

# **DCS - 1 DRILL CORES SCANNER**

## **LABORATORY GAMMA-RAY AND MAGNETIC SUSCEPTIBILITY METER**

**Geological survey  
K, U, Th assays  
Sedimentology  
Artificial radioactivity detection**



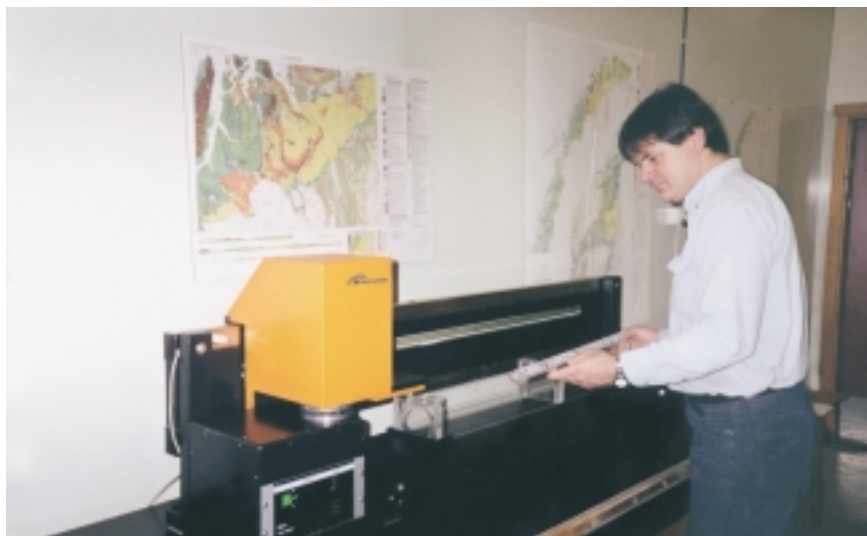
**The DCS-1 is an automatic laboratory device for precise gamma-ray and magnetic susceptibility measurements of drill cores and sediment samples.**



# LABORATORY GAMMA-RAY AND MAGNETIC SUSCEPTIBILITY METER

## DCS - 1

### DRILL CORES SCANNER



The DCS - 1 instrument provides continuous precise measurements on drill cores or other soil and rock samples placed in plastic measuring trays. Magnetic susceptibility and dose rate of gamma-ray are measured simultaneously in 1 cm steps along 1 m long samples. After continuous scanning the spectral measurement with consequent analysis of K, U, Th concentrations on chosen parts of samples is available.

The DCS - 1 instrument is equipped with automatic correction for background levels of both magnetic susceptibility and gamma-ray. The device is calibrated on artificial standards for 36 mm and 100 mm diameters of drill cores (other diameters can be agreed as well). K, U, Th assays are based on the use of 512 channel gamma-ray spectrometer with quantitative spectral analysis. The precise movement and positioning of the measuring head over the sample is performed with the use of the stepping motor.

The DCS - 1 is designed for geological laboratory survey (scanning of rock samples), where it can save significant part of the working time and provide such a high quality of the measurement that cannot be reached using handheld instruments. The device is controlled from a user's PC. The measured curves of magnetic susceptibility and dose rate are shown currently on the computer screen. Measured results are organized in the form of MS Excel files.



Ječná 29a, 621 00 Brno, Czech Republic  
Tel.: +420 (5) 41634 366  
Fax: +420 (5) 41634 260  
E-mail: gregor@gfinstruments.cz  
www.gfinstruments.cz

REPRESENTED BY:

## Technical Specifications

### Gamma-ray unit:

- detector NaI(Tl) 3"x3" with shielded photomultiplier
- energy resolution better than 8.5 % ( $^{137}\text{Cs}$ )
- energy range to 3 MeV
- reference source  $^{137}\text{Cs}$ , activity 16 kBq
- pulse shaping 1  $\mu\text{s}$
- analyzer 512 channels, up to 70000 pulses per second

### Susceptibility unit:

- air-cored detection coil
- sensitivity  $1 \times 10^{-5}$  SI units
- measuring range 0 to 99999  $\times 10^{-5}$  SI units
- operating frequency 10 kHz

### PC interface:

- RS 232C

### Power supply:

- 230 V/ 50 Hz or 115 V/ 60 Hz

### Dimensions:

- 180 x 60 x 62 cm (length, width, height)

### Weight:

- 118 kg

### Ambient conditions:

- laboratory



## Standard Accessories:

- 2 measuring trays (for 36 and 100 mm cores)
- box for shielding material
- 2 pads for sample distance adjustment
- PC communication cable and software (WINDOWS 95 or higher)
- operation manual

With reservations for changes