Tutorial for accessing and using the NuCodeComp Digital Platform

User Level

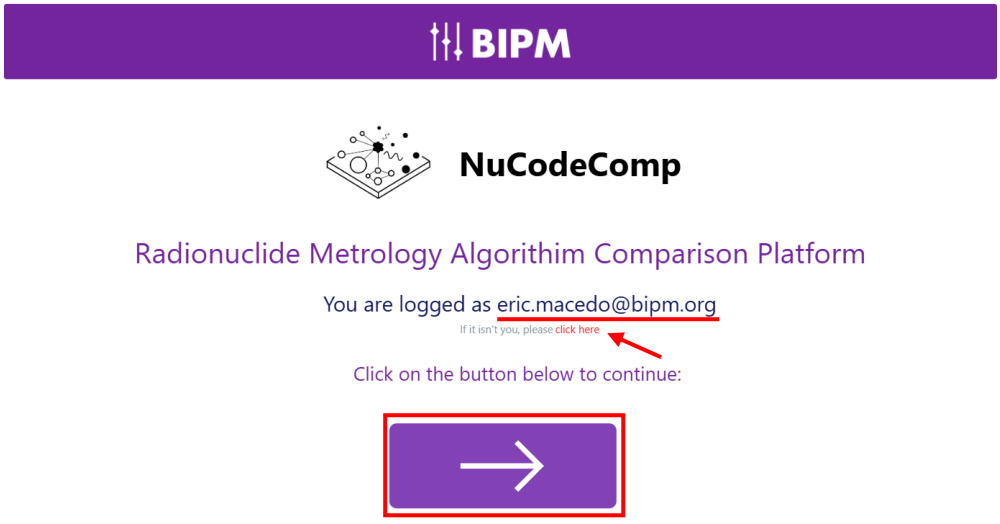
1 Presentation

The NuCodeComp - The Radionuclide Metrology Algorithm Comparison Platform is a software to centralize, manage, and analyse information from the Algorithm Comparisons. These comparisons are based on the distribution of list-mode digital data. List-mode consists of structured data [according to IEC 63047:2021] obtained experimentally or by Monte Carlo simulation.

If you can access the NuCodeComp via Power Apps, chapters 2 to 5 present the step-by-step instructions to interact with the platform. If you don't have access, the instructions for uploading your results by Microsoft Forms are in the chapter 6.

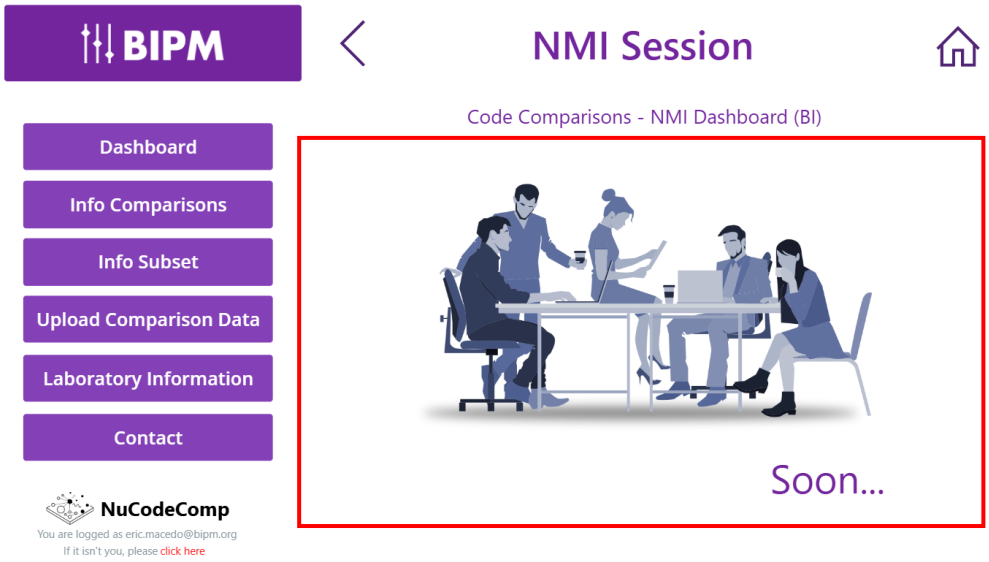
2 Start Page and Dashboard

The start page of the NuCodeComp is shown below. It has the automatic access information for the NMI. To access the application, click on the purple button with the arrow.



If the presented e-mail is not yours or a dark blue button appears for you, please click on the red term "click here".

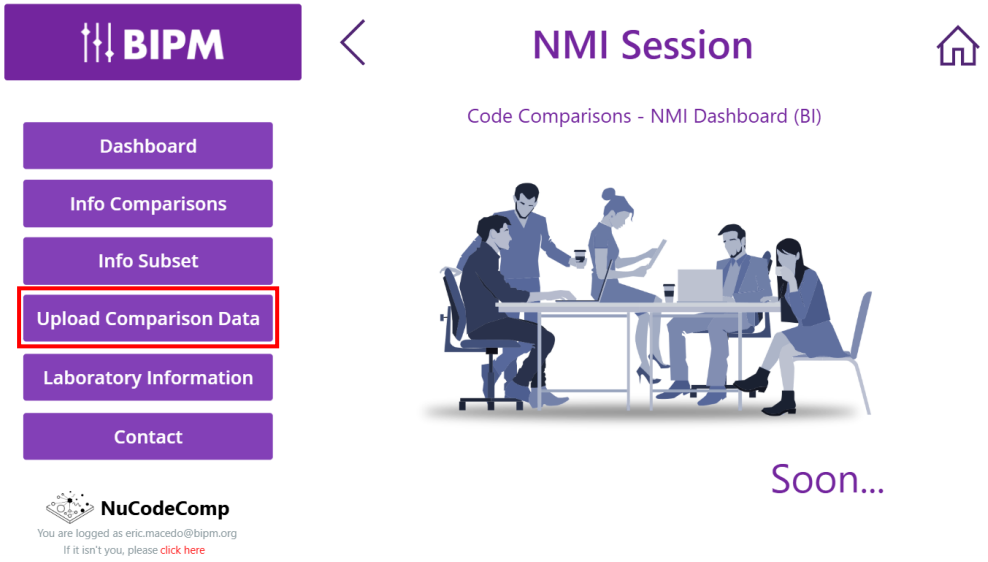
The main screen (*Dashboard*) will appear for you.



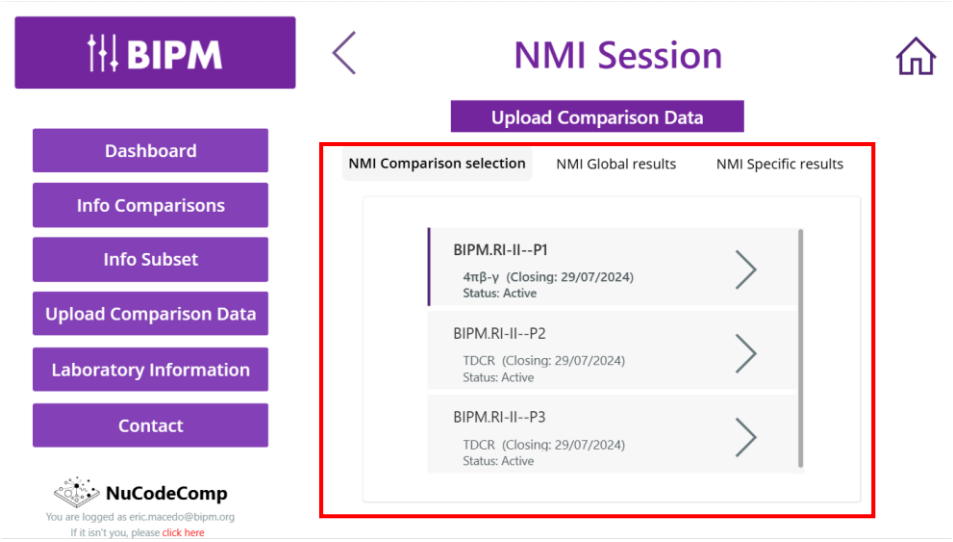
On this screen (under development), you will have access to a BI visualization showing your results, a comparison of metadata with other laboratories, and some historical information about the Code Comparisons.

3 Result Upload

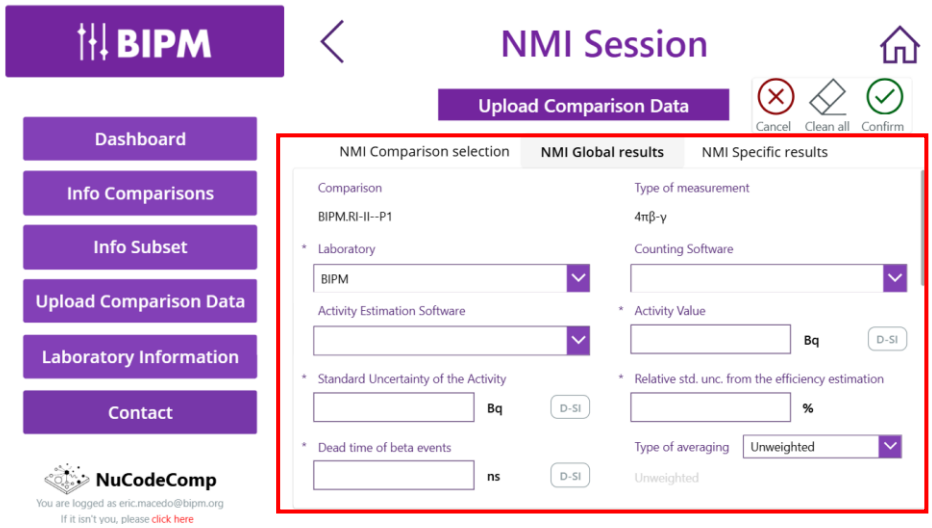
The main function is the result upload. You must access “Upload Comparison Data” by clicking the highlighted buttons on the left menu.



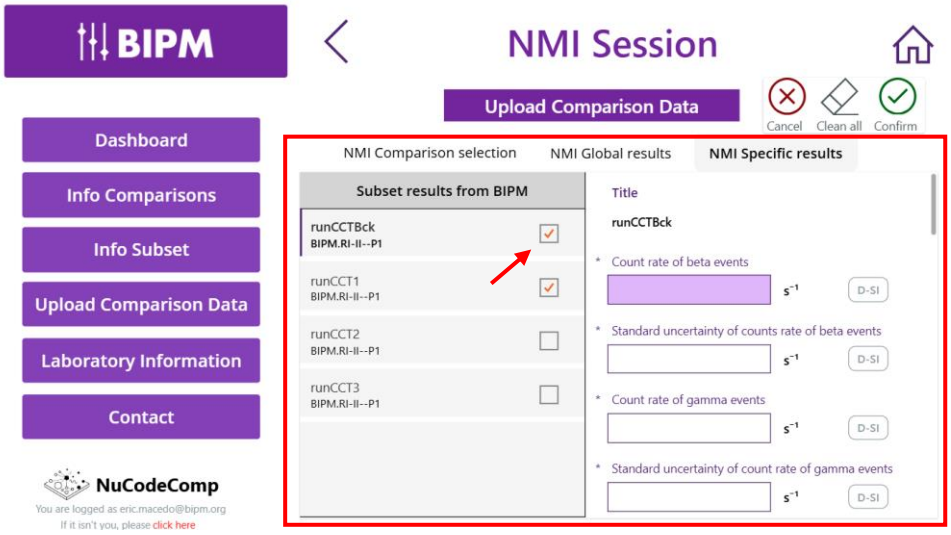
You start selecting the comparison on the gallery. Note that the only active comparisons where the user is part of the board are shown.



The next step is to fill out and confirm the "NMI Global results" form.



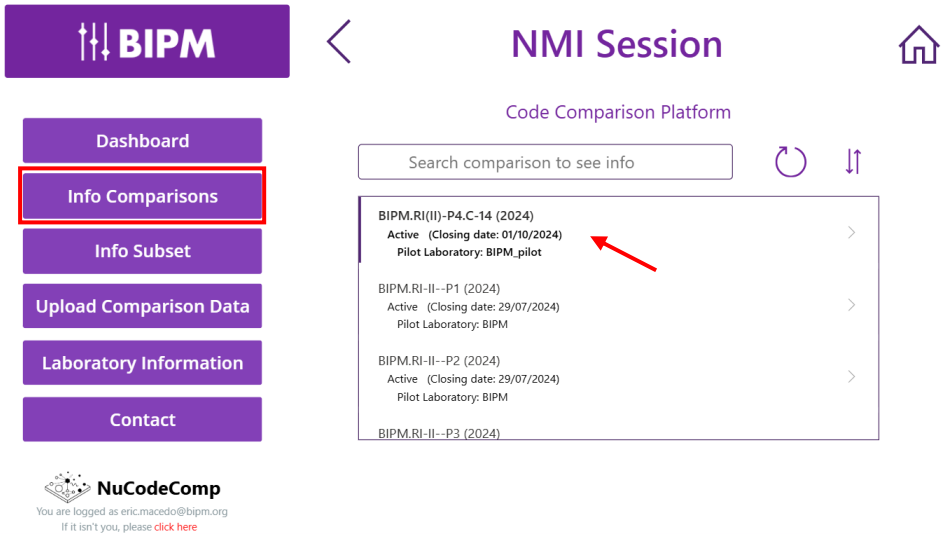
The next step is to complete and confirm the "NMI Specific results" form from the subsets processing. Note that the gallery correspondent item is checked as you fill out one subset result.



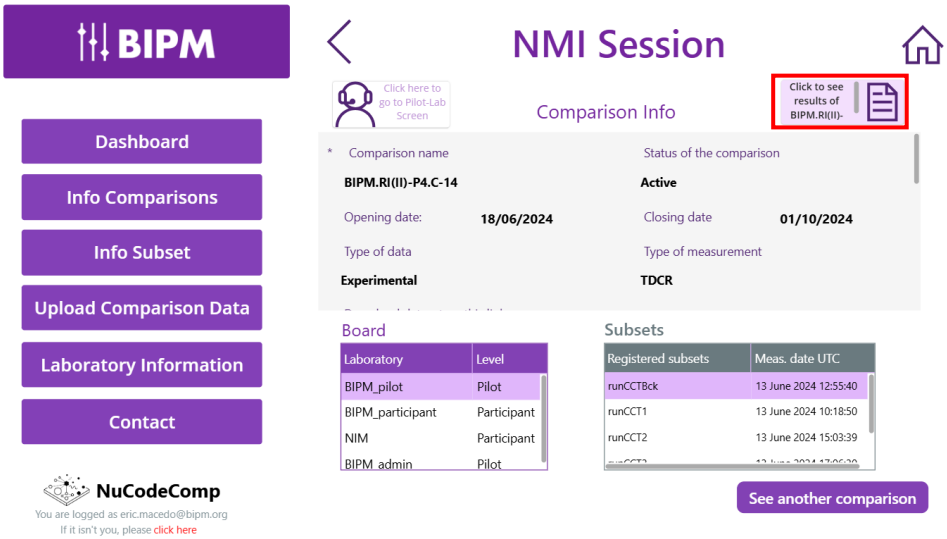
You can confirm the form submission when all of them are filled out.

4 Comparison and result view

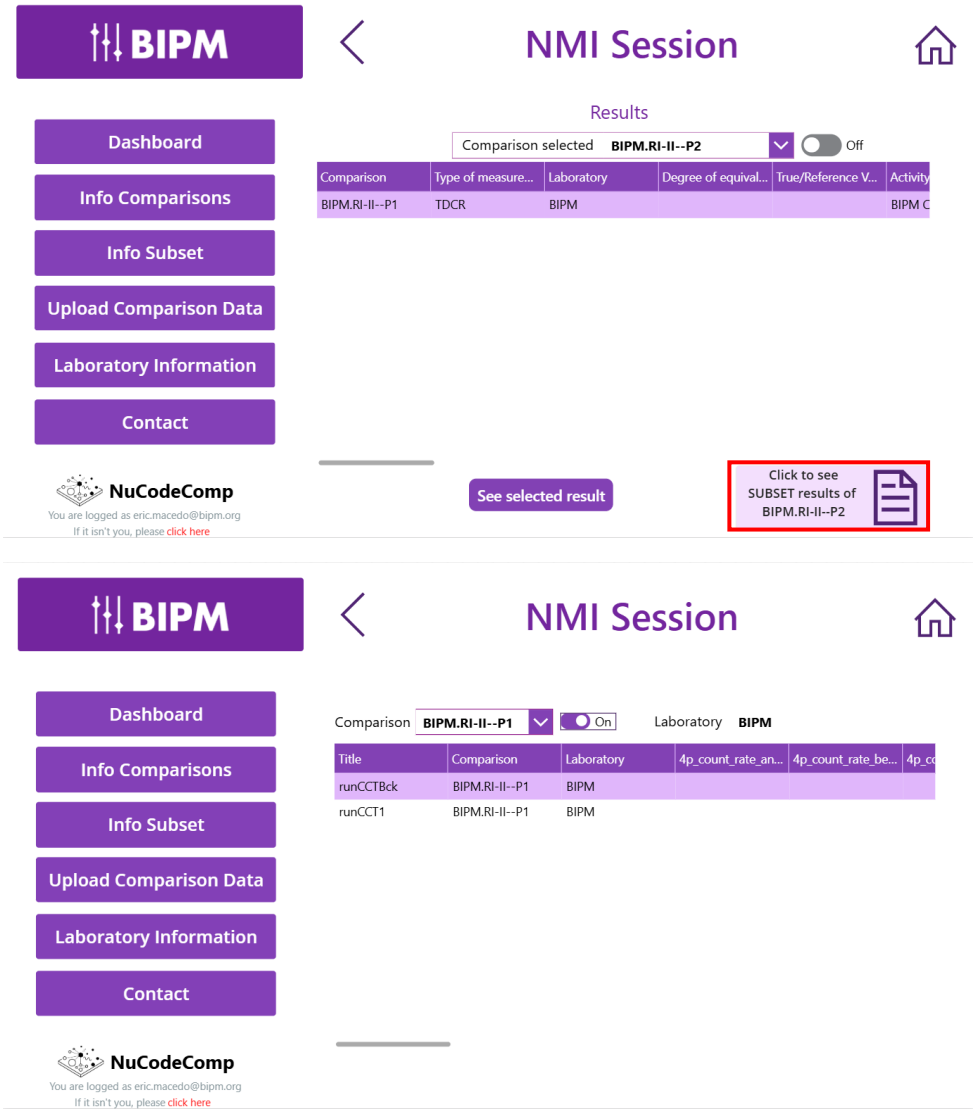
To see the comparison information must access “Info Comparisons” by clicking the highlighted button on the left menu. The “Info Comparisons” browser page shows all comparisons you were/are part of. To access the comparison info, select the comparison by clicking on it in the gallery.



You can see your comparison results by clicking on the highlighted button on the top right-hand.



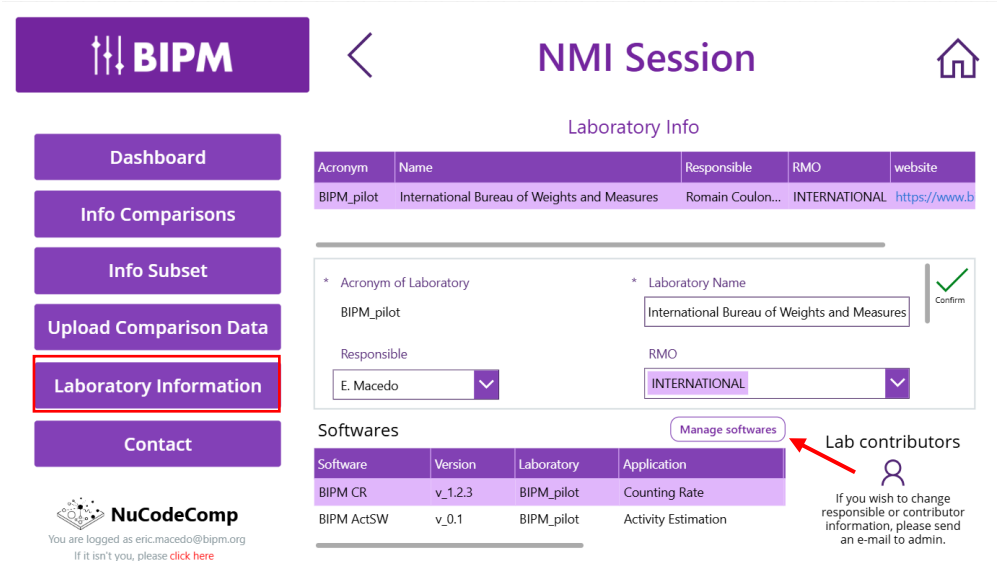
When you are in the Result page, you can also access the subset results for that comparison or even change the comparison to view.



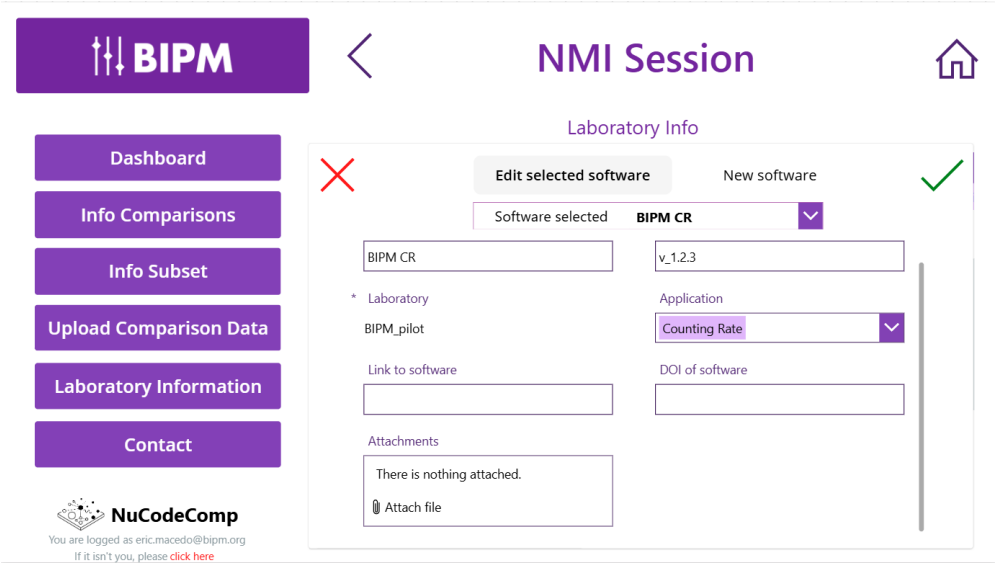
The results of all laboratories in the comparison will be made available on NuCodeComp/*Dashboard* page, after and according to the report publication.

5 Laboratory information

The NMI can edit its registered information and view registered SOFTWARES by clicking on "Laboratory Information" button on the left menu panel. To manage contributors and user information, the BIPM_admin responsible must be contacted.



The NMI can create and edit software information by clicking on the "Manage software" button. The screen shown below will appear for that purpose.

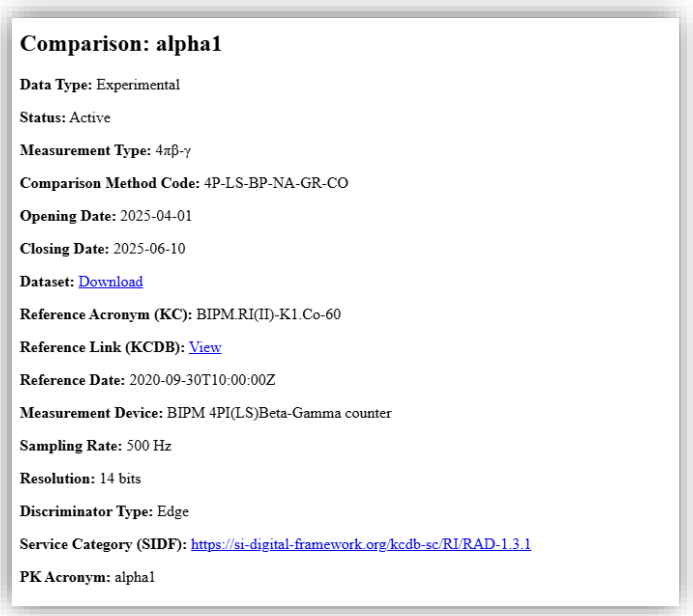


6 Accessing by Microsoft Forms

If you do not have direct access, you can upload your results using Microsoft Forms. To use this option, you must register in the Counting Comparison SharePoint group by providing the required registration information as specified in item 1.5 ("Registering") of the comparison protocol.

All necessary information will be sent by email, and the following instructions are important to keep in mind:

- The comparison information will be provided via an HTML link and displayed as shown in the image below. It is essential to copy and paste the fields with fixed values (such as Comparison and Measurement Type) and those with predefined choices (as indicated in the field description).



Comparison: alpha1

Data Type: Experimental

Status: Active

Measurement Type: 4πβ-γ

Comparison Method Code: 4P-LS-BP-NA-GR-CO

Opening Date: 2025-04-01

Closing Date: 2025-06-10

Dataset: Download

Reference Acronym (KC): BIPM.RI(II)-K1.Co-60

Reference Link (KCDB): View

Reference Date: 2020-09-30T10:00:00Z

Measurement Device: BIPM 4PI(LS)Beta-Gamma counter

Sampling Rate: 500 Hz

Resolution: 14 bits

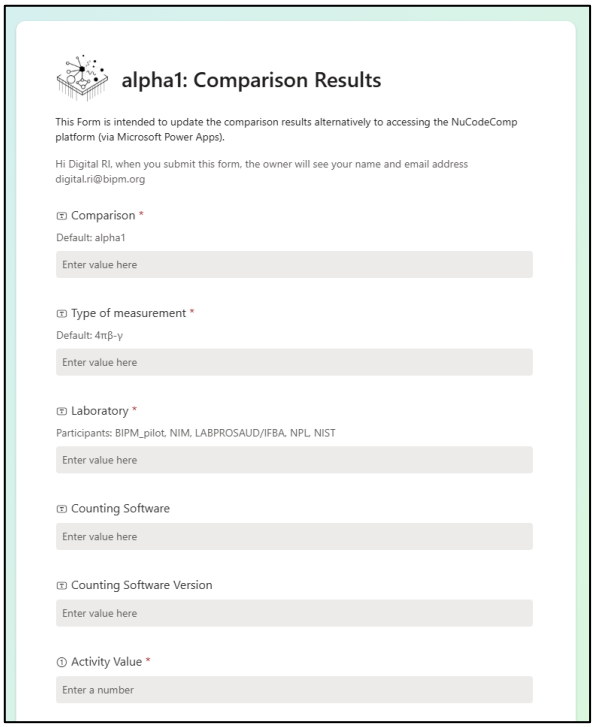
Discriminator Type: Edge

Service Category (SIDF): https://si-digital-framework.org/kcdb-sc/RI/RAD-1.3.1

PK Acronym: alpha1

- In the "Laboratory" field, enter the laboratory acronym "BIPM."
- In the “Counting Software” and “Activity Estimation Software” fields, provide the NAME and version as specified in the protocol, item 1.5 (“Registering”).

· The comparison form for uploading results will be sent via a link. The fields in the form will be displayed as shown in the image below:



alpha1: Comparison Results

This Form is intended to update the comparison results alternatively to accessing the NuCodeComp platform (via Microsoft Power Apps).

Hi Digital RI, when you submit this form, the owner will see your name and email address digital.ri@bipm.org

Comparison *
Default: alpha1
Enter value here

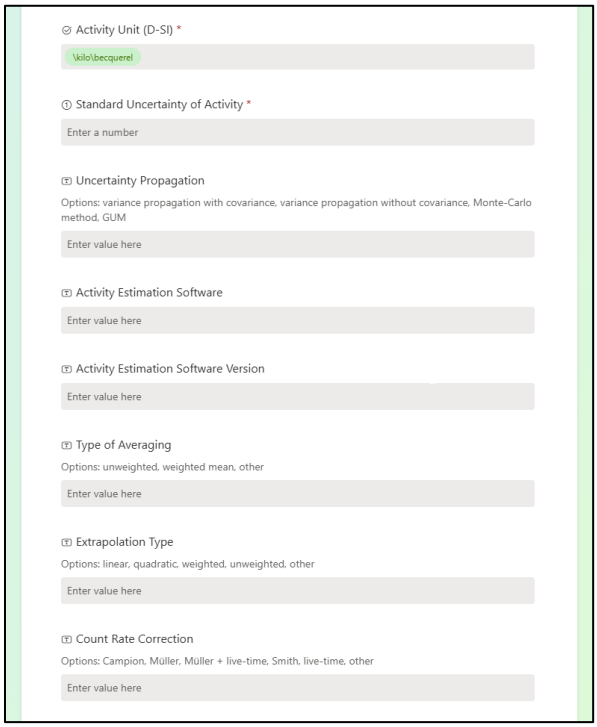
Type of measurement *
Default: 4πβ-γ
Enter value here

Laboratory *
Participants: BIPM_pilot, NIM, LABPROSAUD/IFBA, NPL, NIST
Enter value here

Counting Software
Enter value here

Counting Software Version
Enter value here

Activity Value *
Enter a number



Activity Unit (D-SI) *
\kilo\becquerel

Standard Uncertainty of Activity *
Enter a number

Uncertainty Propagation
Options: variance propagation with covariance, variance propagation without covariance, Monte-Carlo method, GUM
Enter value here

Activity Estimation Software
Enter value here

Activity Estimation Software Version
Enter value here

Type of Averaging
Options: unweighted, weighted mean, other
Enter value here

Extrapolation Type
Options: linear, quadratic, weighted, unweighted, other
Enter value here

Count Rate Correction
Options: Campion, Müller, Müller + live-time, Smith, live-time, other
Enter value here