444

Target Value: 82.6 ± 2.01 [Bq/kg]



Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
1	83.80	1.20	1.43	1.45	1.20	6.04	A	2.82	A	A
2	81.80	2.00	2.44	-0.97	0.80	7.32	A	3.45	A	A
3	85.15	3.82	4.49	3.09	2.55	11.14	A	5.10	A	A
4	82.10	1.60	1.95	-0.61	0.50	6.63	A	3.12	A	A
5	85.50	4.40	5.15	3.51	2.90	12.48	A	5.69	A	A
6	86.40	3.00	3.47	4.60	3.80	9.32	A	4.24	A	A
7	85.60	4.70	5.49	3.63	3.00	13.19	A	6.01	A	A
8	83.64	3.03	3.62	1.26	1.04	9.38	A	4.36	A	A
9	82.00	8.00	9.76	-0.73	0.60	21.28	A	10.05	A	A
10	81.50	1.95	2.39	-1.33	1.10	7.23	A	3.41	A	A
11	81.80	7.10	8.68	-0.97	0.80	19.04	A	9.01	A	A
12	80.00	3.00	3.75	-3.15	2.60	9.32	A	4.47	A	A
13	82.40	6.10	7.40	-0.24	0.20	16.57	A	7.79	A	A
14	82.80	4.10	4.95	0.24	0.20	11.78	A	5.52	A	A
15	81.00	4.00	4.94	-1.94	1.60	11.55	A	5.51	A	A
16	70.80	4.50	6.36	-14.29	11.80	12.72	A	6.81	A	A
18	85.10	5.06	5.95	3.03	2.50	14.05	A	6.42	A	A
19	109.00	4.00	3.67	31.96	26.40	11.55	N	4.40	A	N
20	83.00	3.50	4.22	0.48	0.40	10.41	A	4.87	A	A
21	85.80	1.10	1.28	3.87	3.20	5.91	A	2.75	A	A
23	81.00	7.00	8.64	-1.94	1.60	18.79	A	8.98	A	A
24	85.70	5.30	6.18	3.75	3.10	14.62	A	6.65	A	A
25	81.40	2.40	2.95	-1.45	1.20	8.08	A	3.82	A	A
26	64.30	9.64	14.99	-22.15	18.30	25.41	A	15.19	N	N
27	83.10	8.37	10.07	0.61	0.50	22.21	A	10.36	A	A
28	74.20	1.80	2.43	-10.17	8.40	6.96	N	3.44	A	W
29	77.40	6.60	8.53	-6.30	5.20	17.80	A	8.87	A	A
30	77.40	1.10	1.42	-6.30	5.20	5.91	A	2.82	A	A
31	79.73	4.44	5.57	-3.47	2.87	12.57	A	6.08	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
33	78.00	2.90	3.72	-5.57	4.60	9.10	A	4.44	A	A
34	85.40	1.60	1.87	3.39	2.80	6.63	A	3.07	A	A
35	79.40	9.00	11.34	-3.87	3.20	23.79	A	11.59	A	A
36	82.07	4.85	5.91	-0.64	0.53	13.55	A	6.39	A	A
37	104.60	1.52	1.45	26.63	22.00	6.50	N	2.83	A	N
39	67.10	1.20	1.79	-18.77	15.50	6.04	N	3.02	A	N
42	93.30	2.61	2.80	12.95	10.70	8.50	N	3.71	A	W
43	81.76	6.47	7.91	-1.02	0.84	17.48	A	8.28	A	A
44	77.00	3.50	4.55	-6.78	5.60	10.41	A	5.16	A	A
45	69.50	2.70	3.88	-15.86	13.10	8.68	N	4.58	A	N
48	87.13	3.10	3.56	5.48	4.53	9.53	A	4.31	A	A
49	83.30	1.80	2.16	0.85	0.70	6.96	A	3.25	A	A
50	81.70	1.20	1.47	-1.09	0.90	6.04	A	2.84	A	A
51	78.30	4.00	5.11	-5.21	4.30	11.55	A	5.66	A	A
52	75.40	1.50	1.99	-8.72	7.20	6.47	N	3.14	A	W
53	83.20	1.00	1.20	0.73	0.60	5.79	A	2.71	A	A
55	82.00	1.00	1.22	-0.73	0.60	5.79	A	2.72	A	A
56	83.86	3.72	4.44	1.53	1.26	10.91	A	5.06	A	A
59	79.40	5.00	6.30	-3.87	3.20	13.90	A	6.75	A	A
62	91.90	3.00	3.26	11.26	9.30	9.32	A	4.07	A	A
63	93.00	11.00	11.83	12.59	10.40	28.85	A	12.08	A	A
64	78.03	0.90	1.15	-5.53	4.57	5.68	A	2.69	A	A
65	85.00	12.00	14.12	2.91	2.40	31.39	A	14.33	A	A
67	81.20	3.30	4.06	-1.69	1.40	9.97	A	4.74	A	A
69	88.10	0.90	1.02	6.66	5.50	5.68	A	2.64	A	A
70	73.20	2.90	3.96	-11.38	9.40	9.10	N	4.65	A	W
71	73.04	4.67	6.39	-11.57	9.56	13.12	A	6.84	A	A
73	83.50	1.70	2.04	1.09	0.90	6.79	A	3.17	A	A
75	86.24	1.29	1.49	4.40	3.64	6.16	A	2.86	A	A
76	0.10			-99.88						
77	77.88	0.46	0.59	-5.71	4.72	5.32	A	2.50	A	A
78	79.20	2.30	2.90	-4.12	3.40	7.88	A	3.79	A	A
79	62.30	0.70	1.12	-24.58	20.30	5.49	N	2.68	A	N
80	96.30	3.61	3.75	16.59	13.70	10.66	N	4.47	A	N
81	77.50	7.80	10.06	-6.17	5.10	20.78	A	10.35	A	A
82	84.10	8.40	9.99	1.82	1.50	22.28	A	10.28	A	A
84	85.10	4.80	5.64	3.03	2.50	13.43	A	6.14	A	A
85	85.20	5.80	6.81	3.15	2.60	15.84	A	7.23	A	A
86	71.00	3.00	4.23	-14.04	11.60	9.32	N	4.88	A	W
87	81.90	2.90	3.54	-0.85	0.70	9.10	A	4.30	A	A
88	86.00	5.00	5.81	4.12	3.40	13.90	A	6.30	A	A
89	76.30	1.10	1.44	-7.63	6.30	5.91	N	2.83	A	W
90	81.00	5.00	6.17	-1.94	1.60	13.90	A	6.64	A	A
91	75.00	4.38	5.84	-9.20	7.60	12.44	A	6.33	A	A
92	71.53	1.04	1.45	-13.40	11.07	5.84	N	2.83	A	W
93	79.00	0.30	0.38	-4.36	3.60	5.24	A	2.46	A	A
95	122.00	7.90	6.48	47.70	39.40	21.03	N	6.92	A	N

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
96	98.60	3.09	3.13	19.37	16.00	9.51	N	3.97	A	N
97	86.80	0.80	0.92	5.08	4.20	5.58	A	2.60	A	A
98	60.50	0.90	1.49	-26.76	22.10	5.68	N	2.85	A	N
99	78.60	3.20	4.07	-4.84	4.00	9.75	A	4.74	A	A
101	75.90	3.10	4.08	-8.11	6.70	9.53	A	4.75	A	A
102	79.00	3.00	3.80	-4.36	3.60	9.32	A	4.51	A	A
103	78.50	0.00	0.00	-4.96	4.10	5.19	A	2.43	A	A
104	81.30	4.90	6.03	-1.57	1.30	13.66	A	6.50	A	A
105	82.31	1.98	2.41	-0.35	0.29	7.28	A	3.42	A	A
107	81.00	8.00	9.88	-1.94	1.60	21.28	A	10.17	A	A
108	98.76	1.13	1.14	19.56	16.16	5.95	N	2.69	A	N
110	79.06	4.21	5.33	-4.29	3.54	12.04	A	5.85	A	A
112	83.10	2.30	2.77	0.61	0.50	7.88	A	3.69	A	A
113	82.81	2.55	3.08	0.25	0.21	8.38	A	3.92	A	A
114	76.80	3.60	4.69	-7.02	5.80	10.64	A	5.28	A	A
115	82.10	3.10	3.78	-0.61	0.50	9.53	A	4.49	A	A
116	80.30	4.10	5.11	-2.78	2.30	11.78	A	5.66	A	A
117	83.10	4.00	4.81	0.61	0.50	11.55	A	5.39	A	A
118	66.60	3.30	4.95	-19.37	16.00	9.97	N	5.52	A	N
119	81.30	5.80	7.13	-1.57	1.30	15.84	A	7.54	A	A
120	86.20	6.90	8.00	4.36	3.60	18.54	A	8.37	A	A
121	80.80	4.10	5.07	-2.18	1.80	11.78	A	5.63	A	A
122	65.56	2.65	4.05	-20.63	17.04	8.59	N	4.72	A	N
123	67.45	4.74	7.03	-18.34	15.15	13.28	N	7.44	A	N
124	72.56	1.68	2.32	-12.15	10.04	6.76	N	3.36	A	W
125	57.14	1.54	2.70	-30.82	25.46	6.53	N	3.63	A	N
126	91.70	8.37	9.13	11.02	9.10	22.21	A	9.45	A	A
127	77.10	2.31	3.00	-6.66	5.50	7.90	A	3.86	A	A
128	82.90	2.80	3.38	0.36	0.30	8.89	A	4.16	A	A
129	88.93	1.29	1.45	7.66	6.33	6.16	N	2.83	A	W
130	68.60	2.40	3.50	-16.95	14.00	8.08	N	4.26	A	N
131	84.00	6.00	7.14	1.69	1.40	16.33	A	7.55	A	A
132	1.60	5.00	312.50	-98.06	81.00	13.90	N	312.51	N	N
133	82.00	7.80	9.51	-0.73	0.60	20.78	A	9.82	A	A
134	81.20	3.50	4.31	-1.69	1.40	10.41	A	4.95	A	A
135	78.50	2.90	3.69	-4.96	4.10	9.10	A	4.42	A	A
136	79.00	3.30	4.18	-4.36	3.60	9.97	A	4.83	A	A
137	80.40	1.40	1.74	-2.66	2.20	6.32	A	2.99	A	A
138	74.31	4.29	5.77	-10.04	8.29	12.22	A	6.27	A	A
139	72.70	4.50	6.19	-11.99	9.90	12.72	A	6.65	A	A
140	78.00	4.00	5.13	-5.57	4.60	11.55	A	5.68	A	A
142	82.60	2.70	3.27	0.00	0.00	8.68	A	4.08	A	A
143	82.90	2.20	2.65	0.36	0.30	7.69	A	3.60	A	A
144	79.70	4.00	5.02	-3.51	2.90	11.55	A	5.58	A	A
145	83.80	4.72	5.63	1.45	1.20	13.24	A	6.14	A	A
146	82.50	6.14	7.44	-0.12	0.10	16.67	A	7.83	A	A
147	85.30	2.20	2.58	3.27	2.70	7.69	A	3.55	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
148	64.36	0.94	1.46	-22.08	18.24	5.72	N	2.84	A	N
149	83.00	1.20	1.45	0.48	0.40	6.04	A	2.83	A	A
150	80.00	6.00	7.50	-3.15	2.60	16.33	A	7.88	A	A
151	57.20	2.30	4.02	-30.75	25.40	7.88	N	4.70	A	N
152	64.00	1.10	1.72	-22.52	18.60	5.91	N	2.98	A	N
153	90.16	3.21	3.56	9.15	7.56	9.77	A	4.31	A	A
154	92.60	2.60	2.81	12.11	10.00	8.48	N	3.72	A	W
155	83.40	0.90	1.08	0.97	0.80	5.68	A	2.66	A	A
156	82.00	4.60	5.61	-0.73	0.60	12.95	A	6.11	A	A
157	69.10	1.30	1.88	-16.34	13.50	6.18	N	3.08	A	N
160	77.95	3.37	4.32	-5.63	4.65	10.12	A	4.96	A	A
161	81.70	6.10	7.47	-1.09	0.90	16.57	A	7.85	A	A
162	78.90	2.99	3.79	-4.48	3.70	9.30	A	4.50	A	A
163	84.36	3.13	3.71	2.13	1.76	9.60	A	4.44	A	A
164	72.47	3.48	4.80	-12.26	10.13	10.37	A	5.38	A	A
165	83.50	0.40	0.48	1.09	0.90	5.29	A	2.48	A	A
166	81.78	1.61	1.97	-0.99	0.82	6.64	A	3.13	A	A
167	90.50	5.50	6.08	9.56	7.90	15.11	A	6.55	A	A
168	93.04	2.04	2.19	12.64	10.44	7.39	N	3.28	A	W
169	86.84	2.89	3.33	5.13	4.24	9.08	A	4.12	A	A
172	88.20	10.70	12.13	6.78	5.60	28.09	A	12.37	A	A
173	73.71	3.46	4.69	-10.76	8.89	10.32	A	5.29	A	A
174	71.26	2.43	3.41	-13.73	11.34	8.14	N	4.19	A	W
175	75.64	3.07	4.06	-8.43	6.96	9.47	A	4.73	A	A
176	79.71	2.01	2.52	-3.50	2.89	7.33	A	3.50	A	A
177	86.40	4.40	5.09	4.60	3.80	12.48	A	5.64	A	A
178	80.80	2.40	2.97	-2.18	1.80	8.08	A	3.84	A	A
179	81.01	6.63	8.18	-1.92	1.59	17.87	A	8.54	A	A
182	73.80	5.31	7.20	-10.65	8.80	14.65	A	7.60	A	A
184	71.36	3.05	4.27	-13.61	11.24	9.42	N	4.92	A	W
185	79.90	5.60	7.01	-3.27	2.70	15.35	A	7.42	A	A
186	81.90	1.80	2.20	-0.85	0.70	6.96	A	3.28	A	A
187	85.60	3.00	3.50	3.63	3.00	9.32	A	4.27	A	A
188	85.90	2.40	2.79	4.00	3.30	8.08	A	3.71	A	A
189	83.80	8.50	10.14	1.45	1.20	22.53	A	10.43	A	A
190	81.00	3.00	3.70	-1.94	1.60	9.32	A	4.43	A	A
191	55.80	3.70	6.63	-32.45	26.80	10.86	N	7.06	A	N
192	80.28	4.60	5.73	-2.81	2.32	12.95	A	6.23	A	A
194	87.00	1.60	1.84	5.33	4.40	6.63	A	3.05	A	A
195	110.10	1.20	1.09	33.29	27.50	6.04	N	2.67	A	N
196	87.30	3.80	4.35	5.69	4.70	11.09	A	4.99	A	A
197	86.10	2.60	3.02	4.24	3.50	8.48	A	3.88	A	A
198	90.10	1.00	1.11	9.08	7.50	5.79	N	2.67	A	W
199	83.66	3.45	4.12	1.28	1.06	10.30	A	4.79	A	A
200	82.14	2.60	3.17	-0.56	0.46	8.48	A	3.99	A	A
201	83.50	1.50	1.80	1.09	0.90	6.47	A	3.02	A	A
202	81.84	2.82	3.45	-0.92	0.76	8.93	A	4.22	A	A

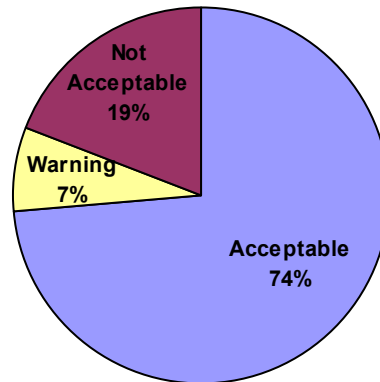
Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
203	80.52	2.00	2.48	-2.52	2.08	7.32	A	3.48	A	A
204	95.00	2.00	2.11	15.01	12.40	7.32	N	3.22	A	N
206	82.90	5.60	6.76	0.36	0.30	15.35	A	7.18	A	A
207	84.70	2.30	2.72	2.54	2.10	7.88	A	3.65	A	A
208	76.20	5.00	6.56	-7.75	6.40	13.90	A	7.00	A	A
209	76.50	4.20	5.49	-7.38	6.10	12.01	A	6.01	A	A
210	87.00	3.00	3.45	5.33	4.40	9.32	A	4.22	A	A
212	60.40	1.70	2.81	-26.88	22.20	6.79	N	3.72	A	N
213	78.00	3.20	4.10	-5.57	4.60	9.75	A	4.77	A	A
214	83.00	2.00	2.41	0.48	0.40	7.32	A	3.42	A	A
215	79.96	5.56	6.95	-3.20	2.64	15.25	A	7.37	A	A
216	91.51	7.65	8.36	10.79	8.91	20.41	A	8.71	A	A
217	82.50	1.50	1.82	-0.12	0.10	6.47	A	3.04	A	A
218	81.00	6.60	8.15	-1.94	1.60	17.80	A	8.50	A	A
220	83.00	1.87	2.25	0.48	0.40	7.08	A	3.32	A	A
222	90.00	2.00	2.22	8.96	7.40	7.32	N	3.30	A	W
223	75.00	1.10	1.47	-9.20	7.60	5.91	N	2.84	A	W
225	77.02	1.79	2.32	-6.76	5.58	6.94	A	3.36	A	A
226	83.10	6.80	8.18	0.61	0.50	18.29	A	8.54	A	A
227	77.83	2.61	3.35	-5.77	4.77	8.50	A	4.14	A	A
228	80.00	1.80	2.25	-3.15	2.60	6.96	A	3.31	A	A
229	87.70	5.10	5.82	6.17	5.10	14.14	A	6.30	A	A
230	89.50	3.40	3.80	8.35	6.90	10.19	A	4.51	A	A
231	72.69	4.95	6.81	-12.00	9.91	13.78	A	7.23	A	A
232	139.54	3.56	2.55	68.93	56.94	10.55	N	3.53	A	N
233	76.35	0.86	1.13	-7.57	6.25	5.64	N	2.68	A	W
234	73.17	1.94	2.65	-11.42	9.43	7.21	N	3.60	A	W
235	82.15	2.40	2.92	-0.54	0.45	8.08	A	3.80	A	A
236	6.62	0.27	4.08	-91.99	75.98	5.23	N	4.75	A	N
237	80.20	3.50	4.36	-2.91	2.40	10.41	A	5.00	A	A
238	76.68	1.39	1.82	-7.17	5.92	6.31	A	3.04	A	A
239	83.70	6.41	7.66	1.33	1.10	17.33	A	8.04	A	A
240	82.00	2.31	2.82	-0.73	0.60	7.90	A	3.72	A	A
241	88.02	2.88	3.27	6.56	5.42	9.06	A	4.08	A	A
242	80.41	2.67	3.32	-2.65	2.19	8.62	A	4.12	A	A
243	58.62	2.56	4.37	-29.03	23.98	8.40	N	5.00	A	N
245	79.20	1.92	2.42	-4.12	3.40	7.17	A	3.43	A	A
246	75.40	7.90	10.48	-8.72	7.20	21.03	A	10.76	A	A
248	71.00	8.00	11.27	-14.04	11.60	21.28	A	11.53	A	A
249	79.60	2.10	2.64	-3.63	3.00	7.50	A	3.59	A	A
250	83.40	4.50	5.40	0.97	0.80	12.72	A	5.92	A	A
251	70.80	0.90	1.27	-14.29	11.80	5.68	N	2.75	A	W
252	81.10	2.60	3.21	-1.82	1.50	8.48	A	4.02	A	A
253	84.39	4.49	5.32	2.17	1.79	12.69	A	5.85	A	A
254	82.89	1.48	1.79	0.35	0.29	6.44	A	3.02	A	A
255	59.34	3.75	6.32	-28.16	23.26	10.98	N	6.77	A	N
256	83.70	8.50	10.16	1.33	1.10	22.53	A	10.44	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
257	86.00	2.30	2.67	4.12	3.40	7.88	A	3.62	A	A
258	85.00	6.80	8.00	2.91	2.40	18.29	A	8.36	A	A
259	82.40	0.80	0.97	-0.24	0.20	5.58	A	2.62	A	A
260	81.10	2.40	2.96	-1.82	1.50	8.08	A	3.83	A	A
261	10.65	0.15	1.41	-87.11	71.95	5.20	N	2.81	A	N
262	87.50	2.70	3.09	5.93	4.90	8.68	A	3.93	A	A
263	77.23	4.04	5.23	-6.50	5.37	11.64	A	5.77	A	A
264	84.40	2.90	3.44	2.18	1.80	9.10	A	4.21	A	A
265	74.91	3.01	4.02	-9.31	7.69	9.34	A	4.70	A	A
268	89.50	2.50	2.79	8.35	6.90	8.28	A	3.70	A	A
269	82.59	0.93	1.13	-0.01	0.01	5.71	A	2.68	A	A
270	75.98	3.49	4.59	-8.01	6.62	10.39	A	5.20	A	A
271	92.60	4.60	4.97	12.11	10.00	12.95	A	5.53	A	A
272	81.40	4.30	5.28	-1.45	1.20	12.25	A	5.82	A	A
275	80.73	0.77	0.95	-2.26	1.87	5.55	A	2.61	A	A
277	85.70	3.10	3.62	3.75	3.10	9.53	A	4.36	A	A
278	86.27	1.71	1.98	4.44	3.67	6.81	A	3.14	A	A
279	86.00	4.00	4.65	4.12	3.40	11.55	A	5.25	A	A
280	86.46	3.10	3.59	4.67	3.86	9.53	A	4.33	A	A
281	93.82	4.85	5.17	13.58	11.22	13.55	A	5.71	A	A
284	99.80	1.50	1.50	20.82	17.20	6.47	N	2.86	A	N
285	80.72	6.63	8.21	-2.28	1.88	17.87	A	8.57	A	A
286	81.90	1.70	2.08	-0.85	0.70	6.79	A	3.20	A	A
287	82.00	0.80	0.98	-0.73	0.60	5.58	A	2.62	A	A
288	84.70	1.50	1.77	2.54	2.10	6.47	A	3.01	A	A
290	82.00	4.10	5.00	-0.73	0.60	11.78	A	5.56	A	A
291	79.00	1.50	1.90	-4.36	3.60	6.47	A	3.09	A	A
292	83.90	2.75	3.28	1.57	1.30	8.79	A	4.08	A	A
293	89.91	3.00	3.34	8.85	7.31	9.32	A	4.13	A	A
295	82.00	6.00	7.32	-0.73	0.60	16.33	A	7.71	A	A
296	72.80	5.30	7.28	-11.86	9.80	14.62	A	7.68	A	A
297	85.70	2.60	3.03	3.75	3.10	8.48	A	3.89	A	A
299	79.70	3.40	4.27	-3.51	2.90	10.19	A	4.91	A	A
300	90.00	2.00	2.22	8.96	7.40	7.32	N	3.30	A	W
302	80.30	2.43	3.03	-2.78	2.30	8.14	A	3.88	A	A
304	84.00	9.00	10.71	1.69	1.40	23.79	A	10.99	A	A
305	82.40	5.20	6.31	-0.24	0.20	14.38	A	6.76	A	A
306	69.60	2.20	3.16	-15.74	13.00	7.69	N	3.99	A	N
307	80.00	3.00	3.75	-3.15	2.60	9.32	A	4.47	A	A
308	91.60	2.50	2.73	10.90	9.00	8.28	N	3.66	A	W
309	61.50	3.90	6.34	-25.54	21.10	11.32	N	6.79	A	N
310	78.60	1.80	2.29	-4.84	4.00	6.96	A	3.34	A	A
311	87.00	4.00	4.60	5.33	4.40	11.55	A	5.20	A	A
312	100.20	10.70	10.68	21.31	17.60	28.09	A	10.95	A	A
316	76.10	4.70	6.18	-7.87	6.50	13.19	A	6.64	A	A
317	82.75	1.18	1.43	0.18	0.15	6.01	A	2.82	A	A
318	82.50	3.40	4.12	-0.12	0.10	10.19	A	4.79	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
319	85.90	3.78	4.40	4.00	3.30	11.05	A	5.03	A	A
320	77.40	1.20	1.55	-6.30	5.20	6.04	A	2.89	A	A
321	74.66	1.67	2.24	-9.61	7.94	6.74	N	3.31	A	W
322	84.00	7.00	8.33	1.69	1.40	18.79	A	8.68	A	A

Analyte: Zn-65 in spiked soil, IAEA-444

Target Value: 29.9 ± 0.99 [Bq/kg]



Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
1	30.80	1.30	4.22	3.01	0.90	4.22	A	5.36	A	A
2	32.30	1.00	3.10	8.03	2.40	3.63	A	4.53	A	A
3	35.04	2.11	6.02	17.19	5.14	6.01	A	6.87	A	A
4	29.10	0.80	2.75	-2.68	0.80	3.28	A	4.30	A	A
5	32.20	1.80	5.59	7.69	2.30	5.30	A	6.50	A	A
6	22.20	1.50	6.76	-25.75	7.70	4.64	N	7.52	A	N
7	30.10	2.50	8.31	0.67	0.20	6.94	A	8.94	A	A
8	34.86	2.13	6.11	16.59	4.96	6.06	A	6.95	A	A
9	30.00	5.00	16.67	0.33	0.10	13.15	A	16.99	N	W
10	28.20	1.50	5.32	-5.69	1.70	4.64	A	6.27	A	A
11	31.60	2.80	8.86	5.69	1.70	7.66	A	9.46	A	A
12	27.00	4.00	14.81	-9.70	2.90	10.63	A	15.18	N	W
13	31.30	2.60	8.31	4.68	1.40	7.18	A	8.94	A	A
14	28.10	2.20	7.83	-6.02	1.80	6.22	A	8.50	A	A
15	32.60	1.80	5.52	9.03	2.70	5.30	A	6.44	A	A
16	31.30	4.50	14.38	4.68	1.40	11.89	A	14.75	A	A
18	26.70	4.18	15.66	-10.70	3.20	11.08	A	16.00	N	W
20	30.00	1.00	3.33	0.33	0.10	3.63	A	4.70	A	A
21	31.60	1.50	4.75	5.69	1.70	4.64	A	5.79	A	A
23	31.00	3.00	9.68	3.68	1.10	8.15	A	10.23	A	A
24	32.90	3.00	9.12	10.03	3.00	8.15	A	9.70	A	A
25	34.80	2.09	6.01	16.39	4.90	5.97	A	6.86	A	A
26	22.20	3.33	15.00	-25.75	7.70	8.96	A	15.36	N	N
27	29.40	3.47	11.80	-1.67	0.50	9.31	A	12.26	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
28	28.10	1.30	4.63	-6.02	1.80	4.22	A	5.69	A	A
29	26.20	2.40	9.16	-12.37	3.70	6.70	A	9.74	A	A
30	15.50	1.70	10.97	-48.16	14.40	5.08	N	11.46	A	N
31	23.55	3.11	13.21	-21.24	6.35	8.42	A	13.61	A	A
33	28.80	2.10	7.29	-3.68	1.10	5.99	A	8.01	A	A
34	30.30	2.90	9.57	1.34	0.40	7.91	A	10.13	A	A
35	27.40	1.60	5.84	-8.36	2.50	4.85	A	6.71	A	A
36	30.45	2.47	8.11	1.84	0.55	6.87	A	8.76	A	A
37	41.41	1.41	3.41	38.51	11.51	4.45	N	4.75	A	N
39	24.10	0.80	3.32	-19.40	5.80	3.28	N	4.69	A	N
42	49.30	4.34	8.80	64.88	19.40	11.48	N	9.41	A	N
43	30.07	2.62	8.71	0.57	0.17	7.23	A	9.32	A	A
44	26.20	5.20	19.85	-12.37	3.70	13.66	A	20.12	N	W
45	22.80	1.80	7.89	-23.75	7.10	5.30	N	8.56	A	N
48	36.55	2.05	5.61	22.24	6.65	5.87	N	6.51	A	N
49	30.30	1.40	4.62	1.34	0.40	4.42	A	5.68	A	A
50	29.00	1.30	4.48	-3.01	0.90	4.22	A	5.57	A	A
51	31.60	1.60	5.06	5.69	1.70	4.85	A	6.05	A	A
52	32.20	1.06	3.29	7.69	2.30	3.74	A	4.67	A	A
53	31.50	0.80	2.54	5.35	1.60	3.28	A	4.17	A	A
55	32.20	0.80	2.48	7.69	2.30	3.28	A	4.14	A	A
56	28.93	2.50	8.64	-3.24	0.97	6.94	A	9.25	A	A
59	28.40	2.00	7.04	-5.02	1.50	5.76	A	7.78	A	A
62	33.10	1.70	5.14	10.70	3.20	5.08	A	6.11	A	A
63	34.00	6.00	17.65	13.71	4.10	15.69	A	17.95	N	W
64	30.22	0.63	2.08	1.07	0.32	3.03	A	3.91	A	A
65	33.00	5.00	15.15	10.37	3.10	13.15	A	15.51	N	W
67	30.40	4.50	14.80	1.67	0.50	11.89	A	15.17	N	W
69	34.80	1.50	4.31	16.39	4.90	4.64	N	5.44	A	N
70	29.87	1.81	6.06	-0.10	0.03	5.32	A	6.91	A	A
71	46.52	2.38	5.12	55.59	16.62	6.65	N	6.09	A	N
73	34.70	4.70	13.54	16.05	4.80	12.39	A	13.94	A	A
75	26.21	0.82	3.14	-12.33	3.69	3.32	N	4.57	A	W
76	0.17			-99.42						
77	21.57	0.41	1.90	-27.86	8.33	2.76	N	3.82	A	N
78	29.30	1.30	4.44	-2.01	0.60	4.22	A	5.54	A	A
79	24.00	1.00	4.17	-19.73	5.90	3.63	N	5.32	A	N
80	33.10	2.78	8.40	10.70	3.20	7.61	A	9.03	A	A
81	17.30	1.80	10.40	-42.14	12.60	5.30	N	10.92	A	N

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
82	28.00	2.50	8.93	-6.35	1.90	6.94	A	9.52	A	A
84	32.40	2.60	8.02	8.36	2.50	7.18	A	8.68	A	A
85	34.60	2.80	8.09	15.72	4.70	7.66	A	8.74	A	A
86	26.00	4.00	15.38	-13.04	3.90	10.63	A	15.74	N	W
87	27.20	1.70	6.25	-9.03	2.70	5.08	A	7.07	A	A
88	32.00	4.00	12.50	7.02	2.10	10.63	A	12.93	A	A
89	22.56	0.84	3.72	-24.55	7.34	3.35	N	4.98	A	N
90	30.00	2.00	6.67	0.33	0.10	5.76	A	7.44	A	A
91	34.92	6.31	18.08	16.79	5.02	16.48	A	18.38	N	N
92	27.44	1.91	6.96	-8.23	2.46	5.55	A	7.71	A	A
93	30.20	1.70	5.63	1.00	0.30	5.08	A	6.53	A	A
95	47.10	3.30	7.01	57.53	17.20	8.89	N	7.75	A	N
96	45.90	3.65	7.95	53.51	16.00	9.76	N	8.61	A	N
97	34.20	0.98	2.87	14.38	4.30	3.59	N	4.38	A	W
98	19.80	1.00	5.05	-33.78	10.10	3.63	N	6.04	A	N
99	30.10	1.80	5.98	0.67	0.20	5.30	A	6.84	A	A
101	27.90	1.30	4.66	-6.69	2.00	4.22	A	5.72	A	A
102	29.00	3.00	10.34	-3.01	0.90	8.15	A	10.86	A	A
103	32.00	0.00	0.01	7.02	2.10	2.55	A	3.31	A	A
104	30.00	1.80	6.00	0.33	0.10	5.30	A	6.85	A	A
105	30.46	2.01	6.60	1.87	0.56	5.78	A	7.38	A	A
107	37.00	4.00	10.81	23.75	7.10	10.63	A	11.31	A	A
108	45.33	0.88	1.94	51.61	15.43	3.42	N	3.84	A	N
110	29.47	1.71	5.80	-1.44	0.43	5.10	A	6.68	A	A
112	27.90	1.00	3.58	-6.69	2.00	3.63	A	4.88	A	A
113	27.47	0.97	3.53	-8.13	2.43	3.58	A	4.84	A	A
114	29.50	1.70	5.76	-1.34	0.40	5.08	A	6.65	A	A
115	28.60	2.50	8.74	-4.35	1.30	6.94	A	9.35	A	A
116	26.40	1.90	7.20	-11.71	3.50	5.53	A	7.92	A	A
117	30.60	3.10	10.13	2.34	0.70	8.40	A	10.66	A	A
118	24.00	1.90	7.92	-19.73	5.90	5.53	N	8.58	A	N
119	32.40	1.70	5.25	8.36	2.50	5.08	A	6.20	A	A
120	31.40	2.60	8.28	5.02	1.50	7.18	A	8.92	A	A
121	27.30	2.20	8.06	-8.70	2.60	6.22	A	8.71	A	A
122	20.39	0.95	4.65	-31.80	9.51	3.54	N	5.71	A	N
123	28.31	3.07	10.84	-5.32	1.59	8.32	A	11.34	A	A
124	27.90	1.00	3.58	-6.69	2.00	3.63	A	4.88	A	A
125	36.08	0.82	2.27	20.67	6.18	3.32	N	4.02	A	N
126	31.90	3.06	9.59	6.69	2.00	8.30	A	10.15	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
127	28.10	1.37	4.88	-6.02	1.80	4.36	A	5.89	A	A
128	29.60	1.40	4.73	-1.00	0.30	4.42	A	5.77	A	A
129	7.97	0.88	11.04	-73.34	21.93	3.42	N	11.53	A	N
130	21.30	3.40	15.96	-28.76	8.60	9.14	A	16.30	N	N
131	32.00	6.00	18.75	7.02	2.10	15.69	A	19.04	N	W
132	1.35	10.00	739.10	-95.47	28.55	25.93	N	739.11	N	N
133	29.80	3.30	11.07	-0.33	0.10	8.89	A	11.56	A	A
134	34.40	3.90	11.34	15.05	4.50	10.38	A	11.81	A	A
135	26.10	1.50	5.75	-12.71	3.80	4.64	A	6.63	A	A
136	33.00	1.90	5.76	10.37	3.10	5.53	A	6.64	A	A
137	31.60	1.20	3.80	5.69	1.70	4.01	A	5.04	A	A
138	26.20	1.92	7.33	-12.37	3.70	5.57	A	8.04	A	A
139	28.90	2.20	7.61	-3.34	1.00	6.22	A	8.30	A	A
140	32.00	2.00	6.25	7.02	2.10	5.76	A	7.07	A	A
142	31.00	2.40	7.74	3.68	1.10	6.70	A	8.42	A	A
143	29.20	3.20	10.96	-2.34	0.70	8.64	A	11.45	A	A
144	32.20	3.20	9.94	7.69	2.30	8.64	A	10.47	A	A
145	28.90	4.54	15.71	-3.34	1.00	11.99	A	16.05	N	W
146	38.25	4.55	11.90	27.93	8.35	12.01	A	12.35	A	A
147	30.30	1.10	3.63	1.34	0.40	3.82	A	4.91	A	A
148	22.00	1.05	4.77	-26.42	7.90	3.72	N	5.81	A	N
149	30.70	1.10	3.58	2.68	0.80	3.82	A	4.88	A	A
150	34.00	4.00	11.76	13.71	4.10	10.63	A	12.22	A	A
151	78.50	3.80	4.84	162.54	48.60	10.13	N	5.86	A	N
152	22.70	1.10	4.85	-24.08	7.20	3.82	N	5.87	A	N
153	35.39	1.73	4.89	18.36	5.49	5.14	N	5.90	A	N
154	36.50	2.90	7.95	22.07	6.60	7.91	A	8.61	A	A
155	31.20	0.90	2.88	4.35	1.30	3.45	A	4.39	A	A
156	31.20	2.30	7.37	4.35	1.30	6.46	A	8.08	A	A
157	20.50	1.70	8.29	-31.44	9.40	5.08	N	8.93	A	N
160	31.95	1.50	4.69	6.86	2.05	4.64	A	5.74	A	A
161	30.50	6.50	21.31	2.01	0.60	16.96	A	21.57	N	W
162	31.30	2.64	8.43	4.68	1.40	7.27	A	9.06	A	A
163	31.65	1.70	5.37	5.85	1.75	5.08	A	6.31	A	A
164	28.28	2.14	7.57	-5.42	1.62	6.08	A	8.26	A	A
165	32.30	1.00	3.10	8.03	2.40	3.63	A	4.53	A	A
166	30.81	1.27	4.12	3.04	0.91	4.15	A	5.29	A	A
167	50.80	4.40	8.66	69.90	20.90	11.64	N	9.27	A	N
168	36.08	1.66	4.60	20.67	6.18	4.99	N	5.67	A	N

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
169	32.96	1.79	5.43	10.23	3.06	5.28	A	6.36	A	A
172	31.30	3.80	12.14	4.68	1.40	10.13	A	12.58	A	A
175	19.15	1.20	6.27	-35.95	10.75	4.01	N	7.09	A	N
176	28.28	1.83	6.47	-5.42	1.62	5.37	A	7.27	A	A
177	32.40	5.00	15.43	8.36	2.50	13.15	A	15.78	N	W
178	29.60	1.50	5.07	-1.00	0.30	4.64	A	6.05	A	A
179	37.70	3.31	8.78	26.09	7.80	8.91	A	9.38	A	A
184	24.96	1.87	7.49	-16.52	4.94	5.46	A	8.19	A	A
185	33.90	3.60	10.62	13.38	4.00	9.63	A	11.12	A	A
186	27.50	1.60	5.82	-8.03	2.40	4.85	A	6.69	A	A
187	24.20	1.30	5.37	-19.06	5.70	4.22	N	6.31	A	N
188	31.80	0.64	2.01	6.35	1.90	3.04	A	3.87	A	A
189	29.80	3.10	10.40	-0.33	0.10	8.40	A	10.92	A	A
190	28.80	1.90	6.60	-3.68	1.10	5.53	A	7.38	A	A
191	21.00	1.50	7.14	-29.77	8.90	4.64	N	7.87	A	N
192	32.57	2.17	6.66	8.93	2.67	6.15	A	7.44	A	A
194	32.00	1.00	3.13	7.02	2.10	3.63	A	4.55	A	A
195	53.30	2.00	3.75	78.26	23.40	5.76	N	5.00	A	N
196	32.00	2.00	6.25	7.02	2.10	5.76	A	7.07	A	A
197	29.90	1.60	5.35	0.00	0.00	4.85	A	6.29	A	A
198	33.30	2.40	7.21	11.37	3.40	6.70	A	7.93	A	A
199	31.90	2.84	8.90	6.69	2.00	7.76	A	9.50	A	A
200	29.04	1.20	4.13	-2.88	0.86	4.01	A	5.30	A	A
201	31.00	2.80	9.03	3.68	1.10	7.66	A	9.62	A	A
202	29.77	1.06	3.56	-0.43	0.13	3.74	A	4.86	A	A
203	29.96	1.30	4.34	0.20	0.06	4.22	A	5.46	A	A
204	34.00	2.00	5.88	13.71	4.10	5.76	A	6.75	A	A
206	31.90	2.20	6.90	6.69	2.00	6.22	A	7.65	A	A
207	32.80	2.70	8.23	9.70	2.90	7.42	A	8.87	A	A
208	25.20	2.00	7.94	-15.72	4.70	5.76	A	8.60	A	A
209	28.40	3.30	11.62	-5.02	1.50	8.89	A	12.08	A	A
210	33.00	1.00	3.03	10.37	3.10	3.63	A	4.49	A	A
212	23.00	1.80	7.83	-23.08	6.90	5.30	N	8.50	A	N
213	30.40	1.90	6.25	1.67	0.50	5.53	A	7.07	A	A
214	31.00	3.00	9.68	3.68	1.10	8.15	A	10.23	A	A
215	30.13	2.89	9.59	0.77	0.23	7.88	A	10.15	A	A
216	31.04	5.56	17.91	3.81	1.14	14.57	A	18.22	N	W
217	29.00	1.10	3.79	-3.01	0.90	3.82	A	5.03	A	A
218	29.30	2.40	8.19	-2.01	0.60	6.70	A	8.84	A	A

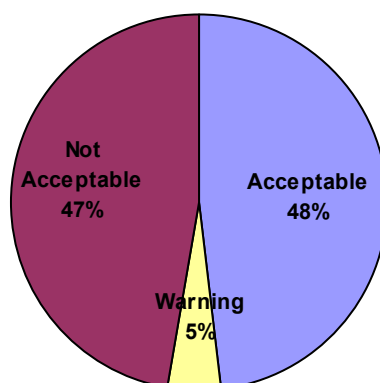
Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
220	30.00	1.34	4.47	0.33	0.10	4.30	A	5.56	A	A
222	37.00	5.00	13.51	23.75	7.10	13.15	A	13.91	A	A
223	28.30	1.70	6.01	-5.35	1.60	5.08	A	6.86	A	A
225	19.77	0.78	3.95	-33.88	10.13	3.25	N	5.15	A	N
226	30.80	2.20	7.14	3.01	0.90	6.22	A	7.87	A	A
227	30.28	2.58	8.52	1.27	0.38	7.13	A	9.14	A	A
228	28.60	0.88	3.08	-4.35	1.30	3.42	A	4.52	A	A
229	32.30	2.40	7.43	8.03	2.40	6.70	A	8.13	A	A
230	26.60	3.00	11.28	-11.04	3.30	8.15	A	11.75	A	A
231	30.35	4.76	15.68	1.51	0.45	12.54	A	16.03	N	W
232	56.39	3.39	6.01	88.60	26.49	9.11	N	6.86	A	N
233	30.01	1.09	3.63	0.37	0.11	3.80	A	4.91	A	A
234	27.18	1.12	4.12	-9.10	2.72	3.86	A	5.29	A	A
235	28.70	1.50	5.23	-4.01	1.20	4.64	A	6.19	A	A
236	2.40	0.40	16.67	-91.97	27.50	2.75	N	16.99	N	N
237	29.30	2.70	9.22	-2.01	0.60	7.42	A	9.79	A	A
238	40.40	3.03	7.50	35.11	10.50	8.23	N	8.20	A	N
239	29.60	1.16	3.92	-1.00	0.30	3.93	A	5.13	A	A
240	12.78	2.78	21.75	-57.26	17.12	7.61	N	22.00	N	N
241	27.38	1.13	4.13	-8.43	2.52	3.88	A	5.29	A	A
242	29.60	8.10	27.36	-1.00	0.30	21.05	A	27.56	N	W
243	26.68	2.06	7.72	-10.77	3.22	5.90	A	8.40	A	A
245	27.60	0.93	3.37	-7.69	2.30	3.50	A	4.72	A	A
246	29.50	4.90	16.61	-1.34	0.40	12.90	A	16.94	N	W
248	29.00	3.00	10.34	-3.01	0.90	8.15	A	10.86	A	A
249	29.10	1.50	5.15	-2.68	0.80	4.64	A	6.13	A	A
250	31.60	1.50	4.75	5.69	1.70	4.64	A	5.79	A	A
251	27.80	1.20	4.32	-7.02	2.10	4.01	A	5.44	A	A
252	27.90	1.50	5.38	-6.69	2.00	4.64	A	6.31	A	A
253	28.88	1.57	5.44	-3.41	1.02	4.79	A	6.37	A	A
254	31.37	0.90	2.87	4.92	1.47	3.45	A	4.38	A	A
255	15.51	1.10	7.09	-48.13	14.39	3.82	N	7.83	A	N
256	20.91	2.35	11.24	-30.07	8.99	6.58	N	11.72	A	N
257	30.10	0.96	3.19	0.67	0.20	3.56	A	4.60	A	A
258	27.80	3.30	11.87	-7.02	2.10	8.89	A	12.32	A	A
259	31.60	0.40	1.27	5.69	1.70	2.75	A	3.54	A	A
260	29.60	1.50	5.07	-1.00	0.30	4.64	A	6.05	A	A
261	29.49	1.75	5.93	-1.37	0.41	5.19	A	6.80	A	A
262	30.00	2.00	6.67	0.33	0.10	5.76	A	7.44	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
263	28.49	1.95	6.84	-4.72	1.41	5.64	A	7.60	A	A
264	30.70	1.70	5.54	2.68	0.80	5.08	A	6.45	A	A
265	28.91	2.59	8.96	-3.31	0.99	7.15	A	9.55	A	A
268	34.70	2.50	7.20	16.05	4.80	6.94	A	7.93	A	A
269	30.32	1.11	3.66	1.40	0.42	3.84	A	4.94	A	A
270	26.79	1.52	5.67	-10.40	3.11	4.68	A	6.57	A	A
271	30.60	1.80	5.88	2.34	0.70	5.30	A	6.75	A	A
272	30.40	2.10	6.91	1.67	0.50	5.99	A	7.66	A	A
275	29.61	1.37	4.63	-0.97	0.29	4.36	A	5.69	A	A
277	28.50	2.30	8.07	-4.68	1.40	6.46	A	8.72	A	A
278	35.65	1.81	5.08	19.23	5.75	5.32	N	6.06	A	N
279	32.10	1.60	4.98	7.36	2.20	4.85	A	5.98	A	A
280	62.45	6.97	11.16	108.86	32.55	18.16	N	11.64	A	N
281	22.33	1.33	5.96	-25.32	7.57	4.28	N	6.81	A	N
284	45.80	2.30	5.02	53.18	15.90	6.46	N	6.02	A	N
285	30.32	3.04	10.03	1.40	0.42	8.25	A	10.56	A	A
286	30.30	1.00	3.30	1.34	0.40	3.63	A	4.67	A	A
287	31.40	0.40	1.27	5.02	1.50	2.75	A	3.55	A	A
288	31.00	1.40	4.52	3.68	1.10	4.42	A	5.60	A	A
290	33.90	2.40	7.08	13.38	4.00	6.70	A	7.82	A	A
291	27.00	1.40	5.19	-9.70	2.90	4.42	A	6.15	A	A
292	29.40	2.06	7.01	-1.67	0.50	5.90	A	7.75	A	A
293	30.10	3.20	10.63	0.67	0.20	8.64	A	11.13	A	A
295	31.00	4.00	12.90	3.68	1.10	10.63	A	13.32	A	A
296	24.50	1.90	7.76	-18.06	5.40	5.53	A	8.43	A	A
297	32.00	1.10	3.44	7.02	2.10	3.82	A	4.77	A	A
299	34.10	3.60	10.56	14.05	4.20	9.63	A	11.06	A	A
300	32.00	4.00	12.50	7.02	2.10	10.63	A	12.93	A	A
302	27.10	2.68	9.89	-9.36	2.80	7.37	A	10.43	A	A
304	37.70	4.50	11.94	26.09	7.80	11.89	A	12.39	A	A
305	33.40	2.50	7.49	11.71	3.50	6.94	A	8.18	A	A
306	26.40	1.00	3.79	-11.71	3.50	3.63	A	5.03	A	A
307	31.00	2.00	6.45	3.68	1.10	5.76	A	7.25	A	A
308	38.30	2.10	5.48	28.09	8.40	5.99	N	6.41	A	N
309	21.90	3.80	17.35	-26.76	8.00	10.13	A	17.66	N	N
310	28.80	1.10	3.82	-3.68	1.10	3.82	A	5.05	A	A
311	34.00	2.50	7.35	13.71	4.10	6.94	A	8.06	A	A
312	0.00	0.00		-100.00	29.90	2.55	N			
316	33.20	2.60	7.83	11.04	3.30	7.18	A	8.50	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
317	30.21	1.38	4.57	1.04	0.31	4.38	A	5.64	A	A
318	33.00	2.20	6.67	10.37	3.10	6.22	A	7.44	A	A
319	33.20	1.96	5.90	11.04	3.30	5.67	A	6.77	A	A
320	29.30	4.50	15.36	-2.01	0.60	11.89	A	15.71	N	W
321	29.52	0.93	3.15	-1.27	0.38	3.50	A	4.57	A	A
322	34.00	3.00	8.82	13.71	4.10	8.15	A	9.42	A	A

Analyte: Cd-109 in spiked soil, IAEA-444

Target Value: 248.7 ± 5.18 [Bq/kg]



Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
1	377.80	18.50	4.90	51.91	129.10	49.57	N	5.32	A	N
2	242.00	15.00	6.20	-2.69	6.70	40.94	A	6.54	A	A
3	275.70	15.20	5.51	10.86	27.00	41.43	A	5.89	A	A
4	268.00	8.00	2.99	7.76	19.30	24.59	A	3.64	A	A
5	317.00	22.00	6.94	27.46	68.30	58.31	N	7.25	A	N
6	243.70	10.60	4.35	-2.01	5.00	30.44	A	4.82	A	A
7	278.00	20.00	7.19	11.78	29.30	53.30	A	7.49	A	A
8	317.10	17.60	5.55	27.50	68.40	47.33	N	5.93	A	N
9	430.00	80.00	18.60	72.90	181.30	206.83	A	18.72	A	A
10	276.90	22.80	8.23	11.34	28.20	60.32	A	8.49	A	A
11	366.50	50.20	13.70	47.37	117.80	130.20	A	13.85	A	A
12	274.00	19.00	6.93	10.17	25.30	50.81	A	7.24	A	A
13	302.00	24.00	7.95	21.43	53.30	63.35	A	8.22	A	A
14	417.00	21.00	5.04	67.67	168.30	55.80	N	5.45	A	N
15	280.00	30.00	10.71	12.59	31.30	78.55	A	10.91	A	A
16	391.00	51.20	13.09	57.22	142.30	132.77	N	13.26	A	N
18	279.00	20.30	7.28	12.18	30.30	54.05	A	7.57	A	A
20	350.00	23.00	6.57	40.73	101.30	60.83	N	6.89	A	N
21	490.50	17.30	3.53	97.23	241.80	46.59	N	4.10	A	N
23	242.00	23.00	9.50	-2.69	6.70	60.83	A	9.73	A	A
24	301.80	40.80	13.52	21.35	53.10	106.11	A	13.68	A	A
26	310.00	31.00	10.00	24.65	61.30	81.09	A	10.21	A	A
27	505.00	60.30	11.94	103.06	256.30	156.15	N	12.12	A	N
28	461.00	63.00	13.67	85.36	212.30	163.09	N	13.82	A	N
30	172.00	10.00	5.81	-30.84	76.70	29.06	N	6.18	A	N
31	430.84	43.85	10.18	73.24	182.14	113.92	N	10.39	A	N
33	427.00	36.00	8.43	71.69	178.30	93.84	N	8.68	A	N
34	247.90	27.60	11.13	-0.32	0.80	72.45	A	11.33	A	A
35	241.00	15.00	6.22	-3.10	7.70	40.94	A	6.56	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
36	260.02	17.80	6.85	4.55	11.32	47.83	A	7.16	A	A
37	539.56	10.01	1.86	116.95	290.86	29.09	N	2.79	A	N
39	155.40	9.10	5.86	-37.52	93.30	27.02	N	6.22	A	N
42	498.00	41.30	8.29	100.24	249.30	107.39	N	8.55	A	N
43	163.60	18.76	11.47	-34.22	85.10	50.21	N	11.65	A	N
45	338.00	24.00	7.10	35.91	89.30	63.35	N	7.40	A	N
48	295.63	12.64	4.28	18.87	46.93	35.24	N	4.76	A	W
49	280.00	50.00	17.86	12.59	31.30	129.69	A	17.98	A	A
50	337.00	11.30	3.35	35.50	88.30	32.07	N	3.95	A	N
51	250.00	13.00	5.20	0.52	1.30	36.10	A	5.60	A	A
52	293.40	27.50	9.37	17.97	44.70	72.20	A	9.60	A	A
53	267.50	5.10	1.91	7.56	18.80	18.75	N	2.82	A	W
55	263.40	5.10	1.94	5.91	14.70	18.75	A	2.84	A	A
56	144.00	12.45	8.65	-42.10	104.70	34.79	N	8.89	A	N
59	223.00	16.00	7.17	-10.33	25.70	43.39	A	7.47	A	A
62	421.00	25.00	5.94	69.28	172.30	65.87	N	6.29	A	N
64	256.92	7.16	2.79	3.31	8.22	22.80	A	3.48	A	A
65	299.00	43.00	14.38	20.23	50.30	111.74	A	14.53	A	A
67	168.00	36.10	21.49	-32.45	80.70	94.09	A	21.59	N	N
69	123.00	27.00	21.95	-50.54	125.70	70.93	N	22.05	N	N
70	282.00	16.00	5.67	13.39	33.30	43.39	A	6.04	A	A
73	243.00	17.00	7.00	-2.29	5.70	45.85	A	7.30	A	A
75	371.00	13.97	3.76	49.18	122.30	38.43	N	4.30	A	N
76	453.53			82.36						
77	238.78	3.30	1.38	-3.99	9.92	15.85	A	2.50	A	A
78	285.40	16.80	5.89	14.76	36.70	45.36	A	6.24	A	A
79	224.00	55.00	24.55	-9.93	24.70	142.53	A	24.64	N	W
82	197.00	30.00	15.23	-20.79	51.70	78.55	A	15.37	A	A
84	416.90	30.40	7.29	67.63	168.20	79.56	N	7.58	A	N
85	205.90	25.60	12.43	-17.21	42.80	67.39	A	12.61	A	A
86	341.00	24.00	7.04	37.11	92.30	63.35	N	7.34	A	N
87	250.00	9.30	3.72	0.52	1.30	27.46	A	4.26	A	A
88	260.00	30.00	11.54	4.54	11.30	78.55	A	11.72	A	A
89	308.20	12.60	4.09	23.92	59.50	35.15	N	4.59	A	N
90	240.00	17.00	7.08	-3.50	8.70	45.85	A	7.38	A	A
91	1246.00	315.50	25.32	401.01	997.30	814.10	N	25.41	N	N
92	185.99	13.60	7.31	-25.22	62.71	37.55	N	7.60	A	N
93	281.20	6.10	2.17	13.07	32.50	20.65	N	3.01	A	W
95	742.00	56.00	7.55	198.35	493.30	145.10	N	7.83	A	N
96	423.00	19.10	4.52	70.08	174.30	51.06	N	4.97	A	N
97	393.30	7.91	2.01	58.14	144.60	24.39	N	2.90	A	N
98	638.10	30.20	4.73	156.57	389.40	79.05	N	5.17	A	N
99	309.00	23.00	7.44	24.25	60.30	60.83	A	7.73	A	A
101	180.30	18.10	10.04	-27.50	68.40	48.57	N	10.25	A	N
102	168.00	27.00	16.07	-32.45	80.70	70.93	N	16.21	A	N
103	226.00	0.04	0.02	-9.13	22.70	13.36	N	2.08	A	W
104	275.00	26.00	9.45	10.57	26.30	68.40	A	9.68	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
105	255.63	19.58	7.66	2.79	6.93	52.25	A	7.94	A	A
107	290.00	30.00	10.34	16.61	41.30	78.55	A	10.55	A	A
108	300.55	4.30	1.43	20.85	51.85	17.37	N	2.53	A	N
110	272.50	17.60	6.46	9.57	23.80	47.33	A	6.79	A	A
112	260.00	9.00	3.46	4.54	11.30	26.79	A	4.04	A	A
113	304.25	11.11	3.65	22.34	55.55	31.63	N	4.20	A	N
114	338.10	20.50	6.06	35.95	89.40	54.55	N	6.41	A	N
115	143.70	15.00	10.44	-42.22	105.00	40.94	N	10.64	A	N
116	299.00	20.00	6.69	20.23	50.30	53.30	A	7.01	A	A
117	298.00	55.00	18.46	19.82	49.30	142.53	A	18.57	A	A
118	115.00	17.00	14.78	-53.76	133.70	45.85	N	14.93	A	N
119	372.00	16.00	4.30	49.58	123.30	43.39	N	4.78	A	N
120	462.00	43.00	9.31	85.77	213.30	111.74	N	9.54	A	N
121	286.30	14.30	4.99	15.12	37.60	39.24	A	5.41	A	A
122	242.91	24.73	10.18	-2.33	5.79	65.19	A	10.39	A	A
124	370.20	10.10	2.73	48.85	121.50	29.29	N	3.43	A	N
126	364.00	34.60	9.51	46.36	115.30	90.26	N	9.73	A	N
127	163.30	9.34	5.72	-34.34	85.40	27.56	N	6.09	A	N
128	275.00	13.00	4.73	10.57	26.30	36.10	A	5.17	A	A
130	120.00	10.00	8.33	-51.75	128.70	29.06	N	8.59	A	N
131	391.00	27.00	6.91	57.22	142.30	70.93	N	7.21	A	N
132	32.27	5.00	15.49	-87.02	216.43	18.57	N	15.63	A	N
133	291.30	38.60	13.25	17.13	42.60	100.48	A	13.41	A	A
135	228.00	35.00	15.35	-8.32	20.70	91.28	A	15.49	A	A
136	198.30	9.50	4.79	-20.27	50.40	27.92	N	5.22	A	N
137	244.00	27.00	11.07	-1.89	4.70	70.93	A	11.26	A	A
138	217.83	8.58	3.94	-12.41	30.87	25.86	N	4.46	A	W
139	283.00	21.00	7.42	13.79	34.30	55.80	A	7.71	A	A
142	365.00	26.60	7.29	46.76	116.30	69.92	N	7.58	A	N
143	382.00	46.00	12.04	53.60	133.30	119.43	N	12.22	A	N
144	258.00	25.00	9.69	3.74	9.30	65.87	A	9.91	A	A
146	813.10	94.78	11.66	226.94	564.40	244.90	N	11.84	A	N
147	269.50	9.00	3.34	8.36	20.80	26.79	A	3.94	A	A
148	116.10	7.38	6.36	-53.32	132.60	23.26	N	6.69	A	N
149	264.00	6.00	2.27	6.15	15.30	20.45	A	3.08	A	A
150	340.00	40.00	11.76	36.71	91.30	104.06	A	11.95	A	A
151	193.00	10.00	5.18	-22.40	55.70	29.06	N	5.58	A	N
152	191.80	8.60	4.48	-22.88	56.90	25.90	N	4.94	A	N
153	449.32	38.14	8.49	80.67	200.62	99.30	N	8.74	A	N
154	384.20	31.30	8.15	54.48	135.50	81.85	N	8.41	A	N
156	192.00	16.00	8.33	-22.80	56.70	43.39	N	8.59	A	N
157	261.00	28.00	10.73	4.95	12.30	73.47	A	10.93	A	A
160	258.95	10.67	4.12	4.12	10.25	30.60	A	4.62	A	A
161	247.00	40.10	16.23	-0.68	1.70	104.32	A	16.37	A	A
162	373.00	23.20	6.22	49.98	124.30	61.33	N	6.56	A	N
163	362.80	15.25	4.20	45.88	114.10	41.55	N	4.69	A	N
164	254.20	9.55	3.76	2.21	5.50	28.03	A	4.30	A	A

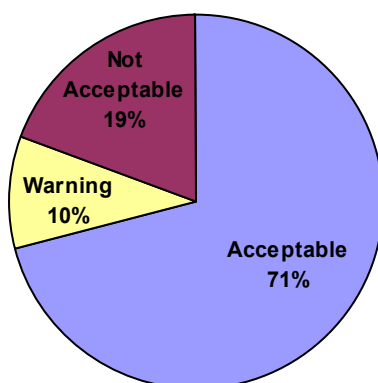
Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
166	177.07	25.99	14.68	-28.80	71.63	68.37	N	14.82	A	N
167	349.00	55.00	15.76	40.33	100.30	142.53	A	15.90	A	A
168	379.40	13.20	3.48	52.55	130.70	36.58	N	4.05	A	N
169	35.81	1.32	3.69	-85.60	212.89	13.79	N	4.23	A	N
172	312.70	23.10	7.39	25.73	64.00	61.08	N	7.68	A	N
175	125.21	7.50	5.99	-49.65	123.49	23.52	N	6.34	A	N
176	324.70	12.00	3.70	30.56	76.00	33.72	N	4.24	A	N
177	<57.7									
178	272.00	13.00	4.78	9.37	23.30	36.10	A	5.21	A	A
179	132.36	9.41	7.11	-46.78	116.34	27.71	N	7.41	A	N
182	156.00	9.52	6.10	-37.27	92.70	27.96	N	6.45	A	N
184	171.51	14.41	8.40	-31.04	77.19	39.51	N	8.66	A	N
185	467.10	35.10	7.51	87.82	218.40	91.54	N	7.80	A	N
186	284.00	18.00	6.34	14.19	35.30	48.32	A	6.67	A	A
187	294.00	12.80	4.35	18.21	45.30	35.63	N	4.83	A	W
188	210.00	20.00	9.52	-15.56	38.70	53.30	A	9.75	A	A
189	309.90	32.10	10.36	24.61	61.20	83.89	A	10.57	A	A
190	370.00	20.00	5.41	48.77	121.30	53.30	N	5.79	A	N
191	168.00	14.00	8.33	-32.45	80.70	38.51	N	8.59	A	N
192	255.87	19.04	7.44	2.88	7.17	50.91	A	7.73	A	A
194	330.00	25.00	7.58	32.69	81.30	65.87	N	7.86	A	N
195	564.20	20.90	3.70	126.86	315.50	55.55	N	4.25	A	N
196	248.00	21.00	8.47	-0.28	0.70	55.80	A	8.72	A	A
197	224.70	8.60	3.83	-9.65	24.00	25.90	A	4.36	A	A
198	412.70	28.50	6.91	65.94	164.00	74.73	N	7.21	A	N
199	225.35	33.35	14.80	-9.39	23.35	87.07	A	14.95	A	A
200	136.17	11.70	8.59	-45.25	112.53	33.01	N	8.84	A	N
201	307.00	11.00	3.58	23.44	58.30	31.37	N	4.14	A	N
202	264.56	8.71	3.29	6.38	15.86	26.15	A	3.90	A	A
203	243.03	10.30	4.24	-2.28	5.67	29.75	A	4.72	A	A
204	275.00	19.00	6.91	10.57	26.30	50.81	A	7.22	A	A
206	316.60	19.70	6.22	27.30	67.90	52.55	N	6.56	A	N
207	221.00	22.00	9.95	-11.14	27.70	58.31	A	10.17	A	A
208	268.00	45.00	16.79	7.76	19.30	116.87	A	16.92	A	A
209	302.00	28.00	9.27	21.43	53.30	73.47	A	9.50	A	A
210	258.00	9.00	3.49	3.74	9.30	26.79	A	4.06	A	A
212	146.00	45.00	30.82	-41.29	102.70	116.87	A	30.89	N	N
213	236.00	15.00	6.36	-5.11	12.70	40.94	A	6.69	A	A
214	290.00	20.00	6.90	16.61	41.30	53.30	A	7.20	A	A
215	231.16	19.62	8.49	-7.05	17.54	52.35	A	8.74	A	A
216	210.40	31.18	14.82	-15.40	38.30	81.55	A	14.97	A	A
217	360.60	17.50	4.85	44.99	111.90	47.09	N	5.28	A	N
218	371.90	30.10	8.09	49.54	123.20	78.80	N	8.36	A	N
220	140.00	2.19	1.56	-43.71	108.70	14.51	N	2.60	A	N
222	<67									
223	315.10	19.10	6.06	26.70	66.40	51.06	N	6.41	A	N
225	278.64	11.43	4.10	12.04	29.94	32.38	A	4.60	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
226	250.00	55.00	22.00	0.52	1.30	142.53	A	22.10	N	W
227	404.30	25.92	6.41	62.57	155.60	68.20	N	6.74	A	N
228	257.00	12.00	4.67	3.34	8.30	33.72	A	5.11	A	A
229	303.10	25.30	8.35	21.87	54.40	66.63	A	8.60	A	A
230	37.40	50.70	135.56	-84.96	211.30	131.49	N	135.58	N	N
231	305.41	26.10	8.55	22.80	56.71	68.65	A	8.80	A	A
232	295.27	15.37	5.21	18.73	46.57	41.85	N	5.61	A	W
233	338.68	16.22	4.79	36.18	89.98	43.93	N	5.22	A	N
235	287.20	17.50	6.09	15.48	38.50	47.09	A	6.44	A	A
236	23.90	0.70	2.93	-90.39	224.80	13.49	N	3.59	A	N
237	296.40	24.00	8.10	19.18	47.70	63.35	A	8.36	A	A
238	152.27	1.39	0.91	-38.77	96.43	13.83	N	2.27	A	N
240	3064.79	121.37	3.96	1132.32	2816.09	313.42	N	4.47	A	N
241	447.07	33.75	7.55	79.76	198.37	88.09	N	7.83	A	N
242	380.70	64.30	16.89	53.08	132.00	166.43	A	17.02	A	A
243	183.03	11.79	6.44	-26.41	65.67	33.22	N	6.77	A	N
245	258.00	17.00	6.59	3.74	9.30	45.85	A	6.91	A	A
246	66.80	8.90	13.32	-73.14	181.90	26.57	N	13.49	A	N
248	243.00	31.00	12.76	-2.29	5.70	81.09	A	12.93	A	A
249	246.00	10.00	4.07	-1.09	2.70	29.06	A	4.57	A	A
250	345.70	18.40	5.32	39.00	97.00	49.32	N	5.72	A	N
251	660.00	21.00	3.18	165.38	411.30	55.80	N	3.80	A	N
252	245.00	23.00	9.39	-1.49	3.70	60.83	A	9.62	A	A
253	217.90	12.60	5.78	-12.38	30.80	35.15	A	6.15	A	A
254	294.10	18.60	6.32	18.25	45.40	49.81	A	6.66	A	A
255	289.07	35.55	12.30	16.23	40.37	92.69	A	12.47	A	A
256	284.88	29.65	10.41	14.55	36.18	77.66	A	10.61	A	A
257	250.00	16.00	6.40	0.52	1.30	43.39	A	6.73	A	A
259	263.10	5.70	2.17	5.79	14.40	19.87	A	3.01	A	A
260	186.20	14.00	7.52	-25.13	62.50	38.51	N	7.80	A	N
261	379.49	14.33	3.78	52.59	130.79	39.31	N	4.31	A	N
262	214.00	30.00	14.02	-13.95	34.70	78.55	A	14.17	A	A
263	253.66	16.39	6.46	1.99	4.96	44.35	A	6.79	A	A
264	220.00	12.00	5.45	-11.54	28.70	33.72	A	5.84	A	A
265	227.50	15.03	6.61	-8.52	21.20	41.02	A	6.93	A	A
268	531.10	34.40	6.48	113.55	282.40	89.75	N	6.80	A	N
269	273.43	12.18	4.45	9.94	24.73	34.15	A	4.92	A	A
270	313.12	16.85	5.38	25.90	64.42	45.48	N	5.77	A	N
271	262.60	23.60	8.99	5.59	13.90	62.34	A	9.23	A	A
272	220.50	14.30	6.49	-11.34	28.20	39.24	A	6.81	A	A
275	232.70	8.54	3.67	-6.43	16.00	25.77	A	4.22	A	A
277	150.30	20.70	13.77	-39.57	98.40	55.05	N	13.93	A	N
278	451.65	45.10	9.99	81.60	202.95	117.12	N	10.20	A	N
279	204.00	26.00	12.75	-17.97	44.70	68.40	A	12.91	A	A
280	272.33	26.38	9.69	9.50	23.63	69.36	A	9.91	A	A
281	234.67	11.92	5.08	-5.64	14.03	33.53	A	5.49	A	A
284	431.00	20.00	4.64	73.30	182.30	53.30	N	5.09	A	N

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
285	54.53	12.83	23.53	-78.07	194.17	35.70	N	23.62	N	N
286	422.00	13.00	3.08	69.68	173.30	36.10	N	3.72	A	N
287	249.00	6.00	2.41	0.12	0.30	20.45	A	3.19	A	A
288	270.00	10.00	3.70	8.56	21.30	29.06	A	4.25	A	A
290	230.00	27.00	11.74	-7.52	18.70	70.93	A	11.92	A	A
291	270.00	10.00	3.70	8.56	21.30	29.06	A	4.25	A	A
292	243.50	15.76	6.47	-2.09	5.20	42.80	A	6.80	A	A
293	218.00	20.00	9.17	-12.34	30.70	53.30	A	9.41	A	A
295	145.00	50.00	34.48	-41.70	103.70	129.69	A	34.55	N	N
296	265.00	19.50	7.36	6.55	16.30	52.05	A	7.65	A	A
297	281.00	11.00	3.91	12.99	32.30	31.37	N	4.43	A	W
299	316.00	32.00	10.13	27.06	67.30	83.63	A	10.34	A	A
300	285.00	12.00	4.21	14.60	36.30	33.72	N	4.70	A	W
302	339.00	24.30	7.17	36.31	90.30	64.10	N	7.46	A	N
304	366.00	41.00	11.20	47.17	117.30	106.62	N	11.39	A	N
305	428.00	34.00	7.94	72.09	179.30	88.73	N	8.21	A	N
306	381.20	11.50	3.02	53.28	132.50	32.54	N	3.67	A	N
307	270.00	15.00	5.56	8.56	21.30	40.94	A	5.93	A	A
308	63.20	1.30	2.06	-74.59	185.50	13.78	N	2.93	A	N
310	180.00	23.00	12.78	-27.62	68.70	60.83	N	12.95	A	N
311	273.00	30.00	10.99	9.77	24.30	78.55	A	11.18	A	A
312	0.00	0.00		-100.00	248.70	13.36	N			
316	193.00	40.00	20.73	-22.40	55.70	104.06	A	20.83	N	N
317	214.41	14.79	6.90	-13.79	34.29	40.43	A	7.21	A	A
318	304.00	17.00	5.59	22.24	55.30	45.85	N	5.97	A	N
319	289.80	14.60	5.04	16.53	41.10	39.97	N	5.45	A	W
320	188.30	2.50	1.33	-24.29	60.40	14.84	N	2.47	A	N
321	162.32	13.35	8.22	-34.73	86.38	36.94	N	8.48	A	N
322	450.00	30.00	6.67	80.94	201.30	78.55	N	6.98	A	N

Analyte: Cs-134 in spiked soil, IAEA-444

Target Value: 59.4 ± 1.73 [Bq/kg]



Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
1	48.00	0.70	1.46	-19.19	11.40	4.81	N	3.26	A	N
2	56.50	2.00	3.54	-4.88	2.90	6.82	A	4.58	A	A
3	57.36	2.90	5.06	-3.43	2.04	8.71	A	5.83	A	A
4	57.70	1.20	2.08	-2.86	1.70	5.43	A	3.58	A	A
5	60.00	3.30	5.50	1.01	0.60	9.61	A	6.22	A	A
6	56.00	2.00	3.57	-5.72	3.40	6.82	A	4.61	A	A
7	59.20	3.30	5.57	-0.34	0.20	9.61	A	6.29	A	A
8	56.35	1.41	2.50	-5.13	3.05	5.76	A	3.84	A	A
9	58.00	6.00	10.34	-2.36	1.40	16.11	A	10.75	A	A
10	55.76	1.52	2.73	-6.13	3.64	5.94	A	3.99	A	A
11	57.10	5.20	9.11	-3.87	2.30	14.14	A	9.56	A	A
12	53.00	5.00	9.43	-10.77	6.40	13.65	A	9.87	A	A
13	57.90	5.20	8.98	-2.53	1.50	14.14	A	9.44	A	A
14	58.80	4.70	7.99	-1.01	0.60	12.92	A	8.51	A	A
16	49.30	3.30	6.69	-17.00	10.10	9.61	N	7.30	A	N
18	52.70	3.00	5.69	-11.28	6.70	8.93	A	6.39	A	A
19	61.30	2.90	4.73	3.20	1.90	8.71	A	5.56	A	A
20	60.60	2.00	3.30	2.02	1.20	6.82	A	4.40	A	A
21	59.00	0.90	1.53	-0.67	0.40	5.03	A	3.29	A	A
23	50.00	4.00	8.00	-15.82	9.40	11.24	A	8.51	A	A
24	65.00	3.80	5.85	9.43	5.60	10.77	A	6.53	A	A
25	51.90	2.02	3.89	-12.63	7.50	6.86	N	4.86	A	W
26	46.30	6.94	14.99	-22.05	13.10	18.45	A	15.27	N	N
27	63.80	6.10	9.56	7.41	4.40	16.36	A	9.99	A	A
28	54.20	1.70	3.14	-8.75	5.20	6.26	A	4.28	A	A
29	57.30	4.60	8.03	-3.54	2.10	12.68	A	8.54	A	A
30	40.90	0.90	2.20	-31.14	18.50	5.03	N	3.65	A	N
31	65.37	3.48	5.32	10.05	5.97	10.03	A	6.07	A	A
33	56.70	2.80	4.94	-4.55	2.70	8.49	A	5.73	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
34	56.10	1.50	2.67	-5.56	3.30	5.91	A	3.95	A	A
35	54.60	6.20	11.36	-8.08	4.80	16.61	A	11.72	A	A
36	56.44	3.47	6.15	-4.98	2.96	10.00	A	6.80	A	A
37	65.38	1.00	1.54	10.07	5.98	5.16	N	3.29	A	W
39	43.50	0.70	1.61	-26.77	15.90	4.81	N	3.33	A	N
42	68.40	1.85	2.70	15.15	9.00	6.53	N	3.97	A	N
43	54.66	4.32	7.90	-7.98	4.74	12.01	A	8.42	A	A
44	57.80	2.90	5.02	-2.69	1.60	8.71	A	5.80	A	A
45	49.00	2.30	4.69	-17.51	10.40	7.43	N	5.52	A	N
48	66.84	4.18	6.25	12.53	7.44	11.67	A	6.90	A	A
49	58.00	3.00	5.17	-2.36	1.40	8.93	A	5.94	A	A
50	55.20	1.60	2.90	-7.07	4.20	6.08	A	4.11	A	A
51	51.70	2.70	5.22	-12.96	7.70	8.27	A	5.98	A	A
52	50.00	0.76	1.52	-15.82	9.40	4.88	N	3.29	A	N
53	58.60	1.00	1.71	-1.35	0.80	5.16	A	3.38	A	A
55	59.30	1.00	1.69	-0.17	0.10	5.16	A	3.37	A	A
56	55.10	2.47	4.48	-7.24	4.30	7.78	A	5.35	A	A
59	62.80	4.30	6.85	5.72	3.40	11.96	A	7.44	A	A
62	60.10	1.90	3.16	1.18	0.70	6.63	A	4.30	A	A
63	64.00	5.00	7.81	7.74	4.60	13.65	A	8.34	A	A
64	53.73	0.75	1.40	-9.55	5.67	4.86	N	3.23	A	W
65	49.00	7.00	14.29	-17.51	10.40	18.60	A	14.58	A	A
67	51.10	2.10	4.11	-13.97	8.30	7.02	N	5.04	A	W
69	51.90	1.70	3.28	-12.63	7.50	6.26	N	4.38	A	W
70	54.30	2.20	4.05	-8.59	5.10	7.22	A	4.99	A	A
71	54.81	3.33	6.08	-7.73	4.59	9.68	A	6.74	A	A
73	51.00	1.50	2.94	-14.14	8.40	5.91	N	4.14	A	W
75	47.91	0.58	1.20	-19.35	11.49	4.71	N	3.15	A	N
76	0.13			-99.77						
77	54.82	0.52	0.95	-7.71	4.58	4.66	A	3.06	A	A
78	52.20	1.60	3.07	-12.12	7.20	6.08	N	4.23	A	W
79	43.00	1.00	2.33	-27.61	16.40	5.16	N	3.73	A	N
80	62.90	2.05	3.26	5.89	3.50	6.92	A	4.37	A	A
81	42.30	4.10	9.69	-28.79	17.10	11.48	N	10.12	A	N
82	61.50	6.20	10.08	3.54	2.10	16.61	A	10.49	A	A
84	51.90	2.90	5.59	-12.63	7.50	8.71	A	6.30	A	A
85	55.70	3.70	6.64	-6.23	3.70	10.54	A	7.25	A	A
86	45.00	2.00	4.44	-24.24	14.40	6.82	N	5.31	A	N
87	54.30	1.90	3.50	-8.59	5.10	6.63	A	4.55	A	A
88	55.00	5.00	9.09	-7.41	4.40	13.65	A	9.55	A	A
89	45.41	0.55	1.21	-23.55	13.99	4.68	N	3.15	A	N
90	57.00	3.00	5.26	-4.04	2.40	8.93	A	6.02	A	A
91	75.44	4.57	6.06	27.00	16.04	12.60	N	6.72	A	N
92	44.46	0.78	1.75	-25.15	14.94	4.90	N	3.40	A	N
93	51.90	1.10	2.12	-12.63	7.50	5.29	N	3.60	A	W
95	85.70	5.60	6.53	44.28	26.30	15.12	N	7.15	A	N
96	63.50	2.26	3.56	6.90	4.10	7.34	A	4.60	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
97	54.20	0.46	0.85	-8.75	5.20	4.62	N	3.03	A	W
98	62.90	1.50	2.38	5.89	3.50	5.91	A	3.76	A	A
99	56.90	3.00	5.27	-4.21	2.50	8.93	A	6.02	A	A
101	50.40	2.00	3.97	-15.15	9.00	6.82	N	4.92	A	N
102	52.00	2.00	3.85	-12.46	7.40	6.82	N	4.82	A	W
103	53.60	0.00	0.00	-9.76	5.80	4.46	N	2.91	A	W
104	61.50	3.70	6.02	3.54	2.10	10.54	A	6.68	A	A
105	53.71	2.13	3.97	-9.58	5.69	7.08	A	4.92	A	A
107	51.00	5.00	9.80	-14.14	8.40	13.65	A	10.23	A	A
108	69.78	0.81	1.16	17.47	10.38	4.93	N	3.14	A	N
110	48.84	2.58	5.28	-17.78	10.56	8.01	N	6.03	A	N
112	58.10	1.40	2.41	-2.19	1.30	5.74	A	3.78	A	A
113	58.19	1.92	3.30	-2.04	1.21	6.67	A	4.40	A	A
114	52.60	3.60	6.84	-11.45	6.80	10.30	A	7.44	A	A
115	55.20	3.00	5.43	-7.07	4.20	8.93	A	6.17	A	A
116	55.60	2.90	5.22	-6.40	3.80	8.71	A	5.97	A	A
117	58.30	2.90	4.97	-1.85	1.10	8.71	A	5.76	A	A
118	44.40	2.20	4.95	-25.25	15.00	7.22	N	5.75	A	N
119	57.80	2.80	4.84	-2.69	1.60	8.49	A	5.65	A	A
120	61.30	5.00	8.16	3.20	1.90	13.65	A	8.66	A	A
121	58.00	3.00	5.17	-2.36	1.40	8.93	A	5.94	A	A
122	51.70	1.20	2.31	-12.97	7.70	5.42	N	3.72	A	W
123	47.67	3.99	8.37	-19.75	11.73	11.22	N	8.86	A	N
124	53.94	1.43	2.65	-9.19	5.46	5.79	A	3.94	A	A
125	57.61	1.36	2.36	-3.01	1.79	5.68	A	3.75	A	A
126	63.40	5.78	9.12	6.73	4.00	15.57	A	9.57	A	A
127	48.50	1.46	3.01	-18.35	10.90	5.84	N	4.19	A	N
128	57.70	2.00	3.47	-2.86	1.70	6.82	A	4.53	A	A
129	64.31	1.08	1.68	8.27	4.91	5.26	A	3.36	A	A
130	47.90	1.80	3.76	-19.36	11.50	6.44	N	4.75	A	N
131	53.00	3.00	5.66	-10.77	6.40	8.93	A	6.37	A	A
132	29.31	5.00	17.06	-50.66	30.09	13.65	N	17.31	N	N
133	62.20	5.80	9.32	4.71	2.80	15.62	A	9.77	A	A
134	59.10	2.50	4.23	-0.51	0.30	7.84	A	5.14	A	A
135	57.20	2.30	4.02	-3.70	2.20	7.43	A	4.96	A	A
136	57.00	1.40	2.46	-4.04	2.40	5.74	A	3.81	A	A
137	56.40	1.00	1.77	-5.05	3.00	5.16	A	3.41	A	A
138	51.14	3.15	6.16	-13.91	8.26	9.27	A	6.81	A	A
139	51.20	3.20	6.25	-13.80	8.20	9.39	A	6.90	A	A
140	59.00	3.00	5.08	-0.67	0.40	8.93	A	5.86	A	A
142	61.70	2.20	3.57	3.87	2.30	7.22	A	4.60	A	A
143	62.20	2.20	3.54	4.71	2.80	7.22	A	4.58	A	A
144	52.80	2.70	5.11	-11.11	6.60	8.27	A	5.88	A	A
145	78.00	9.54	12.23	31.31	18.60	25.01	A	12.57	A	A
146	57.53	4.39	7.63	-3.15	1.87	12.17	A	8.17	A	A
147	56.60	1.50	2.65	-4.71	2.80	5.91	A	3.94	A	A
148	43.06	0.78	1.81	-27.51	16.34	4.90	N	3.43	A	N

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
149	56.30	1.20	2.13	-5.22	3.10	5.43	A	3.61	A	A
150	56.00	4.00	7.14	-5.72	3.40	11.24	A	7.71	A	A
151	61.90	2.00	3.23	4.21	2.50	6.82	A	4.35	A	A
152	40.90	1.10	2.69	-31.14	18.50	5.29	N	3.96	A	N
153	65.89	2.38	3.61	10.93	6.49	7.59	A	4.64	A	A
154	56.60	1.70	3.00	-4.71	2.80	6.26	A	4.18	A	A
155	56.60	0.60	1.06	-4.71	2.80	4.72	A	3.10	A	A
156	48.70	2.70	5.54	-18.01	10.70	8.27	N	6.26	A	N
157	46.50	1.20	2.58	-21.72	12.90	5.43	N	3.89	A	N
158	131.00	10.00	7.63	120.54	71.60	26.18	N	8.17	A	N
160	51.75	2.26	4.37	-12.88	7.65	7.34	N	5.25	A	W
161	55.80	4.40	7.89	-6.06	3.60	12.20	A	8.41	A	A
162	49.50	2.34	4.73	-16.67	9.90	7.51	N	5.55	A	N
163	64.80	2.50	3.86	9.09	5.40	7.84	A	4.83	A	A
164	46.27	1.69	3.65	-22.10	13.13	6.24	N	4.67	A	N
165	56.40	0.30	0.53	-5.05	3.00	4.53	A	2.96	A	A
166	57.90	1.13	1.95	-2.53	1.50	5.33	A	3.51	A	A
167	58.00	15.00	25.86	-2.36	1.40	38.96	A	26.03	N	W
168	57.91	1.40	2.42	-2.51	1.49	5.74	A	3.79	A	A
169	54.78	2.13	3.89	-7.78	4.62	7.08	A	4.86	A	A
172	58.90	6.70	11.38	-0.84	0.50	17.85	A	11.74	A	A
173	54.34	1.85	3.40	-8.52	5.06	6.53	A	4.48	A	A
174	50.84	1.73	3.40	-14.41	8.56	6.31	N	4.48	A	W
175	55.14	1.71	3.10	-7.17	4.26	6.28	A	4.25	A	A
176	53.85	1.44	2.67	-9.34	5.55	5.80	A	3.95	A	A
177	58.00	2.90	5.00	-2.36	1.40	8.71	A	5.79	A	A
178	53.50	1.70	3.18	-9.93	5.90	6.26	A	4.31	A	A
179	55.11	4.20	7.62	-7.22	4.29	11.72	A	8.16	A	A
182	52.80	3.27	6.19	-11.11	6.60	9.54	A	6.84	A	A
184	51.24	4.39	8.57	-13.74	8.16	12.17	A	9.05	A	A
185	53.70	3.80	7.08	-9.60	5.70	10.77	A	7.65	A	A
186	56.10	1.40	2.50	-5.56	3.30	5.74	A	3.84	A	A
187	57.10	1.20	2.10	-3.87	2.30	5.43	A	3.59	A	A
188	57.50	1.40	2.43	-3.20	1.90	5.74	A	3.80	A	A
189	60.10	5.20	8.65	1.18	0.70	14.14	A	9.13	A	A
190	54.50	1.70	3.12	-8.25	4.90	6.26	A	4.27	A	A
191	35.40	2.30	6.50	-40.40	24.00	7.43	N	7.12	A	N
192	55.47	3.14	5.66	-6.62	3.93	9.25	A	6.37	A	A
194	59.00	4.00	6.78	-0.67	0.40	11.24	A	7.38	A	A
195	88.20	1.00	1.13	48.48	28.80	5.16	N	3.13	A	N
196	61.30	2.90	4.73	3.20	1.90	8.71	A	5.56	A	A
197	56.10	1.80	3.21	-5.56	3.30	6.44	A	4.33	A	A
198	57.60	0.80	1.39	-3.03	1.80	4.92	A	3.23	A	A
199	58.09	1.77	3.05	-2.21	1.31	6.39	A	4.22	A	A
200	55.95	2.10	3.75	-5.81	3.45	7.02	A	4.75	A	A
201	42.20	3.00	7.11	-28.96	17.20	8.93	N	7.68	A	N
202	58.77	1.99	3.39	-1.06	0.63	6.80	A	4.47	A	A

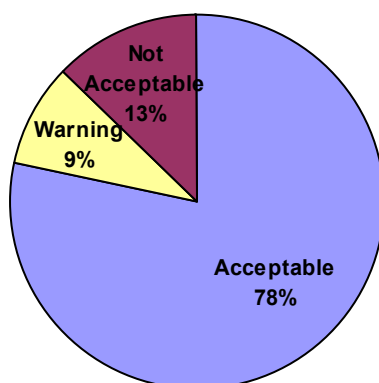
Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
203	55.67	1.70	3.05	-6.28	3.73	6.26	A	4.22	A	A
204	64.00	2.00	3.13	7.74	4.60	6.82	A	4.27	A	A
206	59.10	4.10	6.94	-0.51	0.30	11.48	A	7.52	A	A
207	64.90	1.60	2.47	9.26	5.50	6.08	A	3.82	A	A
208	52.90	5.00	9.45	-10.94	6.50	13.65	A	9.89	A	A
209	58.20	3.23	5.55	-2.02	1.20	9.45	A	6.27	A	A
210	63.00	5.00	7.94	6.06	3.60	13.65	A	8.45	A	A
212	42.20	1.20	2.84	-28.96	17.20	5.43	N	4.07	A	N
213	50.00	2.10	4.20	-15.82	9.40	7.02	N	5.11	A	N
214	55.00	2.00	3.64	-7.41	4.40	6.82	A	4.66	A	A
215	57.01	3.00	5.26	-4.02	2.39	8.93	A	6.01	A	A
216	61.96	5.35	8.63	4.31	2.56	14.51	A	9.11	A	A
217	61.60	0.80	1.30	3.70	2.20	4.92	A	3.19	A	A
218	58.40	4.70	8.05	-1.68	1.00	12.92	A	8.56	A	A
220	57.00	1.81	3.18	-4.04	2.40	6.46	A	4.31	A	A
222	65.00	3.00	4.62	9.43	5.60	8.93	A	5.46	A	A
223	47.30	0.80	1.69	-20.37	12.10	4.92	N	3.37	A	N
225	47.38	2.11	4.45	-20.24	12.02	7.04	N	5.32	A	N
226	57.60	3.10	5.38	-3.03	1.80	9.16	A	6.12	A	A
227	55.07	1.95	3.54	-7.29	4.33	6.73	A	4.58	A	A
228	52.50	1.90	3.62	-11.62	6.90	6.63	N	4.65	A	W
229	62.80	3.60	5.73	5.72	3.40	10.30	A	6.43	A	A
230	65.90	1.80	2.73	10.94	6.50	6.44	N	3.99	A	W
231	48.64	3.59	7.38	-18.11	10.76	10.28	N	7.93	A	N
232	94.39	3.43	3.63	58.91	34.99	9.91	N	4.66	A	N
233	50.01	0.52	1.04	-15.81	9.39	4.66	N	3.09	A	N
234	55.54	1.51	2.72	-6.50	3.86	5.92	A	3.98	A	A
235	60.19	2.10	3.49	1.33	0.79	7.02	A	4.54	A	A
236	12.10	0.40	3.31	-79.63	47.30	4.58	N	4.41	A	N
237	56.60	2.40	4.24	-4.71	2.80	7.63	A	5.14	A	A
238	56.88	0.92	1.62	-4.24	2.52	5.06	A	3.33	A	A
239	56.30	4.32	7.67	-5.22	3.10	12.01	A	8.21	A	A
240	45.77	2.31	5.05	-22.95	13.63	7.45	N	5.83	A	N
241	66.67	2.29	3.43	12.24	7.27	7.40	A	4.50	A	A
242	51.52	1.67	3.24	-13.27	7.88	6.20	N	4.36	A	W
243	43.09	2.27	5.27	-27.46	16.31	7.36	N	6.02	A	N
245	56.00	1.54	2.75	-5.72	3.40	5.98	A	4.01	A	A
246	52.10	5.50	10.56	-12.29	7.30	14.88	A	10.95	A	A
248	49.00	5.00	10.20	-17.51	10.40	13.65	A	10.61	A	A
249	56.00	3.00	5.36	-5.72	3.40	8.93	A	6.10	A	A
250	61.40	3.00	4.89	3.37	2.00	8.93	A	5.69	A	A
251	41.50	0.50	1.20	-30.13	17.90	4.65	N	3.15	A	N
252	55.60	1.40	2.52	-6.40	3.80	5.74	A	3.85	A	A
253	63.83	3.35	5.25	7.46	4.43	9.73	A	6.00	A	A
254	61.24	3.16	5.16	3.10	1.84	9.29	A	5.93	A	A
255	49.89	2.96	5.93	-16.01	9.51	8.85	N	6.61	A	N
256	46.42	4.72	10.17	-21.85	12.98	12.97	N	10.58	A	N

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
257	55.00	2.30	4.18	-7.41	4.40	7.43	A	5.10	A	A
258	62.90	7.10	11.29	5.89	3.50	18.85	A	11.66	A	A
259	56.70	0.90	1.59	-4.55	2.70	5.03	A	3.32	A	A
260	57.30	3.00	5.24	-3.54	2.10	8.93	A	5.99	A	A
261	55.43	2.50	4.51	-6.68	3.97	7.84	A	5.37	A	A
262	63.00	4.00	6.35	6.06	3.60	11.24	A	6.99	A	A
263	53.71	2.86	5.32	-9.58	5.69	8.62	A	6.07	A	A
264	54.40	3.20	5.88	-8.42	5.00	9.39	A	6.56	A	A
265	53.65	2.19	4.08	-9.68	5.75	7.20	A	5.01	A	A
268	63.30	2.10	3.32	6.57	3.90	7.02	A	4.41	A	A
269	54.46	0.74	1.36	-8.32	4.94	4.85	N	3.21	A	W
270	51.26	2.39	4.66	-13.70	8.14	7.61	N	5.50	A	W
271	55.10	2.60	4.72	-7.24	4.30	8.06	A	5.55	A	A
272	59.00	3.40	5.76	-0.67	0.40	9.84	A	6.46	A	A
275	61.51	0.70	1.14	3.55	2.11	4.81	A	3.13	A	A
277	53.00	2.00	3.77	-10.77	6.40	6.82	A	4.77	A	A
278	52.71	1.34	2.54	-11.26	6.69	5.65	N	3.87	A	W
279	55.80	2.60	4.66	-6.06	3.60	8.06	A	5.49	A	A
280	50.79	1.75	3.45	-14.49	8.61	6.35	N	4.51	A	W
281	54.62	2.81	5.14	-8.05	4.78	8.51	A	5.91	A	A
284	68.20	1.00	1.47	14.81	8.80	5.16	N	3.26	A	W
285	51.56	2.77	5.37	-13.20	7.84	8.43	A	6.11	A	A
286	59.00	1.80	3.05	-0.67	0.40	6.44	A	4.22	A	A
287	51.70	0.40	0.77	-12.96	7.70	4.58	N	3.01	A	W
288	58.70	1.30	2.21	-1.18	0.70	5.58	A	3.66	A	A
290	59.10	3.40	5.75	-0.51	0.30	9.84	A	6.45	A	A
291	52.20	1.20	2.30	-12.12	7.20	5.43	N	3.71	A	W
292	54.10	2.03	3.75	-8.92	5.30	6.88	A	4.75	A	A
293	55.60	2.20	3.96	-6.40	3.80	7.22	A	4.91	A	A
295	55.00	4.00	7.27	-7.41	4.40	11.24	A	7.83	A	A
296	49.20	3.60	7.32	-17.17	10.20	10.30	A	7.88	A	A
297	66.40	2.70	4.07	11.78	7.00	8.27	A	5.00	A	A
299	49.20	2.60	5.28	-17.17	10.20	8.06	N	6.03	A	N
300	57.00	2.00	3.51	-4.04	2.40	6.82	A	4.56	A	A
302	60.70	1.95	3.21	2.19	1.30	6.73	A	4.34	A	A
304	66.00	7.00	10.61	11.11	6.60	18.60	A	11.00	A	A
305	51.40	3.30	6.42	-13.47	8.00	9.61	A	7.05	A	A
306	46.60	1.50	3.22	-21.55	12.80	5.91	N	4.34	A	N
307	57.00	3.00	5.26	-4.04	2.40	8.93	A	6.02	A	A
308	62.90	1.80	2.86	5.89	3.50	6.44	A	4.08	A	A
309	49.60	4.10	8.27	-16.50	9.80	11.48	A	8.76	A	A
310	54.80	1.20	2.19	-7.74	4.60	5.43	A	3.64	A	A
311	56.00	4.00	7.14	-5.72	3.40	11.24	A	7.71	A	A
312	46.70	6.30	13.49	-21.38	12.70	16.86	A	13.80	A	A
316	44.70	1.70	3.80	-24.75	14.70	6.26	N	4.79	A	N
317	49.57	0.76	1.53	-16.55	9.83	4.88	N	3.29	A	N
318	54.20	2.30	4.24	-8.75	5.20	7.43	A	5.15	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
319	57.40	1.93	3.36	-3.37	2.00	6.69	A	4.45	A	A
320	48.50	1.00	2.06	-18.35	10.90	5.16	N	3.57	A	N
321	53.49	0.93	1.74	-9.95	5.91	5.07	N	3.39	A	W
322	56.00	7.00	12.50	-5.72	3.40	18.60	A	12.83	A	A

Analyte: Cs-137 in spiked soil, IAEA-444

Target Value: 68.5 ± 1.38 [Bq/kg]



Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
1	59.70	1.40	2.35	-12.85	8.80	5.07	N	3.09	A	W
2	72.50	2.00	2.76	5.84	4.00	6.27	A	3.42	A	A
3	71.14	3.60	5.06	3.85	2.64	9.95	A	5.45	A	A
4	68.20	1.40	2.05	-0.44	0.30	5.07	A	2.88	A	A
5	72.70	3.90	5.36	6.13	4.20	10.67	A	5.73	A	A
6	70.90	2.50	3.53	3.50	2.40	7.37	A	4.06	A	A
7	67.60	3.70	5.47	-1.31	0.90	10.19	A	5.83	A	A
8	68.81	2.46	3.58	0.45	0.31	7.28	A	4.10	A	A
9	66.00	7.00	10.61	-3.65	2.50	18.41	A	10.80	A	A
10	67.58	1.95	2.89	-1.34	0.92	6.16	A	3.52	A	A
11	72.30	6.70	9.27	5.55	3.80	17.65	A	9.48	A	A
12	66.00	2.00	3.03	-3.65	2.50	6.27	A	3.64	A	A
13	70.70	5.30	7.50	3.21	2.20	14.13	A	7.76	A	A
14	68.50	3.40	4.96	0.00	0.00	9.47	A	5.36	A	A
15	71.00	4.00	5.63	3.65	2.50	10.92	A	5.98	A	A
16	61.90	5.90	9.53	-9.64	6.60	15.63	A	9.74	A	A
18	68.30	1.47	2.15	-0.29	0.20	5.20	A	2.95	A	A
19	92.00	3.90	4.24	34.31	23.50	10.67	N	4.69	A	N
20	67.80	3.00	4.42	-1.02	0.70	8.52	A	4.86	A	A
21	77.30	1.20	1.55	12.85	8.80	4.72	N	2.54	A	W
23	66.00	6.00	9.09	-3.65	2.50	15.88	A	9.31	A	A
24	73.80	5.20	7.05	7.74	5.30	13.88	A	7.33	A	A
25	74.80	2.40	3.21	9.20	6.30	7.14	A	3.79	A	A
26	60.00	9.00	15.00	-12.41	8.50	23.49	A	15.13	N	W
27	66.70	7.04	10.55	-2.63	1.80	18.51	A	10.75	A	A
28	68.20	2.00	2.93	-0.44	0.30	6.27	A	3.56	A	A
29	65.50	4.90	7.48	-4.38	3.00	13.13	A	7.75	A	A
30	64.30	1.60	2.49	-6.13	4.20	5.45	A	3.20	A	A
31	78.11	4.41	5.65	14.03	9.61	11.92	A	5.99	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
33	64.40	3.60	5.59	-5.99	4.10	9.95	A	5.94	A	A
34	66.50	1.70	2.56	-2.92	2.00	5.65	A	3.25	A	A
35	66.70	3.50	5.25	-2.63	1.80	9.71	A	5.62	A	A
36	69.67	4.69	6.73	1.71	1.17	12.61	A	7.03	A	A
37	89.81	1.41	1.57	31.11	21.31	5.09	N	2.56	A	N
39	55.70	1.40	2.51	-18.69	12.80	5.07	N	3.22	A	N
42	84.70	3.05	3.60	23.65	16.20	8.64	N	4.13	A	N
43	69.66	5.60	8.04	1.69	1.16	14.88	A	8.29	A	A
44	72.40	4.50	6.22	5.69	3.90	12.14	A	6.53	A	A
45	65.50	2.40	3.66	-4.38	3.00	7.14	A	4.18	A	A
48	72.43	2.67	3.69	5.74	3.93	7.75	A	4.20	A	A
49	70.00	3.00	4.29	2.19	1.50	8.52	A	4.74	A	A
50	66.90	1.70	2.54	-2.34	1.60	5.65	A	3.24	A	A
51	68.70	3.50	5.09	0.29	0.20	9.71	A	5.48	A	A
52	71.20	1.64	2.30	3.94	2.70	5.53	A	3.06	A	A
53	70.00	1.00	1.43	2.19	1.50	4.40	A	2.47	A	A
55	68.80	1.00	1.45	0.44	0.30	4.40	A	2.48	A	A
56	70.44	3.24	4.60	2.83	1.94	9.09	A	5.02	A	A
59	66.70	4.40	6.60	-2.63	1.80	11.90	A	6.90	A	A
62	76.00	2.30	3.03	10.95	7.50	6.92	N	3.64	A	W
63	72.00	6.00	8.33	5.11	3.50	15.88	A	8.57	A	A
64	65.92	0.73	1.11	-3.77	2.58	4.03	A	2.30	A	A
65	71.00	10.00	14.08	3.65	2.50	26.04	A	14.23	A	A
67	66.50	3.80	5.71	-2.92	2.00	10.43	A	6.06	A	A
69	73.00	2.50	3.42	6.57	4.50	7.37	A	3.97	A	A
70	66.60	2.70	4.05	-2.77	1.90	7.82	A	4.53	A	A
71	65.46	3.24	4.95	-4.44	3.04	9.09	A	5.34	A	A
73	65.60	1.90	2.90	-4.23	2.90	6.06	A	3.53	A	A
75	75.22	1.46	1.95	9.80	6.72	5.19	N	2.80	A	W
76	0.73	26.82	3699.11	-98.94	67.77	69.29	A	3699.11	N	N
77	65.95	0.60	0.91	-3.72	2.55	3.88	A	2.21	A	A
78	69.80	2.20	3.15	1.90	1.30	6.70	A	3.74	A	A
79	52.80	1.40	2.65	-22.92	15.70	5.07	N	3.33	A	N
80	81.60	4.28	5.25	19.12	13.10	11.60	N	5.62	A	N
81	66.40	5.00	7.53	-3.07	2.10	13.38	A	7.79	A	A
82	71.10	6.40	9.00	3.80	2.60	16.89	A	9.22	A	A
84	69.90	3.90	5.58	2.04	1.40	10.67	A	5.93	A	A
85	64.20	4.30	6.70	-6.28	4.30	11.65	A	6.99	A	A
86	59.00	2.00	3.39	-13.87	9.50	6.27	N	3.94	A	W
87	69.00	2.60	3.77	0.73	0.50	7.59	A	4.27	A	A
88	70.00	5.00	7.14	2.19	1.50	13.38	A	7.42	A	A
89	62.50	1.10	1.76	-8.76	6.00	4.55	N	2.68	A	W
90	68.00	4.00	5.88	-0.73	0.50	10.92	A	6.22	A	A
91	82.42	4.45	5.40	20.32	13.92	12.02	N	5.76	A	N
92	61.17	1.26	2.06	-10.70	7.33	4.82	N	2.88	A	W
93	68.70	1.20	1.75	0.29	0.20	4.72	A	2.67	A	A
95	105.00	6.90	6.57	53.28	36.50	18.15	N	6.87	A	N

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
96	84.70	2.92	3.45	23.65	16.20	8.33	N	3.99	A	N
97	70.50	0.80	1.13	2.92	2.00	4.12	A	2.31	A	A
98	56.30	0.90	1.60	-17.81	12.20	4.25	N	2.57	A	N
99	73.10	3.70	5.06	6.72	4.60	10.19	A	5.45	A	A
101	64.70	2.60	4.02	-5.55	3.80	7.59	A	4.50	A	A
102	72.00	3.00	4.17	5.11	3.50	8.52	A	4.63	A	A
103	64.50	0.00	0.00	-5.84	4.00	3.56	N	2.01	A	W
104	68.50	4.10	5.99	0.00	0.00	11.16	A	6.32	A	A
105	66.59	1.68	2.52	-2.79	1.91	5.61	A	3.23	A	A
107	73.00	7.00	9.59	6.57	4.50	18.41	A	9.80	A	A
108	87.19	0.60	0.69	27.28	18.69	3.88	N	2.13	A	N
110	63.20	3.34	5.28	-7.74	5.30	9.32	A	5.66	A	A
112	67.70	1.90	2.81	-1.17	0.80	6.06	A	3.45	A	A
113	69.08	2.27	3.29	0.85	0.58	6.85	A	3.85	A	A
114	68.00	3.40	5.00	-0.73	0.50	9.47	A	5.39	A	A
115	69.10	2.70	3.91	0.88	0.60	7.82	A	4.40	A	A
116	68.90	3.50	5.08	0.58	0.40	9.71	A	5.46	A	A
117	72.30	3.50	4.84	5.55	3.80	9.71	A	5.24	A	A
118	54.20	2.70	4.98	-20.88	14.30	7.82	N	5.37	A	N
119	68.20	2.90	4.25	-0.44	0.30	8.29	A	4.71	A	A
120	78.50	6.30	8.03	14.60	10.00	16.64	A	8.27	A	A
121	72.30	3.60	4.98	5.55	3.80	9.95	A	5.37	A	A
122	61.73	2.69	4.35	-9.88	6.77	7.80	A	4.80	A	A
123	66.44	4.71	7.09	-3.01	2.06	12.66	A	7.37	A	A
124	68.70	1.60	2.33	0.29	0.20	5.45	A	3.08	A	A
125	76.72	2.84	3.70	12.00	8.22	8.15	N	4.21	A	W
126	79.30	7.31	9.22	15.77	10.80	19.19	A	9.44	A	A
127	64.10	1.92	3.00	-6.42	4.40	6.10	A	3.61	A	A
128	68.70	2.30	3.35	0.29	0.20	6.92	A	3.91	A	A
129	74.45	1.10	1.48	8.69	5.95	4.55	N	2.50	A	W
130	59.70	2.60	4.36	-12.85	8.80	7.59	N	4.80	A	W
131	71.00	5.00	7.04	3.65	2.50	13.38	A	7.32	A	A
132	1051.10	5.00	0.48	1434.45	982.60	13.38	N	2.07	A	N
133	68.30	7.00	10.25	-0.29	0.20	18.41	A	10.45	A	A
134	65.40	2.50	3.82	-4.53	3.10	7.37	A	4.32	A	A
135	67.00	3.70	5.52	-2.19	1.50	10.19	A	5.88	A	A
136	72.70	1.60	2.20	6.13	4.20	5.45	A	2.98	A	A
137	65.30	1.20	1.84	-4.67	3.20	4.72	A	2.73	A	A
138	61.38	4.49	7.32	-10.39	7.12	12.12	A	7.59	A	A
139	64.10	4.00	6.24	-6.42	4.40	10.92	A	6.56	A	A
140	77.00	4.00	5.19	12.41	8.50	10.92	A	5.57	A	A
142	72.80	1.90	2.61	6.28	4.30	6.06	A	3.30	A	A
143	67.70	3.50	5.17	-1.17	0.80	9.71	A	5.55	A	A
144	66.10	3.70	5.60	-3.50	2.40	10.19	A	5.95	A	A
145	72.40	5.51	7.61	5.69	3.90	14.65	A	7.87	A	A
146	67.04	5.26	7.85	-2.13	1.46	14.03	A	8.10	A	A
147	71.80	1.90	2.65	4.82	3.30	6.06	A	3.33	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
148	52.71	1.06	2.01	-23.05	15.79	4.49	N	2.85	A	N
149	69.00	1.10	1.59	0.73	0.50	4.55	A	2.57	A	A
150	65.00	5.00	7.69	-5.11	3.50	13.38	A	7.95	A	A
151	53.10	2.70	5.08	-22.48	15.40	7.82	N	5.47	A	N
152	54.10	1.40	2.59	-21.02	14.40	5.07	N	3.28	A	N
153	81.59	3.95	4.84	19.11	13.09	10.80	N	5.24	A	N
154	69.40	3.20	4.61	1.31	0.90	8.99	A	5.03	A	A
155	69.90	0.90	1.29	2.04	1.40	4.25	A	2.39	A	A
156	67.80	4.00	5.90	-1.02	0.70	10.92	A	6.23	A	A
157	62.70	2.30	3.67	-8.47	5.80	6.92	A	4.19	A	A
158	135.00	10.00	7.41	97.08	66.50	26.04	N	7.68	A	N
160	67.71	4.10	6.06	-1.15	0.79	11.16	A	6.38	A	A
161	67.50	5.90	8.74	-1.46	1.00	15.63	A	8.97	A	A
162	66.00	2.63	3.98	-3.65	2.50	7.66	A	4.47	A	A
163	70.21	2.60	3.70	2.50	1.71	7.59	A	4.22	A	A
164	63.69	3.37	5.29	-7.02	4.81	9.40	A	5.66	A	A
165	75.30	0.50	0.66	9.93	6.80	3.79	N	2.12	A	W
166	68.52	2.88	4.20	0.03	0.02	8.24	A	4.66	A	A
167	71.20	3.10	4.35	3.94	2.70	8.75	A	4.80	A	A
168	80.89	1.94	2.40	18.09	12.39	6.14	N	3.13	A	N
169	70.00	2.54	3.63	2.19	1.50	7.46	A	4.15	A	A
172	73.30	1.90	2.59	7.01	4.80	6.06	A	3.28	A	A
173	67.44	2.20	3.26	-1.55	1.06	6.70	A	3.83	A	A
174	62.35	2.63	4.22	-8.98	6.15	7.66	A	4.67	A	A
175	61.06	1.60	2.62	-10.86	7.44	5.45	N	3.31	A	W
176	69.05	1.92	2.78	0.80	0.55	6.11	A	3.44	A	A
177	73.80	6.80	9.21	7.74	5.30	17.90	A	9.43	A	A
178	65.80	1.50	2.28	-3.94	2.70	5.26	A	3.04	A	A
179	66.86	5.04	7.54	-2.39	1.64	13.48	A	7.80	A	A
182	63.90	2.49	3.90	-6.72	4.60	7.34	A	4.39	A	A
184	57.19	4.76	8.32	-16.51	11.31	12.79	A	8.56	A	A
185	69.60	5.00	7.18	1.61	1.10	13.38	A	7.46	A	A
186	67.40	2.40	3.56	-1.61	1.10	7.14	A	4.09	A	A
187	69.90	1.90	2.72	2.04	1.40	6.06	A	3.38	A	A
188	72.50	2.40	3.31	5.84	4.00	7.14	A	3.88	A	A
189	68.20	5.10	7.48	-0.44	0.30	13.63	A	7.74	A	A
190	65.00	3.00	4.62	-5.11	3.50	8.52	A	5.04	A	A
191	46.50	3.30	7.10	-32.12	22.00	9.23	N	7.38	A	N
192	66.93	3.81	5.69	-2.29	1.57	10.45	A	6.04	A	A
194	71.00	1.60	2.25	3.65	2.50	5.45	A	3.02	A	A
195	89.10	1.00	1.12	30.07	20.60	4.40	N	2.31	A	N
196	65.80	3.20	4.86	-3.94	2.70	8.99	A	5.26	A	A
197	69.10	2.10	3.04	0.88	0.60	6.48	A	3.65	A	A
198	75.30	1.20	1.59	9.93	6.80	4.72	N	2.57	A	W
199	67.97	3.82	5.62	-0.77	0.53	10.48	A	5.97	A	A
200	67.68	2.30	3.40	-1.20	0.82	6.92	A	3.95	A	A
201	71.80	3.00	4.18	4.82	3.30	8.52	A	4.64	A	A

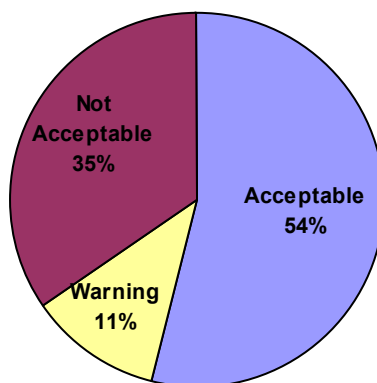
Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
202	69.98	1.96	2.80	2.16	1.48	6.18	A	3.45	A	A
203	66.05	1.50	2.27	-3.58	2.45	5.26	A	3.04	A	A
204	79.00	2.00	2.53	15.33	10.50	6.27	N	3.24	A	N
206	70.80	5.00	7.06	3.36	2.30	13.38	A	7.34	A	A
207	78.10	4.60	5.89	14.01	9.60	12.39	A	6.22	A	A
208	58.60	4.00	6.83	-14.45	9.90	10.92	A	7.12	A	A
209	67.30	4.30	6.39	-1.75	1.20	11.65	A	6.70	A	A
210	77.00	4.00	5.19	12.41	8.50	10.92	A	5.57	A	A
212	52.00	1.40	2.69	-24.09	16.50	5.07	N	3.36	A	N
213	59.90	2.50	4.17	-12.55	8.60	7.37	N	4.63	A	W
214	71.00	2.00	2.82	3.65	2.50	6.27	A	3.46	A	A
215	66.91	3.51	5.25	-2.32	1.59	9.73	A	5.62	A	A
216	77.40	6.74	8.71	12.99	8.90	17.75	A	8.94	A	A
217	77.00	1.40	1.82	12.41	8.50	5.07	N	2.71	A	W
218	66.70	6.90	10.34	-2.63	1.80	18.15	A	10.54	A	A
220	68.00	2.00	2.94	-0.73	0.50	6.27	A	3.56	A	A
222	85.00	3.00	3.53	24.09	16.50	8.52	N	4.06	A	N
223	63.10	1.20	1.90	-7.88	5.40	4.72	N	2.77	A	W
225	65.25	2.16	3.31	-4.74	3.25	6.61	A	3.88	A	A
226	72.30	4.80	6.64	5.55	3.80	12.89	A	6.94	A	A
227	71.61	3.42	4.78	4.54	3.11	9.51	A	5.18	A	A
228	67.20	1.70	2.53	-1.90	1.30	5.65	A	3.23	A	A
229	72.80	4.60	6.32	6.28	4.30	12.39	A	6.63	A	A
230	71.80	8.10	11.28	4.82	3.30	21.20	A	11.46	A	A
231	59.72	2.70	4.52	-12.82	8.78	7.82	N	4.95	A	W
232	106.63	4.33	4.06	55.66	38.13	11.73	N	4.53	A	N
233	63.32	1.17	1.85	-7.56	5.18	4.67	N	2.73	A	W
234	64.41	1.75	2.72	-5.97	4.09	5.75	A	3.38	A	A
235	68.90	1.90	2.76	0.58	0.40	6.06	A	3.42	A	A
236	21.10	0.50	2.37	-69.20	47.40	3.79	N	3.11	A	N
237	68.90	3.10	4.50	0.58	0.40	8.75	A	4.93	A	A
238	77.02	1.45	1.89	12.44	8.52	5.17	N	2.76	A	W
239	64.30	1.98	3.08	-6.13	4.20	6.23	A	3.68	A	A
240	68.67	1.87	2.72	0.25	0.17	6.00	A	3.39	A	A
241	75.18	2.96	3.94	9.75	6.68	8.43	A	4.42	A	A
242	67.11	3.08	4.59	-2.03	1.39	8.71	A	5.01	A	A
243	51.43	1.48	2.88	-24.92	17.07	5.22	N	3.51	A	N
245	64.70	1.43	2.21	-5.55	3.80	5.13	A	2.99	A	A
246	62.00	6.40	10.32	-9.49	6.50	16.89	A	10.52	A	A
248	67.00	8.00	11.94	-2.19	1.50	20.94	A	12.11	A	A
249	68.00	2.00	2.94	-0.73	0.50	6.27	A	3.56	A	A
250	75.00	4.10	5.47	9.49	6.50	11.16	A	5.83	A	A
251	53.60	0.80	1.49	-21.75	14.90	4.12	N	2.51	A	N
252	70.60	1.40	1.98	3.07	2.10	5.07	A	2.83	A	A
253	67.57	3.55	5.25	-1.36	0.93	9.83	A	5.63	A	A
254	71.61	1.83	2.56	4.54	3.11	5.91	A	3.25	A	A
255	57.29	3.52	6.14	-16.36	11.21	9.75	N	6.47	A	N

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
256	66.68	6.76	10.14	-2.66	1.82	17.80	A	10.34	A	A
257	69.60	1.60	2.30	1.61	1.10	5.45	A	3.06	A	A
258	77.80	5.10	6.56	13.58	9.30	13.63	A	6.86	A	A
259	69.30	1.20	1.73	1.17	0.80	4.72	A	2.66	A	A
260	67.10	2.50	3.73	-2.04	1.40	7.37	A	4.24	A	A
261	70.63	1.38	1.95	3.11	2.13	5.04	A	2.81	A	A
262	73.70	2.10	2.85	7.59	5.20	6.48	A	3.49	A	A
263	68.88	3.87	5.62	0.55	0.38	10.60	A	5.97	A	A
264	69.40	1.80	2.59	1.31	0.90	5.85	A	3.28	A	A
265	65.69	3.02	4.60	-4.10	2.81	8.57	A	5.02	A	A
268	81.00	3.60	4.44	18.25	12.50	9.95	N	4.88	A	N
269	73.92	1.54	2.08	7.91	5.42	5.34	N	2.90	A	W
270	69.99	3.29	4.70	2.18	1.49	9.20	A	5.11	A	A
271	78.90	4.10	5.20	15.18	10.40	11.16	A	5.57	A	A
272	69.60	3.70	5.32	1.61	1.10	10.19	A	5.69	A	A
273	70.50	9.50	13.48	2.92	2.00	24.77	A	13.62	A	A
275	68.47	0.94	1.37	-0.04	0.03	4.31	A	2.44	A	A
277	66.90	2.70	4.04	-2.34	1.60	7.82	A	4.51	A	A
278	69.14	1.48	2.14	0.93	0.64	5.22	A	2.94	A	A
279	69.30	3.10	4.47	1.17	0.80	8.75	A	4.91	A	A
280	68.31	4.00	5.86	-0.28	0.19	10.92	A	6.19	A	A
281	75.07	3.83	5.10	9.59	6.57	10.50	A	5.49	A	A
284	84.00	1.70	2.02	22.63	15.50	5.65	N	2.86	A	N
285	66.95	3.59	5.36	-2.26	1.55	9.92	A	5.73	A	A
286	67.50	2.00	2.96	-1.46	1.00	6.27	A	3.58	A	A
287	69.70	0.90	1.29	1.75	1.20	4.25	A	2.39	A	A
288	69.10	1.60	2.32	0.88	0.60	5.45	A	3.07	A	A
290	68.10	3.00	4.41	-0.58	0.40	8.52	A	4.84	A	A
291	64.80	1.40	2.16	-5.40	3.70	5.07	A	2.95	A	A
292	67.60	2.42	3.58	-1.31	0.90	7.19	A	4.11	A	A
293	71.00	3.20	4.51	3.65	2.50	8.99	A	4.94	A	A
295	77.00	5.00	6.49	12.41	8.50	13.38	A	6.80	A	A
296	66.50	4.80	7.22	-2.92	2.00	12.89	A	7.49	A	A
297	74.60	2.30	3.08	8.91	6.10	6.92	A	3.68	A	A
299	75.10	3.90	5.19	9.64	6.60	10.67	A	5.57	A	A
300	76.00	2.00	2.63	10.95	7.50	6.27	N	3.31	A	W
302	74.70	2.79	3.73	9.05	6.20	8.03	A	4.24	A	A
304	79.00	8.00	10.13	15.33	10.50	20.94	A	10.33	A	A
305	66.90	4.30	6.43	-2.34	1.60	11.65	A	6.74	A	A
306	64.80	1.90	2.93	-5.40	3.70	6.06	A	3.56	A	A
307	67.00	3.00	4.48	-2.19	1.50	8.52	A	4.91	A	A
308	79.40	2.60	3.27	15.91	10.90	7.59	N	3.84	A	N
309	53.90	3.50	6.49	-21.31	14.60	9.71	N	6.80	A	N
310	65.70	2.60	3.96	-4.09	2.80	7.59	A	4.44	A	A
311	75.00	4.00	5.33	9.49	6.50	10.92	A	5.70	A	A
312	61.90	5.20	8.40	-9.64	6.60	13.88	A	8.64	A	A
316	62.90	4.10	6.52	-8.18	5.60	11.16	A	6.82	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
317	67.33	1.49	2.21	-1.71	1.17	5.24	A	2.99	A	A
318	67.60	2.90	4.29	-1.31	0.90	8.29	A	4.74	A	A
319	69.80	1.88	2.69	1.90	1.30	6.02	A	3.36	A	A
320	65.70	1.30	1.98	-4.09	2.80	4.89	A	2.82	A	A
321	63.36	1.04	1.64	-7.50	5.14	4.46	N	2.60	A	W
322	70.00	4.00	5.71	2.19	1.50	10.92	A	6.06	A	A

Analyte: Pb-210 in spiked soil, IAEA-444

Target Value: 48.0 ± 1.5 [Bq/kg]



Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
2	53.40	7.00	13.11	11.25	5.40	18.47	A	13.48	A	A
3	124.00	12.00	9.68	158.33	76.00	31.20	N	10.17	A	N
4	55.40	7.90	14.26	15.42	7.40	20.75	A	14.60	A	A
7	60.00	25.00	41.67	25.00	12.00	64.62	A	41.78	N	N
8	218.30	12.70	5.82	354.79	170.30	32.99	N	6.60	A	N
9	45.00	8.00	17.78	-6.25	3.00	21.00	A	18.05	A	A
10	59.69	6.66	11.16	24.35	11.69	17.61	A	11.59	A	A
12	59.00	9.00	15.25	22.92	11.00	23.54	A	15.57	A	A
13	<55									
14	21.70	5.60	25.81	-54.79	26.30	14.96	N	25.99	N	N
16	69.70	17.40	24.96	45.21	21.70	45.06	A	25.16	N	N
18	40.00	7.31	18.27	-16.67	8.00	19.25	A	18.54	A	A
20	45.00	2.20	4.89	-6.25	3.00	6.87	A	5.80	A	A
21	44.80	7.80	17.41	-6.67	3.20	20.49	A	17.69	A	A
23	47.00	7.00	14.89	-2.08	1.00	18.47	A	15.22	A	A
24	55.20	6.60	11.96	15.00	7.20	17.46	A	12.36	A	A
27	45.70	8.82	19.30	-4.79	2.30	23.08	A	19.55	A	A
28	41.00	8.00	19.51	-14.58	7.00	21.00	A	19.76	A	A
30	31.90	6.80	21.32	-33.54	16.10	17.97	A	21.54	N	N
35	40.40	9.20	22.77	-15.83	7.60	24.05	A	22.99	N	W
36	20.52	3.10	15.11	-57.25	27.48	8.89	N	15.43	A	N
37	37.29	3.50	9.39	-22.32	10.71	9.82	N	9.89	A	N
39	12.20	5.60	45.90	-74.58	35.80	14.96	N	46.01	N	N
43	34.80	6.16	17.70	-27.50	13.20	16.36	A	17.97	A	A
48	45.79	7.70	16.82	-4.60	2.21	20.24	A	17.10	A	A
49	30.00	5.00	16.67	-37.50	18.00	13.47	N	16.96	A	N
50	53.10	4.00	7.53	10.63	5.10	11.02	A	8.16	A	A
52	52.00	5.87	11.29	8.33	4.00	15.63	A	11.71	A	A
53	46.60	1.80	3.86	-2.92	1.40	6.05	A	4.97	A	A
55	46.40	1.80	3.88	-3.33	1.60	6.05	A	4.98	A	A
56	44.11	4.97	11.27	-8.10	3.89	13.39	A	11.69	A	A

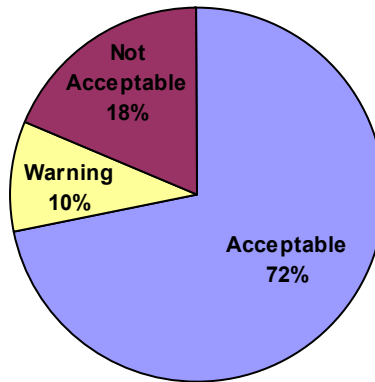
Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
59	90.80	7.80	8.59	89.17	42.80	20.49	N	9.14	A	N
62	44.40	5.80	13.06	-7.50	3.60	15.46	A	13.43	A	A
64	<54									
69	28.90	7.50	25.95	-39.79	19.10	19.73	A	26.14	N	N
73	475.00	21.50	4.53	889.58	427.00	55.60	N	5.50	A	N
76	3.00			-93.75						
77	44.18	10.72	24.26	-7.96	3.82	27.93	A	24.46	N	W
78	29.20	5.10	17.47	-39.17	18.80	13.72	N	17.74	A	N
80	13.30	0.59	4.43	-72.29	34.70	4.16	N	5.42	A	N
82	83.40	16.70	20.02	73.75	35.40	43.26	A	20.27	N	N
84	0.00	0.00		-100.00	48.00	3.87	N			
85	129.60	18.50	14.27	170.00	81.60	47.89	N	14.61	A	N
87	46.20	6.10	13.20	-3.75	1.80	16.21	A	13.57	A	A
89	<20									
90	62.00	9.00	14.52	29.17	14.00	23.54	A	14.85	A	A
92	42.55	11.79	27.71	-11.35	5.45	30.66	A	27.88	N	W
93	55.30	2.60	4.70	15.21	7.30	7.74	A	5.65	A	A
95	98.60	24.30	24.65	105.42	50.60	62.81	A	24.84	N	N
96	<36.3	68.70								
99	65.70	5.40	8.22	36.88	17.70	14.46	N	8.79	A	N
102	80.00	25.00	31.25	66.67	32.00	64.62	A	31.41	N	N
103	62.50	0.01	0.01	30.21	14.50	3.87	N	3.13	A	N
104	46.70	5.20	11.13	-2.71	1.30	13.96	A	11.57	A	A
105	50.35	2.42	4.81	4.90	2.35	7.35	A	5.73	A	A
107	54.00	6.00	11.11	12.50	6.00	15.96	A	11.54	A	A
112	45.10	4.50	9.98	-6.04	2.90	12.24	A	10.46	A	A
113	42.55	3.05	7.17	-11.35	5.45	8.77	A	7.82	A	A
114	53.60	16.40	30.60	11.67	5.60	42.49	A	30.76	N	W
115	42.50	5.00	11.76	-11.46	5.50	13.47	A	12.17	A	A
117	67.20	16.00	23.81	40.00	19.20	41.46	A	24.01	N	N
118	25.50	3.80	14.90	-46.88	22.50	10.54	N	15.23	A	N
119	237.00	31.00	13.08	393.75	189.00	80.07	N	13.45	A	N
122	46.27	6.36	13.74	-3.60	1.73	16.85	A	14.09	A	A
124	167.60	28.60	17.06	249.17	119.60	73.89	N	17.35	A	N
126	66.80	10.10	15.12	39.17	18.80	26.34	A	15.44	A	A
127	30.30	1.24	4.09	-36.88	17.70	5.02	N	5.15	A	N
130	52.00	14.00	26.92	8.33	4.00	36.33	A	27.10	N	W
131	44.00	3.00	6.82	-8.33	4.00	8.65	A	7.50	A	A
132	0.00			-100.00						
133	44.00	9.90	22.50	-8.33	4.00	25.83	A	22.72	N	W
135	73.10	31.80	43.50	52.29	25.10	82.14	A	43.61	N	N
137	<40									
139	<236									
142	58.70	3.60	6.13	22.29	10.70	10.06	N	6.88	A	N
144	55.50	11.00	19.82	15.62	7.50	28.64	A	20.06	N	W
146	53.42	7.06	13.22	11.29	5.42	18.62	A	13.58	A	A
147	28.40	3.40	11.97	-40.83	19.60	9.59	N	12.37	A	N

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
150	66.00	12.00	18.18	37.50	18.00	31.20	A	18.45	A	A
151	235.00	11.00	4.68	389.58	187.00	28.64	N	5.63	A	N
152	39.40	6.20	15.74	-17.92	8.60	16.46	A	16.04	A	A
153	64.73	7.52	11.62	34.85	16.73	19.78	A	12.03	A	A
154	55.40	10.70	19.31	15.42	7.40	27.88	A	19.57	A	A
156	49.60	5.70	11.49	3.33	1.60	15.21	A	11.91	A	A
157	52.00	6.50	12.50	8.33	4.00	17.21	A	12.88	A	A
160	260.25	63.29	24.32	442.19	212.25	163.33	N	24.52	N	N
161	45.80	9.50	20.74	-4.58	2.20	24.81	A	20.98	N	W
162	54.00	18.30	33.89	12.50	6.00	47.37	A	34.03	N	W
163	44.33	8.88	20.03	-7.65	3.67	23.23	A	20.27	N	W
164	55.47	5.57	10.04	15.56	7.47	14.88	A	10.52	A	A
166	56.49	6.73	11.91	17.69	8.49	17.79	A	12.32	A	A
167	72.00	5.00	6.94	50.00	24.00	13.47	N	7.62	A	N
169	56.02	9.44	16.85	16.71	8.02	24.66	A	17.14	A	A
172	40.80	9.20	22.55	-15.00	7.20	24.05	A	22.76	N	W
176	48.93	6.08	12.42	1.94	0.93	16.15	A	12.81	A	A
177	<83.7									
178	48.30	4.80	9.94	0.62	0.30	12.97	A	10.42	A	A
182	60.17	0.66	1.10	25.35	12.17	4.23	N	3.31	A	N
184	77.14	8.49	11.01	60.71	29.14	22.24	N	11.44	A	N
185	30.90	9.20	29.77	-35.62	17.10	24.05	A	29.94	N	N
186	68.00	14.00	20.59	41.67	20.00	36.33	A	20.82	N	N
187	49.00	5.20	10.61	2.08	1.00	13.96	A	11.06	A	A
188	<100	0.00								
189	42.90	5.50	12.82	-10.63	5.10	14.71	A	13.20	A	A
190	48.00	4.00	8.33	0.00	0.00	11.02	A	8.90	A	A
192	37.96	7.89	20.79	-20.92	10.04	20.72	A	21.02	N	N
194	64.00	13.00	20.31	33.33	16.00	33.76	A	20.55	N	N
195	71.80	10.70	14.90	49.58	23.80	27.88	A	15.23	A	A
196	34.30	4.70	13.70	-28.54	13.70	12.73	N	14.05	A	N
197	41.60	7.70	18.51	-13.33	6.40	20.24	A	18.77	A	A
200	45.14	5.30	11.74	-5.96	2.86	14.21	A	12.15	A	A
202	51.04	6.39	12.52	6.33	3.04	16.93	A	12.90	A	A
203	50.51	3.40	6.73	5.23	2.51	9.59	A	7.42	A	A
204	57.00	7.00	12.28	18.75	9.00	18.47	A	12.67	A	A
207	60.10	7.00	11.65	25.21	12.10	18.47	A	12.06	A	A
208	48.80	9.50	19.47	1.67	0.80	24.81	A	19.72	A	A
209	52.60	7.80	14.83	9.58	4.60	20.49	A	15.15	A	A
214	40.00	10.00	25.00	-16.67	8.00	26.09	A	25.19	N	W
215	49.53	6.63	13.39	3.19	1.53	17.54	A	13.75	A	A
220	120.00	1.09	0.91	150.00	72.00	4.78	N	3.25	A	N
222	<131									
228	41.40	3.60	8.70	-13.75	6.60	10.06	A	9.24	A	A
229	51.80	11.70	22.59	7.92	3.80	30.43	A	22.80	N	W
230	183.10	61.80	33.75	281.46	135.10	159.49	A	33.90	N	N
231	50.76	34.18	67.34	5.75	2.76	88.27	A	67.41	N	W

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
232	58.40	3.55	6.08	21.67	10.40	9.94	N	6.83	A	N
233	0.00	0.00		-100.00	48.00	3.87	N			
235	62.30	6.10	9.79	29.79	14.30	16.21	A	10.28	A	A
236	7.50	0.90	12.00	-84.38	40.50	4.51	N	12.40	A	N
237	46.40	4.50	9.70	-3.33	1.60	12.24	A	10.19	A	A
238	13.30	2.36	17.74	-72.29	34.70	7.22	N	18.02	A	N
239	48.40	4.27	8.82	0.83	0.40	11.68	A	9.36	A	A
240	43.55	7.05	16.19	-9.27	4.45	18.60	A	16.49	A	A
243	59.66	4.34	7.27	24.29	11.66	11.85	A	7.92	A	A
245	49.00	13.80	28.16	2.08	1.00	35.81	A	28.34	N	W
248	38.00	9.00	23.68	-20.83	10.00	23.54	A	23.89	N	N
249	44.90	4.10	9.13	-6.46	3.10	11.26	A	9.65	A	A
250	62.50	9.30	14.88	30.21	14.50	24.30	A	15.20	A	A
253	63.87	3.80	5.95	33.06	15.87	10.54	N	6.72	A	N
254	31.34	3.54	11.30	-34.71	16.66	9.92	N	11.72	A	N
256	228.27	29.49	12.92	375.56	180.27	76.18	N	13.29	A	N
257	44.00	3.50	7.95	-8.33	4.00	9.82	A	8.55	A	A
262	54.50	3.00	5.50	13.54	6.50	8.65	A	6.33	A	A
264	49.90	3.20	6.41	3.96	1.90	9.12	A	7.13	A	A
265	69.24	11.61	16.77	44.25	21.24	30.20	A	17.06	A	A
271	63.10	6.90	10.94	31.46	15.10	18.22	A	11.37	A	A
272	49.30	10.60	21.50	2.71	1.30	27.62	A	21.73	N	W
275	57.42	7.43	12.94	19.63	9.42	19.56	A	13.31	A	A
278	50.11	11.17	22.29	4.40	2.11	29.08	A	22.51	N	W
279	39.40	4.80	12.18	-17.92	8.60	12.97	A	12.58	A	A
281	62.43	3.47	5.56	30.06	14.43	9.75	N	6.38	A	N
284	44.20	1.50	3.39	-7.92	3.80	5.47	A	4.61	A	A
285	43.87	24.27	55.32	-8.60	4.13	62.74	A	55.41	N	W
286	47.30	1.40	2.96	-1.46	0.70	5.29	A	4.30	A	A
287	<149									
288	48.00	5.00	10.42	0.00	0.00	13.47	A	10.88	A	A
290	140.00	77.00	55.00	191.67	92.00	198.70	A	55.09	N	N
291	58.00	7.00	12.07	20.83	10.00	18.47	A	12.47	A	A
292	64.60	7.04	10.90	34.58	16.60	18.57	A	11.34	A	A
293	52.90	8.50	16.07	10.21	4.90	22.27	A	16.37	A	A
297	41.20	7.50	18.20	-14.17	6.80	19.73	A	18.47	A	A
299	49.80	9.80	19.68	3.75	1.80	25.58	A	19.93	A	A
300	87.00	11.00	12.64	81.25	39.00	28.64	N	13.02	A	N
302	284.30	28.40	9.99	492.29	236.30	73.37	N	10.47	A	N
304	63.00	10.00	15.87	31.25	15.00	26.09	A	16.18	A	A
306	90.70	3.90	4.30	88.96	42.70	10.78	N	5.32	A	N
308	85.30	10.00	11.72	77.71	37.30	26.09	N	12.13	A	N
310	47.00	7.00	14.89	-2.08	1.00	18.47	A	15.22	A	A
316	35.70	3.90	10.92	-25.62	12.30	10.78	N	11.36	A	N
319	53.00	3.93	7.42	10.42	5.00	10.85	A	8.05	A	A
320	39.20	7.50	19.13	-18.33	8.80	19.73	A	19.39	A	A
321	51.24	5.90	11.51	6.75	3.24	15.71	A	11.93	A	A

Analyte: Am-241 in spiked soil, IAEA-444

Target Value: 55.6 ± 1.6 [Bq/kg]



Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
2	55.50	4.00	7.21	-0.18	0.10	11.11	A	7.76	A	A
3	58.26	3.71	6.37	4.78	2.66	10.42	A	6.99	A	A
4	53.40	1.20	2.25	-3.96	2.20	5.16	A	3.65	A	A
5	56.80	4.30	7.57	2.16	1.20	11.84	A	8.10	A	A
6	43.50	1.80	4.14	-21.76	12.10	6.21	N	5.04	A	N
7	52.20	3.90	7.47	-6.12	3.40	10.88	A	8.01	A	A
8	56.62	5.70	10.07	1.83	1.02	15.27	A	10.47	A	A
9	53.00	9.00	16.98	-4.68	2.60	23.58	A	17.22	A	A
10	59.00	3.10	5.25	6.12	3.40	9.00	A	5.99	A	A
11	48.70	6.90	14.17	-12.41	6.90	18.27	A	14.46	A	A
12	54.00	6.00	11.11	-2.88	1.60	16.02	A	11.48	A	A
13	51.50	4.00	7.77	-7.37	4.10	11.11	A	8.28	A	A
14	53.50	2.70	5.05	-3.78	2.10	8.10	A	5.81	A	A
15	54.00	3.00	5.56	-2.88	1.60	8.77	A	6.26	A	A
16	50.50	5.50	10.89	-9.17	5.10	14.78	A	11.26	A	A
18	43.50	4.68	10.76	-21.76	12.10	12.76	A	11.14	A	A
19	49.40	14.10	28.54	-11.15	6.20	36.61	A	28.69	N	W
20	53.50	2.30	4.30	-3.78	2.10	7.23	A	5.17	A	A
21	32.60	2.60	7.98	-41.37	23.00	7.88	N	8.48	A	N
23	53.00	5.00	9.43	-4.68	2.60	13.54	A	9.86	A	A
24	57.80	3.50	6.06	3.96	2.20	9.93	A	6.70	A	A
26	46.90	7.03	14.99	-15.65	8.70	18.60	A	15.26	A	A
27	66.60	7.37	11.07	19.78	11.00	19.46	A	11.43	A	A
28	57.60	3.30	5.73	3.60	2.00	9.46	A	6.41	A	A
29	52.70	6.20	11.76	-5.22	2.90	16.52	A	12.11	A	A
30	46.70	1.50	3.21	-16.01	8.90	5.66	N	4.31	A	W
31	41.00	3.75	9.15	-26.26	14.60	10.52	N	9.59	A	N
33	48.80	2.90	5.94	-12.23	6.80	8.55	A	6.60	A	A
34	42.30	4.10	9.69	-23.92	13.30	11.35	N	10.11	A	N

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
35	51.60	2.80	5.43	-7.19	4.00	8.32	A	6.14	A	A
36	47.06	3.60	7.65	-15.36	8.54	10.16	A	8.17	A	A
37	64.46	0.86	1.34	15.94	8.86	4.69	N	3.17	A	W
39	40.00	1.50	3.75	-28.06	15.60	5.66	N	4.73	A	N
43	45.47	4.00	8.80	-18.22	10.13	11.11	A	9.26	A	A
45	42.10	3.30	7.84	-24.28	13.50	9.46	N	8.35	A	N
48	51.98	2.09	4.02	-6.51	3.62	6.79	A	4.94	A	A
49	56.00	3.00	5.36	0.72	0.40	8.77	A	6.08	A	A
50	53.40	1.30	2.43	-3.96	2.20	5.32	A	3.77	A	A
51	47.80	2.50	5.23	-14.03	7.80	7.66	N	5.97	A	W
52	56.70	5.58	9.84	1.98	1.10	14.98	A	10.25	A	A
53	56.00	1.30	2.32	0.72	0.40	5.32	A	3.70	A	A
55	56.10	1.30	2.32	0.90	0.50	5.32	A	3.69	A	A
56	49.98	3.44	6.88	-10.11	5.62	9.79	A	7.46	A	A
59	57.30	3.80	6.63	3.06	1.70	10.64	A	7.23	A	A
60	0.20	0.04	20.00	-99.64	55.40	4.13	N	20.21	N	N
62	55.40	4.30	7.76	-0.36	0.20	11.84	A	8.28	A	A
63	44.00	5.00	11.36	-20.86	11.60	13.54	A	11.72	A	A
64	50.60	1.37	2.71	-8.99	5.00	5.43	A	3.95	A	A
65	51.00	8.00	15.69	-8.27	4.60	21.05	A	15.95	A	A
69	55.90	1.70	3.04	0.54	0.30	6.02	A	4.19	A	A
70	49.80	3.20	6.43	-10.43	5.80	9.23	A	7.04	A	A
73	44.10	3.50	7.94	-20.68	11.50	9.93	N	8.44	A	N
75	32.49	1.91	5.87	-41.57	23.11	6.42	N	6.54	A	N
76	0.91			-98.37						
77	51.02	0.69	1.35	-8.24	4.58	4.50	N	3.18	A	W
78	55.40	3.10	5.60	-0.36	0.20	9.00	A	6.29	A	A
79	34.00	1.00	2.94	-38.85	21.60	4.87	N	4.11	A	N
80	58.30	1.35	2.32	4.86	2.70	5.40	A	3.69	A	A
82	60.60	9.10	15.02	8.99	5.00	23.84	A	15.29	A	A
84	59.20	7.20	12.16	6.47	3.60	19.03	A	12.50	A	A
85	64.40	10.00	15.53	15.83	8.80	26.13	A	15.79	A	A
87	52.80	2.00	3.79	-5.04	2.80	6.61	A	4.76	A	A
88	48.00	5.00	10.42	-13.67	7.60	13.54	A	10.81	A	A
89	82.60	3.00	3.63	48.56	27.00	8.77	N	4.63	A	N
90	56.00	8.00	14.29	0.72	0.40	21.05	A	14.57	A	A
92	46.56	1.54	3.31	-16.26	9.04	5.73	N	4.38	A	W
93	52.40	0.80	1.53	-5.76	3.20	4.62	A	3.26	A	A
95	120.00	8.50	7.08	115.83	64.40	22.32	N	7.65	A	N
96	74.30	3.56	4.79	33.63	18.70	10.07	N	5.59	A	N
99	65.90	4.90	7.44	18.53	10.30	13.30	A	7.97	A	A
101	38.60	1.90	4.92	-30.58	17.00	6.41	N	5.70	A	N
102	88.00	5.00	5.68	58.27	32.40	13.54	N	6.37	A	N
103	49.80	0.00	0.00	-10.43	5.80	4.13	N	2.88	A	W
104	49.90	4.00	8.02	-10.25	5.70	11.11	A	8.52	A	A
105	52.33	1.73	3.31	-5.88	3.27	6.08	A	4.38	A	A
107	54.00	5.00	9.26	-2.88	1.60	13.54	A	9.70	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
108	58.00	0.80	1.38	4.32	2.40	4.62	A	3.19	A	A
110	54.00	3.42	6.33	-2.88	1.60	9.74	A	6.96	A	A
111	54.20	1.40	2.58	-2.52	1.40	5.49	A	3.87	A	A
112	54.20	1.70	3.14	-2.52	1.40	6.02	A	4.26	A	A
113	53.98	1.89	3.50	-2.91	1.62	6.39	A	4.53	A	A
114	56.80	6.20	10.92	2.16	1.20	16.52	A	11.29	A	A
115	51.50	3.80	7.38	-7.37	4.10	10.64	A	7.92	A	A
117	67.90	13.00	19.15	22.12	12.30	33.79	A	19.36	A	A
118	37.10	4.50	12.13	-33.27	18.50	12.32	N	12.47	A	N
119	55.80	2.40	4.30	0.36	0.20	7.44	A	5.17	A	A
120	64.10	6.40	9.98	15.29	8.50	17.02	A	10.39	A	A
121	64.30	3.90	6.07	15.65	8.70	10.88	A	6.71	A	A
122	52.04	3.82	7.34	-6.40	3.56	10.68	A	7.88	A	A
124	61.00	1.90	3.11	9.71	5.40	6.41	A	4.24	A	A
125	53.20	2.87	5.39	-4.32	2.40	8.48	A	6.11	A	A
126	57.10	5.40	9.46	2.70	1.50	14.53	A	9.89	A	A
127	43.60	1.85	4.24	-21.58	12.00	6.31	N	5.13	A	N
129	16.98	1.95	11.48	-69.46	38.62	6.51	N	11.84	A	N
130	43.10	2.40	5.57	-22.48	12.50	7.44	N	6.27	A	N
131	51.00	7.00	13.73	-8.27	4.60	18.53	A	14.02	A	A
132	0.00			-100.00						
133	55.60	5.60	10.07	0.00	0.00	15.03	A	10.47	A	A
135	43.40	4.60	10.60	-21.94	12.20	12.57	A	10.98	A	A
136	57.30	3.00	5.24	3.06	1.70	8.77	A	5.97	A	A
137	54.50	3.40	6.24	-1.98	1.10	9.69	A	6.87	A	A
138	41.07	10.73	26.13	-26.13	14.53	27.99	A	26.28	N	N
139	43.40	3.40	7.83	-21.94	12.20	9.69	N	8.35	A	N
142	60.40	3.10	5.13	8.63	4.80	9.00	A	5.88	A	A
143	50.20	5.20	10.36	-9.71	5.40	14.04	A	10.75	A	A
144	46.30	4.80	10.37	-16.73	9.30	13.05	A	10.76	A	A
145	51.70	7.27	14.06	-7.01	3.90	19.21	A	14.35	A	A
146	55.47	7.36	13.27	-0.23	0.13	19.43	A	13.58	A	A
147	46.50	1.40	3.01	-16.37	9.10	5.49	N	4.16	A	W
149	56.20	1.70	3.02	1.08	0.60	6.02	A	4.18	A	A
150	57.00	7.00	12.28	2.52	1.40	18.53	A	12.61	A	A
151	94.00	3.90	4.15	69.06	38.40	10.88	N	5.05	A	N
152	37.70	1.30	3.45	-32.19	17.90	5.32	N	4.49	A	N
153	69.32	6.50	9.38	24.68	13.72	17.27	A	9.81	A	A
154	55.70	2.80	5.03	0.18	0.10	8.32	A	5.79	A	A
156	50.90	3.70	7.27	-8.45	4.70	10.40	A	7.82	A	A
157	54.40	5.30	9.74	-2.16	1.20	14.28	A	10.16	A	A
160	45.38	2.48	5.46	-18.38	10.22	7.61	N	6.18	A	W
161	48.00	6.80	14.17	-13.67	7.60	18.02	A	14.46	A	A
162	58.80	3.20	5.44	5.76	3.20	9.23	A	6.16	A	A
163	53.90	2.24	4.16	-3.06	1.70	7.10	A	5.05	A	A
164	49.91	1.59	3.19	-10.23	5.69	5.82	A	4.29	A	A
165	58.40	6.90	11.82	5.04	2.80	18.27	A	12.16	A	A

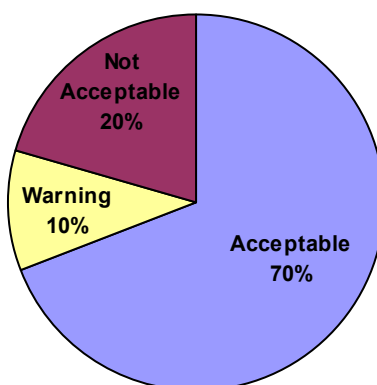
Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
166	54.64	3.22	5.89	-1.73	0.96	9.28	A	6.56	A	A
167	67.30	3.40	5.05	21.04	11.70	9.69	N	5.81	A	N
169	50.55	1.97	3.90	-9.08	5.05	6.55	A	4.84	A	A
172	55.70	5.80	10.41	0.18	0.10	15.52	A	10.80	A	A
176	47.61	1.84	3.86	-14.37	7.99	6.29	N	4.82	A	W
177	58.70	4.60	7.84	5.58	3.10	12.57	A	8.35	A	A
178	53.30	1.60	3.00	-4.14	2.30	5.84	A	4.16	A	A
179	81.91	5.90	7.20	47.32	26.31	15.77	N	7.76	A	N
184	52.88	4.82	9.11	-4.89	2.72	13.10	A	9.56	A	A
185	55.60	4.20	7.55	0.00	0.00	11.60	A	8.08	A	A
186	52.60	2.90	5.51	-5.40	3.00	8.55	A	6.22	A	A
187	62.40	2.20	3.53	12.23	6.80	7.02	A	4.55	A	A
188	60.10	3.30	5.49	8.09	4.50	9.46	A	6.20	A	A
189	52.70	4.90	9.30	-5.22	2.90	13.30	A	9.73	A	A
190	55.00	2.00	3.64	-1.08	0.60	6.61	A	4.64	A	A
191	37.10	3.00	8.09	-33.27	18.50	8.77	N	8.58	A	N
192	54.25	4.03	7.43	-2.43	1.35	11.19	A	7.97	A	A
194	72.00	7.00	9.72	29.50	16.40	18.53	A	10.14	A	A
196	52.10	2.80	5.37	-6.29	3.50	8.32	A	6.10	A	A
197	51.00	2.90	5.69	-8.27	4.60	8.55	A	6.37	A	A
198	67.30	3.50	5.20	21.04	11.70	9.93	N	5.94	A	N
199	55.05	4.42	8.03	-0.99	0.55	12.13	A	8.53	A	A
200	50.49	2.10	4.16	-9.19	5.11	6.81	A	5.06	A	A
201	47.30	2.30	4.86	-14.93	8.30	7.23	N	5.65	A	W
202	52.76	1.87	3.54	-5.11	2.84	6.35	A	4.57	A	A
203	52.22	2.00	3.83	-6.08	3.38	6.61	A	4.79	A	A
204	64.00	1.00	1.56	15.11	8.40	4.87	N	3.27	A	W
206	55.20	4.00	7.25	-0.72	0.40	11.11	A	7.80	A	A
207	62.90	2.20	3.50	13.13	7.30	7.02	N	4.53	A	W
208	46.70	9.00	19.27	-16.01	8.90	23.58	A	19.49	A	A
209	55.60	4.70	8.45	0.00	0.00	12.81	A	8.93	A	A
210	51.00	2.00	3.92	-8.27	4.60	6.61	A	4.86	A	A
212	36.40	1.30	3.57	-34.53	19.20	5.32	N	4.59	A	N
213	41.00	2.30	5.61	-26.26	14.60	7.23	N	6.30	A	N
214	48.00	2.00	4.17	-13.67	7.60	6.61	N	5.06	A	W
215	54.25	4.57	8.42	-2.43	1.35	12.49	A	8.90	A	A
216	23.20	3.44	14.83	-58.27	32.40	9.79	N	15.10	A	N
217	44.40	1.70	3.83	-20.14	11.20	6.02	N	4.79	A	N
220	50.00	1.29	2.58	-10.07	5.60	5.30	N	3.86	A	W
222	65.00	3.00	4.62	16.91	9.40	8.77	N	5.44	A	W
223	50.30	1.90	3.78	-9.53	5.30	6.41	A	4.75	A	A
225	41.34	1.61	3.89	-25.65	14.26	5.86	N	4.84	A	N
226	42.70	5.40	12.65	-23.20	12.90	14.53	A	12.97	A	A
227	50.40	4.85	9.62	-9.35	5.20	13.18	A	10.04	A	A
228	54.00	1.80	3.33	-2.88	1.60	6.21	A	4.40	A	A
229	51.00	4.20	8.24	-8.27	4.60	11.60	A	8.72	A	A
230	59.90	2.90	4.84	7.73	4.30	8.55	A	5.63	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
231	47.93	2.82	5.88	-13.79	7.67	8.37	A	6.55	A	A
232	73.45	2.45	3.34	32.10	17.85	7.55	N	4.41	A	N
233	53.78	2.32	4.31	-3.27	1.82	7.27	A	5.19	A	A
235	60.90	2.40	3.94	9.53	5.30	7.44	A	4.88	A	A
236	2.93	0.12	4.10	-94.73	52.67	4.14	N	5.01	A	N
237	52.20	3.20	6.13	-6.12	3.40	9.23	A	6.77	A	A
238	54.21	0.84	1.55	-2.50	1.39	4.66	A	3.27	A	A
239	52.70	4.03	7.65	-5.22	2.90	11.19	A	8.17	A	A
240	52.18	1.50	2.87	-6.15	3.42	5.66	A	4.07	A	A
241	63.45	6.44	10.15	14.12	7.85	17.12	A	10.55	A	A
242	43.65	10.59	24.26	-21.49	11.95	27.63	A	24.43	N	N
243	43.70	2.20	5.03	-21.40	11.90	7.02	N	5.80	A	N
245	55.40	3.20	5.78	-0.36	0.20	9.23	A	6.45	A	A
246	43.90	13.20	30.07	-21.04	11.70	34.31	A	30.21	N	N
248	49.00	6.00	12.24	-11.87	6.60	16.02	A	12.58	A	A
249	55.00	5.00	9.09	-1.08	0.60	13.54	A	9.54	A	A
250	53.00	1.50	2.83	-4.68	2.60	5.66	A	4.04	A	A
251	11.50	0.80	6.96	-79.32	44.10	4.62	N	7.53	A	N
252	52.20	1.00	1.92	-6.12	3.40	4.87	A	3.46	A	A
253	51.60	2.71	5.25	-7.19	4.00	8.12	A	5.99	A	A
254	47.28	1.59	3.36	-14.96	8.32	5.82	N	4.43	A	W
255	54.64	7.10	12.99	-1.73	0.96	18.78	A	13.31	A	A
256	85.74	8.71	10.16	54.21	30.14	22.85	N	10.56	A	N
257	57.30	2.60	4.54	3.06	1.70	7.88	A	5.37	A	A
258	56.60	6.00	10.60	1.80	1.00	16.02	A	10.98	A	A
259	55.70	1.70	3.05	0.18	0.10	6.02	A	4.19	A	A
260	51.20	4.00	7.81	-7.91	4.40	11.11	A	8.33	A	A
261	57.71	3.19	5.53	3.79	2.11	9.21	A	6.23	A	A
262	59.10	2.00	3.38	6.29	3.50	6.61	A	4.44	A	A
263	53.76	4.30	8.00	-3.31	1.84	11.84	A	8.50	A	A
264	55.00	1.40	2.55	-1.08	0.60	5.49	A	3.84	A	A
265	43.89	2.20	5.01	-21.06	11.71	7.02	N	5.78	A	N
268	101.90	10.90	10.70	83.27	46.30	28.42	N	11.08	A	N
269	53.09	2.09	3.94	-4.51	2.51	6.79	A	4.88	A	A
270	45.49	3.00	6.59	-18.18	10.11	8.77	N	7.20	A	W
271	55.50	3.40	6.13	-0.18	0.10	9.69	A	6.77	A	A
272	56.90	3.40	5.98	2.34	1.30	9.69	A	6.63	A	A
275	54.06	1.18	2.18	-2.77	1.54	5.13	A	3.61	A	A
277	43.70	7.50	17.16	-21.40	11.90	19.79	A	17.40	A	A
278	60.84	1.94	3.19	9.42	5.24	6.49	A	4.30	A	A
279	52.60	4.00	7.60	-5.40	3.00	11.11	A	8.13	A	A
280	95.30	14.85	15.58	71.40	39.70	38.53	N	15.85	A	N
281	60.53	3.04	5.02	8.87	4.93	8.86	A	5.79	A	A
284	63.80	3.00	4.70	14.75	8.20	8.77	A	5.51	A	A
285	68.15	11.30	16.58	22.57	12.55	29.44	A	16.83	A	A
286	50.10	1.20	2.40	-9.89	5.50	5.16	N	3.74	A	W
287	51.40	1.30	2.53	-7.55	4.20	5.32	A	3.83	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
288	51.90	1.90	3.66	-6.65	3.70	6.41	A	4.66	A	A
290	54.30	5.40	9.94	-2.34	1.30	14.53	A	10.35	A	A
291	54.60	1.90	3.48	-1.80	1.00	6.41	A	4.52	A	A
292	58.30	2.69	4.61	4.86	2.70	8.08	A	5.44	A	A
293	43.30	2.20	5.08	-22.12	12.30	7.02	N	5.84	A	N
295	49.00	10.00	20.41	-11.87	6.60	26.13	A	20.61	N	W
297	59.80	2.00	3.34	7.55	4.20	6.61	A	4.41	A	A
299	59.60	6.60	11.07	7.19	4.00	17.52	A	11.44	A	A
300	70.00	3.00	4.29	25.90	14.40	8.77	N	5.16	A	N
302	61.20	5.00	8.17	10.07	5.60	13.54	A	8.66	A	A
304	61.00	6.00	9.84	9.71	5.40	16.02	A	10.25	A	A
305	63.00	7.00	11.11	13.31	7.40	18.53	A	11.48	A	A
306	56.20	2.30	4.09	1.08	0.60	7.23	A	5.00	A	A
307	52.00	5.00	9.62	-6.47	3.60	13.54	A	10.04	A	A
308	80.20	1.80	2.24	44.24	24.60	6.21	N	3.65	A	N
310	56.00	5.50	9.82	0.72	0.40	14.78	A	10.23	A	A
311	58.00	5.00	8.62	4.32	2.40	13.54	A	9.09	A	A
312	47.90	10.00	20.88	-13.85	7.70	26.13	A	21.07	N	W
316	47.40	3.20	6.75	-14.75	8.20	9.23	A	7.34	A	A
317	45.88	1.72	3.75	-17.48	9.72	6.06	N	4.73	A	W
318	54.60	5.80	10.62	-1.80	1.00	15.52	A	11.01	A	A
319	48.60	1.40	2.88	-12.59	7.00	5.49	N	4.07	A	W
320	51.40	1.10	2.14	-7.55	4.20	5.01	A	3.59	A	A
321	51.45	3.20	6.22	-7.46	4.15	9.23	A	6.85	A	A
322	47.00	4.00	8.51	-15.47	8.60	11.11	A	8.98	A	A

Analyte: Mn-54 in spiked water, IAEA-445

Target Value: 4.74 ± 0.02 [Bq/kg]



Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
1	4.33	0.22	5.08	-8.65	0.41	0.57	A	5.10	A	A
2	5.36	0.20	3.73	13.08	0.62	0.52	N	3.76	A	N
3	5.18	0.29	5.60	9.28	0.44	0.75	A	5.61	A	A
4	4.88	0.17	3.48	2.95	0.14	0.44	A	3.51	A	A
5	4.85	0.22	4.54	2.32	0.11	0.57	A	4.56	A	A
6	5.40	0.30	5.56	13.92	0.66	0.78	A	5.57	A	A
7	4.80	0.20	4.17	1.27	0.06	0.52	A	4.19	A	A
8	4.77	0.21	4.40	0.63	0.03	0.54	A	4.42	A	A
9	5.20	0.80	15.38	9.70	0.46	2.06	A	15.39	N	W
10	4.69	0.13	2.77	-1.05	0.05	0.34	A	2.80	A	A
11	4.80	0.40	8.33	1.27	0.06	1.03	A	8.34	A	A
12	4.60	0.30	6.52	-2.95	0.14	0.78	A	6.54	A	A
13	5.19	0.42	8.09	9.49	0.45	1.08	A	8.10	A	A
14	4.60	0.40	8.70	-2.95	0.14	1.03	A	8.71	A	A
15	5.00	0.30	6.00	5.49	0.26	0.78	A	6.01	A	A
16	4.40	0.60	13.64	-7.17	0.34	1.55	A	13.64	N	W
18	4.70	0.17	3.62	-0.84	0.04	0.44	A	3.64	A	A
19	4.54	0.48	10.57	-4.22	0.20	1.24	A	10.58	N	W
20	4.78	0.20	4.18	0.84	0.04	0.52	A	4.21	A	A
21	4.68	0.19	4.06	-1.27	0.06	0.49	A	4.08	A	A
23	4.90	0.40	8.16	3.38	0.16	1.03	A	8.17	A	A
24	4.82	0.41	8.51	1.69	0.08	1.06	A	8.52	A	A
25	5.18	0.45	8.69	9.28	0.44	1.16	A	8.70	A	A
26	3.48	0.69	19.83	-26.58	1.26	1.78	A	19.83	N	N
27	5.16	0.55	10.68	8.86	0.42	1.42	A	10.69	N	W
28	5.02	0.32	6.37	5.91	0.28	0.83	A	6.39	A	A
29	4.36	0.32	7.34	-8.02	0.38	0.83	A	7.35	A	A
30	5.33	0.18	3.38	12.45	0.59	0.47	N	3.40	A	N
33	5.23	0.38	7.27	10.34	0.49	0.98	A	7.28	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
34	4.80	0.20	4.17	1.27	0.06	0.52	A	4.19	A	A
35	4.30	0.28	6.51	-9.28	0.44	0.72	A	6.53	A	A
36	5.19	0.37	7.13	9.49	0.45	0.96	A	7.14	A	A
37	4.49	0.19	4.27	-5.29	0.25	0.50	A	4.29	A	A
39	4.90	0.20	4.08	3.38	0.16	0.52	A	4.10	A	A
42	6.49	0.87	13.41	36.92	1.75	2.25	A	13.41	N	N
43	4.71	0.38	8.07	-0.63	0.03	0.98	A	8.08	A	A
44	4.10	0.24	5.85	-13.50	0.64	0.62	N	5.87	A	N
45	4.72	0.28	5.93	-0.42	0.02	0.72	A	5.95	A	A
48	5.07	0.26	5.13	6.96	0.33	0.67	A	5.15	A	A
49	4.60	0.28	6.09	-2.95	0.14	0.72	A	6.10	A	A
50	5.13	0.33	6.43	8.23	0.39	0.85	A	6.45	A	A
51	5.15	0.27	5.24	8.65	0.41	0.70	A	5.26	A	A
52	5.00	0.18	3.60	5.49	0.26	0.47	A	3.62	A	A
53	4.91	0.09	1.83	3.59	0.17	0.24	A	1.88	A	A
55	4.89	0.09	1.84	3.16	0.15	0.24	A	1.89	A	A
56	5.16	0.35	6.78	8.86	0.42	0.90	A	6.80	A	A
59	4.50	0.30	6.67	-5.06	0.24	0.78	A	6.68	A	A
62	4.90	0.24	4.90	3.38	0.16	0.62	A	4.92	A	A
63	4.90	0.60	12.24	3.38	0.16	1.55	A	12.25	N	W
64	4.80	0.09	1.88	1.27	0.06	0.24	A	1.92	A	A
65	5.10	0.40	7.84	7.59	0.36	1.03	A	7.85	A	A
67	4.80	0.20	4.17	1.27	0.06	0.52	A	4.19	A	A
69	5.30	0.30	5.66	11.81	0.56	0.78	A	5.68	A	A
70	4.78	0.55	11.51	0.84	0.04	1.42	A	11.51	N	W
71	4.10	0.98	23.90	-13.50	0.64	2.53	A	23.91	N	N
73	5.30	0.20	3.77	11.81	0.56	0.52	N	3.80	A	N
75	4.52	0.15	3.35	-4.65	0.22	0.39	A	3.38	A	A
76	0.17	82.60	48398.6	-96.40	4.57	213.11	A	48398.6	N	N
77	5.06	0.08	1.58	6.75	0.32	0.21	N	1.64	A	W
78	5.20	0.30	5.77	9.70	0.46	0.78	A	5.78	A	A
79	4.20	0.10	2.38	-11.39	0.54	0.26	N	2.42	A	N
80	4.70	0.33	6.94	-0.84	0.04	0.84	A	6.95	A	A
81	4.50	0.40	8.89	-5.06	0.24	1.03	A	8.90	A	A
82	4.71	0.33	7.01	-0.63	0.03	0.85	A	7.02	A	A
84	4.60	0.40	8.70	-2.95	0.14	1.03	A	8.71	A	A
85	5.00	0.40	8.00	5.49	0.26	1.03	A	8.01	A	A
86	7.00	1.00	14.29	47.68	2.26	2.58	A	14.29	N	N
87	5.26	0.18	3.42	10.97	0.52	0.47	N	3.45	A	N
88	4.60	0.50	10.87	-2.95	0.14	1.29	A	10.88	N	W
89	2.08	0.09	4.23	-56.12	2.66	0.23	N	4.25	A	N
90	4.80	0.30	6.25	1.27	0.06	0.78	A	6.26	A	A
91	34.72	5.87	16.90	632.49	29.98	15.14	N	16.91	N	N
92	4.78	0.23	4.81	0.84	0.04	0.60	A	4.83	A	A
93	4.60	0.30	6.52	-2.95	0.14	0.78	A	6.54	A	A
95	4.80	0.30	6.25	1.27	0.06	0.78	A	6.26	A	A
96	5.18	0.32	6.18	9.28	0.44	0.83	A	6.19	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
97	5.18	0.13	2.51	9.28	0.44	0.34	N	2.54	A	W
98	2.90	0.40	13.79	-38.82	1.84	1.03	N	13.80	N	N
99	4.70	0.30	6.38	-0.84	0.04	0.78	A	6.40	A	A
101	5.10	0.30	5.88	7.59	0.36	0.78	A	5.90	A	A
102	5.30	0.20	3.77	11.81	0.56	0.52	N	3.80	A	N
103	5.23	0.00	0.01	10.34	0.49	0.05	N	0.42	A	N
104	4.75	0.25	5.26	0.21	0.01	0.65	A	5.28	A	A
105	5.38	0.18	3.40	13.42	0.64	0.47	N	3.43	A	N
107	4.60	0.20	4.35	-2.95	0.14	0.52	A	4.37	A	A
108	6.81	0.41	6.02	43.67	2.07	1.06	N	6.04	A	N
110	4.85	0.15	3.09	2.32	0.11	0.39	A	3.12	A	A
112	4.59	0.12	2.61	-3.16	0.15	0.31	A	2.65	A	A
113	4.65	0.18	3.87	-1.90	0.09	0.47	A	3.89	A	A
114	5.20	0.60	11.54	9.70	0.46	1.55	A	11.55	N	W
115	4.95	0.40	8.08	4.43	0.21	1.03	A	8.09	A	A
116	4.78	0.24	5.02	0.84	0.04	0.62	A	5.04	A	A
117	5.19	0.24	4.62	9.49	0.45	0.62	A	4.64	A	A
118	4.51	0.36	7.98	-4.85	0.23	0.93	A	7.99	A	A
119	4.90	0.21	4.29	3.38	0.16	0.54	A	4.31	A	A
120	5.60	0.50	8.93	18.14	0.86	1.29	A	8.94	A	A
121	5.30	0.30	5.66	11.81	0.56	0.78	A	5.68	A	A
122	4.36	0.15	3.49	-8.12	0.38	0.40	A	3.52	A	A
123	4.60	1.24	26.96	-2.95	0.14	3.20	A	26.96	N	W
124	4.82	0.21	4.36	1.69	0.08	0.54	A	4.38	A	A
125	0.39	0.03	7.69	-91.77	4.35	0.09	N	7.70	A	N
126	4.97	0.50	10.08	4.85	0.23	1.29	A	10.09	N	W
127	4.40	0.35	7.95	-7.17	0.34	0.90	A	7.97	A	A
128	4.80	0.20	4.17	1.27	0.06	0.52	A	4.19	A	A
129	3.24	0.25	7.72	-31.65	1.50	0.65	N	7.73	A	N
130	4.62	0.30	6.49	-2.53	0.12	0.78	A	6.51	A	A
131	5.00	0.40	8.00	5.49	0.26	1.03	A	8.01	A	A
132	16.53	7.00	42.35	248.73	11.79	18.06	A	42.35	N	N
133	4.60	0.70	15.22	-2.95	0.14	1.81	A	15.22	N	W
134	4.80	0.40	8.33	1.27	0.06	1.03	A	8.34	A	A
135	5.30	0.60	11.32	11.81	0.56	1.55	A	11.33	N	N
136	4.60	0.29	6.30	-2.95	0.14	0.75	A	6.32	A	A
137	4.86	0.20	4.12	2.53	0.12	0.52	A	4.14	A	A
139	5.25	0.26	4.95	10.76	0.51	0.67	A	4.97	A	A
140	4.70	0.30	6.38	-0.84	0.04	0.78	A	6.40	A	A
142	5.15	0.31	6.02	8.65	0.41	0.80	A	6.03	A	A
143	4.71	0.30	6.37	-0.63	0.03	0.78	A	6.38	A	A
144	4.90	0.30	6.12	3.38	0.16	0.78	A	6.14	A	A
145	4.83	0.76	15.65	1.90	0.09	1.95	A	15.66	N	W
146	5.99	0.80	13.36	26.37	1.25	2.06	A	13.36	N	N
147	4.50	0.10	2.22	-5.06	0.24	0.26	A	2.26	A	A
148	5.02	0.14	2.79	5.91	0.28	0.36	A	2.82	A	A
149	4.92	0.10	2.03	3.80	0.18	0.26	A	2.08	A	A

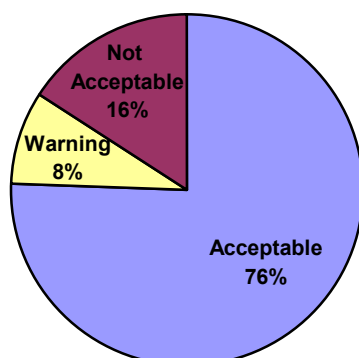
Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
150	5.40	0.50	9.26	13.92	0.66	1.29	A	9.27	A	A
151	4.32	0.20	4.63	-8.86	0.42	0.52	A	4.65	A	A
152	4.68	0.21	4.49	-1.27	0.06	0.54	A	4.51	A	A
153	5.98	0.34	5.69	26.16	1.24	0.88	N	5.70	A	N
154	4.83	0.25	5.18	1.90	0.09	0.65	A	5.19	A	A
155	5.20	0.20	3.85	9.70	0.46	0.52	A	3.87	A	A
156	4.95	0.21	4.24	4.43	0.21	0.54	A	4.26	A	A
157	4.60	0.30	6.52	-2.95	0.14	0.78	A	6.54	A	A
160	5.06	0.24	4.74	6.75	0.32	0.62	A	4.76	A	A
161	4.90	0.37	7.55	3.38	0.16	0.96	A	7.56	A	A
162	3.64	0.19	5.30	-23.21	1.10	0.50	N	5.32	A	N
163	5.30	0.21	4.05	11.90	0.56	0.56	N	4.08	A	N
164	5.06	0.12	2.37	6.75	0.32	0.31	N	2.41	A	W
165	6.39	0.19	2.97	34.81	1.65	0.49	N	3.00	A	N
166	4.98	0.23	4.62	5.06	0.24	0.60	A	4.64	A	A
167	3.97	0.17	4.28	-16.24	0.77	0.44	N	4.30	A	N
168	4.39	0.20	4.56	-7.38	0.35	0.52	A	4.58	A	A
169	4.77	0.15	3.14	0.63	0.03	0.39	A	3.17	A	A
172	3.90	0.30	7.69	-17.72	0.84	0.78	N	7.70	A	N
174	4.55	0.30	6.59	-4.01	0.19	0.78	A	6.61	A	A
175	2.90	0.05	1.72	-38.82	1.84	0.14	N	1.78	A	N
176	4.59	0.23	4.93	-3.21	0.15	0.59	A	4.95	A	A
177	5.46	0.69	12.64	15.19	0.72	1.78	A	12.64	N	N
178	4.55	0.09	1.98	-4.01	0.19	0.24	A	2.02	A	A
179	4.28	0.39	9.11	-9.70	0.46	1.01	A	9.12	A	A
182	23.90	4.37	18.28	404.22	19.16	11.27	N	18.29	N	N
184	3.84	0.37	9.64	-18.99	0.90	0.96	A	9.64	A	A
185	5.60	0.70	12.50	18.14	0.86	1.81	A	12.51	N	N
186	4.60	0.40	8.70	-2.95	0.14	1.03	A	8.71	A	A
187	4.80	0.20	4.17	1.27	0.06	0.52	A	4.19	A	A
188	4.76	0.28	5.88	0.42	0.02	0.72	A	5.90	A	A
189	5.20	0.40	7.69	9.70	0.46	1.03	A	7.70	A	A
190	4.92	0.21	4.27	3.80	0.18	0.54	A	4.29	A	A
191	4.15	0.25	6.02	-12.45	0.59	0.65	A	6.04	A	A
192	5.16	0.35	6.78	8.86	0.42	0.90	A	6.80	A	A
194	5.20	0.10	1.92	9.70	0.46	0.26	N	1.97	A	W
195	5.70	0.20	3.51	20.25	0.96	0.52	N	3.53	A	N
196	4.70	0.20	4.26	-0.84	0.04	0.52	A	4.28	A	A
197	4.70	0.10	2.13	-0.84	0.04	0.26	A	2.17	A	A
198	4.60	0.30	6.52	-2.95	0.14	0.78	A	6.54	A	A
199	4.63	0.23	4.97	-2.32	0.11	0.60	A	4.99	A	A
200	4.79	0.30	6.26	1.05	0.05	0.78	A	6.28	A	A
201	4.82	0.38	7.88	1.69	0.08	0.98	A	7.90	A	A
202	4.85	0.11	2.27	2.32	0.11	0.29	A	2.31	A	A
203	5.05	0.15	2.97	6.54	0.31	0.39	A	3.00	A	A
204	4.70	0.30	6.38	-0.84	0.04	0.78	A	6.40	A	A
206	6.40	0.40	6.25	35.02	1.66	1.03	N	6.26	A	N

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
207	5.47	0.25	4.57	15.40	0.73	0.65	N	4.59	A	N
208	5.15	0.40	7.77	8.65	0.41	1.03	A	7.78	A	A
209	4.46	0.36	8.07	-5.91	0.28	0.93	A	8.08	A	A
210	5.10	0.20	3.92	7.59	0.36	0.52	A	3.94	A	A
212	5.06	0.14	2.77	6.75	0.32	0.36	A	2.80	A	A
213	5.20	0.19	3.65	9.70	0.46	0.49	A	3.68	A	A
214	4.40	0.40	9.09	-7.17	0.34	1.03	A	9.10	A	A
215	4.26	0.40	9.39	-10.13	0.48	1.03	A	9.40	A	A
216	5.22	0.45	8.62	10.13	0.48	1.16	A	8.63	A	A
217	5.30	0.10	1.89	11.81	0.56	0.26	N	1.93	A	N
218	4.87	0.29	5.95	2.74	0.13	0.75	A	5.97	A	A
220	3.50	1.20	34.29	-26.16	1.24	3.10	A	34.29	N	N
222	5.00	0.70	14.00	5.49	0.26	1.81	A	14.01	N	W
223	5.40	0.20	3.70	13.92	0.66	0.52	N	3.73	A	N
225	4.89	0.13	2.66	3.16	0.15	0.34	A	2.69	A	A
226	5.60	0.40	7.14	18.14	0.86	1.03	A	7.16	A	A
227	5.00	0.37	7.40	5.49	0.26	0.96	A	7.41	A	A
228	4.40	0.31	7.05	-7.17	0.34	0.80	A	7.06	A	A
229	5.30	0.30	5.66	11.81	0.56	0.78	A	5.68	A	A
230	5.10	0.80	15.69	7.59	0.36	2.06	A	15.69	N	W
231	3.37	0.42	12.46	-28.90	1.37	1.08	N	12.47	N	N
232	5.96	1.65	27.68	25.74	1.22	4.26	A	27.69	N	N
233	5.07	0.19	3.75	6.96	0.33	0.49	A	3.77	A	A
234	5.66	0.42	7.42	19.41	0.92	1.08	A	7.43	A	A
235	4.46	0.17	3.81	-5.91	0.28	0.44	A	3.83	A	A
236	4.80	0.60	12.50	1.27	0.06	1.55	A	12.51	N	W
237	4.40	0.31	7.05	-7.17	0.34	0.80	A	7.06	A	A
239	4.47	0.16	3.58	-5.70	0.27	0.42	A	3.60	A	A
240	4.71	0.63	13.38	-0.63	0.03	1.63	A	13.38	N	W
241	4.99	0.21	4.21	5.27	0.25	0.54	A	4.23	A	A
242	4.80	0.72	15.08	1.29	0.06	1.87	A	15.09	N	W
243	0.78	0.09	11.08	-83.63	3.96	0.23	N	11.09	N	N
244	4.60	0.31	6.74	-2.95	0.14	0.80	A	6.75	A	A
245	4.87	0.16	3.29	2.74	0.13	0.42	A	3.31	A	A
246	4.50	0.60	13.33	-5.06	0.24	1.55	A	13.34	N	W
248	5.10	0.60	11.76	7.59	0.36	1.55	A	11.77	N	W
249	4.80	0.30	6.25	1.27	0.06	0.78	A	6.26	A	A
250	4.80	0.10	2.08	1.27	0.06	0.26	A	2.13	A	A
251	4.50	0.10	2.22	-5.06	0.24	0.26	A	2.26	A	A
252	4.90	0.20	4.08	3.38	0.16	0.52	A	4.10	A	A
253	5.22	0.29	5.56	10.13	0.48	0.75	A	5.57	A	A
254	5.41	0.33	6.10	14.14	0.67	0.85	A	6.11	A	A
255	3.65	0.25	6.85	-23.00	1.09	0.65	N	6.86	A	N
256	4.32	0.63	14.58	-8.86	0.42	1.63	A	14.59	N	W
257	5.10	0.12	2.35	7.59	0.36	0.31	N	2.39	A	W
258	4.10	0.60	14.63	-13.50	0.64	1.55	A	14.64	N	N
259	4.66	0.08	1.72	-1.69	0.08	0.21	A	1.77	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
260	4.95	0.12	2.42	4.43	0.21	0.31	A	2.46	A	A
261	5.00	0.29	5.80	5.49	0.26	0.75	A	5.82	A	A
262	5.10	0.20	3.92	7.59	0.36	0.52	A	3.94	A	A
263	5.19	0.28	5.39	9.49	0.45	0.72	A	5.41	A	A
264	5.10	0.40	7.84	7.59	0.36	1.03	A	7.85	A	A
265	4.90	0.50	10.20	3.38	0.16	1.29	A	10.21	N	W
268	4.80	1.10	22.92	1.27	0.06	2.84	A	22.92	N	W
269	5.04	0.19	3.77	6.33	0.30	0.49	A	3.79	A	A
270	4.50	0.32	7.11	-5.06	0.24	0.83	A	7.12	A	A
272	5.06	0.31	6.13	6.75	0.32	0.80	A	6.14	A	A
275	5.21	0.19	3.65	9.92	0.47	0.49	A	3.67	A	A
277	4.95	0.23	4.65	4.43	0.21	0.60	A	4.67	A	A
278	5.34	0.50	9.36	12.66	0.60	1.29	A	9.37	A	A
279	4.88	0.31	6.35	2.95	0.14	0.80	A	6.37	A	A
280	5.41	0.25	4.62	14.14	0.67	0.65	N	4.64	A	N
281	3.48	0.25	7.18	-26.58	1.26	0.65	N	7.20	A	N
284	4.40	0.30	6.82	-7.17	0.34	0.78	A	6.83	A	A
285	4.74	0.28	5.91	0.00	0.00	0.72	A	5.92	A	A
286	4.71	0.17	3.61	-0.63	0.03	0.44	A	3.63	A	A
287	5.30	0.10	1.89	11.81	0.56	0.26	N	1.93	A	N
288	4.94	0.13	2.63	4.22	0.20	0.34	A	2.67	A	A
290	4.60	0.30	6.52	-2.95	0.14	0.78	A	6.54	A	A
291	5.55	0.31	5.59	17.09	0.81	0.80	N	5.60	A	N
292	4.79	0.18	3.76	1.05	0.05	0.47	A	3.78	A	A
293	5.05	0.30	5.94	6.54	0.31	0.78	A	5.96	A	A
295	5.00	0.40	8.00	5.49	0.26	1.03	A	8.01	A	A
296	4.60	0.40	8.70	-2.95	0.14	1.03	A	8.71	A	A
297	5.58	0.30	5.38	17.72	0.84	0.78	N	5.39	A	N
299	5.78	0.57	9.86	21.94	1.04	1.47	A	9.87	A	A
300	6.50	0.30	4.62	37.13	1.76	0.78	N	4.63	A	N
302	3.72	0.59	15.86	-21.52	1.02	1.52	A	15.87	N	N
304	5.20	0.50	9.62	9.70	0.46	1.29	A	9.62	A	A
305	4.50	0.30	6.67	-5.06	0.24	0.78	A	6.68	A	A
306	4.70	0.20	4.26	-0.84	0.04	0.52	A	4.28	A	A
307	4.90	0.40	8.16	3.38	0.16	1.03	A	8.17	A	A
308	4.81	0.35	7.28	1.48	0.07	0.90	A	7.29	A	A
309	5.40	0.22	4.07	13.92	0.66	0.57	N	4.10	A	N
310	5.00	0.40	8.00	5.49	0.26	1.03	A	8.01	A	A
311	4.80	0.30	6.25	1.27	0.06	0.78	A	6.26	A	A
316	4.97	0.37	7.44	4.85	0.23	0.96	A	7.46	A	A
317	4.91	0.14	2.85	3.59	0.17	0.36	A	2.88	A	A
318	5.01	0.13	2.59	5.70	0.27	0.34	A	2.63	A	A
319	4.76	0.15	3.15	0.42	0.02	0.39	A	3.18	A	A
320	5.60	0.10	1.79	18.14	0.86	0.26	N	1.83	A	N
321	4.26	0.16	3.76	-10.13	0.48	0.42	N	3.78	A	N
322	4.68	0.09	1.92	-1.27	0.06	0.24	A	1.97	A	A

Analyte: Co-60 in spiked water, IAEA-445

Target Value: 7.52 ± 0.06 [Bq/kg]



Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
1	7.51	0.19	2.53	-0.13	0.01	0.51	A	2.65	A	A
2	7.71	0.20	2.59	2.53	0.19	0.54	A	2.71	A	A
3	7.78	0.36	4.63	3.46	0.26	0.94	A	4.70	A	A
4	7.58	0.16	2.11	0.80	0.06	0.44	A	2.26	A	A
5	7.62	0.34	4.46	1.33	0.10	0.89	A	4.53	A	A
6	7.80	0.40	5.13	3.72	0.28	1.04	A	5.19	A	A
7	7.90	0.30	3.80	5.05	0.38	0.79	A	3.88	A	A
8	7.56	0.32	4.23	0.53	0.04	0.84	A	4.31	A	A
9	8.20	0.80	9.76	9.04	0.68	2.07	A	9.79	A	A
10	7.68	0.14	1.82	2.13	0.16	0.39	A	1.99	A	A
11	6.80	0.50	7.35	-9.57	0.72	1.30	A	7.40	A	A
12	7.30	0.50	6.85	-2.93	0.22	1.30	A	6.90	A	A
13	7.30	0.56	7.67	-2.93	0.22	1.45	A	7.71	A	A
14	7.10	0.40	5.63	-5.59	0.42	1.04	A	5.69	A	A
15	7.20	0.40	5.56	-4.26	0.32	1.04	A	5.61	A	A
16	6.20	0.70	11.29	-17.55	1.32	1.81	A	11.32	N	N
18	7.60	0.30	3.95	1.06	0.08	0.79	A	4.03	A	A
19	7.21	0.26	3.61	-4.12	0.31	0.69	A	3.69	A	A
20	7.46	0.30	4.02	-0.80	0.06	0.79	A	4.10	A	A
21	6.88	0.26	3.78	-8.51	0.64	0.69	A	3.86	A	A
23	7.20	0.60	8.33	-4.26	0.32	1.56	A	8.37	A	A
24	8.27	0.87	10.52	9.97	0.75	2.25	A	10.55	N	W
25	7.33	0.26	3.55	-2.53	0.19	0.69	A	3.64	A	A
26	5.55	1.11	20.00	-26.20	1.97	2.87	A	20.02	N	N
27	7.29	0.74	10.18	-3.06	0.23	1.92	A	10.21	N	W
28	7.55	0.24	3.18	0.40	0.03	0.64	A	3.28	A	A
29	7.25	0.53	7.31	-3.59	0.27	1.38	A	7.35	A	A
30	7.77	0.13	1.67	3.32	0.25	0.37	A	1.85	A	A
33	7.26	0.25	3.44	-3.46	0.26	0.66	A	3.53	A	A
34	7.70	0.20	2.60	2.39	0.18	0.54	A	2.72	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
35	7.13	0.82	11.50	-5.19	0.39	2.12	A	11.53	N	W
36	7.47	0.45	6.02	-0.66	0.05	1.17	A	6.08	A	A
37	7.10	0.19	2.73	-5.54	0.42	0.52	A	2.84	A	A
39	7.50	0.40	5.33	-0.27	0.02	1.04	A	5.39	A	A
42	7.16	0.58	8.10	-4.79	0.36	1.50	A	8.14	A	A
43	7.09	0.63	8.89	-5.72	0.43	1.63	A	8.92	A	A
44	6.37	0.36	5.65	-15.29	1.15	0.94	N	5.71	A	N
45	6.81	0.36	5.29	-9.44	0.71	0.94	A	5.35	A	A
48	8.05	0.36	4.47	7.05	0.53	0.94	A	4.54	A	A
49	7.41	0.28	3.78	-1.46	0.11	0.74	A	3.86	A	A
50	7.28	0.30	4.12	-3.19	0.24	0.79	A	4.20	A	A
51	7.08	0.36	5.08	-5.85	0.44	0.94	A	5.15	A	A
52	7.00	0.16	2.29	-6.91	0.52	0.44	N	2.42	A	W
53	7.59	0.09	1.19	0.93	0.07	0.28	A	1.43	A	A
55	7.56	0.09	1.19	0.53	0.04	0.28	A	1.43	A	A
56	7.45	0.42	5.64	-0.93	0.07	1.09	A	5.69	A	A
59	7.40	0.50	6.76	-1.60	0.12	1.30	A	6.80	A	A
62	7.73	0.26	3.36	2.79	0.21	0.69	A	3.46	A	A
63	8.00	0.90	11.25	6.38	0.48	2.33	A	11.28	N	W
64	7.27	0.11	1.51	-3.32	0.25	0.32	A	1.71	A	A
65	7.70	0.50	6.49	2.39	0.18	1.30	A	6.54	A	A
67	7.30	0.20	2.74	-2.93	0.22	0.54	A	2.85	A	A
69	7.50	0.10	1.33	-0.27	0.02	0.30	A	1.55	A	A
70	7.04	0.46	6.53	-6.38	0.48	1.20	A	6.58	A	A
71	4.81	1.06	22.04	-36.04	2.71	2.74	A	22.05	N	N
73	7.20	0.20	2.78	-4.26	0.32	0.54	A	2.89	A	A
75	8.30	0.16	1.94	10.34	0.78	0.44	N	2.09	A	N
76	0.10			-98.69						
77	7.54	0.07	0.93	0.27	0.02	0.24	A	1.22	A	A
78	7.40	0.30	4.05	-1.60	0.12	0.79	A	4.13	A	A
79	5.60	0.20	3.57	-25.53	1.92	0.54	N	3.66	A	N
80	7.57	0.36	4.81	0.66	0.05	0.95	A	4.87	A	A
81	7.80	0.30	3.85	3.72	0.28	0.79	A	3.93	A	A
82	7.59	0.57	7.51	0.93	0.07	1.48	A	7.55	A	A
84	7.10	0.50	7.04	-5.59	0.42	1.30	A	7.09	A	A
85	8.20	0.60	7.32	9.04	0.68	1.56	A	7.36	A	A
86	8.00	1.00	12.50	6.38	0.48	2.58	A	12.53	N	W
87	7.59	0.21	2.77	0.93	0.07	0.56	A	2.88	A	A
88	7.50	0.60	8.00	-0.27	0.02	1.56	A	8.04	A	A
89	3.43	0.10	2.80	-54.44	4.09	0.29	N	2.91	A	N
90	7.60	0.50	6.58	1.06	0.08	1.30	A	6.63	A	A
91	11.99	1.78	14.85	59.44	4.47	4.60	A	14.88	N	N
92	7.09	0.19	2.68	-5.72	0.43	0.51	A	2.80	A	A
93	8.40	0.20	2.38	11.70	0.88	0.54	N	2.51	A	N
95	7.20	0.50	6.94	-4.26	0.32	1.30	A	6.99	A	A
96	7.73	0.28	3.62	2.79	0.21	0.74	A	3.71	A	A
97	7.87	0.11	1.40	4.65	0.35	0.32	N	1.61	A	W

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
98	5.50	0.40	7.27	-26.86	2.02	1.04	N	7.32	A	N
99	6.80	0.30	4.41	-9.57	0.72	0.79	A	4.48	A	A
101	8.00	0.40	5.00	6.38	0.48	1.04	A	5.06	A	A
102	7.50	0.20	2.67	-0.27	0.02	0.54	A	2.78	A	A
103	7.38	0.00	0.01	-1.86	0.14	0.15	A	0.80	A	A
104	7.40	0.40	5.41	-1.60	0.12	1.04	A	5.46	A	A
105	7.61	0.34	4.46	1.14	0.09	0.89	A	4.53	A	A
107	6.90	0.30	4.35	-8.24	0.62	0.79	A	4.42	A	A
108	9.44	0.40	4.24	25.53	1.92	1.04	N	4.31	A	N
110	7.61	0.21	2.76	1.20	0.09	0.56	A	2.87	A	A
112	7.20	0.23	3.19	-4.26	0.32	0.61	A	3.29	A	A
113	7.51	0.28	3.73	-0.13	0.01	0.74	A	3.81	A	A
114	7.70	0.50	6.49	2.39	0.18	1.30	A	6.54	A	A
115	7.07	0.50	7.07	-5.98	0.45	1.30	A	7.12	A	A
116	7.54	0.38	5.04	0.27	0.02	0.99	A	5.10	A	A
117	8.02	0.30	3.74	6.65	0.50	0.79	A	3.82	A	A
118	7.03	0.42	5.97	-6.52	0.49	1.09	A	6.03	A	A
119	7.66	0.55	7.18	1.86	0.14	1.43	A	7.22	A	A
120	8.30	0.60	7.23	10.37	0.78	1.56	A	7.27	A	A
121	7.40	0.40	5.41	-1.60	0.12	1.04	A	5.46	A	A
122	6.42	0.18	2.79	-14.64	1.10	0.49	N	2.90	A	N
123	6.54	1.48	22.63	-13.03	0.98	3.82	A	22.64	N	N
124	7.92	0.31	3.91	5.32	0.40	0.81	A	3.99	A	A
125	2.12	0.07	3.30	-71.81	5.40	0.24	N	3.40	A	N
126	7.59	0.71	9.39	0.93	0.07	1.85	A	9.43	A	A
127	6.60	0.30	4.55	-12.23	0.92	0.79	N	4.61	A	N
128	7.40	0.20	2.70	-1.60	0.12	0.54	A	2.82	A	A
129	5.86	0.29	4.95	-22.07	1.66	0.76	N	5.01	A	N
130	7.10	0.25	3.52	-5.59	0.42	0.66	A	3.61	A	A
131	7.50	0.60	8.00	-0.27	0.02	1.56	A	8.04	A	A
132	18.27	5.00	27.37	142.95	10.75	12.90	A	27.38	N	N
133	7.90	0.80	10.13	5.05	0.38	2.07	A	10.16	N	W
134	6.60	0.80	12.12	-12.23	0.92	2.07	A	12.15	N	N
135	7.80	0.50	6.41	3.72	0.28	1.30	A	6.46	A	A
136	6.20	0.33	5.32	-17.55	1.32	0.87	N	5.38	A	N
137	7.51	0.18	2.40	-0.13	0.01	0.49	A	2.53	A	A
139	7.08	0.29	4.10	-5.85	0.44	0.76	A	4.17	A	A
140	7.10	0.40	5.63	-5.59	0.42	1.04	A	5.69	A	A
142	7.80	0.40	5.13	3.72	0.28	1.04	A	5.19	A	A
143	6.86	0.17	2.48	-8.78	0.66	0.47	N	2.60	A	W
144	7.30	0.40	5.48	-2.93	0.22	1.04	A	5.54	A	A
145	7.28	0.77	10.58	-3.19	0.24	1.99	A	10.61	N	W
146	7.22	0.92	12.74	-3.99	0.30	2.38	A	12.77	N	W
147	6.70	0.20	2.99	-10.90	0.82	0.54	N	3.09	A	N
148	7.44	0.13	1.75	-1.06	0.08	0.37	A	1.92	A	A
149	7.56	0.09	1.19	0.53	0.04	0.28	A	1.43	A	A
150	8.00	0.50	6.25	6.38	0.48	1.30	A	6.30	A	A

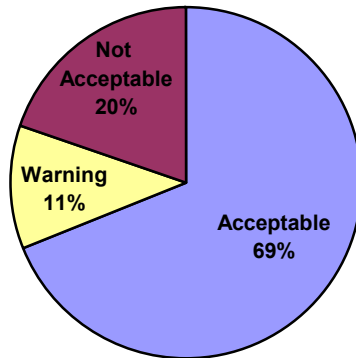
Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
151	7.06	0.26	3.68	-6.12	0.46	0.69	A	3.77	A	A
152	7.48	0.20	2.67	-0.53	0.04	0.54	A	2.79	A	A
153	8.52	0.36	4.23	13.30	1.00	0.94	N	4.30	A	N
154	7.45	0.23	3.09	-0.93	0.07	0.61	A	3.19	A	A
155	8.50	0.40	4.71	13.03	0.98	1.04	A	4.77	A	A
156	7.43	0.24	3.23	-1.20	0.09	0.64	A	3.33	A	A
157	6.40	0.20	3.13	-14.89	1.12	0.54	N	3.23	A	N
160	6.96	0.29	4.17	-7.45	0.56	0.76	A	4.24	A	A
161	8.20	0.50	6.10	9.04	0.68	1.30	A	6.15	A	A
162	6.73	0.36	5.32	-10.51	0.79	0.94	A	5.38	A	A
163	7.46	0.29	3.84	-0.84	0.06	0.75	A	3.92	A	A
164	7.39	0.11	1.49	-1.73	0.13	0.32	A	1.69	A	A
165	8.06	0.28	3.47	7.18	0.54	0.74	A	3.56	A	A
166	7.88	0.23	2.92	4.79	0.36	0.61	A	3.03	A	A
167	5.38	0.30	5.58	-28.46	2.14	0.79	N	5.63	A	N
168	6.43	0.20	3.11	-14.49	1.09	0.54	N	3.21	A	N
169	7.86	0.25	3.18	4.52	0.34	0.66	A	3.28	A	A
172	6.60	0.60	9.09	-12.23	0.92	1.56	A	9.13	A	A
173	4.72	0.31	6.57	-37.23	2.80	0.81	N	6.62	A	N
174	7.11	0.64	9.00	-5.45	0.41	1.66	A	9.04	A	A
175	5.95	0.27	4.54	-20.88	1.57	0.71	N	4.61	A	N
176	6.78	0.25	3.63	-9.80	0.74	0.65	N	3.71	A	W
177	7.98	0.41	5.14	6.12	0.46	1.07	A	5.20	A	A
178	7.53	0.12	1.59	0.13	0.01	0.35	A	1.78	A	A
179	6.97	0.62	8.90	-7.31	0.55	1.61	A	8.93	A	A
182	42.20	8.14	19.29	461.17	34.68	21.00	N	19.31	N	N
184	7.16	0.53	7.40	-4.79	0.36	1.38	A	7.45	A	A
185	7.90	0.80	10.13	5.05	0.38	2.07	A	10.16	N	W
186	7.00	0.40	5.71	-6.91	0.52	1.04	A	5.77	A	A
187	7.50	0.30	4.00	-0.27	0.02	0.79	A	4.08	A	A
188	7.38	0.30	4.07	-1.86	0.14	0.79	A	4.14	A	A
189	7.60	0.50	6.58	1.06	0.08	1.30	A	6.63	A	A
190	7.80	0.20	2.56	3.72	0.28	0.54	A	2.69	A	A
191	6.38	0.38	5.96	-15.16	1.14	0.99	N	6.01	A	N
192	7.22	0.46	6.37	-3.99	0.30	1.20	A	6.42	A	A
194	7.90	0.10	1.27	5.05	0.38	0.30	N	1.50	A	W
195	8.60	0.20	2.33	14.36	1.08	0.54	N	2.46	A	N
196	7.40	0.20	2.70	-1.60	0.12	0.54	A	2.82	A	A
197	7.60	0.20	2.63	1.06	0.08	0.54	A	2.75	A	A
198	6.60	0.30	4.55	-12.23	0.92	0.79	N	4.61	A	N
199	6.89	0.30	4.35	-8.38	0.63	0.79	A	4.43	A	A
200	7.03	0.40	5.69	-6.52	0.49	1.04	A	5.75	A	A
201	7.31	0.20	2.74	-2.79	0.21	0.54	A	2.85	A	A
202	7.50	0.20	2.67	-0.27	0.02	0.54	A	2.78	A	A
203	7.65	0.16	2.09	1.73	0.13	0.44	A	2.24	A	A
204	8.70	0.50	5.75	15.69	1.18	1.30	A	5.80	A	A
206	9.40	0.70	7.45	25.00	1.88	1.81	N	7.49	A	N

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
207	7.20	0.17	2.36	-4.26	0.32	0.47	A	2.49	A	A
208	8.11	0.65	8.01	7.85	0.59	1.68	A	8.05	A	A
209	7.00	0.44	6.29	-6.91	0.52	1.15	A	6.34	A	A
210	7.80	0.10	1.28	3.72	0.28	0.30	A	1.51	A	A
212	7.61	0.20	2.63	1.20	0.09	0.54	A	2.75	A	A
213	7.67	0.22	2.87	1.99	0.15	0.59	A	2.98	A	A
214	7.40	0.30	4.05	-1.60	0.12	0.79	A	4.13	A	A
215	6.48	0.56	8.64	-13.83	1.04	1.45	A	8.68	A	A
216	7.56	0.63	8.33	0.53	0.04	1.63	A	8.37	A	A
217	7.40	0.20	2.70	-1.60	0.12	0.54	A	2.82	A	A
218	7.06	0.42	5.95	-6.12	0.46	1.09	A	6.00	A	A
220	8.10	1.09	13.46	7.71	0.58	2.82	A	13.48	N	W
222	8.60	0.50	5.81	14.36	1.08	1.30	A	5.87	A	A
223	8.80	0.20	2.27	17.02	1.28	0.54	N	2.41	A	N
225	7.44	0.17	2.28	-1.06	0.08	0.47	A	2.42	A	A
226	8.00	1.10	13.75	6.38	0.48	2.84	A	13.77	N	W
227	6.98	0.33	4.73	-7.18	0.54	0.87	A	4.79	A	A
228	7.89	0.28	3.55	4.92	0.37	0.74	A	3.64	A	A
229	7.70	0.30	3.90	2.39	0.18	0.79	A	3.98	A	A
230	7.50	0.40	5.33	-0.27	0.02	1.04	A	5.39	A	A
231	5.89	0.74	12.56	-21.68	1.63	1.92	A	12.59	N	N
232	9.78	1.44	14.72	30.05	2.26	3.72	A	14.75	N	N
233	7.51	0.18	2.40	-0.13	0.01	0.49	A	2.53	A	A
234	8.05	0.29	3.60	7.05	0.53	0.76	A	3.69	A	A
235	7.13	0.20	2.81	-5.19	0.39	0.54	A	2.92	A	A
236	7.78	0.22	2.83	3.46	0.26	0.59	A	2.94	A	A
237	7.41	0.41	5.53	-1.46	0.11	1.07	A	5.59	A	A
239	7.22	0.56	7.76	-3.99	0.30	1.45	A	7.80	A	A
240	6.78	0.65	9.59	-9.84	0.74	1.68	A	9.62	A	A
241	7.16	0.19	2.65	-4.79	0.36	0.51	A	2.77	A	A
242	7.62	0.55	7.19	1.40	0.11	1.42	A	7.23	A	A
243	1.97	0.04	2.14	-73.84	5.55	0.19	N	2.28	A	N
244	6.61	0.38	5.75	-12.10	0.91	0.99	A	5.80	A	A
245	7.55	0.24	3.18	0.40	0.03	0.64	A	3.28	A	A
246	6.40	0.80	12.50	-14.89	1.12	2.07	A	12.53	N	N
248	6.50	0.70	10.77	-13.56	1.02	1.81	A	10.80	N	N
249	7.40	0.30	4.05	-1.60	0.12	0.79	A	4.13	A	A
250	7.40	0.20	2.70	-1.60	0.12	0.54	A	2.82	A	A
251	6.60	0.10	1.52	-12.23	0.92	0.30	N	1.71	A	N
252	7.60	0.20	2.63	1.06	0.08	0.54	A	2.75	A	A
253	7.85	0.42	5.35	4.39	0.33	1.09	A	5.41	A	A
254	7.60	0.25	3.29	1.06	0.08	0.66	A	3.38	A	A
255	7.46	0.55	7.37	-0.80	0.06	1.43	A	7.42	A	A
256	9.34	1.12	11.99	24.20	1.82	2.89	A	12.02	N	N
257	7.60	0.11	1.45	1.06	0.08	0.32	A	1.65	A	A
258	9.20	1.10	11.96	22.34	1.68	2.84	A	11.98	N	N
259	7.61	0.08	1.05	1.20	0.09	0.26	A	1.32	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
260	7.54	0.15	1.99	0.27	0.02	0.42	A	2.14	A	A
261	7.26	0.28	3.86	-3.46	0.26	0.74	A	3.94	A	A
262	7.50	0.20	2.67	-0.27	0.02	0.54	A	2.78	A	A
263	7.50	0.39	5.20	-0.27	0.02	1.02	A	5.26	A	A
264	8.40	0.60	7.14	11.70	0.88	1.56	A	7.19	A	A
265	7.38	0.70	9.49	-1.86	0.14	1.81	A	9.52	A	A
268	7.10	1.60	22.54	-5.59	0.42	4.13	A	22.55	N	W
269	7.54	0.17	2.25	0.27	0.02	0.47	A	2.39	A	A
270	6.72	0.36	5.36	-10.64	0.80	0.94	A	5.42	A	A
272	7.49	0.43	5.74	-0.40	0.03	1.12	A	5.80	A	A
275	7.79	0.15	1.93	3.59	0.27	0.42	A	2.08	A	A
277	7.62	0.29	3.81	1.33	0.10	0.76	A	3.89	A	A
278	8.65	0.62	7.17	15.03	1.13	1.61	A	7.21	A	A
279	7.39	0.47	6.36	-1.73	0.13	1.22	A	6.41	A	A
280	8.50	0.26	3.06	13.03	0.98	0.69	N	3.16	A	N
281	7.37	0.51	6.92	-1.99	0.15	1.32	A	6.97	A	A
284	7.10	0.40	5.63	-5.59	0.42	1.04	A	5.69	A	A
285	7.16	0.57	7.96	-4.79	0.36	1.48	A	8.00	A	A
286	6.87	0.21	3.06	-8.64	0.65	0.56	N	3.16	A	W
287	7.70	0.10	1.30	2.39	0.18	0.30	A	1.52	A	A
288	7.76	0.15	1.93	3.19	0.24	0.42	A	2.09	A	A
290	7.30	0.30	4.11	-2.93	0.22	0.79	A	4.19	A	A
291	8.05	0.39	4.84	7.05	0.53	1.02	A	4.91	A	A
292	7.60	0.35	4.61	1.06	0.08	0.92	A	4.67	A	A
293	7.71	0.33	4.28	2.53	0.19	0.87	A	4.35	A	A
295	7.30	0.60	8.22	-2.93	0.22	1.56	A	8.26	A	A
296	6.90	0.60	8.70	-8.24	0.62	1.56	A	8.73	A	A
297	8.10	0.28	3.46	7.71	0.58	0.74	A	3.55	A	A
299	7.51	0.64	8.52	-0.13	0.01	1.66	A	8.56	A	A
300	9.70	0.30	3.09	28.99	2.18	0.79	N	3.19	A	N
302	7.24	0.55	7.60	-3.72	0.28	1.43	A	7.64	A	A
304	7.30	0.70	9.59	-2.93	0.22	1.81	A	9.62	A	A
305	7.20	0.40	5.56	-4.26	0.32	1.04	A	5.61	A	A
306	6.80	0.30	4.41	-9.57	0.72	0.79	A	4.48	A	A
307	7.10	0.30	4.23	-5.59	0.42	0.79	A	4.30	A	A
308	6.96	0.27	3.88	-7.45	0.56	0.71	A	3.96	A	A
309	7.80	0.30	3.85	3.72	0.28	0.79	A	3.93	A	A
310	7.20	0.30	4.17	-4.26	0.32	0.79	A	4.24	A	A
311	7.10	0.30	4.23	-5.59	0.42	0.79	A	4.30	A	A
316	7.70	0.49	6.36	2.39	0.18	1.27	A	6.41	A	A
317	7.33	0.13	1.77	-2.53	0.19	0.37	A	1.94	A	A
318	7.50	0.10	1.33	-0.27	0.02	0.30	A	1.55	A	A
319	6.82	0.22	3.23	-9.31	0.70	0.59	N	3.32	A	W
320	8.10	0.10	1.23	7.71	0.58	0.30	N	1.47	A	W
321	6.78	0.21	3.10	-9.84	0.74	0.56	N	3.20	A	W
322	6.90	0.10	1.45	-8.24	0.62	0.30	N	1.65	A	W

Analyte: Zn-65 in spiked water, IAEA-445

Target Value: 13.06 ± 0.15 [Bq/kg]



Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
1	12.30	0.40	3.25	-5.82	0.76	1.10	A	3.45	A	A
2	14.12	0.40	2.83	8.12	1.06	1.10	A	3.06	A	A
3	13.55	0.67	4.94	3.75	0.49	1.77	A	5.08	A	A
4	12.35	0.27	2.19	-5.44	0.71	0.80	A	2.47	A	A
5	12.89	0.59	4.58	-1.30	0.17	1.57	A	4.72	A	A
6	11.80	0.70	5.93	-9.65	1.26	1.85	A	6.04	A	A
7	13.20	0.50	3.79	1.07	0.14	1.35	A	3.96	A	A
8	13.34	0.56	4.20	2.14	0.28	1.50	A	4.35	A	A
9	14.00	3.00	21.43	7.20	0.94	7.75	A	21.46	N	W
10	11.99	0.30	2.50	-8.19	1.07	0.87	N	2.75	A	W
11	12.70	1.00	7.87	-2.76	0.36	2.61	A	7.96	A	A
12	12.20	0.70	5.74	-6.58	0.86	1.85	A	5.85	A	A
13	14.50	1.20	8.28	11.03	1.44	3.12	A	8.36	A	A
14	12.10	0.60	4.96	-7.35	0.96	1.60	A	5.09	A	A
15	13.70	0.70	5.11	4.90	0.64	1.85	A	5.24	A	A
16	11.30	1.80	15.93	-13.48	1.76	4.66	A	15.97	N	N
18	12.60	0.81	6.43	-3.52	0.46	2.13	A	6.53	A	A
19	12.70	0.70	5.51	-2.76	0.36	1.85	A	5.63	A	A
20	12.80	0.50	3.91	-1.99	0.26	1.35	A	4.07	A	A
21	13.03	0.48	3.68	-0.23	0.03	1.30	A	3.86	A	A
23	12.70	1.10	8.66	-2.76	0.36	2.86	A	8.74	A	A
24	13.93	1.41	10.12	6.66	0.87	3.66	A	10.19	N	W
25	13.60	0.72	5.29	4.13	0.54	1.90	A	5.42	A	A
26	9.42	1.88	19.96	-27.87	3.64	4.87	A	19.99	N	N
27	13.30	1.39	10.45	1.84	0.24	3.61	A	10.51	N	W
28	13.60	0.80	5.88	4.13	0.54	2.10	A	5.99	A	A
29	10.87	0.76	6.99	-16.77	2.19	2.00	N	7.09	A	N
30	14.40	0.40	2.78	10.26	1.34	1.10	N	3.01	A	N
33	14.10	0.80	5.67	7.96	1.04	2.10	A	5.79	A	A
34	13.00	0.50	3.85	-0.46	0.06	1.35	A	4.01	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
35	11.98	0.74	6.18	-8.27	1.08	1.95	A	6.28	A	A
36	13.40	1.05	7.84	2.60	0.34	2.74	A	7.92	A	A
37	12.70	0.62	4.87	-2.77	0.36	1.64	A	5.00	A	A
39	12.40	0.40	3.23	-5.05	0.66	1.10	A	3.42	A	A
42	18.20	2.26	12.42	39.36	5.14	5.84	A	12.47	N	N
43	12.91	1.05	8.13	-1.15	0.15	2.74	A	8.21	A	A
44	10.84	0.73	6.73	-17.00	2.22	1.92	N	6.83	A	N
45	10.20	0.60	5.88	-21.90	2.86	1.60	N	5.99	A	N
48	14.93	0.76	5.09	14.32	1.87	2.00	A	5.22	A	A
49	12.10	0.80	6.61	-7.35	0.96	2.10	A	6.71	A	A
50	10.90	0.83	7.61	-16.54	2.16	2.18	A	7.70	A	A
51	13.05	0.67	5.13	-0.08	0.01	1.77	A	5.26	A	A
52	13.00	0.40	3.08	-0.46	0.06	1.10	A	3.28	A	A
53	13.87	0.16	1.15	6.20	0.81	0.57	N	1.63	A	W
55	13.67	0.17	1.24	4.67	0.61	0.58	N	1.69	A	W
56	12.87	0.87	6.76	-1.45	0.19	2.28	A	6.86	A	A
59	13.10	0.90	6.87	0.31	0.04	2.35	A	6.97	A	A
62	13.20	0.90	6.82	1.07	0.14	2.35	A	6.91	A	A
63	14.30	2.00	13.99	9.49	1.24	5.17	A	14.03	N	W
64	13.34	0.17	1.27	2.14	0.28	0.58	A	1.72	A	A
65	13.80	0.90	6.52	5.67	0.74	2.35	A	6.62	A	A
67	12.80	0.50	3.91	-1.99	0.26	1.35	A	4.07	A	A
69	13.80	0.50	3.62	5.67	0.74	1.35	A	3.80	A	A
70	13.26	1.21	9.13	1.53	0.20	3.15	A	9.20	A	A
73	13.80	0.50	3.62	5.67	0.74	1.35	A	3.80	A	A
75	12.56	0.37	2.97	-3.81	0.50	1.04	A	3.18	A	A
76	0.17			-98.68						
77	13.86	0.20	1.44	6.13	0.80	0.65	N	1.84	A	W
78	12.50	0.60	4.80	-4.29	0.56	1.60	A	4.94	A	A
79	9.40	0.50	5.32	-28.02	3.66	1.35	N	5.44	A	N
80	13.44	0.89	6.58	2.91	0.38	2.32	A	6.68	A	A
81	12.00	1.00	8.33	-8.12	1.06	2.61	A	8.41	A	A
82	13.00	0.90	6.92	-0.46	0.06	2.35	A	7.02	A	A
84	12.30	1.00	8.13	-5.82	0.76	2.61	A	8.21	A	A
85	14.30	1.00	6.99	9.49	1.24	2.61	A	7.09	A	A
86	14.80	2.80	18.92	13.32	1.74	7.23	A	18.95	N	N
87	14.19	0.47	3.31	8.65	1.13	1.27	A	3.51	A	A
88	13.00	1.00	7.69	-0.46	0.06	2.61	A	7.78	A	A
89	4.75	0.22	4.63	-63.63	8.31	0.69	N	4.77	A	N
90	12.00	0.80	6.67	-8.12	1.06	2.10	A	6.76	A	A
91	27.73	6.32	22.79	112.33	14.67	16.31	A	22.82	N	N
92	12.06	0.62	5.14	-7.66	1.00	1.65	A	5.27	A	A
93	13.90	0.30	2.16	6.43	0.84	0.87	A	2.44	A	A
95	13.00	0.90	6.92	-0.46	0.06	2.35	A	7.02	A	A
96	14.50	0.67	4.62	11.03	1.44	1.77	A	4.76	A	A
97	13.96	0.31	2.22	6.89	0.90	0.89	N	2.50	A	W
98	8.20	0.60	7.32	-37.21	4.86	1.60	N	7.41	A	N

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
99	12.50	1.20	9.60	-4.29	0.56	3.12	A	9.67	A	A
101	13.00	0.80	6.15	-0.46	0.06	2.10	A	6.26	A	A
102	13.70	0.50	3.65	4.90	0.64	1.35	A	3.83	A	A
103	11.70	0.00	0.01	-10.41	1.36	0.39	N	1.15	A	N
104	12.90	0.70	5.43	-1.23	0.16	1.85	A	5.55	A	A
105	14.44	0.89	6.18	10.57	1.38	2.33	A	6.28	A	A
107	12.60	0.60	4.76	-3.52	0.46	1.60	A	4.90	A	A
108	18.47	0.86	4.66	41.42	5.41	2.25	N	4.80	A	N
110	13.60	0.40	2.94	4.13	0.54	1.10	A	3.16	A	A
112	12.30	0.48	3.90	-5.82	0.76	1.30	A	4.07	A	A
113	12.92	0.45	3.48	-1.07	0.14	1.22	A	3.67	A	A
114	14.90	1.10	7.38	14.09	1.84	2.86	A	7.47	A	A
115	12.90	1.00	7.75	-1.23	0.16	2.61	A	7.84	A	A
116	12.80	0.64	5.00	-1.99	0.26	1.70	A	5.13	A	A
117	15.18	0.66	4.35	16.23	2.12	1.75	N	4.50	A	N
118	12.26	0.98	7.99	-6.13	0.80	2.56	A	8.08	A	A
119	12.90	0.60	4.65	-1.23	0.16	1.60	A	4.79	A	A
120	15.40	1.60	10.39	17.92	2.34	4.15	A	10.45	N	N
121	13.50	0.70	5.19	3.37	0.44	1.85	A	5.31	A	A
122	10.80	0.41	3.80	-17.29	2.26	1.13	N	3.97	A	N
123	12.67	2.06	16.26	-2.99	0.39	5.33	A	16.30	N	W
124	14.27	0.55	3.85	9.26	1.21	1.47	A	4.02	A	A
125	0.45	0.04	8.89	-96.55	12.61	0.40	N	8.96	A	N
126	14.40	1.41	9.79	10.26	1.34	3.66	A	9.86	A	A
127	12.40	0.88	7.10	-5.05	0.66	2.30	A	7.19	A	A
128	12.80	0.50	3.91	-1.99	0.26	1.35	A	4.07	A	A
129	7.02	0.49	6.98	-46.25	6.04	1.32	N	7.07	A	N
130	11.60	0.90	7.76	-11.18	1.46	2.35	A	7.84	A	A
131	14.00	2.00	14.29	7.20	0.94	5.17	A	14.33	N	W
132	24.20	7.00	28.93	85.30	11.14	18.06	A	28.95	N	N
133	12.00	1.70	14.17	-8.12	1.06	4.40	A	14.21	N	W
134	11.50	1.10	9.57	-11.94	1.56	2.86	A	9.63	A	A
135	14.90	1.00	6.71	14.09	1.84	2.61	A	6.81	A	A
136	12.00	0.68	5.67	-8.12	1.06	1.80	A	5.78	A	A
137	13.88	0.43	3.10	6.28	0.82	1.17	A	3.30	A	A
139	13.28	0.62	4.67	1.68	0.22	1.65	A	4.81	A	A
140	12.30	0.60	4.88	-5.82	0.76	1.60	A	5.01	A	A
142	13.50	1.40	10.37	3.37	0.44	3.63	A	10.43	N	W
143	12.55	0.46	3.67	-3.91	0.51	1.25	A	3.84	A	A
144	13.10	1.40	10.69	0.31	0.04	3.63	A	10.75	N	W
145	13.90	1.85	13.31	6.43	0.84	4.79	A	13.36	N	W
146	19.82	2.64	13.32	51.76	6.76	6.82	A	13.37	N	N
147	12.30	0.30	2.44	-5.82	0.76	0.87	A	2.70	A	A
148	13.07	0.36	2.75	0.08	0.01	1.01	A	2.98	A	A
149	13.50	0.18	1.33	3.37	0.44	0.60	A	1.76	A	A
150	12.30	1.20	9.76	-5.82	0.76	3.12	A	9.82	A	A
151	12.28	0.54	4.40	-5.97	0.78	1.45	A	4.54	A	A

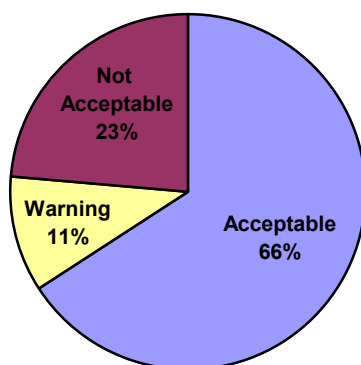
Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
152	13.33	0.42	3.15	2.07	0.27	1.15	A	3.35	A	A
153	14.26	0.78	5.47	9.19	1.20	2.05	A	5.59	A	A
154	13.30	0.70	5.26	1.84	0.24	1.85	A	5.39	A	A
155	11.40	0.70	6.14	-12.71	1.66	1.85	A	6.25	A	A
156	14.12	0.68	4.82	8.12	1.06	1.80	A	4.95	A	A
157	11.40	0.60	5.26	-12.71	1.66	1.60	N	5.39	A	N
160	13.61	0.57	4.19	4.21	0.55	1.52	A	4.34	A	A
161	14.70	1.00	6.80	12.56	1.64	2.61	A	6.90	A	A
162	11.60	0.59	5.09	-11.18	1.46	1.57	A	5.21	A	A
163	14.85	0.61	4.12	13.71	1.79	1.63	N	4.28	A	N
164	13.72	0.26	1.90	5.05	0.66	0.77	A	2.22	A	A
165	16.40	0.44	2.68	25.57	3.34	1.20	N	2.92	A	N
166	13.35	0.56	4.19	2.22	0.29	1.50	A	4.35	A	A
167	10.49	0.39	3.72	-19.68	2.57	1.08	N	3.89	A	N
168	12.40	0.60	4.84	-5.05	0.66	1.60	A	4.97	A	A
169	13.30	0.40	3.01	1.84	0.24	1.10	A	3.22	A	A
172	11.70	1.00	8.55	-10.41	1.36	2.61	A	8.62	A	A
175	9.65	0.71	7.36	-26.11	3.41	1.87	N	7.45	A	N
176	11.82	0.57	4.84	-9.49	1.24	1.53	A	4.98	A	A
177	14.70	0.90	6.12	12.56	1.64	2.35	A	6.23	A	A
178	12.30	0.30	2.44	-5.82	0.76	0.87	A	2.70	A	A
179	12.38	1.10	8.89	-5.21	0.68	2.86	A	8.96	A	A
184	8.80	0.73	8.30	-32.62	4.26	1.92	N	8.37	A	N
185	14.00	1.70	12.14	7.20	0.94	4.40	A	12.20	N	W
186	14.10	1.10	7.80	7.96	1.04	2.86	A	7.89	A	A
187	12.50	0.60	4.80	-4.29	0.56	1.60	A	4.94	A	A
188	12.50	0.68	5.44	-4.29	0.56	1.80	A	5.56	A	A
189	14.20	0.80	5.63	8.73	1.14	2.10	A	5.75	A	A
190	13.20	0.60	4.55	1.07	0.14	1.60	A	4.69	A	A
191	11.30	0.80	7.08	-13.48	1.76	2.10	A	7.17	A	A
192	12.40	0.83	6.69	-5.05	0.66	2.18	A	6.79	A	A
194	14.80	0.30	2.03	13.32	1.74	0.87	N	2.33	A	N
195	16.10	0.40	2.48	23.28	3.04	1.10	N	2.74	A	N
196	12.60	0.40	3.17	-3.52	0.46	1.10	A	3.38	A	A
197	12.20	0.40	3.28	-6.58	0.86	1.10	A	3.47	A	A
198	12.90	1.00	7.75	-1.23	0.16	2.61	A	7.84	A	A
199	12.57	0.57	4.53	-3.75	0.49	1.52	A	4.68	A	A
200	12.04	0.60	4.98	-7.81	1.02	1.60	A	5.11	A	A
201	13.80	0.50	3.62	5.67	0.74	1.35	A	3.80	A	A
202	12.82	0.27	2.11	-1.84	0.24	0.80	A	2.40	A	A
203	13.39	0.36	2.69	2.53	0.33	1.01	A	2.92	A	A
204	16.40	1.00	6.10	25.57	3.34	2.61	N	6.20	A	N
206	20.70	1.50	7.25	58.50	7.64	3.89	N	7.34	A	N
207	13.83	0.45	3.25	5.90	0.77	1.22	A	3.45	A	A
208	13.90	1.10	7.91	6.43	0.84	2.86	A	8.00	A	A
209	12.60	0.94	7.46	-3.52	0.46	2.46	A	7.55	A	A
210	14.10	0.30	2.13	7.96	1.04	0.87	N	2.42	A	W

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
212	13.36	0.38	2.84	2.30	0.30	1.05	A	3.07	A	A
213	13.66	0.45	3.29	4.59	0.60	1.22	A	3.49	A	A
214	13.00	1.00	7.69	-0.46	0.06	2.61	A	7.78	A	A
215	10.44	0.96	9.20	-20.06	2.62	2.51	N	9.27	A	N
216	14.17	1.11	7.83	8.50	1.11	2.89	A	7.92	A	A
217	13.80	0.20	1.45	5.67	0.74	0.65	N	1.85	A	W
218	12.39	0.74	5.97	-5.13	0.67	1.95	A	6.08	A	A
220	12.00	0.67	5.58	-8.12	1.06	1.77	A	5.70	A	A
222	12.40	1.50	12.10	-5.05	0.66	3.89	A	12.15	N	W
223	12.60	0.80	6.35	-3.52	0.46	2.10	A	6.45	A	A
225	13.65	0.46	3.37	4.52	0.59	1.25	A	3.56	A	A
226	14.10	1.20	8.51	7.96	1.04	3.12	A	8.59	A	A
227	12.17	0.93	7.64	-6.81	0.89	2.43	A	7.73	A	A
228	12.70	0.55	4.33	-2.76	0.36	1.47	A	4.48	A	A
229	13.50	0.60	4.44	3.37	0.44	1.60	A	4.59	A	A
230	12.70	1.20	9.45	-2.76	0.36	3.12	A	9.52	A	A
231	9.90	1.13	11.41	-24.20	3.16	2.94	N	11.47	N	N
232	18.90	2.43	12.86	44.72	5.84	6.28	A	12.91	N	N
233	13.07	0.60	4.59	0.08	0.01	1.60	A	4.73	A	A
234	15.46	0.77	4.98	18.38	2.40	2.02	N	5.11	A	N
235	12.00	0.48	4.00	-8.12	1.06	1.30	A	4.16	A	A
236	13.00	0.60	4.62	-0.46	0.06	1.60	A	4.76	A	A
237	10.42	0.85	8.16	-20.21	2.64	2.23	N	8.24	A	N
239	12.60	0.44	3.49	-3.52	0.46	1.20	A	3.68	A	A
240	12.05	1.71	14.19	-7.73	1.01	4.43	A	14.24	N	W
241	12.83	0.49	3.82	-1.76	0.23	1.32	A	3.99	A	A
242	13.06	2.28	17.46	0.00	0.00	5.90	A	17.50	N	W
243	2.98	0.16	5.37	-77.18	10.08	0.57	N	5.49	A	N
244	9.56	0.57	5.96	-26.80	3.50	1.52	N	6.07	A	N
245	12.79	0.41	3.21	-2.07	0.27	1.13	A	3.41	A	A
246	11.40	1.50	13.16	-12.71	1.66	3.89	A	13.21	N	N
248	12.90	1.60	12.40	-1.23	0.16	4.15	A	12.46	N	W
249	13.30	0.60	4.51	1.84	0.24	1.60	A	4.66	A	A
250	13.30	0.40	3.01	1.84	0.24	1.10	A	3.22	A	A
251	12.40	0.30	2.42	-5.05	0.66	0.87	A	2.68	A	A
252	13.30	0.40	3.01	1.84	0.24	1.10	A	3.22	A	A
253	12.77	0.71	5.56	-2.22	0.29	1.87	A	5.68	A	A
254	13.45	0.77	5.72	2.99	0.39	2.02	A	5.84	A	A
255	11.94	1.01	8.46	-8.58	1.12	2.63	A	8.54	A	A
256	10.05	1.41	14.03	-23.05	3.01	3.66	A	14.08	N	N
257	13.20	0.32	2.42	1.07	0.14	0.91	A	2.68	A	A
258	9.80	1.40	14.29	-24.96	3.26	3.63	A	14.33	N	N
259	13.70	0.20	1.46	4.90	0.64	0.65	A	1.86	A	A
260	13.17	0.30	2.28	0.84	0.11	0.87	A	2.55	A	A
261	13.15	0.77	5.86	0.69	0.09	2.02	A	5.97	A	A
262	13.70	0.50	3.65	4.90	0.64	1.35	A	3.83	A	A
263	13.20	0.70	5.30	1.07	0.14	1.85	A	5.43	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec	Final Score
264	14.00	1.60	11.43	7.20	0.94	4.15	A	11.49	N	W
265	10.44	0.10	0.96	-20.06	2.62	0.47	N	1.50	A	N
268	12.70	2.90	22.83	-2.76	0.36	7.49	A	22.86	N	W
269	13.83	0.37	2.68	5.90	0.77	1.03	A	2.91	A	A
270	10.78	0.73	6.77	-17.46	2.28	1.92	N	6.87	A	N
272	12.95	0.78	6.02	-0.84	0.11	2.05	A	6.13	A	A
275	14.35	0.43	3.00	9.88	1.29	1.17	N	3.21	A	W
277	13.16	0.58	4.41	0.77	0.10	1.55	A	4.55	A	A
278	14.46	1.70	11.76	10.72	1.40	4.40	A	11.81	N	N
279	13.10	0.80	6.11	0.31	0.04	2.10	A	6.21	A	A
280	14.04	0.44	3.13	7.50	0.98	1.20	A	3.34	A	A
281	8.72	0.64	7.34	-33.23	4.34	1.70	N	7.43	A	N
284	13.50	1.00	7.41	3.37	0.44	2.61	A	7.50	A	A
285	12.51	0.89	7.11	-4.21	0.55	2.33	A	7.21	A	A
286	10.83	0.32	2.95	-17.08	2.23	0.91	N	3.17	A	N
287	13.90	0.20	1.44	6.43	0.84	0.65	N	1.84	A	W
288	13.20	0.30	2.27	1.07	0.14	0.87	A	2.55	A	A
290	13.20	0.70	5.30	1.07	0.14	1.85	A	5.43	A	A
291	14.78	0.62	4.19	13.17	1.72	1.65	N	4.35	A	N
292	13.20	0.70	5.30	1.07	0.14	1.85	A	5.43	A	A
293	13.20	0.63	4.77	1.07	0.14	1.67	A	4.91	A	A
295	12.50	1.00	8.00	-4.29	0.56	2.61	A	8.08	A	A
296	11.20	0.90	8.04	-14.24	1.86	2.35	A	8.12	A	A
297	13.30	0.50	3.76	1.84	0.24	1.35	A	3.93	A	A
299	16.50	1.20	7.27	26.34	3.44	3.12	N	7.36	A	N
300	17.00	1.00	5.88	30.17	3.94	2.61	N	5.99	A	N
302	10.50	1.15	10.95	-19.60	2.56	2.99	A	11.01	N	N
304	14.20	1.40	9.86	8.73	1.14	3.63	A	9.93	A	A
305	13.40	0.80	5.97	2.60	0.34	2.10	A	6.08	A	A
306	12.70	0.40	3.15	-2.76	0.36	1.10	A	3.35	A	A
307	12.30	0.80	6.50	-5.82	0.76	2.10	A	6.60	A	A
308	13.10	0.67	5.11	0.31	0.04	1.77	A	5.24	A	A
309	11.80	0.60	5.08	-9.65	1.26	1.60	A	5.21	A	A
310	12.60	0.70	5.56	-3.52	0.46	1.85	A	5.67	A	A
311	12.50	0.70	5.60	-4.29	0.56	1.85	A	5.72	A	A
316	14.37	1.03	7.17	10.03	1.31	2.69	A	7.26	A	A
317	13.20	0.38	2.88	1.07	0.14	1.05	A	3.10	A	A
318	13.50	0.30	2.22	3.37	0.44	0.87	A	2.50	A	A
319	12.40	0.43	3.47	-5.05	0.66	1.17	A	3.65	A	A
320	15.30	0.40	2.61	17.15	2.24	1.10	N	2.86	A	N
321	10.96	0.41	3.74	-16.08	2.10	1.13	N	3.91	A	N
322	12.70	0.20	1.57	-2.76	0.36	0.65	A	1.95	A	A

Analyte: Cd-109 in spiked water, IAEA-445

Target Value: 34.96 ± 0.2 [Bq/kg]



Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
1	36.10	2.70	7.48	3.26	1.14	6.99	A	7.50	A	A
2	67.00	5.00	7.46	91.65	32.04	12.91	N	7.48	A	N
3	36.61	2.48	6.77	4.72	1.65	6.42	A	6.80	A	A
4	34.34	1.28	3.73	-1.77	0.62	3.34	A	3.77	A	A
5	40.60	2.10	5.17	16.13	5.64	5.44	N	5.20	A	N
6	25.10	2.90	11.55	-28.20	9.86	7.50	N	11.57	A	N
7	38.30	1.80	4.70	9.55	3.34	4.67	A	4.73	A	A
8	33.40	2.19	6.56	-4.46	1.56	5.67	A	6.58	A	A
9	48.00	9.00	18.75	37.30	13.04	23.23	A	18.76	N	N
10	39.30	3.00	7.63	12.41	4.34	7.76	A	7.65	A	A
11	55.50	7.10	12.79	58.75	20.54	18.33	N	12.81	A	N
12	38.00	6.00	15.79	8.70	3.04	15.49	A	15.80	N	W
13	35.50	2.90	8.17	1.54	0.54	7.50	A	8.19	A	A
14	39.60	4.80	12.12	13.27	4.64	12.39	A	12.13	A	A
15	37.40	2.10	5.61	6.98	2.44	5.44	A	5.64	A	A
16	23.20	3.40	14.66	-33.64	11.76	8.79	N	14.67	A	N
18	30.90	3.32	10.74	-11.61	4.06	8.58	A	10.76	A	A
19	34.10	2.10	6.16	-2.46	0.86	5.44	A	6.18	A	A
20	33.50	2.80	8.36	-4.18	1.46	7.24	A	8.38	A	A
21	30.72	1.94	6.32	-12.13	4.24	5.03	A	6.34	A	A
23	37.00	4.00	10.81	5.84	2.04	10.33	A	10.83	A	A
24	36.97	3.82	10.33	5.75	2.01	9.87	A	10.35	A	A
26	32.10	4.81	14.98	-8.18	2.86	12.42	A	15.00	A	A
27	38.10	5.54	14.54	8.98	3.14	14.30	A	14.55	A	A
28	37.00	1.90	5.14	5.84	2.04	4.93	A	5.17	A	A
30	17.00	1.50	8.82	-51.37	17.96	3.90	N	8.84	A	N
33	30.60	4.30	14.05	-12.47	4.36	11.11	A	14.06	A	A
34	30.10	4.70	15.61	-13.90	4.86	12.14	A	15.63	N	W
35	36.60	3.20	8.74	4.69	1.64	8.27	A	8.76	A	A
36	34.46	2.56	7.43	-1.43	0.50	6.62	A	7.45	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
37	58.69	2.65	4.52	67.87	23.73	6.86	N	4.55	A	N
39	3.50	2.20	62.86	-89.99	31.46	5.70	N	62.86	N	N
42	45.70	8.32	18.21	30.72	10.74	21.47	A	18.21	N	N
43	34.67	2.88	8.31	-0.83	0.29	7.45	A	8.33	A	A
45	38.00	2.80	7.37	8.70	3.04	7.24	A	7.39	A	A
48	39.52	1.30	3.29	13.04	4.56	3.39	N	3.34	A	W
49	29.30	1.80	6.14	-16.19	5.66	4.67	N	6.17	A	N
50	38.60	2.40	6.22	10.41	3.64	6.21	A	6.24	A	A
51	32.40	1.70	5.25	-7.32	2.56	4.42	A	5.28	A	A
52	32.00	3.16	9.88	-8.47	2.96	8.17	A	9.89	A	A
53	33.79	0.57	1.69	-3.35	1.17	1.56	A	1.78	A	A
55	34.00	0.65	1.91	-2.75	0.96	1.75	A	2.00	A	A
56	34.84	2.41	6.92	-0.34	0.12	6.24	A	6.94	A	A
59	27.00	2.00	7.41	-22.77	7.96	5.19	N	7.43	A	N
62	39.20	3.30	8.42	12.13	4.24	8.53	A	8.44	A	A
63	39.00	4.00	10.26	11.56	4.04	10.33	A	10.27	A	A
64	32.15	0.95	2.95	-8.04	2.81	2.50	N	3.01	A	W
65	36.00	4.00	11.11	2.97	1.04	10.33	A	11.13	A	A
67	23.60	2.00	8.47	-32.49	11.36	5.19	N	8.49	A	N
69	33.00	3.00	9.09	-5.61	1.96	7.76	A	9.11	A	A
70	35.04	10.23	29.20	0.23	0.08	26.40	A	29.20	N	W
73	18.00	2.80	15.56	-48.51	16.96	7.24	N	15.57	N	N
75	31.33	1.58	5.03	-10.37	3.63	4.10	A	5.06	A	A
76	423.53			1111.47						
77	30.96	1.01	3.26	-11.44	4.00	2.66	N	3.31	A	W
78	46.40	4.70	10.13	32.72	11.44	12.14	A	10.15	A	A
79	35.50	9.30	26.20	1.54	0.54	24.00	A	26.20	N	W
82	32.20	3.20	9.94	-7.89	2.76	8.27	A	9.95	A	A
84	33.30	4.10	12.31	-4.75	1.66	10.59	A	12.33	A	A
85	53.80	5.00	9.29	53.89	18.84	12.91	N	9.31	A	N
87	33.97	1.19	3.50	-2.83	0.99	3.11	A	3.55	A	A
88	39.00	9.00	23.08	11.56	4.04	23.23	A	23.08	N	W
89	16.00	1.60	10.00	-54.23	18.96	4.16	N	10.02	A	N
90	30.00	4.00	13.33	-14.19	4.96	10.33	A	13.35	A	A
92	29.78	1.92	6.45	-14.82	5.18	4.98	N	6.47	A	W
93	32.00	2.80	8.75	-8.47	2.96	7.24	A	8.77	A	A
95	34.60	2.80	8.09	-1.03	0.36	7.24	A	8.11	A	A
96	36.50	2.11	5.78	4.41	1.54	5.47	A	5.81	A	A
97	36.02	1.04	2.89	3.03	1.06	2.73	A	2.94	A	A
98	429.10	18.90	4.40	1127.40	394.14	48.76	N	4.44	A	N
99	45.80	4.90	10.70	31.01	10.84	12.65	A	10.71	A	A
101	31.80	3.20	10.06	-9.04	3.16	8.27	A	10.08	A	A
102	35.00	3.00	8.57	0.11	0.04	7.76	A	8.59	A	A
103	38.10	0.01	0.02	8.98	3.14	0.52	N	0.57	A	W
104	32.70	2.60	7.95	-6.46	2.26	6.73	A	7.97	A	A
105	35.60	1.60	4.49	1.83	0.64	4.15	A	4.52	A	A
107	37.00	2.00	5.41	5.84	2.04	5.19	A	5.44	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
108	43.46	3.81	8.77	24.31	8.50	9.84	A	8.79	A	A
110	34.57	1.76	5.09	-1.12	0.39	4.57	A	5.12	A	A
112	28.90	0.99	3.43	-17.33	6.06	2.61	N	3.47	A	N
113	36.23	1.29	3.56	3.63	1.27	3.37	A	3.61	A	A
114	64.50	9.20	14.26	84.50	29.54	23.74	N	14.28	A	N
115	34.70	4.00	11.53	-0.74	0.26	10.33	A	11.54	A	A
116	32.80	2.10	6.40	-6.18	2.16	5.44	A	6.43	A	A
117	42.40	6.30	14.86	21.28	7.44	16.26	A	14.87	A	A
118	28.70	1.20	4.18	-17.91	6.26	3.14	N	4.22	A	N
119	38.10	1.80	4.72	8.98	3.14	4.67	A	4.76	A	A
120	23.80	7.80	32.77	-31.92	11.16	20.13	A	32.78	N	N
121	36.90	2.20	5.96	5.55	1.94	5.70	A	5.99	A	A
122	33.07	2.61	7.90	-5.41	1.89	6.76	A	7.92	A	A
124	37.64	2.42	6.43	7.67	2.68	6.26	A	6.45	A	A
126	41.10	4.68	11.39	17.56	6.14	12.09	A	11.40	A	A
127	34.90	2.12	6.07	-0.17	0.06	5.49	A	6.10	A	A
128	35.80	2.60	7.26	2.40	0.84	6.73	A	7.29	A	A
130	34.40	3.00	8.72	-1.60	0.56	7.76	A	8.74	A	A
131	35.00	4.00	11.43	0.11	0.04	10.33	A	11.44	A	A
132	37.26	7.00	18.79	6.58	2.30	18.07	A	18.80	N	W
133	31.40	8.90	28.34	-10.18	3.56	22.97	A	28.35	N	W
135	41.00	6.00	14.63	17.28	6.04	15.49	A	14.65	A	A
136	65.40	13.00	19.88	87.07	30.44	33.54	A	19.89	N	N
137	35.80	4.40	12.29	2.40	0.84	11.36	A	12.30	A	A
139	39.00	2.20	5.64	11.56	4.04	5.70	A	5.67	A	A
140	31.00	13.00	41.94	-11.33	3.96	33.54	A	41.94	N	W
142	35.20	5.30	15.06	0.69	0.24	13.68	A	15.07	N	W
143	36.20	2.00	5.52	3.55	1.24	5.19	A	5.55	A	A
144	34.00	5.50	16.18	-2.75	0.96	14.20	A	16.19	N	W
146	<43.78	0.04								
147	31.50	1.00	3.17	-9.90	3.46	2.63	N	3.23	A	W
148	34.15	1.50	4.39	-2.32	0.81	3.90	A	4.43	A	A
149	34.20	0.97	2.84	-2.17	0.76	2.56	A	2.89	A	A
150	37.00	4.00	10.81	5.84	2.04	10.33	A	10.83	A	A
151	33.20	1.90	5.72	-5.03	1.76	4.93	A	5.75	A	A
152	32.50	2.40	7.38	-7.04	2.46	6.21	A	7.41	A	A
153	50.38	4.97	9.87	44.11	15.42	12.83	N	9.88	A	N
154	30.50	2.70	8.85	-12.76	4.46	6.99	A	8.87	A	A
156	30.52	2.23	7.31	-12.70	4.44	5.78	A	7.33	A	A
157	35.40	4.00	11.30	1.26	0.44	10.33	A	11.31	A	A
160	32.10	2.19	6.82	-8.18	2.86	5.67	A	6.85	A	A
161	32.00	3.00	9.38	-8.47	2.96	7.76	A	9.39	A	A
162	36.90	2.08	5.64	5.55	1.94	5.39	A	5.67	A	A
163	36.06	1.68	4.66	3.15	1.10	4.37	A	4.69	A	A
164	35.89	2.10	5.85	2.66	0.93	5.44	A	5.88	A	A
166	45.34	5.05	11.14	29.69	10.38	13.04	A	11.15	A	A
167	18.10	2.30	12.71	-48.23	16.86	5.96	N	12.72	A	N

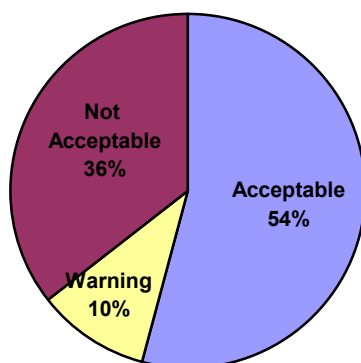
Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
168	29.80	2.00	6.71	-14.76	5.16	5.19	A	6.74	A	A
169	88.91	2.14	2.41	154.32	53.95	5.55	N	2.47	A	N
172	40.40	5.50	13.61	15.56	5.44	14.20	A	13.63	A	A
175	23.99	2.98	12.42	-31.38	10.97	7.71	N	12.44	A	N
176	28.97	1.98	6.85	-17.13	5.99	5.14	N	6.87	A	N
177	<11.4									
178	33.50	0.30	0.90	-4.18	1.46	0.93	N	1.06	A	W
179	29.21	2.30	7.87	-16.45	5.75	5.96	A	7.89	A	A
182	61.60	11.52	18.70	76.20	26.64	29.73	A	18.71	N	N
184	30.04	0.25	0.83	-14.07	4.92	0.83	N	1.01	A	W
185	69.70	8.10	11.62	99.37	34.74	20.90	N	11.64	A	N
186	38.80	3.80	9.79	10.98	3.84	9.82	A	9.81	A	A
187	30.90	2.40	7.77	-11.61	4.06	6.21	A	7.79	A	A
188	36.50	1.50	4.11	4.41	1.54	3.90	A	4.15	A	A
189	37.40	4.50	12.03	6.98	2.44	11.62	A	12.05	A	A
190	23.00	2.00	8.70	-34.21	11.96	5.19	N	8.71	A	N
191	28.20	2.30	8.16	-19.34	6.76	5.96	N	8.18	A	N
192	34.01	3.15	9.26	-2.72	0.95	8.14	A	9.28	A	A
194	34.40	2.10	6.10	-1.60	0.56	5.44	A	6.13	A	A
195	40.00	2.00	5.00	14.42	5.04	5.19	A	5.03	A	A
196	34.10	1.40	4.11	-2.46	0.86	3.65	A	4.15	A	A
197	46.60	18.70	40.13	33.30	11.64	48.25	A	40.13	N	N
198	32.60	6.10	18.71	-6.75	2.36	15.75	A	18.72	N	W
199	29.51	4.36	14.77	-15.59	5.45	11.26	A	14.79	A	A
200	33.16	1.70	5.13	-5.15	1.80	4.42	A	5.16	A	A
201	30.60	2.00	6.54	-12.47	4.36	5.19	A	6.56	A	A
202	34.56	0.86	2.49	-1.14	0.40	2.28	A	2.55	A	A
203	34.68	2.50	7.21	-0.80	0.28	6.47	A	7.23	A	A
204	40.00	3.00	7.50	14.42	5.04	7.76	A	7.52	A	A
206	21.70	1.50	6.91	-37.93	13.26	3.90	N	6.94	A	N
207	34.30	3.90	11.37	-1.89	0.66	10.08	A	11.38	A	A
208	32.50	4.60	14.15	-7.04	2.46	11.88	A	14.17	A	A
209	31.60	3.35	10.60	-9.61	3.36	8.66	A	10.62	A	A
210	36.40	0.50	1.37	4.12	1.44	1.39	N	1.49	A	W
212	35.30	1.00	2.83	0.97	0.34	2.63	A	2.89	A	A
213	36.10	2.20	6.09	3.26	1.14	5.70	A	6.12	A	A
214	33.00	3.00	9.09	-5.61	1.96	7.76	A	9.11	A	A
215	30.13	2.91	9.66	-13.82	4.83	7.53	A	9.68	A	A
216	33.23	4.88	14.69	-4.95	1.73	12.60	A	14.70	A	A
217	33.60	0.50	1.49	-3.89	1.36	1.39	A	1.59	A	A
218	34.22	2.05	5.99	-2.12	0.74	5.31	A	6.02	A	A
220	11.00	0.77	7.00	-68.54	23.96	2.05	N	7.02	A	N
222	<34									
225	43.42	2.27	5.23	24.20	8.46	5.88	N	5.26	A	N
227	41.82	4.07	9.73	19.62	6.86	10.51	A	9.75	A	A
228	27.60	2.50	9.06	-21.05	7.36	6.47	N	9.08	A	N
229	39.30	2.20	5.60	12.41	4.34	5.70	A	5.63	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
230	41.10	4.40	10.71	17.56	6.14	11.36	A	10.72	A	A
231	26.49	4.98	18.80	-24.23	8.47	12.86	A	18.81	N	N
232	34.38	3.77	10.97	-1.66	0.58	9.74	A	10.98	A	A
233	37.05	2.07	5.59	5.98	2.09	5.37	A	5.62	A	A
235	29.54	2.90	9.82	-15.50	5.42	7.50	A	9.83	A	A
236	31.40	3.90	12.42	-10.18	3.56	10.08	A	12.43	A	A
237	34.30	3.20	9.33	-1.89	0.66	8.27	A	9.35	A	A
240	422.53	42.36	10.03	1108.61	387.57	109.29	N	10.04	A	N
241	43.06	3.54	8.22	23.17	8.10	9.15	A	8.24	A	A
242	36.50	15.61	42.77	4.41	1.54	40.28	A	42.77	N	W
243	1.68	0.26	15.48	-95.19	33.28	0.85	N	15.49	N	N
244	24.90	1.60	6.43	-28.78	10.06	4.16	N	6.45	A	N
245	38.10	1.93	5.07	8.98	3.14	5.01	A	5.10	A	A
246	58.20	5.80	9.97	66.48	23.24	14.97	N	9.98	A	N
248	33.60	4.40	13.10	-3.89	1.36	11.36	A	13.11	A	A
249	34.00	2.00	5.88	-2.75	0.96	5.19	A	5.91	A	A
250	33.00	2.50	7.58	-5.61	1.96	6.47	A	7.60	A	A
251	69.40	2.40	3.46	98.51	34.44	6.21	N	3.51	A	N
252	26.90	2.50	9.29	-23.05	8.06	6.47	N	9.31	A	N
253	38.53	2.19	5.68	10.21	3.57	5.67	A	5.71	A	A
254	37.42	2.84	7.59	7.04	2.46	7.35	A	7.61	A	A
255	72.89	9.47	12.99	108.50	37.93	24.44	N	13.00	A	N
257	37.00	2.60	7.03	5.84	2.04	6.73	A	7.05	A	A
259	35.50	1.20	3.38	1.54	0.54	3.14	A	3.43	A	A
260	35.81	1.70	4.75	2.43	0.85	4.42	A	4.78	A	A
261	26.50	3.67	13.85	-24.20	8.46	9.48	A	13.86	A	A
262	24.80	2.00	8.06	-29.06	10.16	5.19	N	8.08	A	N
263	34.99	2.18	6.23	0.09	0.03	5.65	A	6.26	A	A
264	30.60	5.50	17.97	-12.47	4.36	14.20	A	17.98	N	W
265	28.52	2.80	9.82	-18.42	6.44	7.24	A	9.83	A	A
268	51.30	14.30	27.88	46.74	16.34	36.90	A	27.88	N	N
269	32.59	2.55	7.82	-6.78	2.37	6.60	A	7.85	A	A
270	39.72	5.68	14.30	13.62	4.76	14.66	A	14.31	A	A
272	32.60	2.30	7.06	-6.75	2.36	5.96	A	7.08	A	A
275	30.98	0.66	2.13	-11.38	3.98	1.78	N	2.21	A	W
277	38.15	4.16	10.90	9.12	3.19	10.75	A	10.92	A	A
278	42.53	6.40	15.05	21.65	7.57	16.52	A	15.06	N	N
279	34.30	3.10	9.04	-1.89	0.66	8.01	A	9.06	A	A
280	32.25	4.71	14.60	-7.75	2.71	12.16	A	14.62	A	A
284	51.30	3.30	6.43	46.74	16.34	8.53	N	6.46	A	N
285	33.60	9.93	29.55	-3.89	1.36	25.62	A	29.56	N	W
286	28.00	1.60	5.71	-19.91	6.96	4.16	N	5.74	A	N
287	32.50	1.20	3.69	-7.04	2.46	3.14	A	3.74	A	A
288	37.50	1.30	3.47	7.27	2.54	3.39	A	3.51	A	A
290	39.30	3.60	9.16	12.41	4.34	9.30	A	9.18	A	A
291	38.00	2.80	7.37	8.70	3.04	7.24	A	7.39	A	A
292	35.10	1.84	5.24	0.40	0.14	4.78	A	5.27	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
293	32.90	2.10	6.38	-5.89	2.06	5.44	A	6.41	A	A
295	27.00	6.00	22.22	-22.77	7.96	15.49	A	22.23	N	N
296	36.90	3.10	8.40	5.55	1.94	8.01	A	8.42	A	A
297	39.20	3.90	9.95	12.13	4.24	10.08	A	9.97	A	A
300	38.00	5.00	13.16	8.70	3.04	12.91	A	13.17	A	A
302	21.10	2.15	10.19	-39.65	13.86	5.57	N	10.21	A	N
304	39.20	4.00	10.20	12.13	4.24	10.33	A	10.22	A	A
305	52.00	9.00	17.31	48.74	17.04	23.23	A	17.32	N	N
306	42.80	2.10	4.91	22.43	7.84	5.44	N	4.94	A	N
307	38.00	5.00	13.16	8.70	3.04	12.91	A	13.17	A	A
308	16.50	0.37	2.24	-52.80	18.46	1.09	N	2.31	A	N
309	25.10	2.06	8.21	-28.20	9.86	5.34	N	8.23	A	N
310	35.80	3.10	8.66	2.40	0.84	8.01	A	8.68	A	A
311	33.00	3.00	9.09	-5.61	1.96	7.76	A	9.11	A	A
316	39.00	4.06	10.41	11.56	4.04	10.49	A	10.43	A	A
317	33.87	2.05	6.05	-3.12	1.09	5.31	A	6.08	A	A
318	32.30	2.10	6.50	-7.61	2.66	5.44	A	6.53	A	A
319	34.10	1.83	5.37	-2.46	0.86	4.75	A	5.40	A	A
320	35.10	0.50	1.42	0.40	0.14	1.39	A	1.54	A	A
322	32.00	1.00	3.13	-8.47	2.96	2.63	N	3.18	A	W

Analyte: Cs-134 in spiked water, IAEA-445

Target Value: 7.65 ± 0.1 [Bq/kg]



Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
1	5.89	0.12	2.04	-23.01	1.76	0.40	N	2.42	A	N
2	7.33	0.20	2.73	-4.18	0.32	0.58	A	3.03	A	A
3	7.69	0.47	6.11	0.52	0.04	1.24	A	6.25	A	A
4	7.38	0.15	2.03	-3.53	0.27	0.47	A	2.42	A	A
5	7.53	0.33	4.38	-1.57	0.12	0.89	A	4.57	A	A
6	7.00	0.40	5.71	-8.50	0.65	1.06	A	5.86	A	A
7	7.40	0.30	4.05	-3.27	0.25	0.82	A	4.26	A	A
8	7.06	0.19	2.69	-7.71	0.59	0.55	N	2.99	A	W
9	8.30	0.60	7.23	8.50	0.65	1.57	A	7.35	A	A
10	7.49	0.15	2.00	-2.09	0.16	0.47	A	2.39	A	A
11	7.30	0.60	8.22	-4.58	0.35	1.57	A	8.32	A	A
12	6.60	0.50	7.58	-13.73	1.05	1.32	A	7.69	A	A
13	7.43	0.58	7.81	-2.88	0.22	1.52	A	7.91	A	A
14	7.30	0.60	8.22	-4.58	0.35	1.57	A	8.32	A	A
16	6.20	0.60	9.68	-18.95	1.45	1.57	A	9.77	A	A
18	6.70	0.23	3.43	-12.42	0.95	0.65	N	3.67	A	N
19	6.05	0.63	10.41	-20.92	1.60	1.65	A	10.49	N	N
20	7.40	0.40	5.41	-3.27	0.25	1.06	A	5.56	A	A
21	6.12	0.30	4.90	-20.00	1.53	0.82	N	5.07	A	N
23	6.70	0.60	8.96	-12.42	0.95	1.57	A	9.05	A	A
24	7.31	0.59	8.07	-4.44	0.34	1.54	A	8.18	A	A
25	6.34	1.03	16.25	-17.12	1.31	2.67	A	16.30	N	N
26	6.80	1.36	20.00	-11.11	0.85	3.52	A	20.04	N	N
27	7.05	0.69	9.72	-7.84	0.60	1.79	A	9.80	A	A
28	7.00	0.26	3.71	-8.50	0.65	0.72	A	3.94	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
29	7.47	0.52	6.96	-2.35	0.18	1.37	A	7.08	A	A
30	7.30	0.12	1.64	-4.58	0.35	0.40	A	2.10	A	A
31	4.44	0.38	8.56	-41.96	3.21	1.01	N	8.66	A	N
33	8.08	0.30	3.71	5.62	0.43	0.82	A	3.94	A	A
34	7.10	0.20	2.82	-7.19	0.55	0.58	A	3.11	A	A
35	6.82	0.78	11.44	-10.85	0.83	2.03	A	11.51	N	N
36	7.05	0.55	7.80	-7.84	0.60	1.44	A	7.91	A	A
37	7.22	0.25	3.41	-5.65	0.43	0.69	A	3.65	A	A
39	6.50	0.20	3.08	-15.03	1.15	0.58	N	3.34	A	N
42	7.82	0.56	7.16	2.22	0.17	1.47	A	7.28	A	A
43	6.82	0.54	7.92	-10.85	0.83	1.42	A	8.03	A	A
44	6.76	0.34	5.03	-11.63	0.89	0.91	A	5.20	A	A
45	6.82	0.31	4.55	-10.85	0.83	0.84	A	4.73	A	A
48	7.62	0.27	3.54	-0.39	0.03	0.74	A	3.78	A	A
49	7.40	0.30	4.05	-3.27	0.25	0.82	A	4.26	A	A
50	7.15	0.24	3.36	-6.54	0.50	0.67	A	3.60	A	A
51	6.62	0.34	5.14	-13.46	1.03	0.91	N	5.30	A	N
52	6.90	0.13	1.88	-9.80	0.75	0.42	N	2.29	A	W
53	7.29	0.08	1.10	-4.71	0.36	0.33	N	1.71	A	W
55	7.01	0.09	1.28	-8.37	0.64	0.35	N	1.83	A	W
56	6.83	0.35	5.12	-10.72	0.82	0.94	A	5.29	A	A
59	7.90	0.60	7.59	3.27	0.25	1.57	A	7.71	A	A
62	7.18	0.22	3.06	-6.14	0.47	0.62	A	3.33	A	A
63	7.60	0.60	7.89	-0.65	0.05	1.57	A	8.00	A	A
64	6.69	0.11	1.64	-12.55	0.96	0.38	N	2.10	A	N
65	6.80	0.40	5.88	-11.11	0.85	1.06	A	6.03	A	A
67	6.30	0.10	1.59	-17.65	1.35	0.36	N	2.06	A	N
69	6.50	0.20	3.08	-15.03	1.15	0.58	N	3.34	A	N
70	7.14	0.45	6.30	-6.67	0.51	1.19	A	6.44	A	A
71	8.42	1.57	18.65	10.07	0.77	4.06	A	18.69	N	N
73	6.80	0.20	2.94	-11.11	0.85	0.58	N	3.22	A	N
75	6.65	0.11	1.66	-13.07	1.00	0.38	N	2.11	A	N
76	0.13			-98.24						
77	7.01	1.04	14.84	-8.37	0.64	2.70	A	14.89	N	W
78	6.50	0.30	4.62	-15.03	1.15	0.82	N	4.80	A	N
79	5.70	0.20	3.51	-25.49	1.95	0.58	N	3.74	A	N
80	6.04	0.33	5.43	-21.05	1.61	0.88	N	5.59	A	N
81	7.40	0.30	4.05	-3.27	0.25	0.82	A	4.26	A	A
82	7.52	0.56	7.45	-1.70	0.13	1.47	A	7.56	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
84	6.50	0.50	7.69	-15.03	1.15	1.32	A	7.80	A	A
85	7.30	0.50	6.85	-4.58	0.35	1.32	A	6.97	A	A
87	6.86	0.18	2.62	-10.33	0.79	0.53	N	2.93	A	N
88	7.00	0.60	8.57	-8.50	0.65	1.57	A	8.67	A	A
89	3.13	0.07	2.30	-59.02	4.52	0.32	N	2.64	A	N
90	7.60	0.50	6.58	-0.65	0.05	1.32	A	6.71	A	A
91	51.37	6.67	12.99	571.50	43.72	17.22	N	13.06	N	N
92	6.34	0.17	2.68	-17.12	1.31	0.51	N	2.98	A	N
93	7.10	0.10	1.41	-7.19	0.55	0.36	N	1.92	A	W
95	6.50	0.40	6.15	-15.03	1.15	1.06	N	6.29	A	N
96	6.81	0.28	4.11	-10.98	0.84	0.77	N	4.31	A	N
97	6.61	0.07	1.06	-13.59	1.04	0.31	N	1.68	A	N
98	8.60	0.90	10.47	12.42	0.95	2.34	A	10.55	N	N
99	7.00	0.20	2.86	-8.50	0.65	0.58	N	3.14	A	W
101	6.60	0.40	6.06	-13.73	1.05	1.06	A	6.20	A	A
102	6.90	0.20	2.90	-9.80	0.75	0.58	N	3.18	A	W
103	8.62	0.00	0.00	12.68	0.97	0.26	N	1.31	A	N
104	7.70	0.50	6.49	0.65	0.05	1.32	A	6.62	A	A
105	6.62	0.40	6.03	-13.53	1.04	1.06	A	6.17	A	A
107	6.50	0.30	4.62	-15.03	1.15	0.82	N	4.80	A	N
108	9.03	0.34	3.77	18.04	1.38	0.91	N	3.99	A	N
110	7.06	0.17	2.41	-7.71	0.59	0.51	N	2.74	A	W
112	7.04	0.12	1.70	-7.97	0.61	0.40	N	2.15	A	W
113	7.43	0.25	3.36	-2.88	0.22	0.69	A	3.61	A	A
114	7.60	0.70	9.21	-0.65	0.05	1.82	A	9.30	A	A
115	7.13	0.70	9.82	-6.80	0.52	1.82	A	9.90	A	A
116	7.54	0.38	5.04	-1.44	0.11	1.01	A	5.21	A	A
117	7.87	0.28	3.56	2.88	0.22	0.77	A	3.79	A	A
118	6.49	0.32	4.93	-15.16	1.16	0.86	N	5.10	A	N
119	7.71	0.36	4.67	0.78	0.06	0.96	A	4.85	A	A
120	7.80	0.60	7.69	1.96	0.15	1.57	A	7.80	A	A
121	6.90	0.40	5.80	-9.80	0.75	1.06	A	5.94	A	A
122	6.89	0.15	2.24	-9.97	0.76	0.47	N	2.59	A	W
123	6.84	1.51	22.08	-10.59	0.81	3.90	A	22.11	N	N
124	6.98	0.26	3.72	-8.76	0.67	0.72	A	3.95	A	A
125	8.90	0.09	1.01	16.34	1.25	0.35	N	1.65	A	N
126	7.77	0.72	9.33	1.57	0.12	1.89	A	9.42	A	A
127	6.40	0.24	3.75	-16.34	1.25	0.67	N	3.97	A	N
128	7.30	0.30	4.11	-4.58	0.35	0.82	A	4.31	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
129	5.66	0.28	4.95	-26.01	1.99	0.77	N	5.12	A	N
130	6.94	0.22	3.17	-9.28	0.71	0.62	N	3.43	A	W
131	6.80	0.50	7.35	-11.11	0.85	1.32	A	7.47	A	A
132	20.92	7.00	33.46	173.46	13.27	18.06	A	33.49	N	N
133	7.10	0.70	9.86	-7.19	0.55	1.82	A	9.95	A	A
134	7.30	0.40	5.48	-4.58	0.35	1.06	A	5.63	A	A
135	7.60	0.50	6.58	-0.65	0.05	1.32	A	6.71	A	A
136	5.90	0.29	4.92	-22.88	1.75	0.79	N	5.09	A	N
137	7.35	0.17	2.31	-3.92	0.30	0.51	A	2.66	A	A
139	6.79	0.29	4.27	-11.24	0.86	0.79	N	4.47	A	N
140	6.30	0.30	4.76	-17.65	1.35	0.82	N	4.94	A	N
142	7.70	0.35	4.55	0.65	0.05	0.94	A	4.73	A	A
143	7.18	0.41	5.71	-6.14	0.47	1.09	A	5.86	A	A
144	7.00	0.60	8.57	-8.50	0.65	1.57	A	8.67	A	A
145	7.21	0.94	13.01	-5.75	0.44	2.43	A	13.08	N	W
146	6.09	0.81	13.30	-20.39	1.56	2.11	A	13.36	N	N
147	6.90	0.20	2.90	-9.80	0.75	0.58	N	3.18	A	W
148	6.57	0.12	1.83	-14.12	1.08	0.40	N	2.25	A	N
149	7.14	0.09	1.26	-6.67	0.51	0.35	N	1.82	A	W
150	9.20	0.60	6.52	20.26	1.55	1.57	A	6.65	A	A
151	6.80	0.23	3.38	-11.11	0.85	0.65	N	3.63	A	N
152	6.63	0.20	3.02	-13.33	1.02	0.58	N	3.29	A	N
153	8.35	0.36	4.31	9.15	0.70	0.96	A	4.51	A	A
154	6.61	0.19	2.87	-13.59	1.04	0.55	N	3.16	A	N
155	8.00	0.30	3.75	4.58	0.35	0.82	A	3.97	A	A
156	6.53	0.23	3.52	-14.64	1.12	0.65	N	3.76	A	N
157	6.20	0.20	3.23	-18.95	1.45	0.58	N	3.48	A	N
160	6.67	0.21	3.15	-12.81	0.98	0.60	N	3.41	A	N
161	7.10	0.50	7.04	-7.19	0.55	1.32	A	7.16	A	A
162	4.56	0.22	4.85	-40.39	3.09	0.63	N	5.02	A	N
163	8.31	0.34	4.09	8.67	0.66	0.91	A	4.29	A	A
164	6.56	0.10	1.52	-14.25	1.09	0.36	N	2.01	A	N
165	8.90	0.30	3.37	16.34	1.25	0.82	N	3.62	A	N
166	7.53	0.20	2.66	-1.57	0.12	0.58	A	2.96	A	A
167	2.89	0.32	11.07	-62.22	4.76	0.86	N	11.15	N	N
168	6.05	0.20	3.31	-20.92	1.60	0.58	N	3.55	A	N
169	6.81	0.24	3.52	-10.98	0.84	0.67	N	3.76	A	N
172	7.60	0.60	7.89	-0.65	0.05	1.57	A	8.00	A	A
173	3.43	0.15	4.37	-55.16	4.22	0.47	N	4.56	A	N

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
174	7.58	0.43	5.67	-0.92	0.07	1.14	A	5.82	A	A
175	6.97	0.35	5.02	-8.89	0.68	0.94	A	5.19	A	A
176	6.71	0.21	3.09	-12.26	0.94	0.59	N	3.36	A	N
177	7.25	0.38	5.24	-5.23	0.40	1.01	A	5.40	A	A
178	7.27	0.14	1.93	-4.97	0.38	0.44	A	2.33	A	A
179	7.51	0.60	7.99	-1.83	0.14	1.57	A	8.10	A	A
182	26.30	2.92	11.10	243.79	18.65	7.54	N	11.18	N	N
184	7.50	0.54	7.20	-1.96	0.15	1.42	A	7.32	A	A
185	6.90	2.50	36.23	-9.80	0.75	6.46	A	36.26	N	W
186	7.30	0.40	5.48	-4.58	0.35	1.06	A	5.63	A	A
187	7.50	0.30	4.00	-1.96	0.15	0.82	A	4.21	A	A
188	6.81	0.33	4.85	-10.98	0.84	0.89	A	5.02	A	A
189	7.00	0.40	5.71	-8.50	0.65	1.06	A	5.86	A	A
190	7.28	0.20	2.75	-4.84	0.37	0.58	A	3.04	A	A
191	5.75	0.40	6.96	-24.84	1.90	1.06	N	7.08	A	N
192	6.50	0.40	6.15	-15.03	1.15	1.06	N	6.29	A	N
194	7.10	0.20	2.82	-7.19	0.55	0.58	A	3.11	A	A
195	7.50	0.20	2.67	-1.96	0.15	0.58	A	2.97	A	A
196	7.30	0.20	2.74	-4.58	0.35	0.58	A	3.04	A	A
197	6.60	0.20	3.03	-13.73	1.05	0.58	N	3.30	A	N
198	6.70	0.20	2.99	-12.42	0.95	0.58	N	3.26	A	N
199	7.30	0.39	5.34	-4.58	0.35	1.04	A	5.50	A	A
200	7.12	0.40	5.62	-6.93	0.53	1.06	A	5.77	A	A
201	6.85	0.23	3.36	-10.46	0.80	0.65	N	3.60	A	N
202	7.30	0.19	2.60	-4.58	0.35	0.55	A	2.91	A	A
203	7.58	0.22	2.90	-0.92	0.07	0.62	A	3.18	A	A
204	6.80	0.40	5.88	-11.11	0.85	1.06	A	6.03	A	A
206	7.70	0.60	7.79	0.65	0.05	1.57	A	7.90	A	A
207	7.34	0.14	1.91	-4.05	0.31	0.44	A	2.31	A	A
208	7.85	0.70	8.92	2.61	0.20	1.82	A	9.01	A	A
209	7.84	0.51	6.51	2.48	0.19	1.34	A	6.64	A	A
210	7.60	0.10	1.32	-0.65	0.05	0.36	A	1.85	A	A
212	7.62	0.23	3.02	-0.39	0.03	0.65	A	3.29	A	A
213	6.85	0.19	2.77	-10.46	0.80	0.55	N	3.07	A	N
214	6.60	0.30	4.55	-13.73	1.05	0.82	N	4.73	A	N
215	6.57	0.52	7.91	-14.12	1.08	1.37	A	8.02	A	A
216	6.73	0.58	8.62	-12.03	0.92	1.52	A	8.72	A	A
217	7.90	0.10	1.27	3.27	0.25	0.36	A	1.82	A	A
218	6.68	0.41	6.14	-12.68	0.97	1.09	A	6.28	A	A

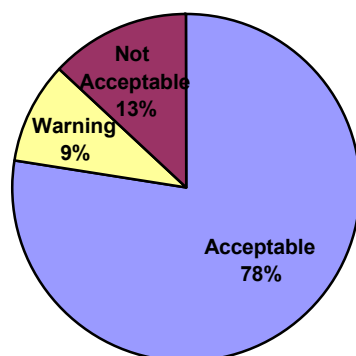
Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
220	7.80	1.28	16.41	1.96	0.15	3.31	A	16.46	N	W
222	7.40	0.50	6.76	-3.27	0.25	1.32	A	6.88	A	A
223	6.90	0.20	2.90	-9.80	0.75	0.58	N	3.18	A	W
225	7.61	0.22	2.89	-0.52	0.04	0.62	A	3.17	A	A
226	8.00	0.50	6.25	4.58	0.35	1.32	A	6.39	A	A
227	6.90	0.31	4.49	-9.80	0.75	0.84	A	4.68	A	A
228	6.79	0.21	3.09	-11.24	0.86	0.60	N	3.36	A	N
229	7.60	0.30	3.95	-0.65	0.05	0.82	A	4.16	A	A
230	6.50	0.40	6.15	-15.03	1.15	1.06	N	6.29	A	N
231	4.78	0.66	13.81	-37.52	2.87	1.72	N	13.87	N	N
232	8.99	1.46	16.24	17.52	1.34	3.78	A	16.29	N	N
233	7.00	0.11	1.57	-8.50	0.65	0.38	N	2.04	A	W
234	7.82	0.30	3.84	2.22	0.17	0.82	A	4.05	A	A
235	6.98	0.18	2.58	-8.76	0.67	0.53	N	2.89	A	W
236	7.30	0.20	2.74	-4.58	0.35	0.58	A	3.04	A	A
237	6.55	0.45	6.87	-14.38	1.10	1.19	A	6.99	A	A
239	6.89	0.53	7.69	-9.93	0.76	1.39	A	7.80	A	A
240	7.34	1.21	16.49	-4.05	0.31	3.13	A	16.54	N	W
241	6.88	0.19	2.76	-10.07	0.77	0.55	N	3.06	A	N
242	6.75	0.67	9.87	-11.75	0.90	1.74	A	9.95	A	A
243	1.69	0.07	3.97	-77.92	5.96	0.31	N	4.18	A	N
244	5.46	0.39	7.14	-28.63	2.19	1.04	N	7.26	A	N
245	7.53	0.27	3.59	-1.57	0.12	0.74	A	3.82	A	A
246	5.60	0.70	12.50	-26.80	2.05	1.82	N	12.57	N	N
248	6.30	0.70	11.11	-17.65	1.35	1.82	A	11.19	N	N
249	7.70	0.60	7.79	0.65	0.05	1.57	A	7.90	A	A
250	7.10	0.30	4.23	-7.19	0.55	0.82	A	4.42	A	A
251	6.30	0.10	1.59	-17.65	1.35	0.36	N	2.06	A	N
252	7.10	0.20	2.82	-7.19	0.55	0.58	A	3.11	A	A
253	7.19	0.38	5.29	-6.01	0.46	1.01	A	5.44	A	A
254	7.92	0.44	5.56	3.53	0.27	1.16	A	5.71	A	A
255	8.54	0.58	6.79	11.63	0.89	1.52	A	6.92	A	A
256	6.62	0.76	11.48	-13.46	1.03	1.98	A	11.55	N	N
257	7.60	0.28	3.68	-0.65	0.05	0.77	A	3.91	A	A
258	10.00	1.00	10.00	30.72	2.35	2.59	A	10.09	N	N
259	7.04	0.10	1.42	-7.97	0.61	0.36	N	1.93	A	W
260	7.34	0.16	2.18	-4.05	0.31	0.49	A	2.54	A	A
261	7.04	0.40	5.68	-7.97	0.61	1.06	A	5.83	A	A
262	8.00	0.40	5.00	4.58	0.35	1.06	A	5.17	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
263	6.88	0.36	5.23	-10.07	0.77	0.96	A	5.39	A	A
264	7.70	0.60	7.79	0.65	0.05	1.57	A	7.90	A	A
265	6.56	0.60	9.15	-14.25	1.09	1.57	A	9.24	A	A
268	6.80	1.50	22.06	-11.11	0.85	3.88	A	22.10	N	N
269	6.56	0.12	1.83	-14.25	1.09	0.40	N	2.25	A	N
270	6.05	0.32	5.29	-20.92	1.60	0.86	N	5.45	A	N
272	7.54	0.46	6.10	-1.44	0.11	1.21	A	6.24	A	A
275	7.62	0.16	2.10	-0.39	0.03	0.49	A	2.47	A	A
277	6.35	0.23	3.62	-16.99	1.30	0.65	N	3.85	A	N
278	6.73	0.59	8.77	-12.03	0.92	1.54	A	8.86	A	A
279	7.63	0.45	5.90	-0.26	0.02	1.19	A	6.04	A	A
280	6.21	0.17	2.74	-18.82	1.44	0.51	N	3.03	A	N
281	6.02	0.37	6.15	-21.31	1.63	0.99	N	6.28	A	N
284	7.00	0.20	2.86	-8.50	0.65	0.58	N	3.14	A	W
285	6.56	5.16	78.66	-14.25	1.09	13.32	A	78.67	N	N
286	6.86	0.21	3.06	-10.33	0.79	0.60	N	3.33	A	N
287	6.90	0.10	1.45	-9.80	0.75	0.36	N	1.95	A	W
288	7.42	0.15	2.02	-3.01	0.23	0.47	A	2.41	A	A
290	7.40	0.50	6.76	-3.27	0.25	1.32	A	6.88	A	A
291	6.97	0.21	3.01	-8.89	0.68	0.60	N	3.28	A	W
292	7.53	0.24	3.19	-1.57	0.12	0.67	A	3.44	A	A
293	6.61	0.25	3.78	-13.59	1.04	0.69	N	4.00	A	N
295	7.40	0.40	5.41	-3.27	0.25	1.06	A	5.56	A	A
296	6.40	0.50	7.81	-16.34	1.25	1.32	A	7.92	A	A
297	8.10	0.42	5.19	5.88	0.45	1.11	A	5.35	A	A
299	6.93	0.52	7.50	-9.41	0.72	1.37	A	7.62	A	A
300	8.10	0.30	3.70	5.88	0.45	0.82	A	3.93	A	A
302	6.19	0.41	6.62	-19.08	1.46	1.09	N	6.75	A	N
304	7.00	0.70	10.00	-8.50	0.65	1.82	A	10.09	N	W
305	6.70	0.50	7.46	-12.42	0.95	1.32	A	7.58	A	A
306	6.60	0.30	4.55	-13.73	1.05	0.82	N	4.73	A	N
307	7.30	0.40	5.48	-4.58	0.35	1.06	A	5.63	A	A
308	6.64	0.26	3.92	-13.20	1.01	0.72	N	4.13	A	N
309	6.60	0.26	3.94	-13.73	1.05	0.72	N	4.15	A	N
310	6.80	0.20	2.94	-11.11	0.85	0.58	N	3.22	A	N
311	6.90	0.50	7.25	-9.80	0.75	1.32	A	7.36	A	A
316	7.60	0.57	7.50	-0.65	0.05	1.49	A	7.61	A	A
317	6.42	0.11	1.71	-16.08	1.23	0.38	N	2.16	A	N
318	7.13	0.09	1.26	-6.80	0.52	0.35	N	1.82	A	W

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
319	6.83	0.16	2.34	-10.72	0.82	0.49	N	2.68	A	N
320	6.60	0.10	1.52	-13.73	1.05	0.36	N	2.00	A	N
321	7.26	0.22	3.03	-5.10	0.39	0.62	A	3.30	A	A
322	6.40	0.30	4.69	-16.34	1.25	0.82	N	4.87	A	N

Analyte: Cs-137 in spiked water, IAEA-445

Target Value: 8.12 ± 0.06 [Bq/kg]



Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
1	7.08	0.22	3.11	-12.81	1.04	0.59	N	3.19	A	N
2	8.80	0.20	2.27	8.37	0.68	0.54	N	2.39	A	W
3	8.64	0.44	5.09	6.40	0.52	1.15	A	5.15	A	A
4	8.14	0.17	2.09	0.25	0.02	0.47	A	2.22	A	A
5	8.10	0.36	4.44	-0.25	0.02	0.94	A	4.51	A	A
6	8.30	0.40	4.82	2.22	0.18	1.04	A	4.88	A	A
7	8.10	0.30	3.70	-0.25	0.02	0.79	A	3.78	A	A
8	8.10	0.31	3.83	-0.25	0.02	0.81	A	3.90	A	A
9	8.70	0.80	9.20	7.14	0.58	2.07	A	9.23	A	A
10	8.25	0.20	2.42	1.60	0.13	0.54	A	2.53	A	A
11	8.30	0.60	7.23	2.22	0.18	1.56	A	7.27	A	A
12	7.50	0.40	5.33	-7.64	0.62	1.04	A	5.38	A	A
13	8.51	0.66	7.76	4.80	0.39	1.71	A	7.79	A	A
14	7.80	0.40	5.13	-3.94	0.32	1.04	A	5.18	A	A
15	8.10	0.40	4.94	-0.25	0.02	1.04	A	4.99	A	A
16	7.80	0.90	11.54	-3.94	0.32	2.33	A	11.56	N	W
18	8.10	0.27	3.33	-0.25	0.02	0.71	A	3.41	A	A
19	7.84	0.23	2.93	-3.45	0.28	0.61	A	3.03	A	A
20	8.05	0.40	4.97	-0.86	0.07	1.04	A	5.02	A	A
21	7.70	0.27	3.51	-5.17	0.42	0.71	A	3.58	A	A
23	8.20	0.70	8.54	0.99	0.08	1.81	A	8.57	A	A
24	7.95	0.66	8.30	-2.09	0.17	1.71	A	8.33	A	A
25	8.29	0.41	4.95	2.09	0.17	1.07	A	5.00	A	A
26	8.06	1.61	19.98	-0.74	0.06	4.16	A	19.99	N	W
27	7.74	0.75	9.69	-4.68	0.38	1.94	A	9.72	A	A
28	8.39	0.31	3.69	3.33	0.27	0.81	A	3.77	A	A
29	7.94	0.46	5.79	-2.22	0.18	1.20	A	5.84	A	A
30	8.83	0.20	2.27	8.74	0.71	0.54	N	2.38	A	W
31	4.31	1.18	27.38	-46.92	3.81	3.05	N	27.39	N	N
33	8.75	0.40	4.57	7.76	0.63	1.04	A	4.63	A	A
34	7.90	0.20	2.53	-2.71	0.22	0.54	A	2.64	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
35	8.06	0.46	5.71	-0.74	0.06	1.20	A	5.75	A	A
36	8.20	0.49	5.98	0.99	0.08	1.27	A	6.02	A	A
37	7.38	0.26	3.51	-9.15	0.74	0.69	N	3.59	A	W
39	8.60	0.70	8.14	5.91	0.48	1.81	A	8.17	A	A
42	9.07	0.80	8.82	11.70	0.95	2.07	A	8.85	A	A
43	8.06	0.40	4.96	-0.74	0.06	1.04	A	5.02	A	A
44	7.60	0.43	5.66	-6.40	0.52	1.12	A	5.71	A	A
45	8.34	0.39	4.68	2.71	0.22	1.02	A	4.73	A	A
48	8.05	0.29	3.60	-0.86	0.07	0.76	A	3.68	A	A
49	7.90	0.40	5.06	-2.71	0.22	1.04	A	5.12	A	A
50	6.66	0.40	6.01	-17.98	1.46	1.04	N	6.05	A	N
51	7.55	0.39	5.17	-7.02	0.57	1.02	A	5.22	A	A
52	8.30	0.25	3.01	2.22	0.18	0.66	A	3.10	A	A
53	8.26	0.10	1.21	1.72	0.14	0.30	A	1.42	A	A
55	8.36	0.11	1.32	2.96	0.24	0.32	A	1.51	A	A
56	8.78	0.52	5.92	8.13	0.66	1.35	A	5.97	A	A
59	7.80	0.50	6.41	-3.94	0.32	1.30	A	6.45	A	A
62	8.32	0.45	5.41	2.46	0.20	1.17	A	5.46	A	A
63	8.50	0.70	8.24	4.68	0.38	1.81	A	8.27	A	A
64	8.03	0.11	1.37	-1.11	0.09	0.32	A	1.56	A	A
65	8.20	0.50	6.10	0.99	0.08	1.30	A	6.14	A	A
67	8.00	0.20	2.50	-1.48	0.12	0.54	A	2.61	A	A
69	8.80	0.50	5.68	8.37	0.68	1.30	A	5.73	A	A
70	8.41	0.61	7.25	3.57	0.29	1.58	A	7.29	A	A
71	7.91	1.47	18.58	-2.59	0.21	3.80	A	18.60	N	W
73	8.20	0.20	2.44	0.99	0.08	0.54	A	2.55	A	A
75	9.45	0.20	2.16	16.44	1.33	0.55	N	2.29	A	N
76	0.73	26.82	3699.11	-91.07	7.39	69.20	A	3699.11	N	N
77	8.46	0.11	1.30	4.19	0.34	0.32	N	1.50	A	W
78	9.30	0.50	5.38	14.53	1.18	1.30	A	5.43	A	A
79	7.10	0.20	2.82	-12.56	1.02	0.54	N	2.91	A	N
80	8.00	0.52	6.45	-1.48	0.12	1.34	A	6.49	A	A
81	6.70	0.40	5.97	-17.49	1.42	1.04	N	6.02	A	N
82	8.32	0.58	6.97	2.46	0.20	1.50	A	7.01	A	A
84	8.50	0.60	7.06	4.68	0.38	1.56	A	7.10	A	A
85	8.30	0.60	7.23	2.22	0.18	1.56	A	7.27	A	A
86	8.76	1.10	12.56	7.88	0.64	2.84	A	12.58	N	W
87	8.40	0.24	2.86	3.45	0.28	0.64	A	2.95	A	A
88	7.10	0.50	7.04	-12.56	1.02	1.30	A	7.08	A	A
89	4.08	0.12	2.94	-49.75	4.04	0.35	N	3.03	A	N
90	8.20	0.50	6.10	0.99	0.08	1.30	A	6.14	A	A
91	79.41	9.76	12.29	877.96	71.29	25.18	N	12.31	N	N
92	7.79	0.26	3.34	-4.06	0.33	0.69	A	3.42	A	A
93	9.10	0.20	2.20	12.07	0.98	0.54	N	2.32	A	N
95	7.60	0.50	6.58	-6.40	0.52	1.30	A	6.62	A	A
96	8.22	0.34	4.14	1.23	0.10	0.89	A	4.20	A	A
97	8.40	0.13	1.55	3.45	0.28	0.37	A	1.71	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
98	14.30	0.50	3.50	76.11	6.18	1.30	N	3.57	A	N
99	7.80	0.50	6.41	-3.94	0.32	1.30	A	6.45	A	A
101	8.20	0.40	4.88	0.99	0.08	1.04	A	4.93	A	A
102	8.40	0.30	3.57	3.45	0.28	0.79	A	3.65	A	A
103	8.12	0.00	0.01	0.00	0.00	0.15	A	0.74	A	A
104	8.00	0.40	5.00	-1.48	0.12	1.04	A	5.05	A	A
105	8.40	0.43	5.11	3.41	0.28	1.12	A	5.16	A	A
107	7.90	0.40	5.06	-2.71	0.22	1.04	A	5.12	A	A
108	7.65	0.29	3.79	-5.79	0.47	0.76	A	3.86	A	A
110	8.42	0.21	2.49	3.69	0.30	0.56	A	2.60	A	A
112	7.88	0.15	1.90	-2.96	0.24	0.42	A	2.04	A	A
113	7.76	0.27	3.48	-4.43	0.36	0.71	A	3.56	A	A
114	8.60	0.60	6.98	5.91	0.48	1.56	A	7.02	A	A
115	7.45	0.50	6.71	-8.25	0.67	1.30	A	6.75	A	A
116	8.24	0.41	4.98	1.48	0.12	1.07	A	5.03	A	A
117	9.34	0.35	3.75	15.02	1.22	0.92	N	3.82	A	N
118	7.90	0.60	7.59	-2.71	0.22	1.56	A	7.63	A	A
119	8.23	0.37	4.50	1.35	0.11	0.97	A	4.56	A	A
120	9.70	0.90	9.28	19.46	1.58	2.33	A	9.31	A	A
121	8.80	0.50	5.68	8.37	0.68	1.30	A	5.73	A	A
122	7.34	0.28	3.76	-9.59	0.78	0.73	N	3.83	A	W
123	8.26	1.66	20.10	1.72	0.14	4.29	A	20.11	N	W
124	8.64	0.34	3.94	6.40	0.52	0.89	A	4.00	A	A
125	36.78	0.15	0.41	352.96	28.66	0.42	N	0.84	A	N
126	8.58	0.83	9.65	5.67	0.46	2.14	A	9.68	A	A
127	7.20	0.39	5.42	-11.33	0.92	1.02	A	5.47	A	A
128	7.80	0.20	2.56	-3.94	0.32	0.54	A	2.67	A	A
129	5.68	0.26	4.58	-30.05	2.44	0.69	N	4.64	A	N
130	7.44	0.28	3.76	-8.37	0.68	0.74	A	3.84	A	A
131	8.90	0.60	6.74	9.61	0.78	1.56	A	6.78	A	A
132	26.80	7.00	26.12	230.05	18.68	18.06	N	26.13	N	N
133	7.80	0.90	11.54	-3.94	0.32	2.33	A	11.56	N	W
134	8.30	0.50	6.02	2.22	0.18	1.30	A	6.07	A	A
135	8.80	0.70	7.95	8.37	0.68	1.81	A	7.99	A	A
136	7.60	0.39	5.13	-6.40	0.52	1.02	A	5.18	A	A
137	8.09	0.25	3.09	-0.37	0.03	0.66	A	3.18	A	A
139	8.74	0.38	4.35	7.64	0.62	0.99	A	4.41	A	A
140	8.20	0.40	4.88	0.99	0.08	1.04	A	4.93	A	A
142	8.60	0.32	3.72	5.91	0.48	0.84	A	3.79	A	A
143	7.89	0.45	5.70	-2.83	0.23	1.17	A	5.75	A	A
144	8.00	0.40	5.00	-1.48	0.12	1.04	A	5.05	A	A
145	8.87	1.04	11.72	9.24	0.75	2.69	A	11.75	N	W
146	7.31	0.97	13.27	-9.98	0.81	2.51	A	13.29	N	W
147	7.70	0.20	2.60	-5.17	0.42	0.54	A	2.70	A	A
148	8.05	0.16	1.99	-0.86	0.07	0.44	A	2.12	A	A
149	8.24	0.10	1.21	1.48	0.12	0.30	A	1.42	A	A
150	8.50	0.60	7.06	4.68	0.38	1.56	A	7.10	A	A

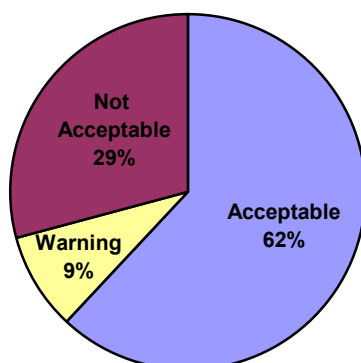
Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
151	7.77	0.30	3.86	-4.31	0.35	0.79	A	3.93	A	A
152	8.06	0.21	2.61	-0.74	0.06	0.56	A	2.71	A	A
153	10.02	0.55	5.49	23.40	1.90	1.43	N	5.54	A	N
154	8.17	0.33	4.04	0.62	0.05	0.87	A	4.11	A	A
155	8.20	0.30	3.66	0.99	0.08	0.79	A	3.73	A	A
156	7.96	0.29	3.64	-1.97	0.16	0.76	A	3.72	A	A
157	7.60	0.40	5.26	-6.40	0.52	1.04	A	5.31	A	A
160	8.32	0.48	5.77	2.46	0.20	1.25	A	5.82	A	A
161	7.80	0.60	7.69	-3.94	0.32	1.56	A	7.73	A	A
162	2.51	0.19	7.73	-69.09	5.61	0.52	N	7.76	A	N
163	8.32	0.36	4.32	2.45	0.20	0.94	A	4.38	A	A
164	8.30	0.14	1.69	2.22	0.18	0.39	A	1.84	A	A
165	11.95	0.23	1.92	47.17	3.83	0.61	N	2.06	A	N
166	8.10	0.28	3.46	-0.25	0.02	0.74	A	3.53	A	A
167	6.20	0.23	3.71	-23.65	1.92	0.61	N	3.78	A	N
168	7.62	0.26	3.41	-6.16	0.50	0.69	A	3.49	A	A
169	8.19	0.22	2.69	0.86	0.07	0.59	A	2.79	A	A
172	8.30	0.40	4.82	2.22	0.18	1.04	A	4.88	A	A
173	9.81	0.40	4.08	20.81	1.69	1.04	N	4.14	A	N
174	9.50	0.52	5.47	17.00	1.38	1.35	N	5.52	A	N
175	10.71	0.17	1.59	31.90	2.59	0.47	N	1.75	A	N
176	7.74	0.30	3.90	-4.74	0.38	0.79	A	3.96	A	A
177	9.19	0.86	9.36	13.18	1.07	2.22	A	9.39	A	A
178	7.93	0.12	1.51	-2.34	0.19	0.35	A	1.68	A	A
179	8.58	0.68	7.93	5.67	0.46	1.76	A	7.96	A	A
182	33.70	2.53	7.51	315.02	25.58	6.53	N	7.54	A	N
184	8.16	0.59	7.23	0.49	0.04	1.53	A	7.27	A	A
185	8.70	0.90	10.34	7.14	0.58	2.33	A	10.37	N	W
186	8.10	0.50	6.17	-0.25	0.02	1.30	A	6.22	A	A
187	8.20	0.40	4.88	0.99	0.08	1.04	A	4.93	A	A
188	7.98	0.42	5.26	-1.72	0.14	1.09	A	5.31	A	A
189	8.40	0.40	4.76	3.45	0.28	1.04	A	4.82	A	A
190	8.30	0.40	4.82	2.22	0.18	1.04	A	4.88	A	A
191	7.06	0.50	7.08	-13.05	1.06	1.30	A	7.12	A	A
192	8.15	0.44	5.40	0.37	0.03	1.15	A	5.45	A	A
194	8.60	0.20	2.33	5.91	0.48	0.54	A	2.44	A	A
195	9.20	0.20	2.17	13.30	1.08	0.54	N	2.30	A	N
196	8.10	0.20	2.47	-0.25	0.02	0.54	A	2.58	A	A
197	8.40	0.30	3.57	3.45	0.28	0.79	A	3.65	A	A
198	7.30	0.50	6.85	-10.10	0.82	1.30	A	6.89	A	A
199	7.99	0.37	4.63	-1.60	0.13	0.97	A	4.69	A	A
200	8.10	0.40	4.94	-0.25	0.02	1.04	A	4.99	A	A
201	8.80	0.36	4.09	8.37	0.68	0.94	A	4.16	A	A
202	8.12	0.15	1.85	0.00	0.00	0.42	A	1.99	A	A
203	8.44	0.20	2.37	3.94	0.32	0.54	A	2.48	A	A
204	8.00	0.40	5.00	-1.48	0.12	1.04	A	5.05	A	A
206	11.10	0.80	7.21	36.70	2.98	2.07	N	7.24	A	N

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
207	9.02	0.31	3.44	11.08	0.90	0.81	N	3.52	A	N
208	8.75	0.70	8.00	7.76	0.63	1.81	A	8.03	A	A
209	7.68	0.57	7.42	-5.42	0.44	1.48	A	7.46	A	A
210	8.20	0.30	3.66	0.99	0.08	0.79	A	3.73	A	A
212	8.84	0.19	2.15	8.87	0.72	0.51	N	2.27	A	W
213	8.22	0.26	3.16	1.23	0.10	0.69	A	3.25	A	A
214	8.40	0.40	4.76	3.45	0.28	1.04	A	4.82	A	A
215	7.07	0.53	7.50	-12.93	1.05	1.38	A	7.53	A	A
216	8.74	0.76	8.70	7.64	0.62	1.97	A	8.73	A	A
217	9.40	0.20	2.13	15.76	1.28	0.54	N	2.25	A	N
218	8.08	0.49	6.06	-0.49	0.04	1.27	A	6.11	A	A
220	8.40	1.34	15.95	3.45	0.28	3.46	A	15.97	N	W
222	9.60	0.60	6.25	18.23	1.48	1.56	A	6.29	A	A
223	8.70	0.20	2.30	7.14	0.58	0.54	N	2.41	A	W
225	8.12	0.20	2.46	0.00	0.00	0.54	A	2.57	A	A
226	8.90	0.60	6.74	9.61	0.78	1.56	A	6.78	A	A
227	7.99	0.47	5.88	-1.60	0.13	1.22	A	5.93	A	A
228	7.74	0.30	3.88	-4.68	0.38	0.79	A	3.95	A	A
229	8.60	0.40	4.65	5.91	0.48	1.04	A	4.71	A	A
230	9.40	0.70	7.45	15.76	1.28	1.81	A	7.48	A	A
231	6.37	0.49	7.69	-21.55	1.75	1.27	N	7.73	A	N
232	9.59	1.38	14.39	18.10	1.47	3.56	A	14.41	N	N
233	8.41	0.24	2.85	3.57	0.29	0.64	A	2.95	A	A
234	9.09	0.73	8.03	11.95	0.97	1.89	A	8.06	A	A
235	7.80	0.16	2.05	-3.94	0.32	0.44	A	2.18	A	A
236	7.73	0.30	3.88	-4.80	0.39	0.79	A	3.95	A	A
237	8.07	0.49	6.07	-0.62	0.05	1.27	A	6.12	A	A
239	7.66	0.25	3.26	-5.67	0.46	0.66	A	3.35	A	A
240	9.45	0.55	5.82	16.38	1.33	1.43	A	5.87	A	A
241	8.16	0.34	4.17	0.49	0.04	0.89	A	4.23	A	A
242	8.08	0.72	8.92	-0.46	0.04	1.87	A	8.95	A	A
243	1.72	0.04	2.50	-78.78	6.40	0.19	N	2.60	A	N
244	7.50	0.49	6.53	-7.64	0.62	1.27	A	6.57	A	A
245	8.16	0.22	2.70	0.49	0.04	0.59	A	2.80	A	A
246	6.60	0.80	12.12	-18.72	1.52	2.07	A	12.14	N	N
248	8.50	0.90	10.59	4.68	0.38	2.33	A	10.61	N	W
249	8.30	0.40	4.82	2.22	0.18	1.04	A	4.88	A	A
250	8.50	0.30	3.53	4.68	0.38	0.79	A	3.61	A	A
251	7.50	0.10	1.33	-7.64	0.62	0.30	N	1.52	A	W
252	8.40	0.30	3.57	3.45	0.28	0.79	A	3.65	A	A
253	8.71	0.47	5.40	7.27	0.59	1.22	A	5.45	A	A
254	8.34	0.35	4.20	2.71	0.22	0.92	A	4.26	A	A
255	7.14	0.46	6.44	-12.07	0.98	1.20	A	6.48	A	A
256	6.77	0.79	11.67	-16.63	1.35	2.04	A	11.69	N	N
257	8.10	0.18	2.22	-0.25	0.02	0.49	A	2.34	A	A
258	6.80	0.80	11.76	-16.26	1.32	2.07	A	11.79	N	N
259	8.47	0.11	1.30	4.31	0.35	0.32	N	1.49	A	W

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
260	8.38	0.17	2.03	3.20	0.26	0.47	A	2.16	A	A
261	8.18	0.41	5.01	0.74	0.06	1.07	A	5.07	A	A
262	8.20	0.20	2.44	0.99	0.08	0.54	A	2.55	A	A
263	8.25	0.44	5.33	1.60	0.13	1.15	A	5.38	A	A
264	9.20	0.60	6.52	13.30	1.08	1.56	A	6.56	A	A
265	7.94	0.70	8.82	-2.22	0.18	1.81	A	8.85	A	A
268	8.20	1.90	23.17	0.99	0.08	4.90	A	23.18	N	W
269	8.33	0.24	2.88	2.59	0.21	0.64	A	2.97	A	A
270	7.73	0.45	5.82	-4.80	0.39	1.17	A	5.87	A	A
272	8.08	0.45	5.57	-0.49	0.04	1.17	A	5.62	A	A
273	7.86	0.40	5.09	-3.20	0.26	1.04	A	5.14	A	A
275	8.50	0.22	2.59	4.68	0.38	0.59	A	2.69	A	A
277	8.00	0.31	3.88	-1.48	0.12	0.81	A	3.94	A	A
278	8.43	0.55	6.52	3.82	0.31	1.43	A	6.57	A	A
279	7.95	0.46	5.79	-2.09	0.17	1.20	A	5.83	A	A
280	7.90	0.26	3.29	-2.71	0.22	0.69	A	3.37	A	A
281	8.13	0.48	5.90	0.12	0.01	1.25	A	5.95	A	A
284	8.80	0.50	5.68	8.37	0.68	1.30	A	5.73	A	A
285	7.87	0.43	5.46	-3.08	0.25	1.12	A	5.51	A	A
286	7.24	0.22	3.04	-10.84	0.88	0.59	N	3.13	A	N
287	8.30	0.10	1.20	2.22	0.18	0.30	A	1.41	A	A
288	8.22	0.18	2.19	1.23	0.10	0.49	A	2.31	A	A
290	7.80	0.30	3.85	-3.94	0.32	0.79	A	3.92	A	A
291	8.85	0.32	3.62	8.99	0.73	0.84	A	3.69	A	A
292	8.05	0.25	3.11	-0.86	0.07	0.66	A	3.19	A	A
293	8.52	0.40	4.69	4.93	0.40	1.04	A	4.75	A	A
295	8.20	0.70	8.54	0.99	0.08	1.81	A	8.57	A	A
296	7.40	0.60	8.11	-8.87	0.72	1.56	A	8.14	A	A
297	8.71	0.31	3.56	7.27	0.59	0.81	A	3.64	A	A
299	10.10	0.80	7.92	24.38	1.98	2.07	A	7.96	A	A
300	9.90	0.30	3.03	21.92	1.78	0.79	N	3.12	A	N
302	7.40	0.62	8.38	-8.87	0.72	1.61	A	8.41	A	A
304	8.50	0.90	10.59	4.68	0.38	2.33	A	10.61	N	W
305	8.10	0.50	6.17	-0.25	0.02	1.30	A	6.22	A	A
306	7.90	0.40	5.06	-2.71	0.22	1.04	A	5.12	A	A
307	7.80	0.50	6.41	-3.94	0.32	1.30	A	6.45	A	A
308	7.88	0.35	4.44	-2.96	0.24	0.92	A	4.50	A	A
309	8.30	0.26	3.13	2.22	0.18	0.69	A	3.22	A	A
310	7.80	0.40	5.13	-3.94	0.32	1.04	A	5.18	A	A
311	7.80	0.40	5.13	-3.94	0.32	1.04	A	5.18	A	A
316	8.32	0.57	6.85	2.46	0.20	1.48	A	6.89	A	A
317	7.99	0.21	2.63	-1.60	0.13	0.56	A	2.73	A	A
318	7.90	0.12	1.52	-2.71	0.22	0.35	A	1.69	A	A
319	8.38	0.21	2.51	3.20	0.26	0.56	A	2.61	A	A
320	8.90	0.10	1.12	9.61	0.78	0.30	N	1.34	A	W
321	7.43	0.18	2.42	-8.50	0.69	0.49	N	2.53	A	W
322	7.50	0.10	1.33	-7.64	0.62	0.30	N	1.52	A	W

Analyte: Pb-210 in spiked water, IAEA-445

Target Value: 29.34 ± 0.5 [Bq/kg]



Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
1	17.50	7.40	42.29	-40.35	11.84	19.14	A	42.32	N	N
2	26.20	4.00	15.27	-10.70	3.14	10.40	A	15.36	A	A
3	43.73	11.73	26.82	49.05	14.39	30.29	A	26.88	N	N
4	30.00	2.00	6.67	2.25	0.66	5.32	A	6.88	A	A
7	37.00	10.00	27.03	26.11	7.66	25.83	A	27.08	N	N
8	32.90	3.83	11.64	12.13	3.56	9.97	A	11.77	A	A
9	22.00	11.00	50.00	-25.02	7.34	28.41	A	50.03	N	N
12	29.00	2.00	6.90	-1.16	0.34	5.32	A	7.10	A	A
13	31.50	4.60	14.60	7.36	2.16	11.94	A	14.70	A	A
14	20.90	2.50	11.96	-28.77	8.44	6.58	N	12.08	A	N
16	9.70	1.30	13.40	-66.94	19.64	3.59	N	13.51	A	N
18	25.90	2.74	10.58	-11.72	3.44	7.19	A	10.72	A	A
20	27.20	1.50	5.51	-7.29	2.14	4.08	A	5.77	A	A
21	11.78	4.40	37.35	-59.85	17.56	11.43	N	37.39	N	N
23	32.00	3.00	9.38	9.07	2.66	7.85	A	9.53	A	A
24	29.11	3.50	12.02	-0.78	0.23	9.12	A	12.14	A	A
27	30.70	5.46	17.79	4.64	1.36	14.15	A	17.87	A	A
28	42.00	7.00	16.67	43.15	12.66	18.11	A	16.75	A	A
30	26.70	2.00	7.49	-9.00	2.64	5.32	A	7.68	A	A
33	12.50	9.70	77.60	-57.40	16.84	25.06	A	77.62	N	N
35	26.50	2.60	9.81	-9.68	2.84	6.83	A	9.96	A	A
36	8.15	1.20	14.72	-72.22	21.19	3.35	N	14.82	A	N
37	23.91	2.30	9.63	-18.51	5.43	6.08	A	9.78	A	A
39	36.30	3.80	10.47	23.72	6.96	9.89	A	10.61	A	A
43	31.05	2.61	8.41	5.83	1.71	6.86	A	8.58	A	A
48	33.24	2.91	8.75	13.29	3.90	7.62	A	8.92	A	A
49	31.00	3.00	9.68	5.66	1.66	7.85	A	9.83	A	A
50	18.40	2.20	11.96	-37.29	10.94	5.82	N	12.08	A	N
53	29.18	0.73	2.50	-0.55	0.16	2.28	A	3.03	A	A
55	32.13	1.02	3.17	9.51	2.79	2.93	A	3.60	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
56	31.83	2.93	9.21	8.49	2.49	7.67	A	9.36	A	A
59	11.30	1.00	8.85	-61.49	18.04	2.88	N	9.01	A	N
60	96.00	10.00	10.42	227.20	66.66	25.83	N	10.56	A	N
62	34.80	4.00	11.49	18.61	5.46	10.40	A	11.62	A	A
63	24.00	2.00	8.33	-18.20	5.34	5.32	N	8.51	A	W
64	34.55	6.29	18.21	17.76	5.21	16.28	A	18.29	A	A
69	30.00	5.00	16.67	2.25	0.66	12.96	A	16.75	A	A
73	102.10	72.10	70.62	247.99	72.76	186.02	A	70.64	N	N
75	4493.65	416.32	9.26	15215.7	4464.31	1074.12	N	9.42	A	N
76	3.00			-89.78						
77	36.04	3.10	8.60	22.84	6.70	8.10	A	8.77	A	A
78	26.10	4.20	16.09	-11.04	3.24	10.91	A	16.18	A	A
80	40.60	1.38	3.40	38.38	11.26	3.79	N	3.80	A	N
82	22.70	4.50	19.82	-22.63	6.64	11.68	A	19.90	A	A
84	0.00	0.00		-100.00	29.34	1.29	N			
85	54.30	10.80	19.89	85.07	24.96	27.89	A	19.96	A	A
87	0.70	0.03	4.29	-97.61	28.64	1.29	N	4.61	A	N
89	<1									
90	25.10	2.90	11.55	-14.45	4.24	7.59	A	11.68	A	A
92	46.86	6.67	14.23	59.71	17.52	17.26	N	14.34	A	N
93	46.80	4.50	9.62	59.51	17.46	11.68	N	9.77	A	N
95	30.80	3.10	10.06	4.98	1.46	8.10	A	10.21	A	A
96	27.40	2.54	9.27	-6.61	1.94	6.68	A	9.43	A	A
99	45.90	5.40	11.76	56.44	16.56	13.99	N	11.89	A	N
102	29.00	4.00	13.79	-1.16	0.34	10.40	A	13.90	A	A
103	85.30	0.01	0.01	190.73	55.96	1.29	N	1.70	A	N
104	27.10	2.20	8.12	-7.63	2.24	5.82	A	8.30	A	A
105	29.88	2.01	6.73	1.84	0.54	5.35	A	6.95	A	A
107	25.70	1.30	5.06	-12.41	3.64	3.59	N	5.34	A	W
112	28.70	3.20	11.15	-2.18	0.64	8.36	A	11.28	A	A
113	27.25	1.51	5.54	-7.12	2.09	4.10	A	5.80	A	A
114	30.70	5.60	18.24	4.64	1.36	14.51	A	18.32	A	A
115	30.00	4.00	13.33	2.25	0.66	10.40	A	13.44	A	A
117	25.50	6.00	23.53	-13.09	3.84	15.53	A	23.59	A	A
118	29.10	4.40	15.12	-0.82	0.24	11.43	A	15.22	A	A
119	29.90	3.40	11.37	1.91	0.56	8.87	A	11.50	A	A
122	28.88	3.62	12.54	-1.56	0.46	9.43	A	12.66	A	A
124	39.40	2.80	7.11	34.29	10.06	7.34	N	7.31	A	N
126	38.90	5.64	14.50	32.58	9.56	14.61	A	14.60	A	A
127	35.10	3.01	8.58	19.63	5.76	7.87	A	8.74	A	A
129	65.69	5.21	7.93	123.89	36.35	13.50	N	8.11	A	N
130	25.40	2.20	8.66	-13.43	3.94	5.82	A	8.83	A	A
131	31.00	2.00	6.45	5.66	1.66	5.32	A	6.67	A	A
132	0.00			-100.00						
133	22.50	5.70	25.33	-23.31	6.84	14.76	A	25.39	N	W
135	97.80	34.00	34.76	233.33	68.46	87.73	A	34.81	N	N
137	10.50	3.50	33.33	-64.21	18.84	9.12	N	33.38	N	N

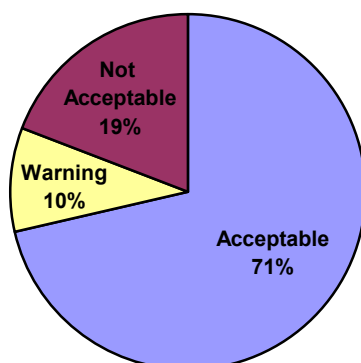
Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
139	<218									
142	32.40	2.30	7.10	10.43	3.06	6.07	A	7.30	A	A
144	33.30	5.90	17.72	13.50	3.96	15.28	A	17.80	A	A
146	<59.76	0.06								
147	28.70	1.50	5.23	-2.18	0.64	4.08	A	5.50	A	A
149	35.00	15.75	45.00	19.29	5.66	40.66	A	45.03	N	W
150	39.00	4.00	10.26	32.92	9.66	10.40	A	10.40	A	A
151	23.60	1.20	5.08	-19.56	5.74	3.35	N	5.36	A	W
152	27.90	2.90	10.39	-4.91	1.44	7.59	A	10.53	A	A
153	43.61	4.78	10.96	48.64	14.27	12.40	N	11.09	A	N
154	30.70	3.10	10.10	4.64	1.36	8.10	A	10.24	A	A
156	32.30	3.70	11.46	10.09	2.96	9.63	A	11.58	A	A
157	26.00	2.90	11.15	-11.38	3.34	7.59	A	11.28	A	A
161	26.20	4.70	17.94	-10.70	3.14	12.19	A	18.02	A	A
162	5.91	1.54	26.06	-79.86	23.43	4.18	N	26.11	N	N
163	26.59	2.52	9.48	-9.37	2.75	6.63	A	9.63	A	A
164	29.69	2.54	8.56	1.19	0.35	6.68	A	8.72	A	A
166	11.61	2.72	23.43	-60.43	17.73	7.14	N	23.49	A	N
169	38.83	3.10	7.98	32.34	9.49	8.10	N	8.16	A	N
172	10.80	2.40	22.22	-63.19	18.54	6.32	N	22.29	A	N
173	25.60	0.12	0.46	-12.75	3.74	1.33	N	1.77	A	W
176	28.85	2.68	9.30	-1.67	0.49	7.04	A	9.46	A	A
177	<0.0021									
178	30.80	0.90	2.92	4.98	1.46	2.66	A	3.38	A	A
182	29.81	1.02	3.42	1.60	0.47	2.93	A	3.82	A	A
184	8.31	1.32	15.88	-71.68	21.03	3.64	N	15.98	A	N
185	30.10	4.50	14.95	2.59	0.76	11.68	A	15.05	A	A
186	52.00	14.00	26.92	77.23	22.66	36.14	A	26.98	N	N
187	27.90	3.50	12.54	-4.91	1.44	9.12	A	12.66	A	A
188	<100	0.00								
189	35.50	12.00	33.80	21.00	6.16	30.99	A	33.85	N	W
190	26.50	1.90	7.17	-9.68	2.84	5.07	A	7.37	A	A
192	26.96	3.59	13.32	-8.11	2.38	9.35	A	13.42	A	A
194	36.80	3.10	8.42	25.43	7.46	8.10	A	8.59	A	A
195	49.30	2.80	5.68	68.03	19.96	7.34	N	5.93	A	N
196	24.20	1.50	6.20	-17.52	5.14	4.08	N	6.43	A	W
197	23.60	9.50	40.25	-19.56	5.74	24.54	A	40.29	N	W
200	30.52	4.90	16.06	4.02	1.18	12.71	A	16.15	A	A
202	30.65	1.50	4.89	4.46	1.31	4.08	A	5.18	A	A
203	33.60	2.28	6.79	14.52	4.26	6.02	A	7.00	A	A
204	31.40	3.40	10.83	7.02	2.06	8.87	A	10.96	A	A
207	26.10	3.60	13.79	-11.04	3.24	9.38	A	13.90	A	A
208	36.50	6.50	17.81	24.40	7.16	16.82	A	17.89	A	A
209	21.40	3.41	15.93	-27.06	7.94	8.89	A	16.03	A	A
212	31.30	1.20	3.83	6.68	1.96	3.35	A	4.20	A	A
213	8.00	3.50	43.75	-72.73	21.34	9.12	N	43.78	N	N
214	19.00	3.00	15.79	-35.24	10.34	7.85	N	15.88	A	N

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
215	25.54	3.69	14.45	-12.95	3.80	9.61	A	14.55	A	A
217	23.30	0.80	3.43	-20.59	6.04	2.43	N	3.83	A	W
220	12.00	0.88	7.33	-59.10	17.34	2.61	N	7.53	A	N
222	<73									
228	28.80	2.50	8.68	-1.84	0.54	6.58	A	8.85	A	A
229	30.70	1.60	5.21	4.64	1.36	4.32	A	5.48	A	A
230	18.70	9.60	51.34	-36.26	10.64	24.80	A	51.37	N	N
231	17.45	4.70	26.93	-40.52	11.89	12.19	A	26.99	N	N
232	23.70	1.47	6.20	-19.22	5.64	4.01	N	6.43	A	W
233	68.89	63.66	92.41	134.80	39.55	164.25	A	92.42	N	N
235	20.08	1.97	9.81	-31.56	9.26	5.24	N	9.96	A	N
236	30.10	3.60	11.96	2.59	0.76	9.38	A	12.08	A	A
237	28.27	2.60	9.20	-3.65	1.07	6.83	A	9.35	A	A
239	46.60	5.16	11.07	58.83	17.26	13.38	N	11.20	A	N
240	34.52	3.77	10.92	17.66	5.18	9.81	A	11.05	A	A
243	9.95	0.68	6.83	-66.09	19.39	2.18	N	7.04	A	N
244	25.30	1.80	7.11	-13.77	4.04	4.82	A	7.32	A	A
245	34.60	6.10	17.63	17.93	5.26	15.79	A	17.71	A	A
248	26.40	4.70	17.80	-10.02	2.94	12.19	A	17.88	A	A
249	32.50	1.50	4.62	10.77	3.16	4.08	A	4.92	A	A
250	47.60	5.50	11.55	62.24	18.26	14.25	N	11.68	A	N
251	31.20	7.70	24.68	6.34	1.86	19.91	A	24.74	A	A
253	42.60	2.90	6.81	45.19	13.26	7.59	N	7.02	A	N
254	27.44	2.15	7.84	-6.48	1.90	5.70	A	8.02	A	A
257	28.00	2.60	9.29	-4.57	1.34	6.83	A	9.44	A	A
262	33.00	7.00	21.21	12.47	3.66	18.11	A	21.28	A	A
264	35.10	6.10	17.38	19.63	5.76	15.79	A	17.46	A	A
268	99.30	37.70	37.97	238.45	69.96	97.27	A	38.00	N	N
270	43.95	6.34	14.43	49.80	14.61	16.41	A	14.53	A	A
272	36.80	4.60	12.50	25.43	7.46	11.94	A	12.62	A	A
275	32.32	5.39	16.68	10.16	2.98	13.97	A	16.76	A	A
278	28.74	6.68	23.24	-2.04	0.60	17.28	A	23.31	A	A
279	25.40	4.00	15.75	-13.43	3.94	10.40	A	15.84	A	A
284	1.20	0.20	16.67	-95.91	28.14	1.39	N	16.75	A	N
285	22.09	11.34	51.34	-24.71	7.25	29.29	A	51.36	N	W
286	25.50	0.60	2.35	-13.09	3.84	2.02	N	2.91	A	W
287	<28.9									
288	27.00	2.00	7.41	-7.98	2.34	5.32	A	7.60	A	A
290	27.00	15.00	55.56	-7.98	2.34	38.72	A	55.58	N	W
291	26.20	3.00	11.45	-10.70	3.14	7.85	A	11.58	A	A
292	27.70	2.11	7.62	-5.59	1.64	5.59	A	7.81	A	A
293	27.99	2.68	9.57	-4.60	1.35	7.03	A	9.73	A	A
296	27.00	8.40	31.11	-7.98	2.34	21.71	A	31.16	N	W
297	30.60	2.90	9.48	4.29	1.26	7.59	A	9.63	A	A
299	31.60	5.60	17.72	7.70	2.26	14.51	A	17.80	A	A
302	8.50	1.10	12.94	-71.03	20.84	3.12	N	13.05	A	N
304	30.60	3.10	10.13	4.29	1.26	8.10	A	10.27	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
306	44.40	2.00	4.50	51.33	15.06	5.32	N	4.82	A	N
308	44.90	4.00	8.91	53.03	15.56	10.40	N	9.07	A	N
310	28.00	4.10	14.64	-4.57	1.34	10.66	A	14.74	A	A
316	20.66	2.70	13.07	-29.58	8.68	7.08	N	13.18	A	N
317	47.48	8.45	17.80	61.83	18.14	21.84	A	17.88	A	A
319	29.80	1.79	6.01	1.57	0.46	4.79	A	6.24	A	A
320	28.70	0.60	2.09	-2.18	0.64	2.02	A	2.70	A	A

Analyte: Am-241 in spiked water, IAEA-445

Target Value: 7.11 ± 0.05 [Bq/kg]



Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
1	6.66	0.40	6.01	-6.33	0.45	1.04	A	6.05	A	A
2	7.30	0.50	6.85	2.67	0.19	1.30	A	6.89	A	A
3	7.59	0.55	7.25	6.75	0.48	1.42	A	7.28	A	A
4	7.15	0.21	2.94	0.56	0.04	0.56	A	3.02	A	A
5	7.56	0.38	5.03	6.33	0.45	0.99	A	5.08	A	A
6	5.80	0.80	13.79	-18.42	1.31	2.07	A	13.81	A	A
7	6.80	0.30	4.41	-4.36	0.31	0.78	A	4.47	A	A
8	5.99	0.54	9.02	-15.75	1.12	1.40	A	9.04	A	A
9	8.40	1.40	16.67	18.14	1.29	3.61	A	16.68	N	N
10	6.97	0.56	8.03	-1.97	0.14	1.45	A	8.07	A	A
11	8.20	1.10	13.41	15.33	1.09	2.84	A	13.43	A	A
12	6.60	0.70	10.61	-7.17	0.51	1.81	A	10.63	A	A
13	6.99	0.56	8.01	-1.69	0.12	1.45	A	8.04	A	A
14	7.30	0.90	12.33	2.67	0.19	2.33	A	12.35	A	A
15	7.20	0.40	5.56	1.27	0.09	1.04	A	5.60	A	A
16	7.30	1.20	16.44	2.67	0.19	3.10	A	16.45	N	W
18	5.90	0.74	12.54	-17.02	1.21	1.91	A	12.56	A	A
19	7.36	0.46	6.25	3.52	0.25	1.19	A	6.29	A	A
20	7.10	0.30	4.23	-0.14	0.01	0.78	A	4.28	A	A
21	5.38	0.50	9.29	-24.33	1.73	1.30	N	9.32	A	N
23	7.70	0.70	9.09	8.30	0.59	1.81	A	9.12	A	A
24	7.13	0.56	7.85	0.28	0.02	1.45	A	7.89	A	A
26	7.20	1.44	20.00	1.27	0.09	3.72	A	20.01	N	W
27	6.83	0.80	11.73	-3.94	0.28	2.07	A	11.75	A	A
28	5.97	0.32	5.36	-16.03	1.14	0.84	N	5.41	A	N
29	7.32	0.81	11.07	2.95	0.21	2.09	A	11.09	A	A
30	4.94	0.22	4.45	-30.52	2.17	0.58	N	4.51	A	N
31	2.32	1.27	54.74	-67.37	4.79	3.28	N	54.75	N	N
33	16.10	1.10	6.83	126.44	8.99	2.84	N	6.87	A	N
34	6.20	0.70	11.29	-12.80	0.91	1.81	A	11.31	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
35	7.01	0.45	6.42	-1.41	0.10	1.17	A	6.46	A	A
36	6.83	0.62	9.08	-3.94	0.28	1.60	A	9.10	A	A
37	6.51	0.19	2.96	-8.42	0.60	0.51	N	3.04	A	W
39	6.80	0.20	2.94	-4.36	0.31	0.53	A	3.02	A	A
43	6.42	0.54	8.41	-9.70	0.69	1.40	A	8.44	A	A
45	7.00	0.60	8.57	-1.55	0.11	1.55	A	8.60	A	A
48	7.82	0.26	3.32	9.99	0.71	0.68	N	3.40	A	W
49	6.90	0.30	4.35	-2.95	0.21	0.78	A	4.40	A	A
50	5.42	0.29	5.35	-23.77	1.69	0.76	N	5.40	A	N
52	6.30	0.66	10.48	-11.39	0.81	1.71	A	10.50	A	A
53	7.12	0.10	1.40	0.14	0.01	0.29	A	1.57	A	A
55	7.14	0.11	1.54	0.42	0.03	0.31	A	1.69	A	A
56	7.00	0.55	7.86	-1.55	0.11	1.42	A	7.89	A	A
59	6.70	0.40	5.97	-5.77	0.41	1.04	A	6.01	A	A
60	1.40	0.10	7.14	-80.31	5.71	0.29	N	7.18	A	N
62	7.61	0.53	6.96	7.03	0.50	1.37	A	7.00	A	A
63	8.00	0.70	8.75	12.52	0.89	1.81	A	8.78	A	A
64	7.18	0.22	3.06	0.98	0.07	0.58	A	3.14	A	A
65	7.30	0.50	6.85	2.67	0.19	1.30	A	6.89	A	A
69	7.70	0.10	1.30	8.30	0.59	0.29	N	1.48	A	W
70	7.27	1.95	26.82	2.25	0.16	5.03	A	26.83	N	W
73	8.20	2.30	28.05	15.33	1.09	5.94	A	28.06	N	N
75	7.64	0.29	3.84	7.40	0.53	0.77	A	3.91	A	A
76	0.91			-87.26						
77	7.57	0.22	2.91	6.47	0.46	0.58	A	2.99	A	A
78	7.30	0.60	8.22	2.67	0.19	1.55	A	8.25	A	A
79	5.40	0.30	5.56	-24.05	1.71	0.78	N	5.60	A	N
80	5.54	0.84	15.09	-22.08	1.57	2.16	A	15.11	N	N
82	6.50	0.65	10.00	-8.58	0.61	1.68	A	10.02	A	A
84	8.50	1.40	16.47	19.55	1.39	3.61	A	16.49	N	N
85	10.90	2.00	18.35	53.31	3.79	5.16	A	18.36	N	N
89	3.54	0.42	11.86	-50.21	3.57	1.09	N	11.89	A	N
90	6.60	0.90	13.64	-7.17	0.51	2.33	A	13.65	A	A
92	6.34	0.36	5.68	-10.83	0.77	0.94	A	5.72	A	A
93	7.50	0.40	5.33	5.49	0.39	1.04	A	5.38	A	A
95	6.80	0.50	7.35	-4.36	0.31	1.30	A	7.39	A	A
96	7.52	0.37	4.92	5.77	0.41	0.96	A	4.97	A	A
99	9.60	0.50	5.21	35.02	2.49	1.30	N	5.26	A	N
101	6.20	0.60	9.68	-12.80	0.91	1.55	A	9.70	A	A
102	7.30	0.30	4.11	2.67	0.19	0.78	A	4.17	A	A
103	13.20	0.00	0.01	85.65	6.09	0.13	N	0.70	A	N
104	6.60	0.40	6.06	-7.17	0.51	1.04	A	6.10	A	A
105	6.75	0.31	4.58	-5.12	0.36	0.81	A	4.63	A	A
107	7.20	0.40	5.56	1.27	0.09	1.04	A	5.60	A	A
108	6.43	0.43	6.69	-9.56	0.68	1.12	A	6.72	A	A
110	7.33	0.39	5.32	3.09	0.22	1.01	A	5.37	A	A
111	7.11	0.15	2.11	0.00	0.00	0.41	A	2.22	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
112	6.59	0.18	2.73	-7.31	0.52	0.48	N	2.82	A	W
113	7.05	0.25	3.55	-0.84	0.06	0.66	A	3.62	A	A
114	5.90	0.30	5.08	-17.02	1.21	0.78	N	5.13	A	N
115	6.82	0.80	11.73	-4.08	0.29	2.07	A	11.75	A	A
117	8.91	1.30	14.59	25.32	1.80	3.36	A	14.61	A	A
118	6.41	0.64	9.98	-9.85	0.70	1.66	A	10.01	A	A
119	7.01	0.33	4.71	-1.41	0.10	0.86	A	4.76	A	A
120	9.60	1.70	17.71	35.02	2.49	4.39	A	17.72	N	N
121	7.40	0.50	6.76	4.08	0.29	1.30	A	6.79	A	A
122	6.97	0.52	7.43	-1.93	0.14	1.34	A	7.46	A	A
124	6.45	0.41	6.36	-9.28	0.66	1.07	A	6.40	A	A
126	7.61	0.90	11.84	7.03	0.50	2.33	A	11.86	A	A
127	7.50	0.32	4.27	5.49	0.39	0.84	A	4.32	A	A
129	8.08	0.78	9.65	13.64	0.97	2.02	A	9.68	A	A
130	9.65	0.46	4.77	35.72	2.54	1.19	N	4.82	A	N
131	7.30	0.90	12.33	2.67	0.19	2.33	A	12.35	A	A
132	0.00			-100.00						
133	8.20	1.00	12.20	15.33	1.09	2.58	A	12.22	A	A
135	6.40	0.80	12.50	-9.99	0.71	2.07	A	12.52	A	A
136	6.50	4.50	69.23	-8.58	0.61	11.61	A	69.23	N	W
137	7.20	0.70	9.72	1.27	0.09	1.81	A	9.75	A	A
139	7.66	0.46	6.01	7.74	0.55	1.19	A	6.05	A	A
142	8.10	0.40	4.94	13.92	0.99	1.04	A	4.99	A	A
143	7.20	1.10	15.28	1.27	0.09	2.84	A	15.29	N	W
144	7.60	0.80	10.53	6.89	0.49	2.07	A	10.55	A	A
146	<10.57	0.01								
147	6.90	0.20	2.90	-2.95	0.21	0.53	A	2.98	A	A
149	6.40	0.31	4.84	-9.99	0.71	0.81	A	4.89	A	A
150	7.50	0.70	9.33	5.49	0.39	1.81	A	9.36	A	A
151	6.80	0.30	4.41	-4.36	0.31	0.78	A	4.47	A	A
152	6.47	0.31	4.79	-9.00	0.64	0.81	A	4.84	A	A
153	10.20	0.99	9.71	43.46	3.09	2.56	N	9.73	A	N
154	7.34	0.41	5.59	3.23	0.23	1.07	A	5.63	A	A
156	6.81	0.32	4.70	-4.22	0.30	0.84	A	4.75	A	A
157	7.20	0.70	9.72	1.27	0.09	1.81	A	9.75	A	A
158	10.40	1.00	9.62	46.27	3.29	2.58	N	9.64	A	N
160	5.37	0.76	14.15	-24.47	1.74	1.97	A	14.17	A	A
161	7.90	0.70	8.86	11.11	0.79	1.81	A	8.89	A	A
162	4.95	0.27	5.45	-30.38	2.16	0.71	N	5.50	A	N
163	7.43	0.30	4.04	4.50	0.32	0.78	A	4.10	A	A
164	7.34	0.33	4.50	3.23	0.23	0.86	A	4.55	A	A
166	5.99	0.55	9.18	-15.75	1.12	1.42	A	9.21	A	A
167	8.57	0.70	8.17	20.53	1.46	1.81	A	8.20	A	A
169	7.36	0.24	3.26	3.52	0.25	0.63	A	3.34	A	A
172	8.70	1.10	12.64	22.36	1.59	2.84	A	12.66	A	A
176	6.59	0.31	4.64	-7.27	0.52	0.80	A	4.69	A	A
177	7.18	0.31	4.32	0.98	0.07	0.81	A	4.37	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
178	6.47	0.10	1.55	-9.00	0.64	0.29	N	1.70	A	W
179	5.81	0.44	7.57	-18.28	1.30	1.14	N	7.61	A	N
184	7.39	0.58	7.85	3.94	0.28	1.50	A	7.88	A	A
185	7.80	0.80	10.26	9.70	0.69	2.07	A	10.28	A	A
186	8.60	0.80	9.30	20.96	1.49	2.07	A	9.33	A	A
187	7.10	0.40	5.63	-0.14	0.01	1.04	A	5.68	A	A
188	7.52	0.91	12.10	5.77	0.41	2.35	A	12.12	A	A
189	7.50	0.60	8.00	5.49	0.39	1.55	A	8.03	A	A
190	7.20	0.30	4.17	1.27	0.09	0.78	A	4.23	A	A
191	6.40	0.51	7.97	-9.99	0.71	1.32	A	8.00	A	A
192	7.06	0.35	4.96	-0.70	0.05	0.91	A	5.01	A	A
194	7.80	0.20	2.56	9.70	0.69	0.53	N	2.66	A	W
196	7.30	0.20	2.74	2.67	0.19	0.53	A	2.83	A	A
197	7.90	3.80	48.10	11.11	0.79	9.80	A	48.11	N	W
198	5.90	2.60	44.07	-17.02	1.21	6.71	A	44.07	N	N
199	7.33	0.57	7.78	3.09	0.22	1.48	A	7.81	A	A
200	7.36	0.90	12.23	3.52	0.25	2.33	A	12.25	A	A
201	6.82	0.60	8.80	-4.08	0.29	1.55	A	8.83	A	A
202	7.40	0.27	3.65	4.08	0.29	0.71	A	3.72	A	A
203	7.56	0.43	5.69	6.33	0.45	1.12	A	5.73	A	A
204	8.60	0.90	10.47	20.96	1.49	2.33	A	10.49	A	A
206	14.80	1.00	6.76	108.16	7.69	2.58	N	6.79	A	N
207	8.16	0.46	5.64	14.77	1.05	1.19	A	5.68	A	A
208	6.82	0.85	12.46	-4.08	0.29	2.20	A	12.48	A	A
209	6.49	0.83	12.79	-8.72	0.62	2.15	A	12.81	A	A
210	6.10	1.30	21.31	-14.21	1.01	3.36	A	21.32	N	W
212	7.22	0.19	2.63	1.55	0.11	0.51	A	2.72	A	A
213	5.91	0.31	5.25	-16.88	1.20	0.81	N	5.29	A	N
214	6.20	0.40	6.45	-12.80	0.91	1.04	A	6.49	A	A
215	6.22	0.82	13.18	-12.52	0.89	2.12	A	13.20	A	A
216	3.33	0.49	14.71	-53.16	3.78	1.27	N	14.73	A	N
217	6.10	0.10	1.64	-14.21	1.01	0.29	N	1.78	A	W
218	6.65	0.50	7.52	-6.47	0.46	1.30	A	7.55	A	A
222	8.70	0.90	10.34	22.36	1.59	2.33	A	10.37	A	A
223	5.80	0.90	15.52	-18.42	1.31	2.33	A	15.53	N	N
225	8.38	0.41	4.89	17.86	1.27	1.07	N	4.94	A	N
226	6.20	1.10	17.74	-12.80	0.91	2.84	A	17.76	N	W
227	7.38	0.91	12.33	3.80	0.27	2.35	A	12.35	A	A
228	8.36	0.33	3.95	17.58	1.25	0.86	N	4.01	A	N
229	7.30	0.30	4.11	2.67	0.19	0.78	A	4.17	A	A
230	6.00	0.50	8.33	-15.61	1.11	1.30	A	8.36	A	A
231	5.75	0.55	9.57	-19.13	1.36	1.42	A	9.59	A	A
232	7.06	1.18	16.71	-0.70	0.05	3.05	A	16.73	N	W
233	7.86	0.30	3.82	10.55	0.75	0.78	A	3.88	A	A
235	5.88	0.26	4.42	-17.30	1.23	0.68	N	4.48	A	N
236	7.30	0.36	4.93	2.67	0.19	0.94	A	4.98	A	A
237	7.14	0.55	7.70	0.42	0.03	1.42	A	7.74	A	A

Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
239	7.35	0.59	8.03	3.38	0.24	1.53	A	8.06	A	A
240	6.72	0.42	6.25	-5.49	0.39	1.09	A	6.29	A	A
241	6.59	0.70	10.62	-7.31	0.52	1.81	A	10.65	A	A
242	4.84	3.18	65.70	-31.90	2.27	8.21	A	65.70	N	N
243	2.34	0.06	2.69	-67.05	4.77	0.21	N	2.78	A	N
244	6.26	0.45	7.19	-11.95	0.85	1.17	A	7.22	A	A
245	7.71	0.43	5.58	8.44	0.60	1.12	A	5.62	A	A
246	2.40	0.70	29.17	-66.24	4.71	1.81	N	29.18	N	N
248	7.20	0.90	12.50	1.27	0.09	2.33	A	12.52	A	A
249	7.40	0.30	4.05	4.08	0.29	0.78	A	4.11	A	A
250	6.70	0.20	2.99	-5.77	0.41	0.53	A	3.07	A	A
251	3.72	1.04	27.96	-47.68	3.39	2.69	N	27.97	N	N
252	7.60	0.50	6.58	6.89	0.49	1.30	A	6.62	A	A
253	7.68	0.42	5.47	8.02	0.57	1.09	A	5.51	A	A
254	7.39	0.27	3.65	3.94	0.28	0.71	A	3.72	A	A
255	4.55	0.68	14.95	-36.01	2.56	1.76	N	14.96	A	N
257	7.30	0.29	3.97	2.67	0.19	0.76	A	4.03	A	A
258	10.60	1.00	9.43	49.09	3.49	2.58	N	9.46	A	N
259	7.22	0.37	5.12	1.55	0.11	0.96	A	5.17	A	A
260	7.45	0.41	5.50	4.78	0.34	1.07	A	5.55	A	A
261	6.18	1.06	17.15	-13.08	0.93	2.74	A	17.17	N	W
262	2.70	0.50	18.52	-62.03	4.41	1.30	N	18.53	N	N
263	6.66	0.46	6.91	-6.33	0.45	1.19	A	6.94	A	A
264	8.10	0.70	8.64	13.92	0.99	1.81	A	8.67	A	A
265	6.54	0.60	9.17	-8.02	0.57	1.55	A	9.20	A	A
268	6.80	2.40	35.29	-4.36	0.31	6.19	A	35.30	N	W
269	6.24	1.69	27.08	-12.24	0.87	4.36	A	27.09	N	W
270	6.69	0.92	13.75	-5.91	0.42	2.38	A	13.77	A	A
272	7.60	0.47	6.18	6.89	0.49	1.22	A	6.22	A	A
275	7.58	0.54	7.12	6.61	0.47	1.40	A	7.16	A	A
277	8.62	2.16	25.06	21.24	1.51	5.57	A	25.07	N	N
278	8.32	0.62	7.45	17.02	1.21	1.60	A	7.49	A	A
279	6.95	0.55	7.91	-2.25	0.16	1.42	A	7.94	A	A
280	9.20	1.17	12.72	29.40	2.09	3.02	A	12.74	A	A
284	7.30	1.40	19.18	2.67	0.19	3.61	A	19.19	N	W
285	6.39	1.73	27.07	-10.13	0.72	4.47	A	27.08	N	W
286	6.99	0.33	4.72	-1.69	0.12	0.86	A	4.77	A	A
287	6.70	0.20	2.99	-5.77	0.41	0.53	A	3.07	A	A
288	6.90	0.30	4.35	-2.95	0.21	0.78	A	4.40	A	A
290	6.20	0.60	9.68	-12.80	0.91	1.55	A	9.70	A	A
291	7.05	0.29	4.11	-0.84	0.06	0.76	A	4.17	A	A
292	7.13	0.30	4.21	0.28	0.02	0.78	A	4.27	A	A
293	7.27	0.40	5.50	2.25	0.16	1.04	A	5.55	A	A
295	4.60	1.10	23.91	-35.30	2.51	2.84	A	23.92	N	N
296	6.40	1.10	17.19	-9.99	0.71	2.84	A	17.20	N	W
297	6.51	0.42	6.45	-8.44	0.60	1.09	A	6.49	A	A
299	8.65	2.00	23.12	21.66	1.54	5.16	A	23.13	N	N

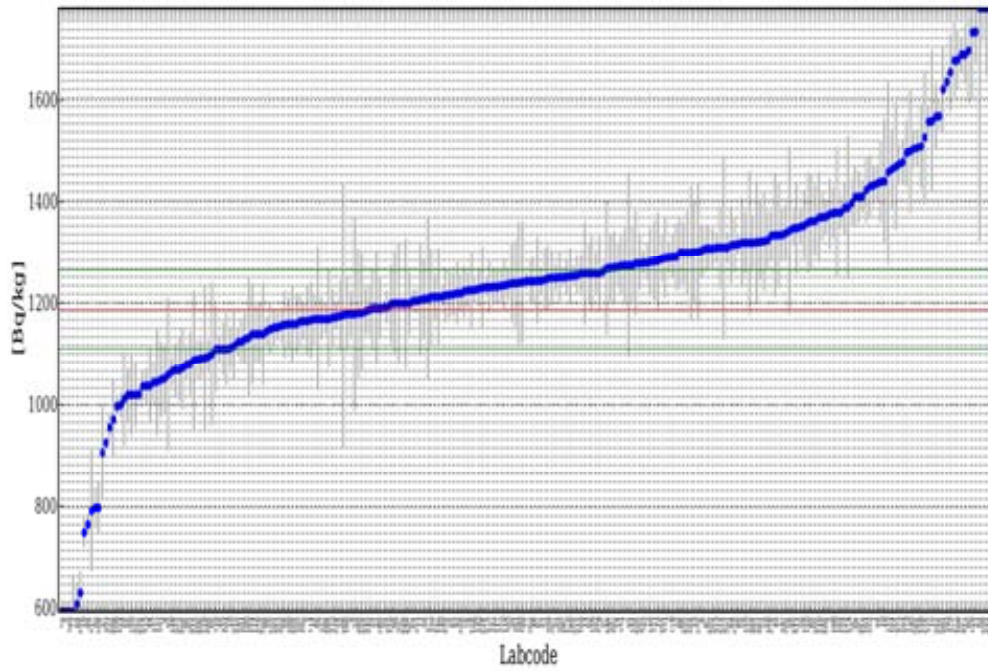
Lab code	Rep. Value	Rep. Unc.	Unc. [%]	Rel. Bias	A1	A2	True	P	Prec.	Final Score
300	9.00	1.00	11.11	26.58	1.89	2.58	A	11.13	A	A
302	6.43	0.51	7.93	-9.56	0.68	1.32	A	7.96	A	A
304	7.30	0.70	9.59	2.67	0.19	1.81	A	9.61	A	A
305	12.00	2.50	20.83	68.78	4.89	6.45	A	20.85	N	N
306	8.30	0.50	6.02	16.74	1.19	1.30	A	6.07	A	A
308	8.46	0.29	3.43	18.99	1.35	0.76	N	3.50	A	N
309	5.80	0.49	8.45	-18.42	1.31	1.27	N	8.48	A	N
310	6.90	0.70	10.14	-2.95	0.21	1.81	A	10.17	A	A
311	7.10	0.60	8.45	-0.14	0.01	1.55	A	8.48	A	A
316	8.78	0.72	8.20	23.49	1.67	1.86	A	8.23	A	A
317	6.57	0.32	4.87	-7.59	0.54	0.84	A	4.92	A	A
318	7.73	0.83	10.74	8.72	0.62	2.15	A	10.76	A	A
319	6.71	0.33	4.92	-5.63	0.40	0.86	A	4.97	A	A
320	7.10	0.10	1.41	-0.14	0.01	0.29	A	1.57	A	A
321	6.06	0.50	8.25	-14.77	1.05	1.30	A	8.28	A	A
322	6.90	0.30	4.35	-2.95	0.21	0.78	A	4.40	A	A

APPENDIX III. S-SHAPE AND Z-SCORE CHARTS

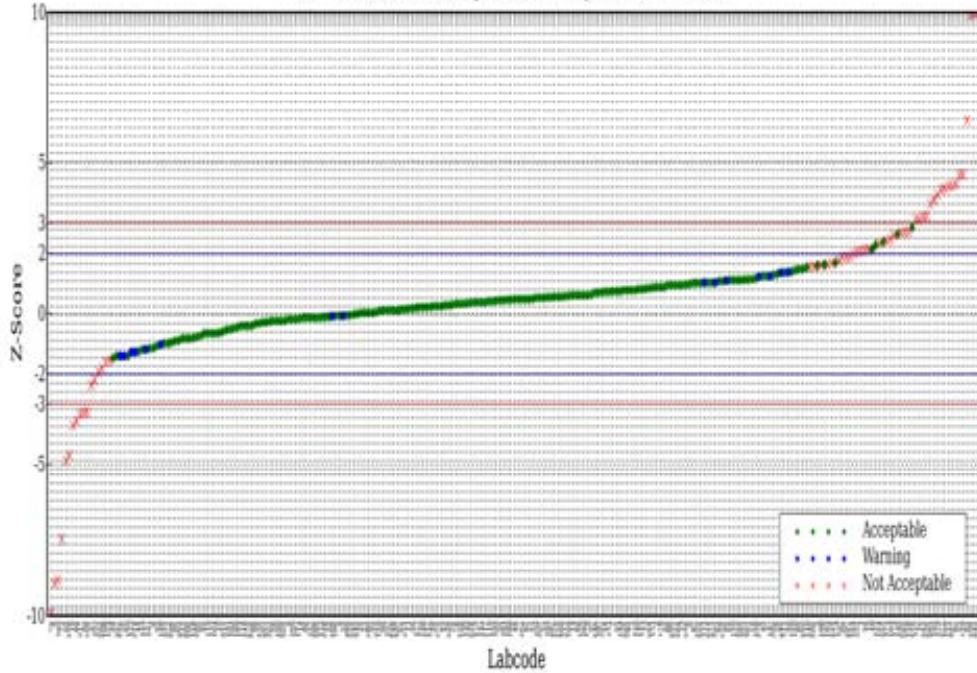
On the S-shape charts the IAEA target value is represented by a red line, and the respective combined standard uncertainty [u] is represented by two green lines.

On the z-score charts warning limits are represented by blue lines, action limits by red lines.

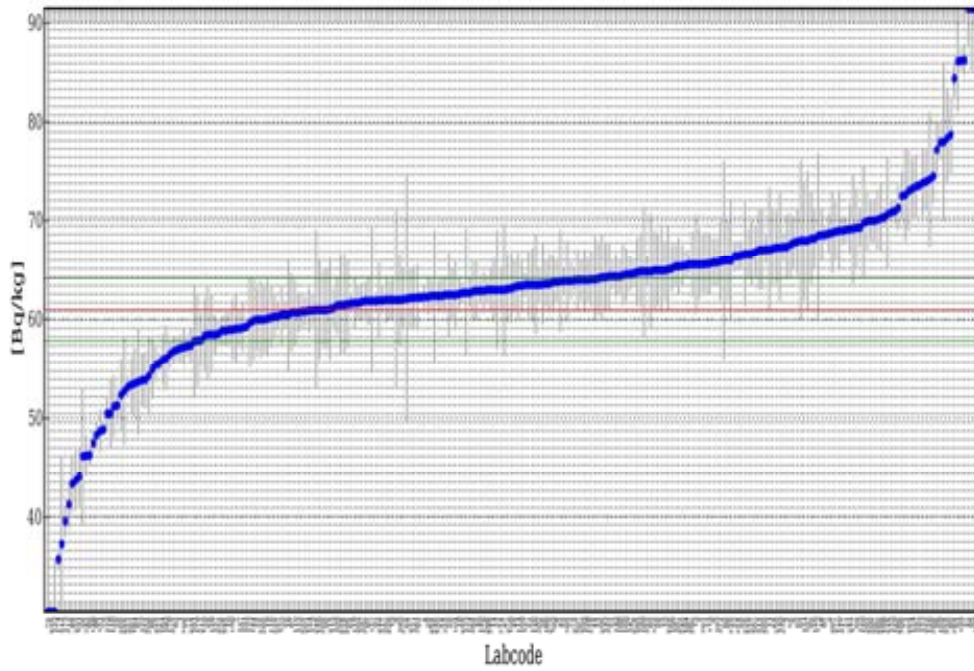
S-Shape chart, Analyte: K-40 in Spinach, IAEA-330



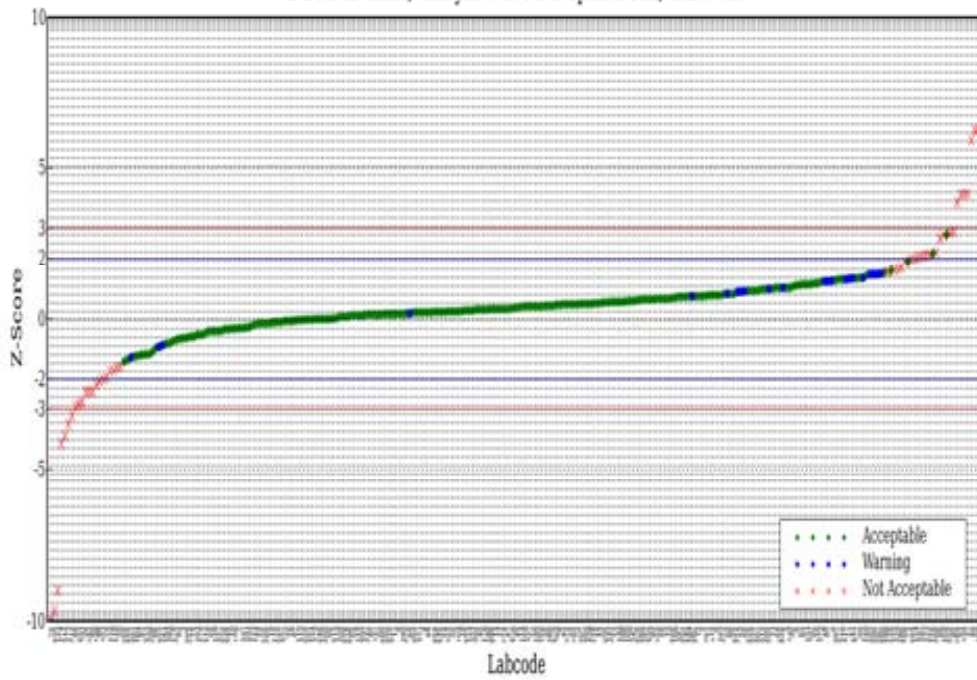
Z-Scores chart, Analyte: K-40 in Spinach, IAEA-330



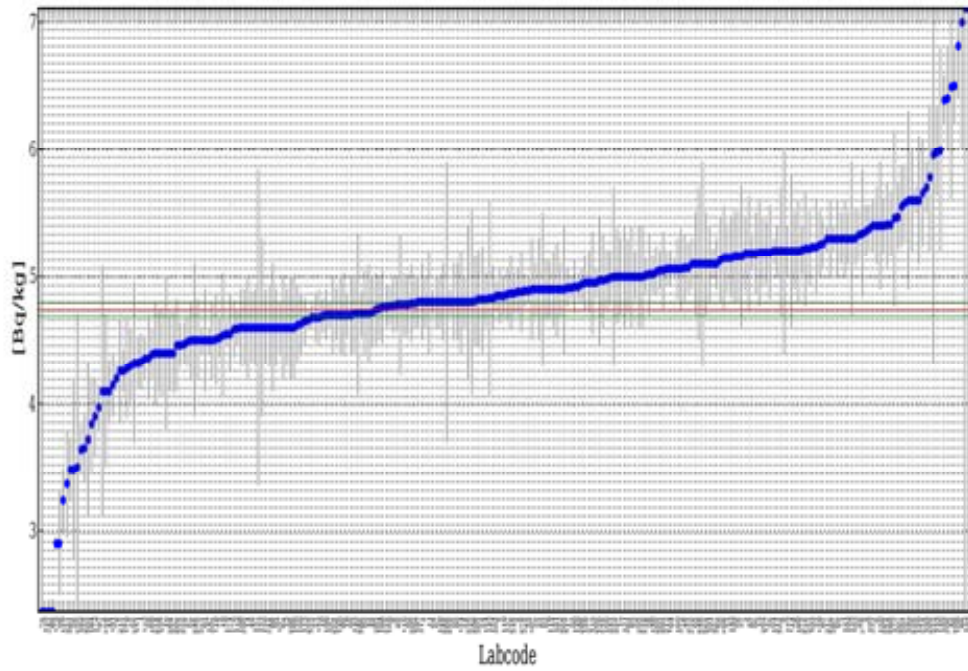
S-Shape chart, Analyte: Mn-54 in spiked Soil, IAEA-444



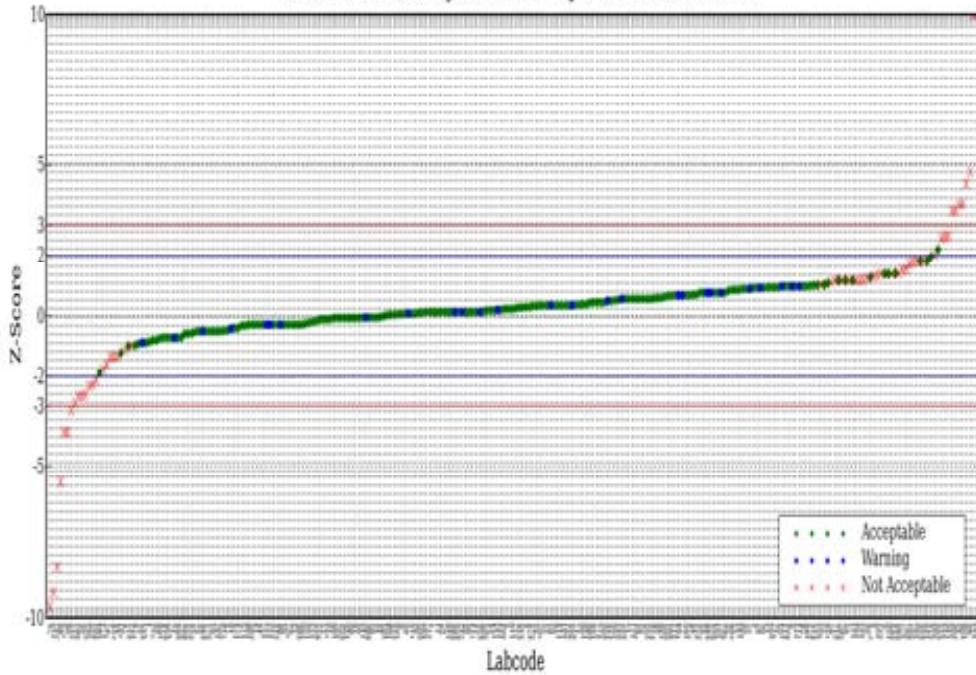
Z-Scores chart, Analyte: Mn-54 in spiked Soil, IAEA-444



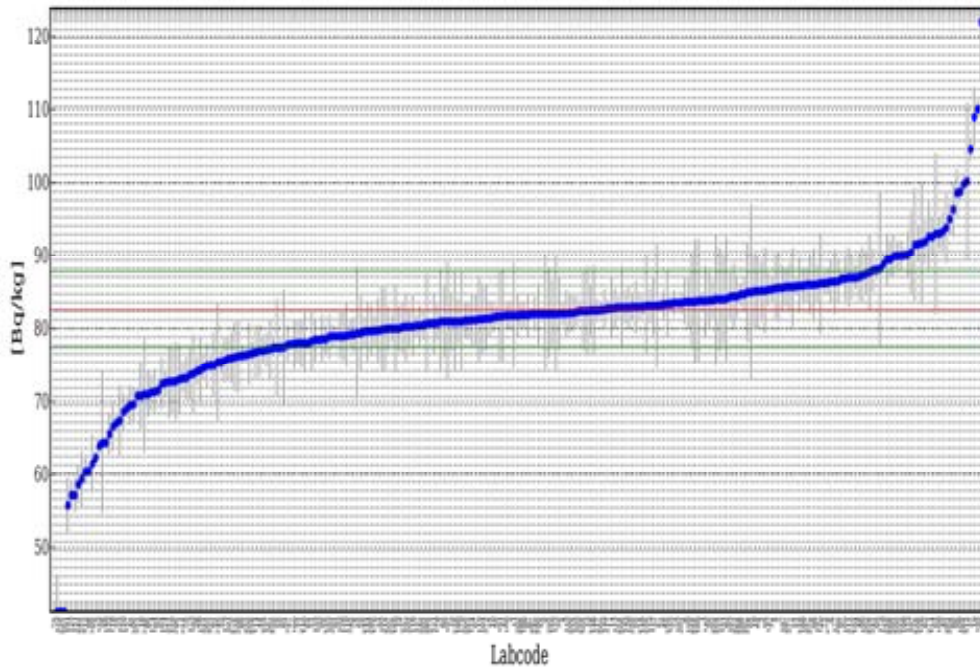
S-Shape chart, Analyte: Mn-54 in spiked Water, IAEA 445



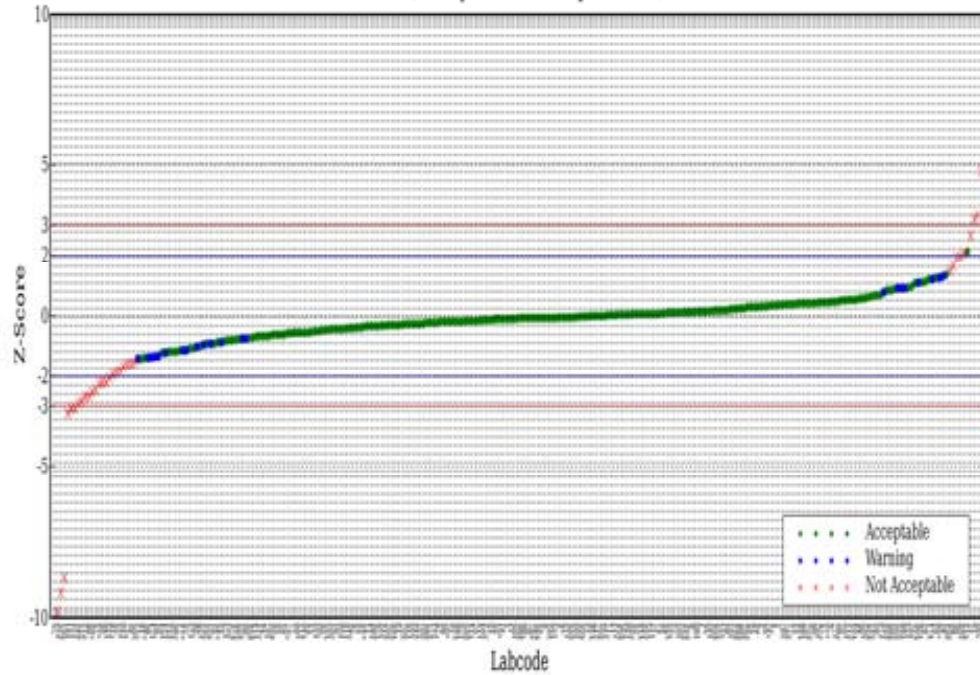
Z-Scores chart, Analyte: Mn-54 in spiked Water, IAEA 445



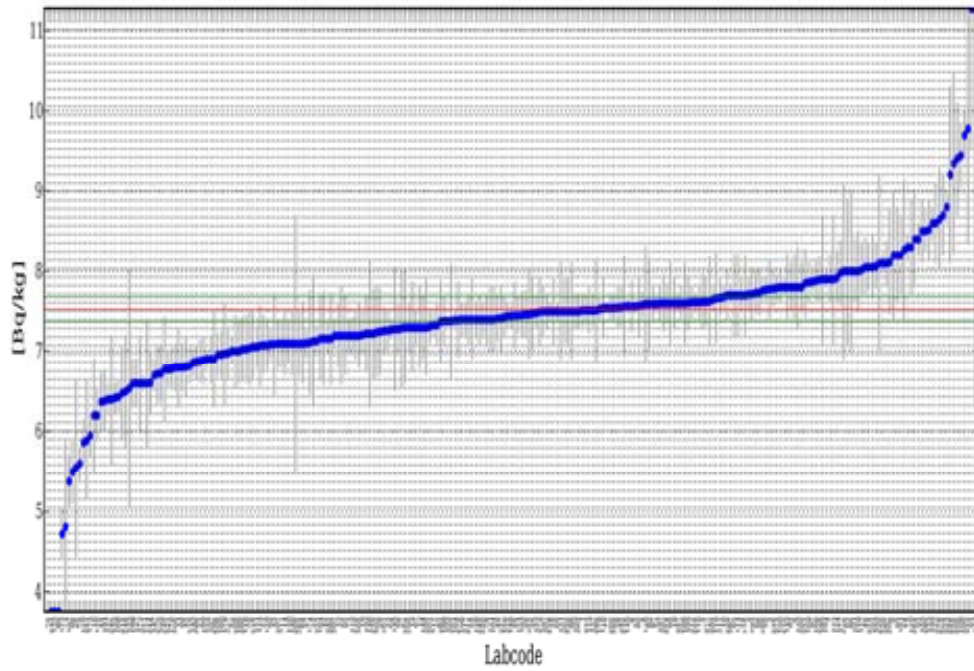
S-Shape chart, Analyte: Co-60 in spiked Soil, IAEA-444



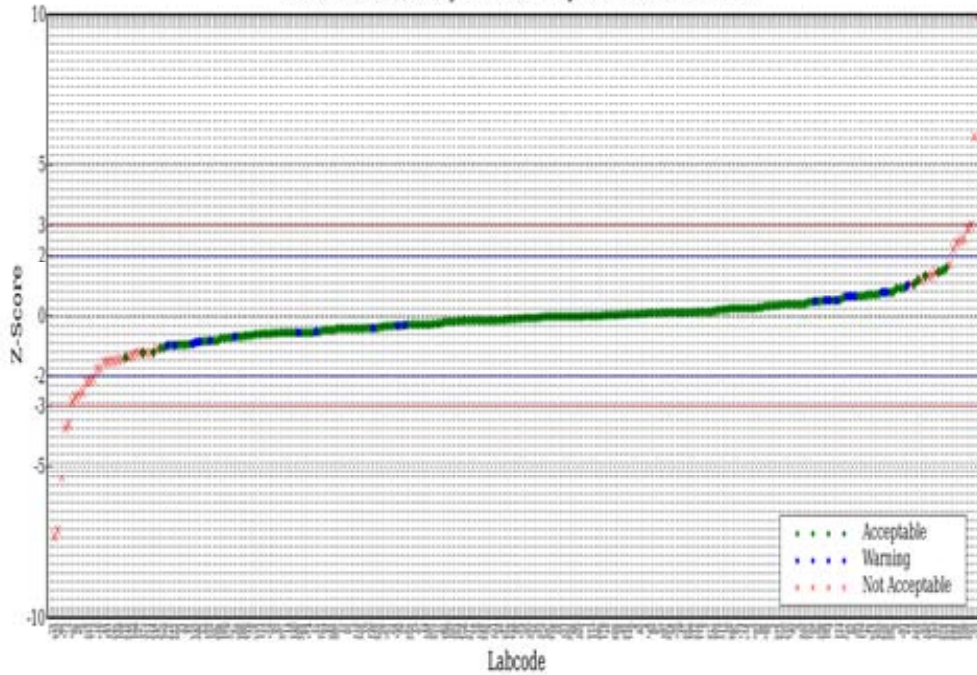
Z-Scores chart, Analyte: Co-60 in spiked Soil, IAEA-444



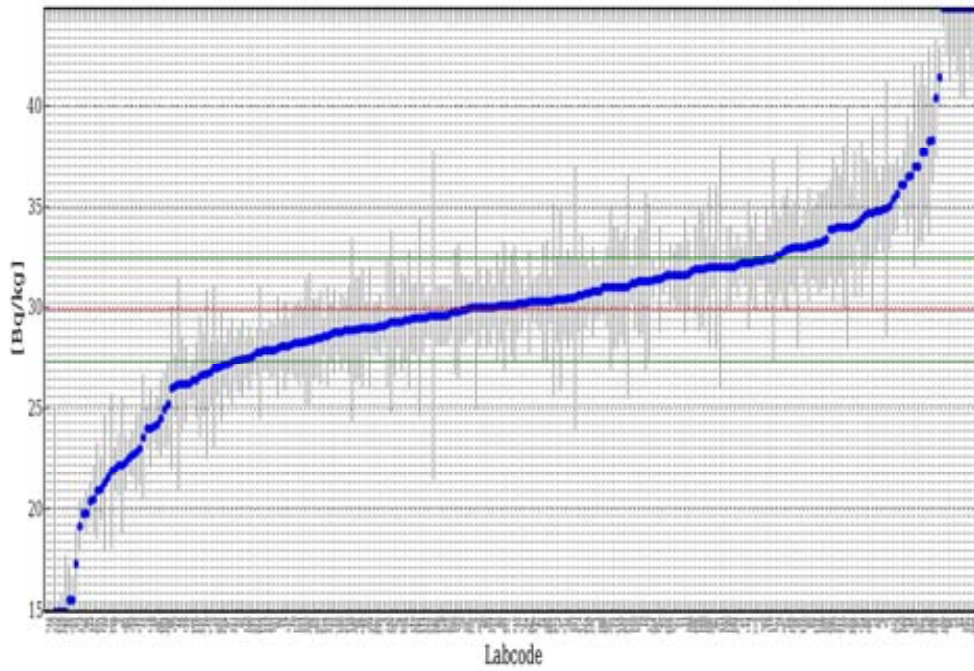
S-Shape chart, Analyte: Co-60 in spiked Water, IAEA 445



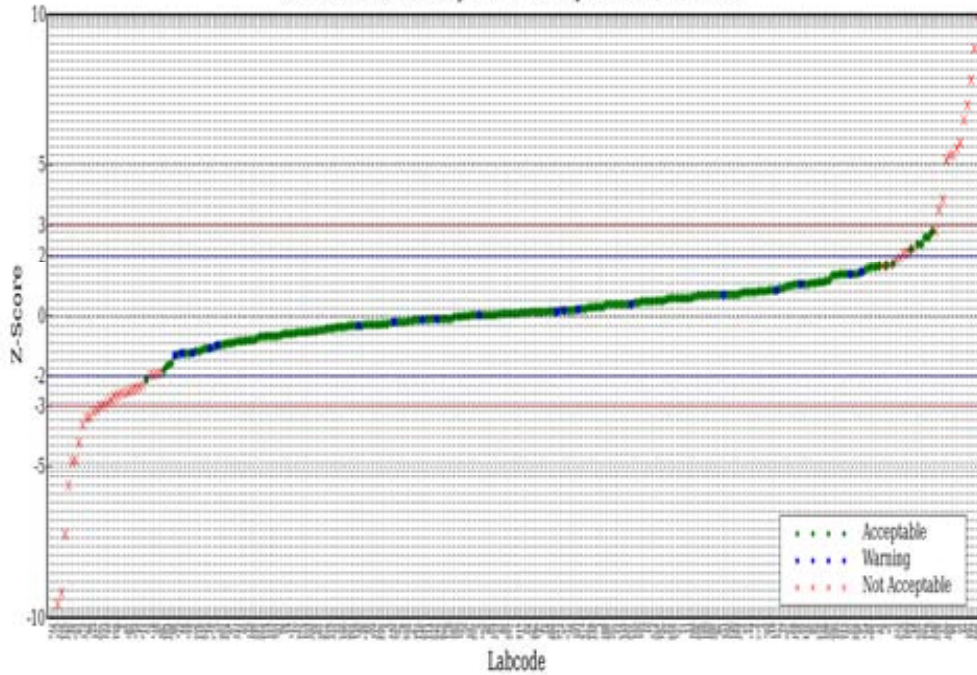
Z-Scores chart, Analyte: Co-60 in spiked Water, IAEA 445



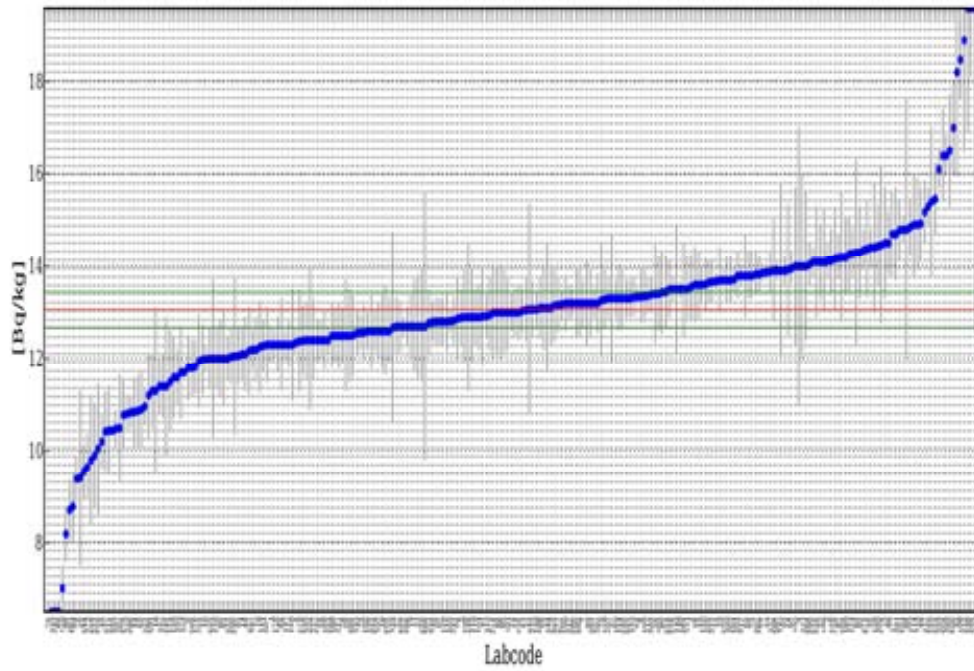
S-Shape chart, Analyte: Zn-65 in spiked Soil, IAEA-444



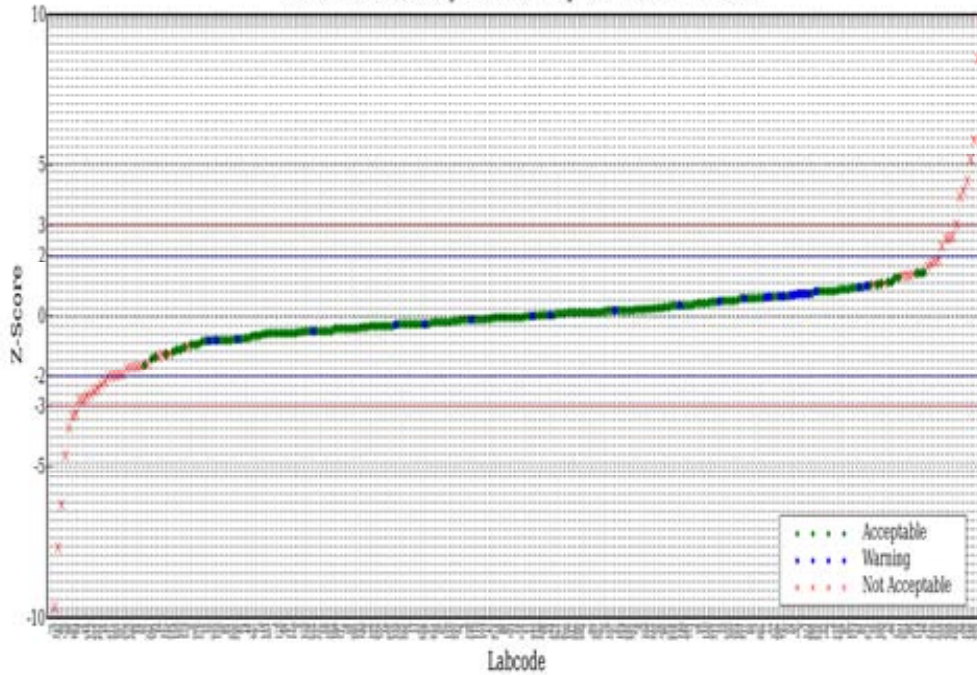
Z-Scores chart, Analyte: Zn-65 in spiked Soil, IAEA-444



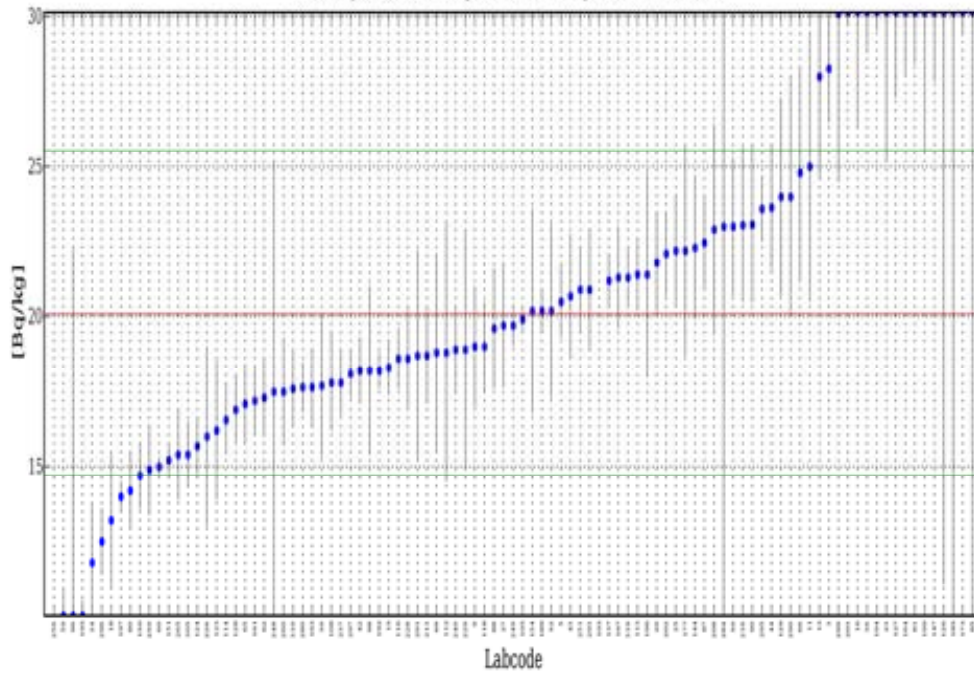
S-Shape chart, Analyte: Zn-65 in spiked Water, IAEA 445



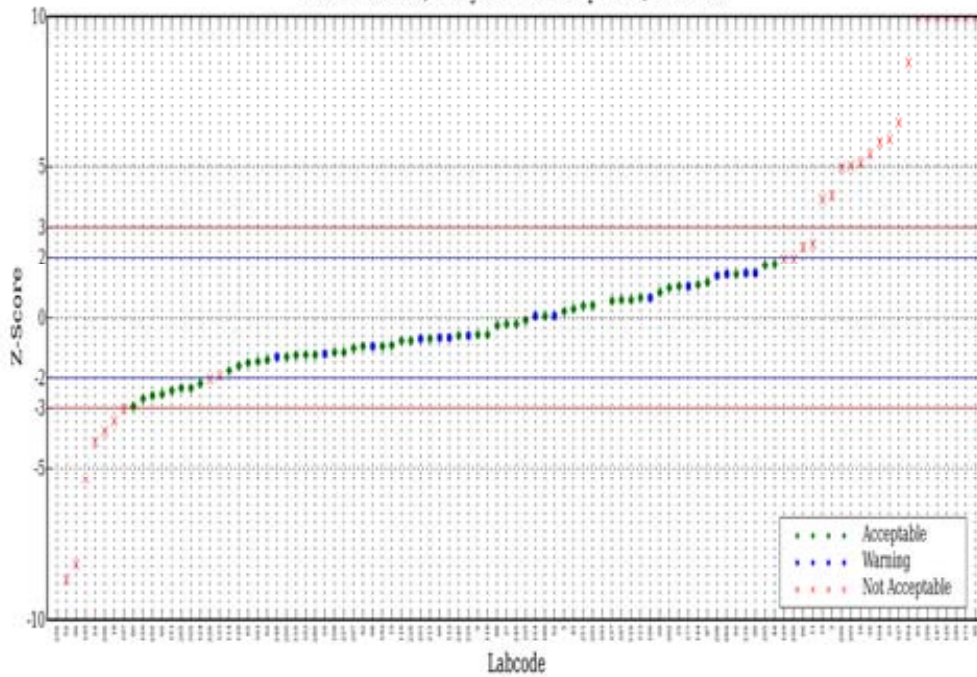
Z-Scores chart, Analyte: Zn-65 in spiked Water, IAEA 445



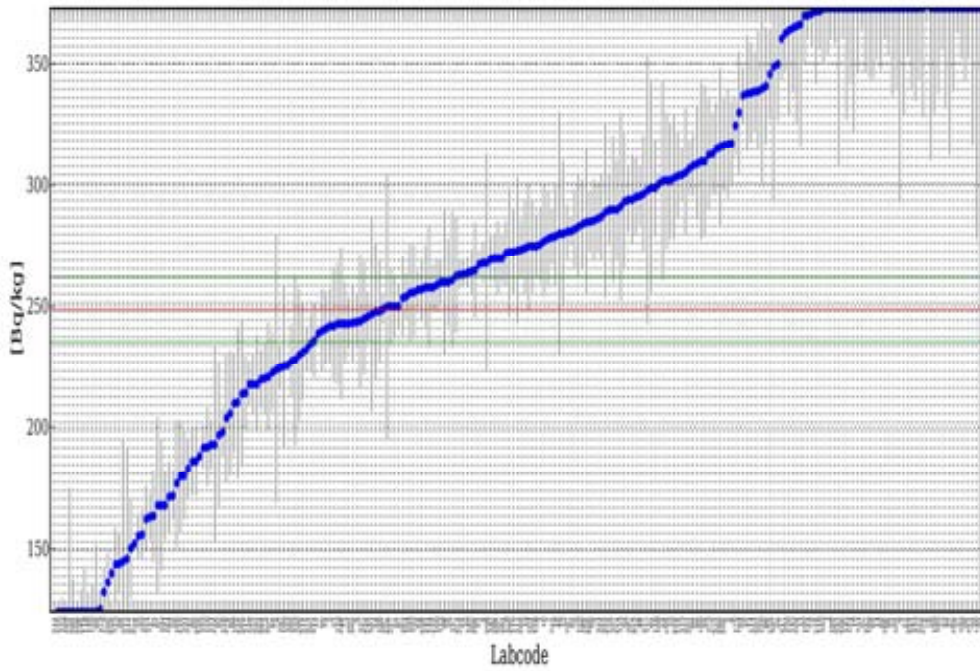
S-Shape chart, Analyte: Sr-90 in Spinach, IAEA-330



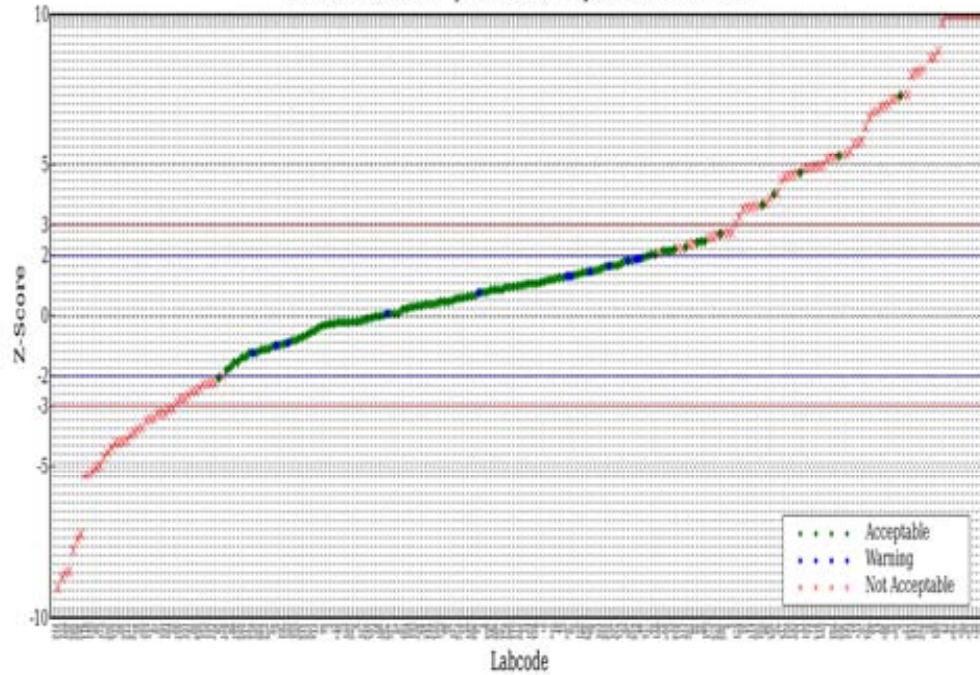
Z-Scores chart, Analyte: Sr-90 in Spinach, IAEA-330



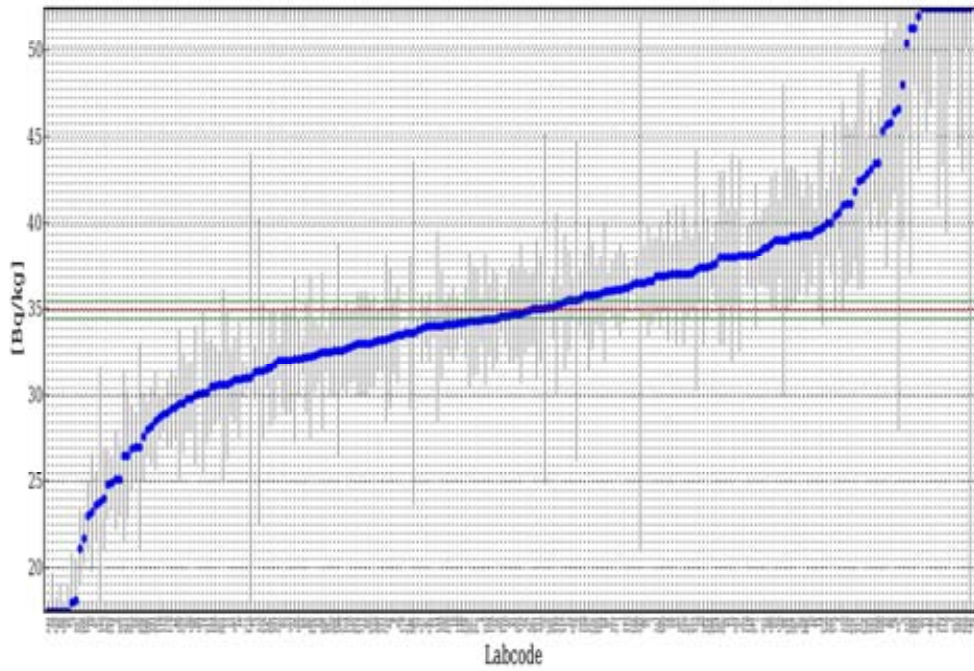
S-Shape chart, Analyte: Cd-109 in spiked Soil, IAEA-444



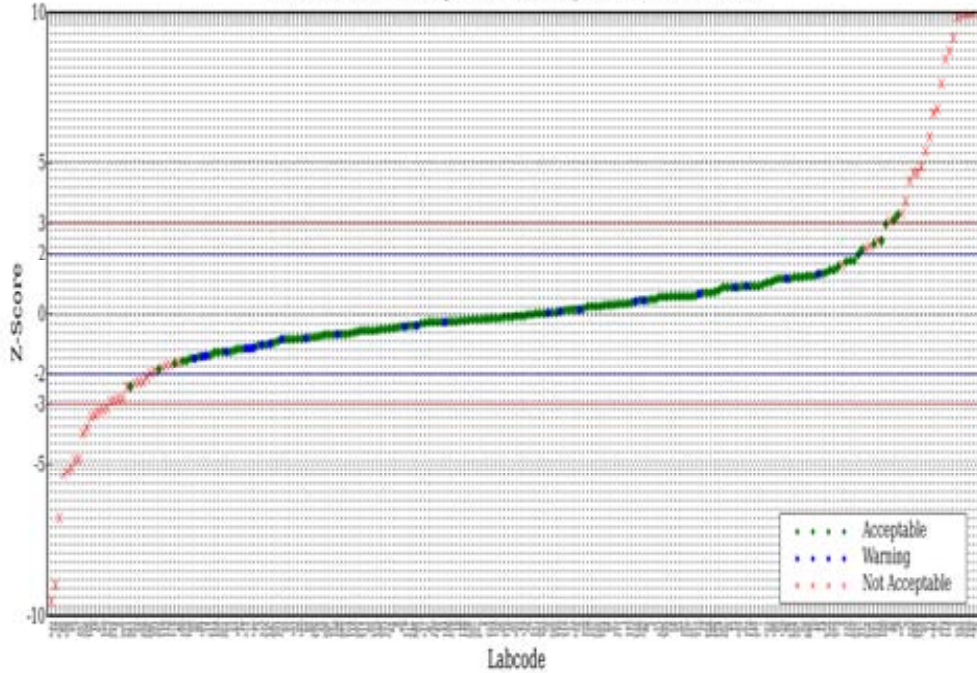
Z-Scores chart, Analyte: Cd-109 in spiked Soil, IAEA-444



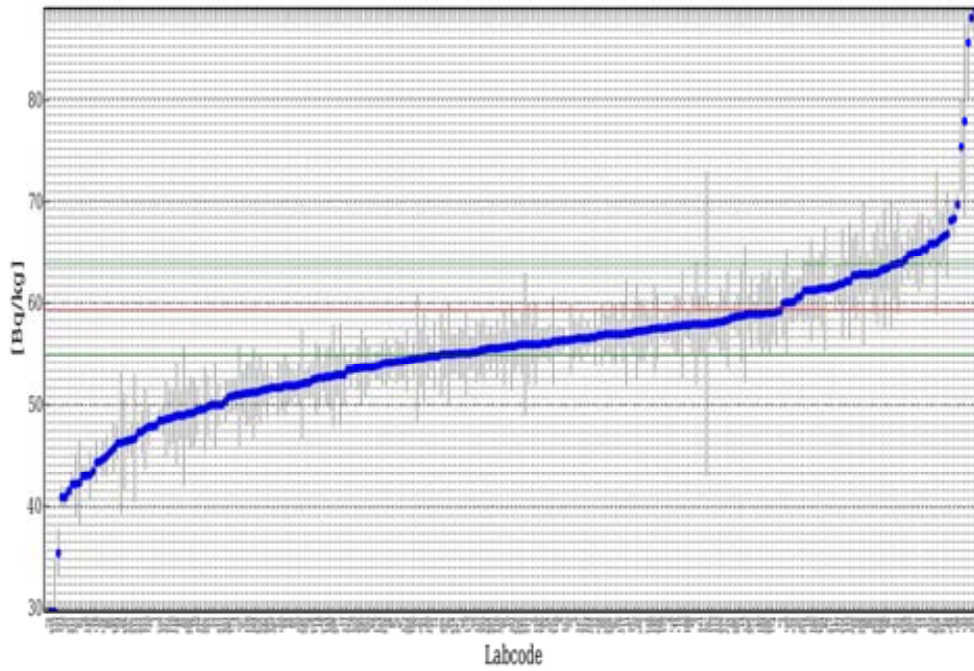
S-Shape chart, Analyte: Cd-109 in spiked Water, IAEA 445



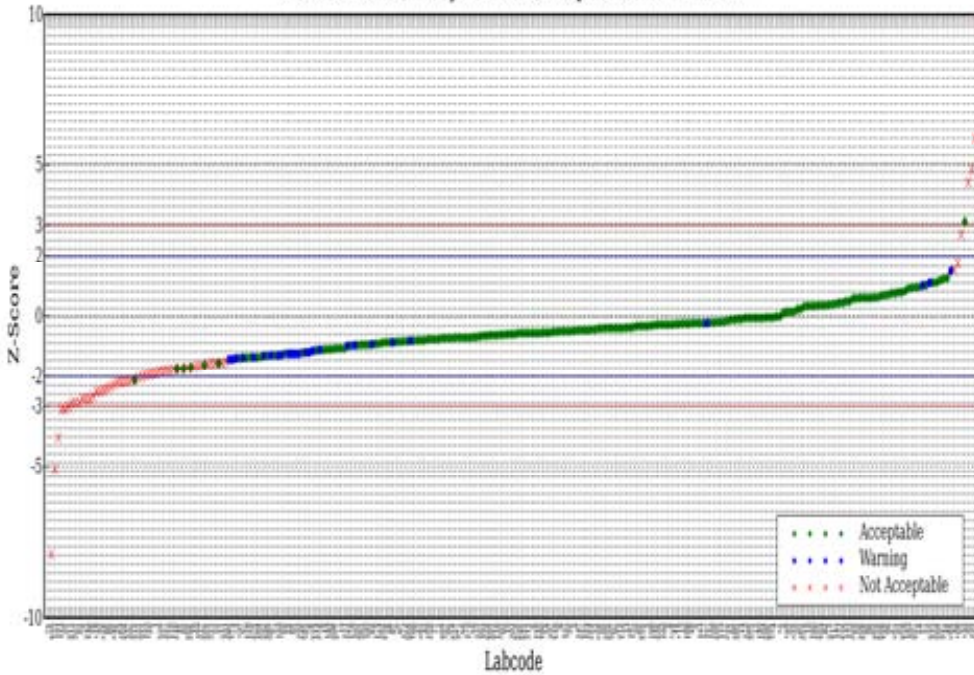
Z-Scores chart, Analyte: Cd-109 in spiked Water, IAEA 445



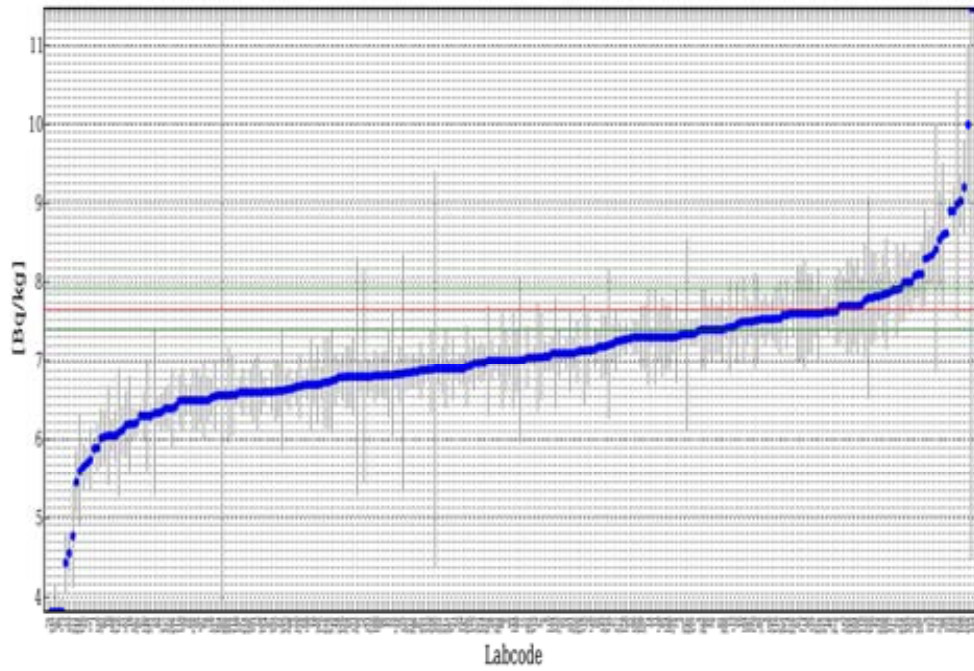
S-Shape chart, Analyte: Cs-134 in spiked Soil, IAEA-444



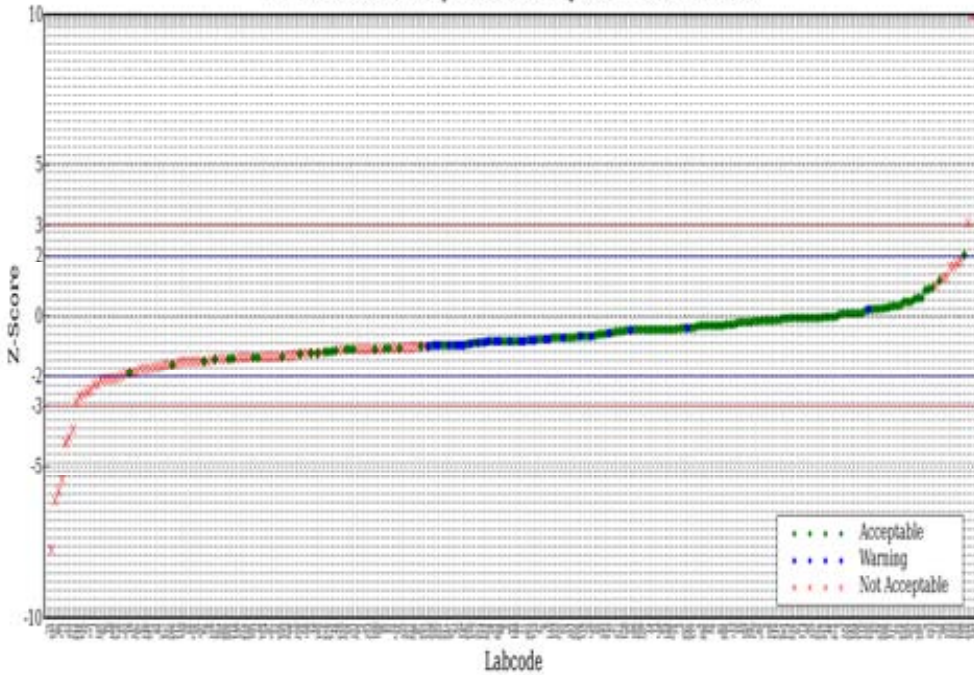
Z-Scores chart, Analyte: Cs-134 in spiked Soil, IAEA-444



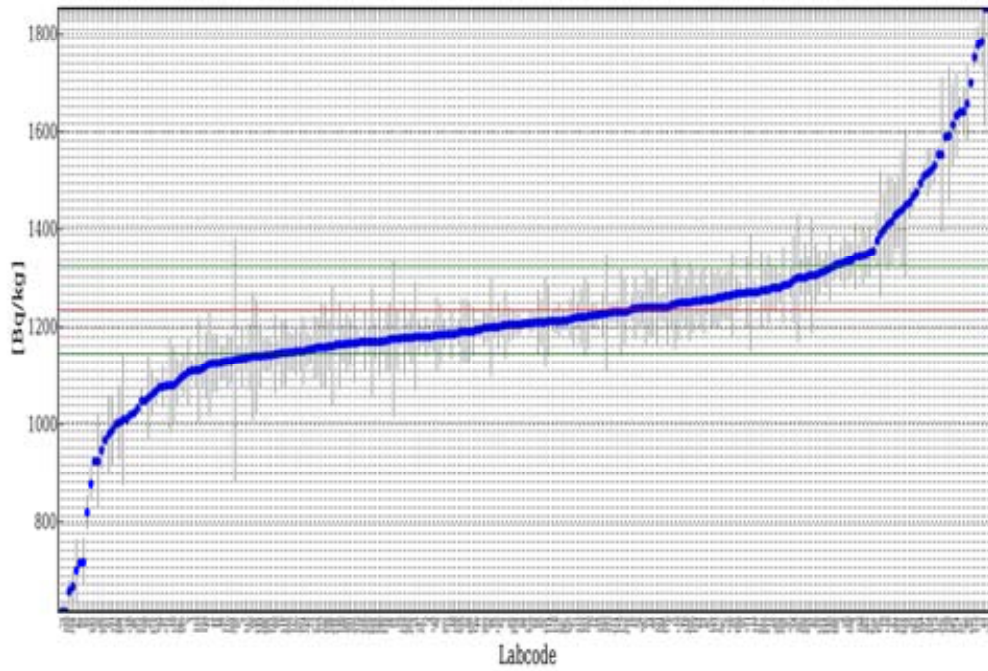
S-Shape chart, Analyte: Cs-134 in spiked Water, IAEA 445



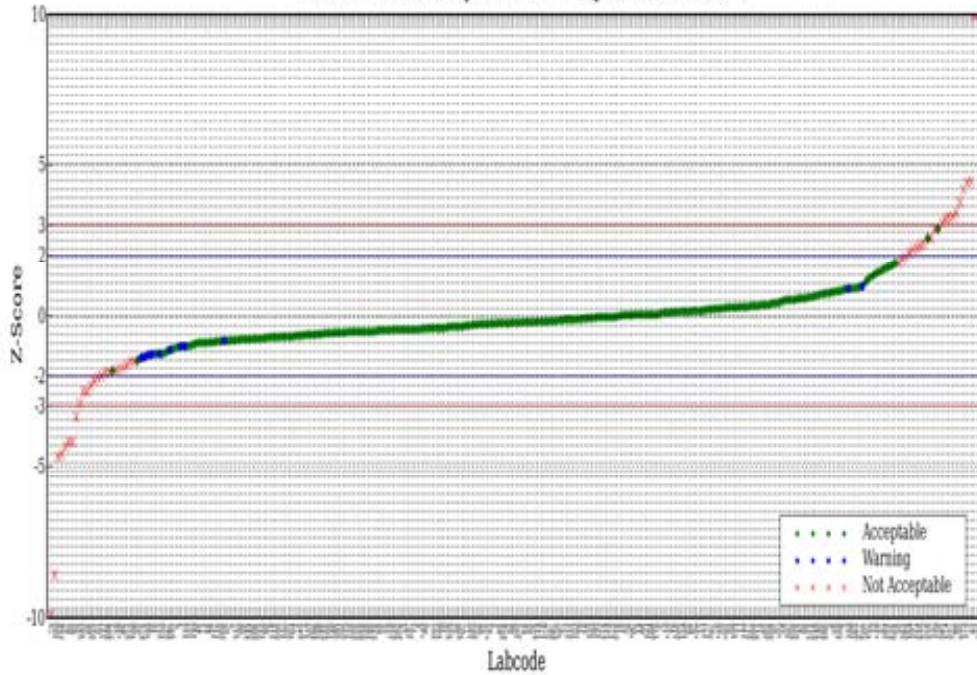
Z-Scores chart, Analyte: Cs-134 in spiked Water, IAEA 445



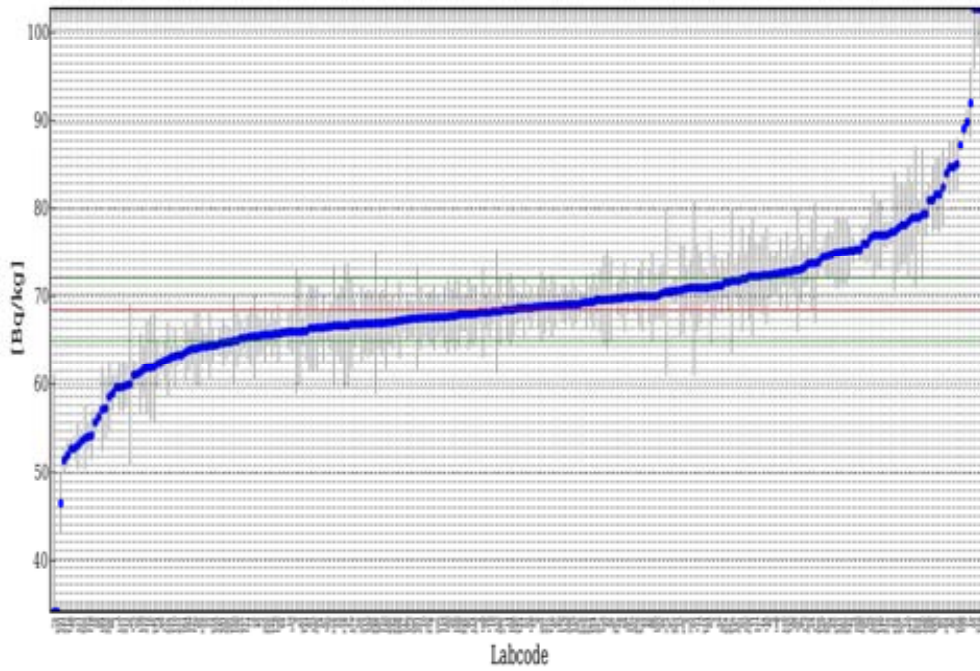
S-Shape chart, Analyte: Cs-137 in Spinach, IAEA-330



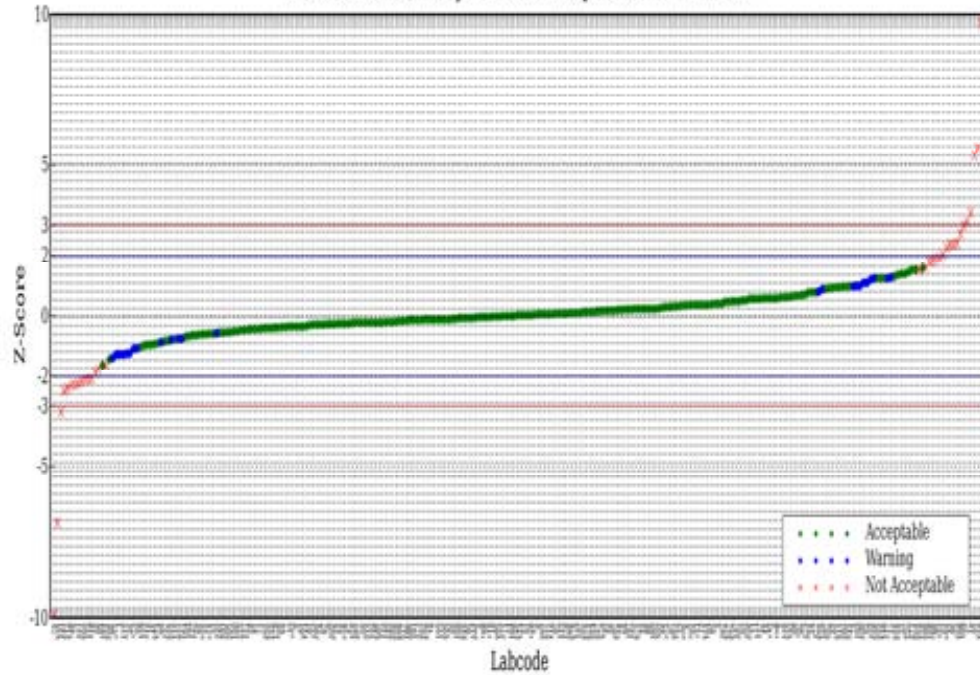
Z-Scores chart, Analyte: Cs-137 in Spinach, IAEA-330



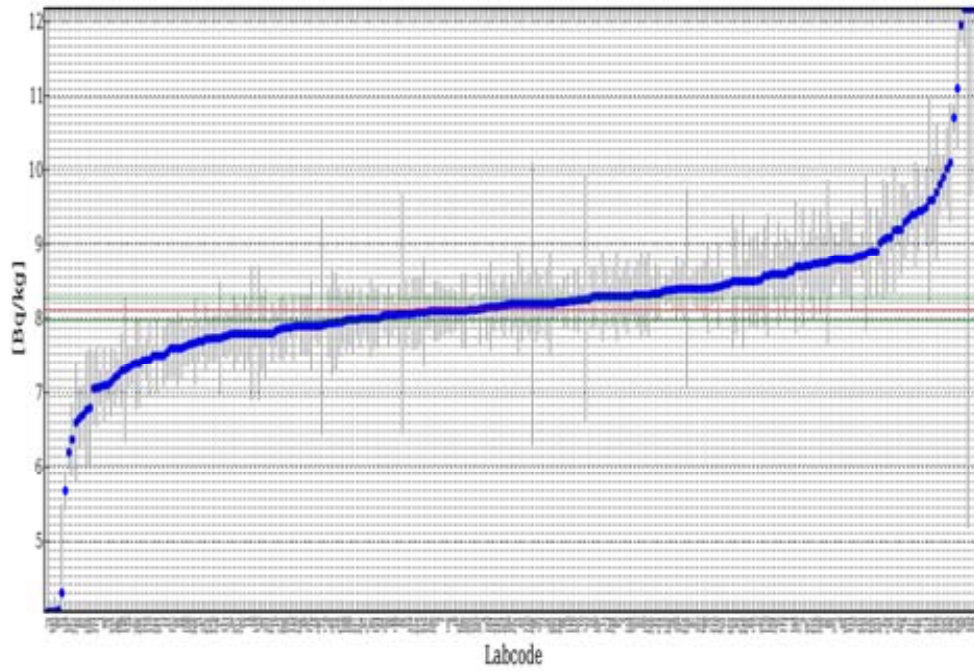
S-Shape chart, Analyte: Cs-137 in spiked Soil, IAEA-444



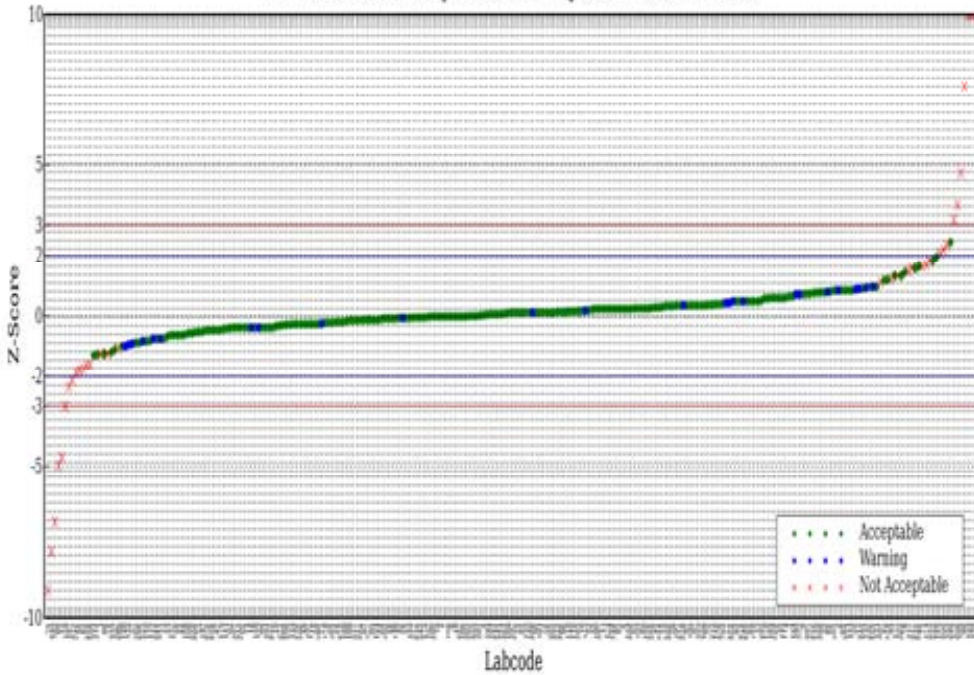
Z-Scores chart, Analyte: Cs-137 in spiked Soil, IAEA-444



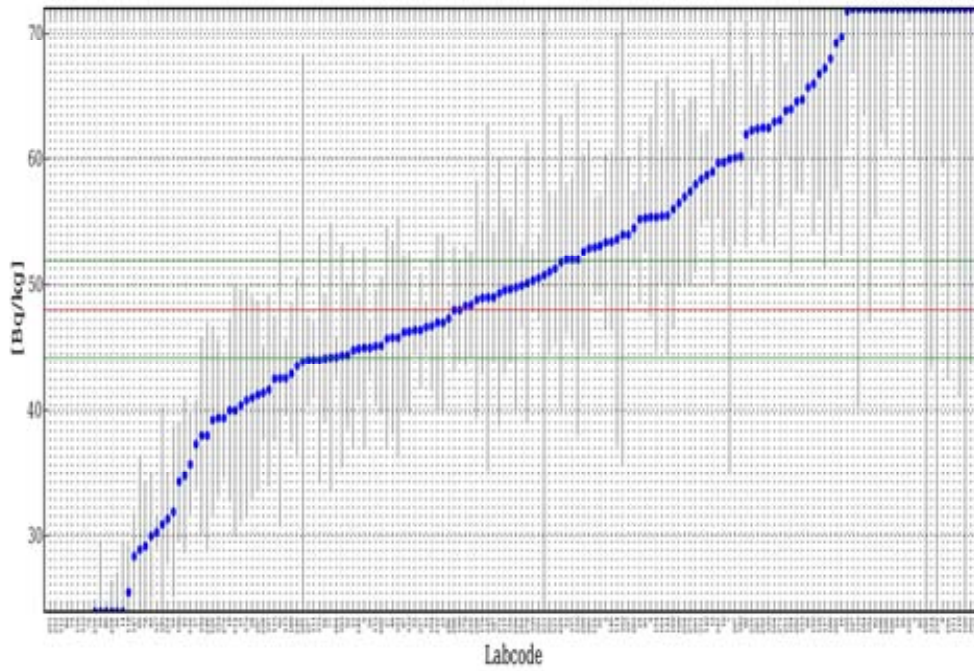
S-Shape chart, Analyte: Cs-137 in spiked Water, IAEA 445



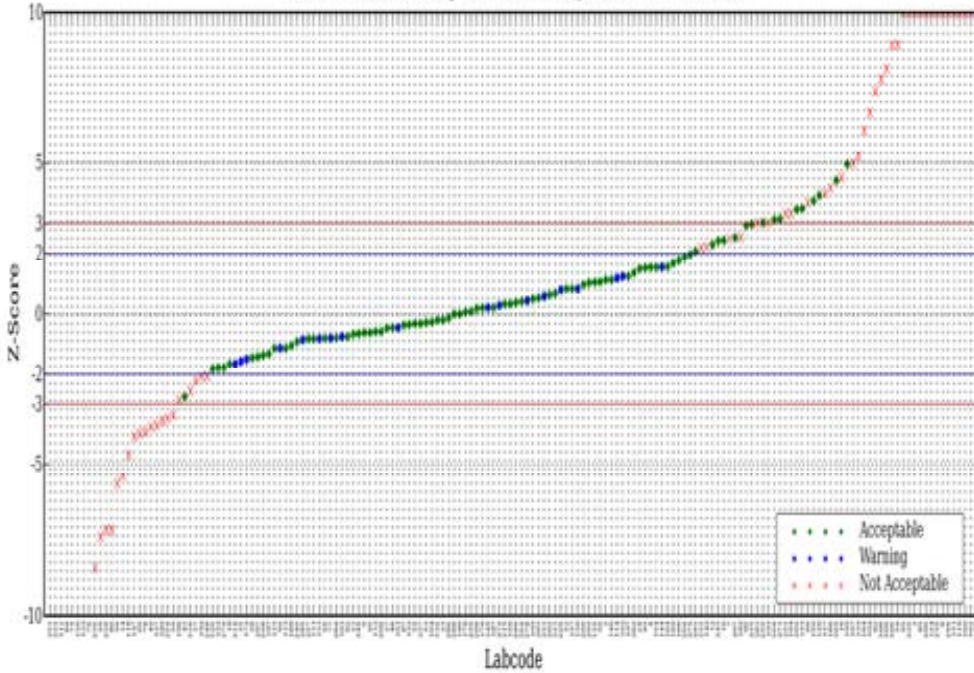
Z-Scores chart, Analyte: Cs-137 in spiked Water, IAEA 445



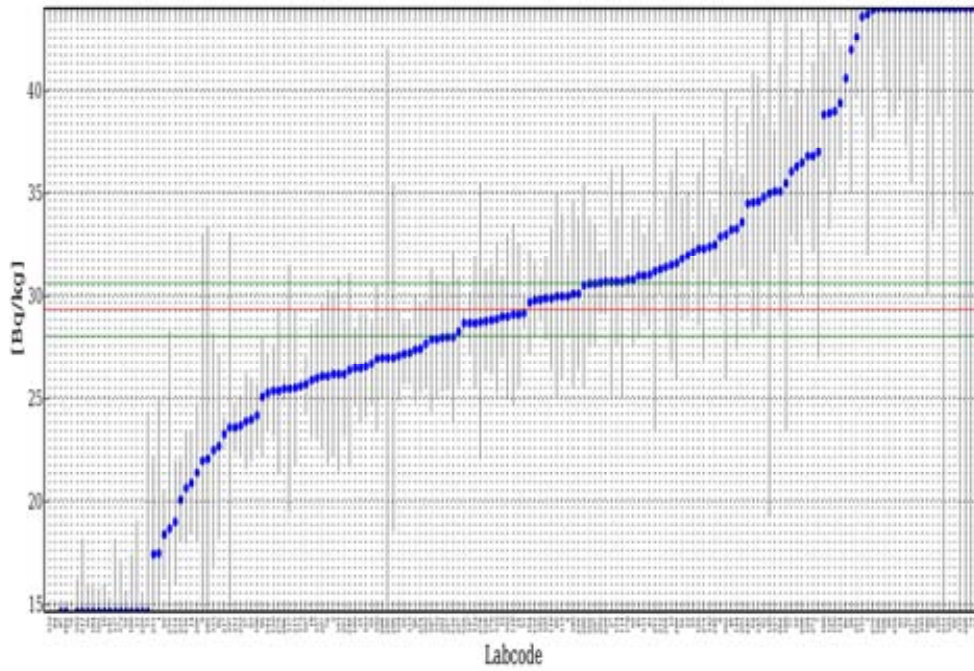
S-Shape chart, Analyte: Pb-210 in spiked Soil, IAEA-444



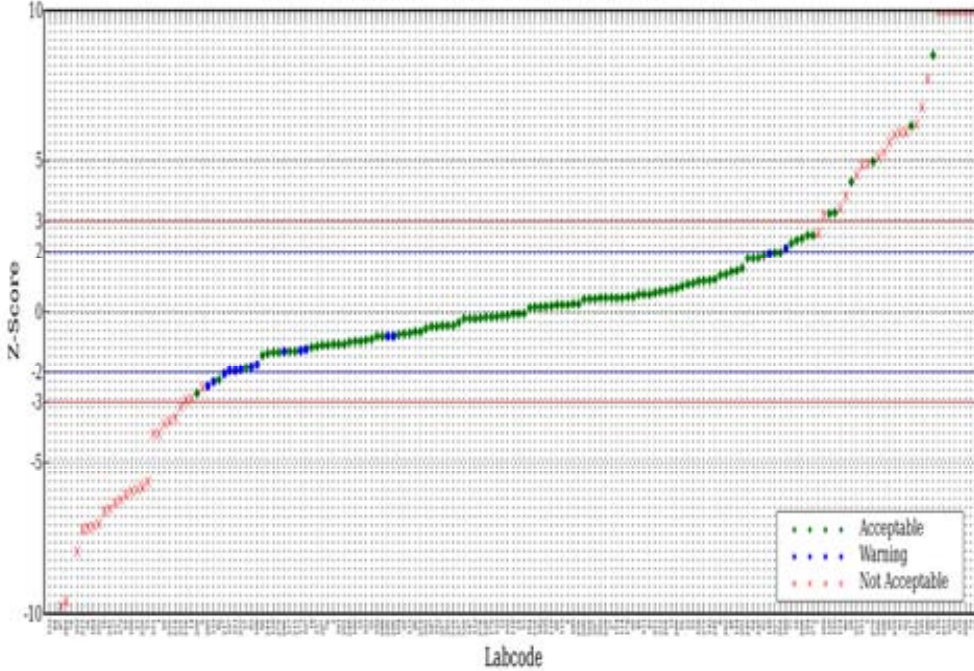
Z-Scores chart, Analyte: Pb-210 in spiked Soil, IAEA-444



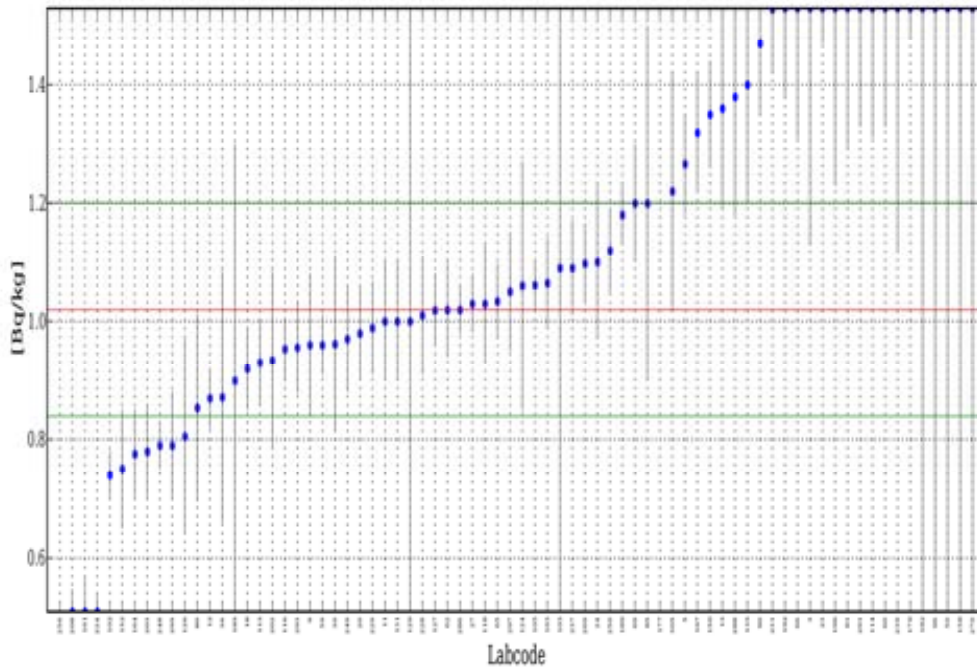
S-Shape chart, Analyte: Pb-210 in spiked Water, IAEA 445



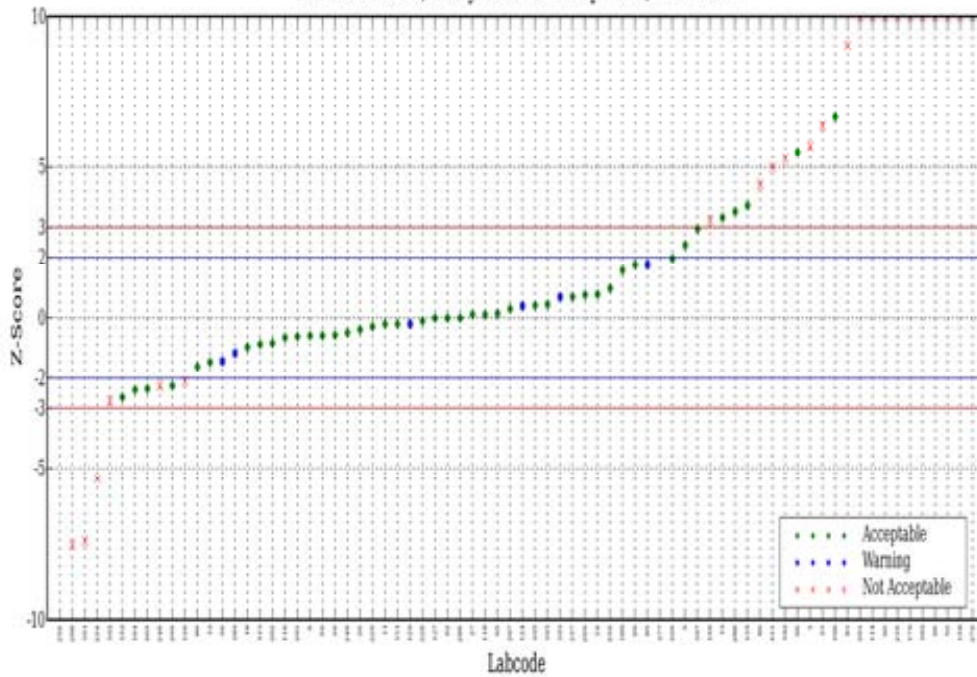
Z-Scores chart, Analyte: Pb-210 in spiked Water, IAEA 445



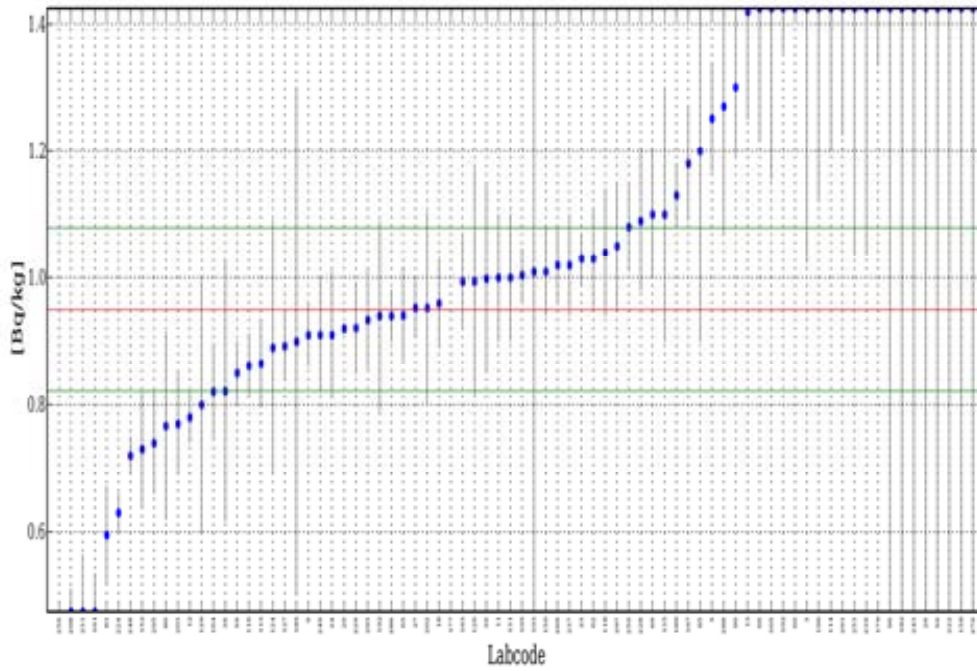
S-Shape chart, Analyte: U-234 in Spinach, IAEA-330



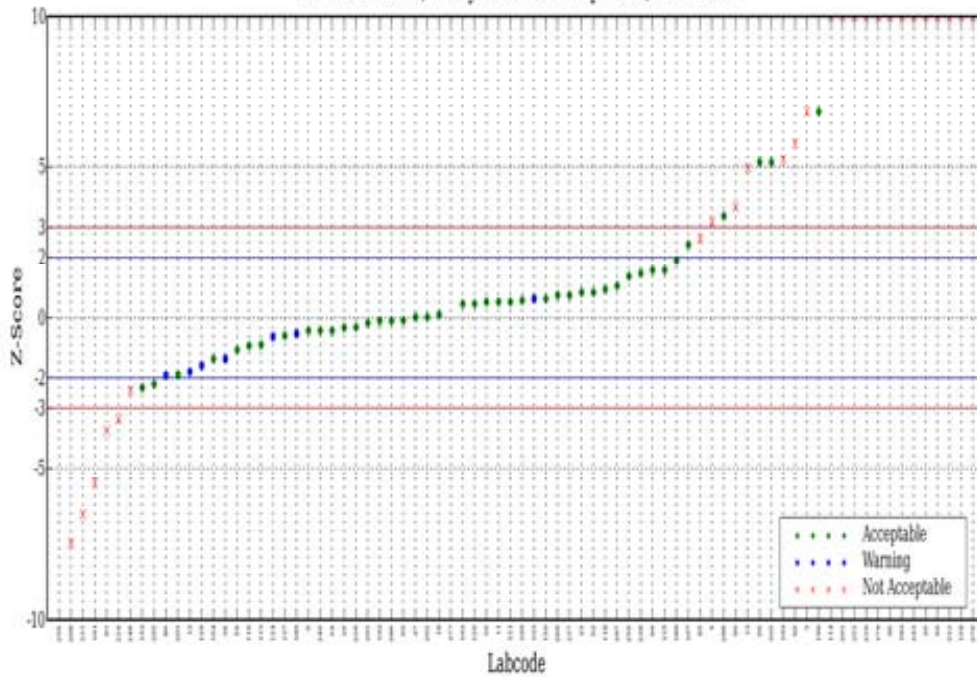
Z-Scores chart, Analyte: U-234 in Spinach, IAEA-330



S-Shape chart, Analyte: U-238 in Spinach, IAEA-330



Z-Scores chart, Analyte: U-238 in Spinach, IAEA-330



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