

<b>Method</b>	<b>GAMMASPECTROMETRY</b>
Principle	Total gamma ray intensity and spectrum are measured. Content of K, equivalent U and equivalent Th can be determined from selected energy windows.
Other information	
<b>Devices</b>	
Devices in use	EXPLORANIUM miniSPEC GR-130 EXPLORANIUM GR-135G RADIATION SOLUTIONS BGO-SUPER-SPEC RS-230 GEOFYZIKA GS-256
Measured components or/and quantities	Total gamma ray intensity Spectrum (channels 256): GR-130, GR-130G, GS-256 Spectrum (channels 1024): RS-230 K, eU and eTh content (not GR-130)
Units	Cps (counts per second) or Bequerel, %K, ppm eU and ppm eTh
Reading accuracy	1 cps; 0.01 %, 0.01 ppm
Other information	Stabilization automatic or with test source (GR-130)
<b>Measurement</b>	
General	Gamma ray intensity decays with growing distance. Measurements require a well-grounded set-up and consideration of background.
Measured quantities	Gamma pulses per second
Measuring parameters	Number of pulses/second, Energy distribution of the pulses
Quality requirement of reading accuracy	Gamma radiation obeys Poisson statistics meaning that standard deviation = $\sqrt{\text{radiation intensity}}$
Maintenance of reading accuracy	Data checking in the field office, monitoring radiation from test source
Standard error of mean values of repeated measurements	Gamma radiation obeys Poisson statistics meaning that standard deviation = $\sqrt{\text{radiation intensity}}$
Location	Error of XY: (GPS) < 5 m, < 2 m (Focus-GPS), < 0.5 m (VRS-GPS) Z: not usually measured Typical mean error for station coordinate, 2 m (after correction) Typical mean error for line coordinate, 5 m (after correction)
Repeat criteria	Measurements are repeated when lateral deviation is greater than half line interval or closure error is greater than point interval.
Other information	Number of measured gamma pulses depends on crystal volume