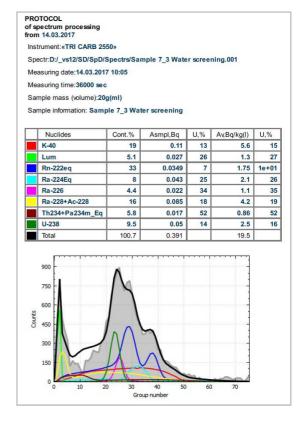


## SpectraDec software for liquid scintillation analysis

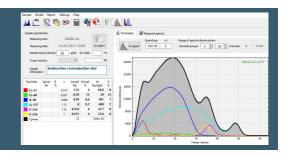
## **FEATURES**

- Software allows users to provide radionuclide analysis of samples measured on all types of liquid scintillation spectrometers
- rapid processing in the automatic mode of spectra with small statistics, with poor resolution and with a significant overlap in the energy spectra of constituent radionuclides
- the processing is based on mathematical modeling of the measured spectrum by the spectra of individual radionuclides from a preprepared library
- the possibility of modeling the missing library spectra from the available spectra
- availability of the measurement techniques used on liquid scintillation spectrometers
- rapid test (without radiochemical preparation) of the activity of  $\alpha$  and  $\beta$  emitters
- procedure of the automatic and manual quenching correction, including the application of an external standard
- accounting for activity of radionuclide used as a label
- possibility of self-modeling of the spectrum by the operator, as well as taking into account of a priori activity of radionuclides in the mixture
- formation of preliminary sets of the calculated radionuclides
- the report editor allows you to create the resulting document in accordance with any user requirements and save it in various formats (html, pdf)
- availability of the user and administrator modes



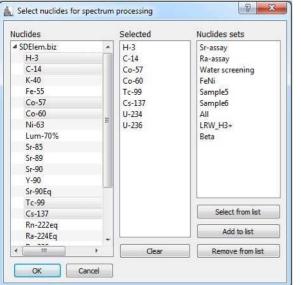


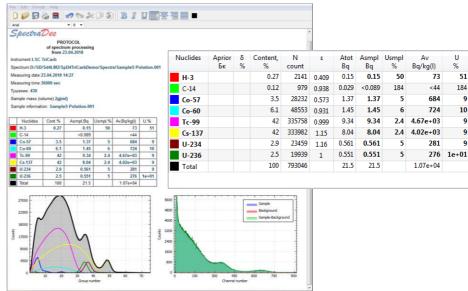
## SpectraDec Software for liquid scintillation analysis



## **APPLICATION**

- Monitoring of natural radionuclides ( $^{226}$ Ra,  $^{228}$ Ra,  $^{228}$ Th,  $^{222}$ Rn,  $^{210}$ Pb,  $^{210}$ Po,  $^{234}$ U,  $^{238}$ U) and technogenic ( $^{3}$ H,  $^{14}$ C,  $^{90}$ Sr,  $^{89}$ Sr,  $^{137}$ Cs,  $^{241}$ Pu,  $^{36}$ Cl,  $^{129}$ I,  $^{85}$ Kr,  $^{99}$ Tc, Pu) radionuclides in environmental objects (air, soil, water, sediments, foliage, etc.) at background levels
- Rapid analysis of various radionuclides in the environment under the control of emissions and discharges of non-nuclear-cycle enterprises (coal, oil and gas fields, power plants)
- Monitoring of technogenic radionuclides in emissions and discharges of enterprises of the nuclear cycle (<sup>3</sup>H, <sup>85</sup>Kr, <sup>89</sup>Sr, <sup>90</sup>Sr, <sup>99</sup>Tc, <sup>129</sup>I, <sup>241</sup>Pu ...), as well as in radioactive waste
- Radiation monitoring of sources of drinking water supply and food products
- Monitoring of the content of various radionuclides in technological environments at nuclear cycle plants – rapid analysis by screening method without radiochemical preparation or with minimal simplified preparation
- Measurements of airborne content, as well as internal contents of various radionuclides of personnel at nuclear cycle facilities
- Determination of gross α-β activity in various objects
- Precise analysis of radon and thoron in indoor air
- Quality inspection of isotope products
- Control of radioisotope tracers in medical and biological research







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