

SPPGamma

Portable Scintillometer

○ TOTAL GAMMA RADIATION DETECTION

□ APPLICATIONS

- Uranium prospection : Mapping, Ground detection, and detection of aerial anomalies K, U, Th or full count
- Mining prospection : Mapping of clay or hydrothermal alteration zones, help and/or complement for geological mapping
- Public safety
- Monitoring of industrial or mining sites following rehabilitation
- NORMS search
- Expertise



- **Self-contained, portable, sturdy, dust and water proof**
- **Ergonomic, simple to use**
- **Gamma Measurement** obtained with a scintillator and a photomultiplier
- Universal use with its numerous **operating modes**
- Trigger controlled actions
- Screen **display** of: measure in progress, mean measure, device status
- Onboard GPS for the geolocation of measurement points
- Data storage of measurements and corresponding geographical data
- USB port
- Powered by two 1.5V batteries allowing over **4 days of autonomy**
- Setting and data reading with *SPPG-Reader*.

Specifications



Operating Principle:

Gamma photons emitted by a radioactive source interact with the scintillating material, producing photons which are in turn detected by a photomultiplier. The number of photons detected is proportional to the number of disintegrations emitted originally.

Quantity measured: Bq

Results are given in counts per second (cps)

Detection:

With a scintillator coupled to a photomultiplier
Scintillator NaI(Tl) Ø 38.1 mm * 25.4 mm (h)
Photomultiplier Scionix Ø 38.1 mm
High power voltage 1000V
Threshold energy: 30 keV
Maximum energy: 1500 keV

Additional Sensors

Temperature: ±2.5°C accuracy

Measure of the PM high voltage power supply: for the regulation of the voltage

Measure of battery power: Automatic shutdown if battery too low

Light sensor: Automatic lighting of the LCD screen

Geolocation:

On board GPS

Resolution: 3 m for the best reception conditions.

Electronics:

32 MHz 16 bits microcontroller circuit board

Input / Output

Display: Backlit 160x160 pixels LCD screen

Sound buzzer: trigger action, menu navigation, radio-activity level

PC connection: By USB cable

Data backup:

4Mb SRAM Memory

3.6V Lithium battery

Storage capacity of 9 000 measures with GPS data or 30 000 measures without

Operation

Menu navigation by trigger action

Auto test when switched on

Constant auto check

Automatic standby if idle (programmable idle time)

Operating modes:

In all modes, display of the radioactivity value, refreshed every 0.1 to 1s

Sampling: Current radioactivity recorded by pressing the trigger

Automatic (Tracking): Automatic recording of the radioactivity value, programmable period.

Power:

2 type D batteries 1.5V located in the handle

Autonomy: 110 hours with GPS off, 40 hours with GPS on

Housing:

ABS and PC plastic housing

H*W*L: 230*90*225 mm

Weight: 1.5 kg

Operating conditions:

-20°C to +55°C, 10-90 % relative humidity

IP65 rated

SPPGamma is supplied with:

- Lockable carry case
- Carrying pouch for use on-site
- USB connecting cable
- Operating software *SPPG-Reader*
- Calibration certificate
- User guide

SPPG-Reader

Software operating under Microsoft Windows Vista, Windows7 or 8.

Communicates with the SPPGamma via USB

Functions:

- Readout of the measures recorded by the device and backup in text format, accessible from Excel.
- Initialization and setting of operating parameters
- Clock settings

Order References

SPPGamma

Ref : P-442-100