Terraplus
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CORELA GRG-01 spectral gamma ray logger
Device for Drill Core Activity Logging



PERFORM SIMULTANEOUS MEASUREMENTS with multiple built-in detectors for superior precision / shorter acquisition time

GRG-01 – spectral gamma logger is the state-of-the-art versatile instrument for laboratory or in situ gamma ray and K-U-Th concentration pattern logging. It includes an array of novel compact and high sensitivity Gadolinium Aluminium Gallium Garnet (GAGG) radiation detectors embedded in efficient tungsten or lead shielding and in close contact with the measured sample (core). Its design minimizes the requirement for shielding size and weight while matching the accuracy and precision of larger conventional setups. The revolutionary modular architecture can combine a series of standardized instrumented segments to perform simultaneous measurements along core samples (with the option to measure crushed or split core) and provide customizable statistical precision.

Features:

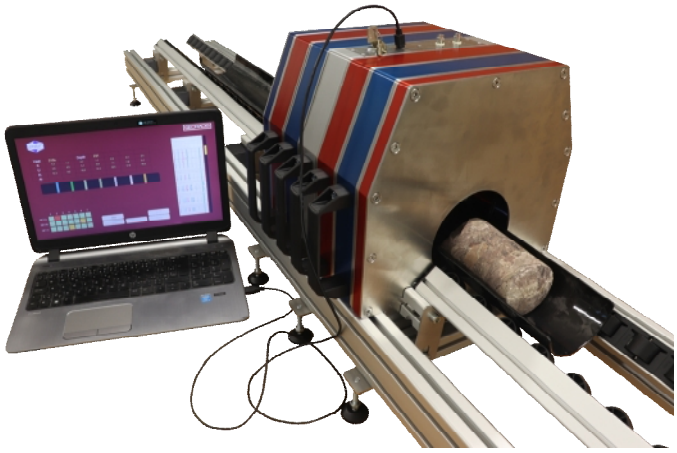
- Next generation GAGG scintillation detectors with FWHM resolution similar to NaI(Tl) but with double the density and sensitivity;
- Three (3) detectors within each measuring segment and the ability to combine up to seven (7) measuring segments for greater productivity;
- CORVIEW software included with each system for measurement control and spectra evalution;
- Simultaneous determination of K, U, Th concentrations with selectable units (% and ppm - traditional, Bq/kg - SI or W/kg - geothermal);
- Advanced method of automatic gain stabilization using natural background radiation, eliminating the need for a radioactive check source;
- Compatible with process automation (connectable to a robot), computer controllable;
- Compact and lightweight compared to larger, conventional setups without sacrificing sensitivity;
- Disassembles to facilitate transportation and field deployment;
- Ruggedized for harsh environments (shock, temperature, humidity, dust);
- Easy maintenance and decontamination; and
- Certified calibrated units with measurement traceability.

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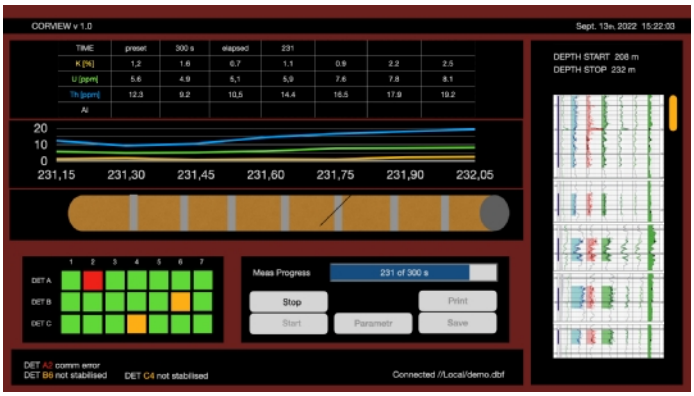
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Base CORELA System with 1 Measuring Segment



CORVIEW Software with data from 7 Measuring Segments

Specifications

Operating temperature range:
-20°C to +50°C

Storage temperature:
-20°C to +60°C

Weight per individual segment:
- Lateral (L) 20 kg
- Shielding (S) 45 kg
- Measuring (M) 42 kg

Base system consists of segments LSSMSSL with a stand and conveyor, weighing 280 kg

Detectors in each measuring segment: 3
Max number of measuring segments: 7
Max number of detectors: 21
Max number of spectrometers: 21

MCA channels: 1024

Sample diameter: Min 2 cm, Max 10 cm

Protection rating: IP64

Operating length of the device (path): Min 1.5 m

Power supply
- USB C or external 24 V DC

Data Connection
- LAN Ethernet, min 10Mbit, USB 2.0

CORVIEW Software

- Control (self-diagnostics, auto calibration)
- Data collection, processing and archiving
- Graphic output of the depth profile
- Concentration K, U, Th at depth d Ue, The, activity index, API
- Tasks manager for automated processing
- Variable measuring modes (static, slow motion)
- Remote control

Standard Accessories

- Conveyor system with tray and driver
- UPS backup
- Calibration standards
- Additional Measuring (M), Shielding (S), and Lateral (L) segments

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