

PEGASO: a library of gamma spectra from U and Pu samples

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Experimental activity produces a large amount of data.

These are often stored in a non-organised way:

- on different devices (files and/or paper)
- in different places (measurement/item data)
- incomplete (loss of relevant information)

PEGaSO

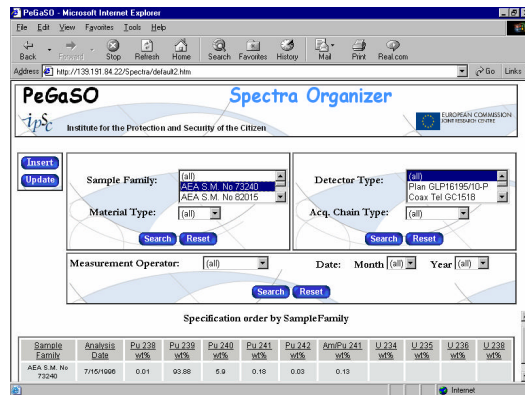
PERLA Gamma Spectra Organiser

PEGaSO is an electronic gamma spectra library. It has been set up to store electronically all information about all the measurements performed in the laboratory, PERLA reference samples and the various combinations of detectors and electronic acquisition devices used. PEGaSO archives the gamma spectra tracing well-defined experimental conditions and reporting quality indicators.

All relevant information is stored in the data base and available for any future use.

It can be accessed from everywhere (web-based application) from authorised users.

PEGaSO avoids repetition of measurements, reducing so waste of time and resources and dose exposure of personnel.



GAMMA SPECTRUM MEASUREMENT DATA SHEET	
Location: PERLA Laboratory Date: 22-Jul-98	
ITEM DESCRIPTION	GEOMETRICAL CONDITION
SampleID: AE06	Item - detector orientation: Side
SampleFamily: AEA S.M. No 82015	Item - detector distance: 1.5 cm
OA Composition: Pu02	Collimator:
Material Type: powder	Material:
Container Type: AEA Cylinder	Thickness: 0 mm
Attenuators:	Hole diameter: 0 mm
Material: no material	Cu Filter thickness: 1.5 mm
Thickness: 0 mm	Cu Filter thickness: 0.5 mm
PHOTON DETECTOR	ACQUISITION CHAIN
DetectorType: Planar	ChainType: Conventional
SerialNumber: GLP16195/10-P	Reference Pulser:
Supplier: EG&G Ortec	Supplier and Model: EG&G Ortec:Rosarich pulser 418
	CounterType:
	Supplier and Model: EG&G Ortec:Counter and timer 776
	HV Supply:
	Supplier and Model: EG&G Ortec:Bias Supply 409
PREAMPLIFIER	Amplifier:
PreAmp: Charge sensitive with feedback resistor	Supplier and Model: EG&G Ortec
Supplier: EG&G Ortec	PulsingShape: Gaussian Unipolar
	ShapingTime: 2.000000
	Pur: On
	A/d:
	Model and Supplier: Spectrum Master 919EG&G Ortec
	Memory Buffer:
	Model and Supplier: Spectrum Master 919EG&G Ortec
	Conversion Gain: 8 k
	Spectrum Size: 8 k
MEASUREMENT DATA	QUALITY INDICATORS
FileName: 06a7b	Date: 22/07/1998
	QualityIndicators:
RealTime: 3408 S	
LiveTime: 3137 S	
DeadTime: 2.735%	
Input CountRate: 3076 1/S	
	Date: 22-Jul-98
	Operator:
	Signature:

Conclusion

PEGaSO is an electronic gamma spectra library providing a controlled web access to a wide range of measurements performed in PERLA facility. The flexible user interface allows an easy consultation. New spectra can be added on-line if all the required information is given and quality indicators are specified. The 1500 spectra already included cover a wide range of nuclear material samples and acquisition devices. They were performed in various experimental conditions under well-controlled (quality indicators) and documented (internal data sheets) conditions.

