BALTIC SCIENTIFIC INSTRUMENTS

SpectraLineGP software package

Application

SpectraLine Gamma Precision (GP) software has been developed for a wide range of application tasks in spectrometry using gamma-ray semiconductor detectors.

The tasks are as follows:

- Examination and certification of food products and building materials.
- Radiation monitoring of environmental and other objects.
- Certification of radiation samples.
- Determination of the enrichment level for uranium, plutonium and other elements.
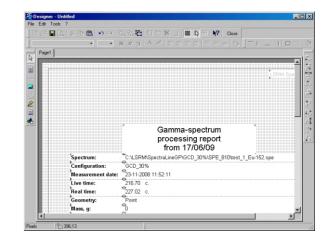- Fuel analysis in scientific research, etc.

Specification

- Automatic peak search with the required level of detection (peak search results are stored in files).
- Calibration by energy, half-width, and peak shape.
- Calculation of the peak parameters (position, half-width, area), with storing the results in a text file.
- Calibration by efficiency; construction of approximate efficiency curves.
- Activity calculation by different methods;
- Correction for true summation in view of the subsequent gamma-ray intensity correction.
- Storing the measured spectra and results of processing in the database in order to analyze the repeated measurements for convergence in the given criteria (the quality estimation).
- Simultaneous processing of an arbitrary (optional) number of spectra; the use of several spectra peaks from different energy ranges at calibration by shape.
- Quantitative and visual control over the calibration quality.
- Connection of an arbitrary (optional) number of measuring channels.
- Independent control, start, stop, spectra storage and visualization in all measuring channels.

It is possible to create libraries of arbitrary (optional) configuration depending on the task to be solved is involved in the program.
Information is provided on the radionuclide designation, its half-life period, line energy, line intensity, and absolute error.

The program has a built-in editor, which allows making up the reports of various forms and connecting external programs.

SpectraLineGP Software has a user-friendly interface and offers the following options:
- Color scheme adjustment of the window.
- Data copying into the spectrum windows.
- Addition/deletion of peaks and zones in a spectrum.
- Viewing the parameters of indicated zones or separate peaks.
- Zone integration or splitting into smaller zones;
- Viewing of calibration results, corrections, calculations, etc.