

QuantAir

the measuring and
quantification of
airborne emissions

kromek⁺
detect image identify

QuantAir

QuantAir is a unique solution for in-field air monitoring that provides high performance and detection capabilities with accurate in-field quantification.

The lightweight system incorporates an optimised lead/copper shield enabling operation in both standard and raised backgrounds. This enables monitoring of potential activity build up and acts as a live warning system, allowing remedial actions to be carried out at the time of release. This minimises potential intake and increase worker safety.

Initially setup to measure ¹³¹I levels, QuantAir can be tailored to any radionuclide. It works with most current air sampling devices, including L60, L100 and Hi-Q air samplers measuring carbon cartridge Maypack filters with the potential of other configurations.

QuantAir incorporates the Kromek GR1, the world's smallest high-resolution room temperature gamma ray spectrometer utilizing a cadmium zinc telluride (CZT) detector and offering world-leading specification in a compact form. With an energy resolution of less than 2.5%, the GR1 provides clear separation of gamma energy peaks.

Features:

- Measures ¹³¹I levels
- Works with existing air sampling devices including L60, L100 and Hi-Q air samplers
- Light weight system
- Audio visual alarm with mute capability
- User defined activity alarm threshold
- Adjustable confidence levels

Applications:

- Environmental monitoring
- Decommissioning



Kromek's GR1 spectrometer

Analytical Software

QuantAir comes with Kromek's analytical software with an easy to use interface.

Calibration is pre-set during manufacture using calibration sources and simulated efficiency factors. The software also offers a user efficiency calibration to use with Maypacks of known ¹³¹I activity.

Activity analysis algorithms offer accumulated activity output as well as an instantaneous activity output. During a measurement, sophisticated algorithms continually compare the calculated activities with the activity alarm threshold, which will alarm if above this threshold. The user can define the activity alarm threshold.

Dynamic search and alarm capability.

Dynamic search alarms utilise statistical significance algorithms that can be configured to the user's needs. It includes an audio visual alarm with mute capability and adjustable confidence levels, as well as screen locking capabilities when measuring.

Results of the algorithm outputs are stored in separate CSV files that can be exported via USB.



Tablet specifications:

The rugged handheld tablet offers good durability and is designed for mobile workers for use in various locations (vehicle mount or stand available separately).

- Multi-touch capacitive touch screen where users can type with fingers, stylus or capacitive gloves
- Full colour, 7 inch screen
- Rugged design certified to IP65 and MIL-STD-810G
- Vehicle Mount or Dock available
- 1.2kg in weight
- 8 hours typical run time
- MIL-STD-810G drop protection from 4 feet (120cm)
- MIL-STD-810G protection against vibration
- Wide operating temperature range: -30°C to 60°C
- Wide humidity range: 90%

GR1 specifications:

Detector Resolution	<2.5%
Energy Range	30keV to 3MeV
Number of Channels	4096
Power Consumption	Powered via USB
Weight	4.8kg
Dimensions	h 219.5 x w 113.3 x d 62.5 mm
Screen Dimension	7 inches
Lead/Copper Shield	10mm/3mm
Radionuclides	I- ¹³¹ , others on request
Sample Containment	Maypack Filter
Temperature	0-40°C