

Developments at the UK National Data Centre for Radionuclide Analysis

Recent developments at the UK National Data Centre, hosted by UK Radionuclide Laboratory GBL15, have significantly improved the data processing capabilities for IMS radionuclide data. GBL15 utilises the IDC-developed software packages including `nms_client` and `rms_pipeline` in order to receive data downloads and automatically analyse the files. These results are used as a foundation for further investigation using independent, in-house developed analysis software. The GBL15 analysis sequence for gamma and beta-gamma spectral data employs software written using Python, SQL, Bash and ROOT languages to provide a comprehensive, automatically generated interpretation of each sample. The software is able to identify samples of interest, probe the IMS network for preliminary data captured during the sample acquisition, independently verify the identification of nuclides of interest, and flag this to GBL15 Radionuclide Specialists. This poster summarises the work that has gone in to developing a custom automatic analysis pipeline for radionuclide data, its validation against commercial software and the opportunities for further enhancing the capability of automated radionuclide analysis and data fusion in the UK.

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