BALTIC SCIENTIFIC INSTRUMENTS

Bringing Solutions



AirTrack-I
Iodine Monitoring Station

AirTrack-I Iodine Monitoring Station

with automatic cartridge changer

DESCRIPTION

AirTrack-I represents the state-of-the-art in iodine monitoring, featuring advanced design solutions for automatic gamma spectrometric measurements and cartridge changer mechanics. The use of innovative $SrI_2(Eu)$ scintillation detector, offering high energy resolution and low intrinsic background, ensures maximum reliability in identifying radioactive iodine and significantly lowers the detection limit for its concentration.

AirTrack-I shares the same functional and mechanical design as the AirTrack-Sr Aerosol Monitoring Station. Both monitors are built on a modular principle and feature interchangeable components; however, AirTrack-I utilizes specialized charcoal filters which do not trap other gases, thus ensuring that the sample is enriched specifically with I-131.





APPLICATION

- Continuous automatic measurement of radioactive iodine activity and concentration in ambient air

FEATURES

- TEDA Impregnated Charcoal Filter for capturing radioactive iodine
- Scintillation detector $SrI_2(Eu)$ with <3.5% energy resolution
- Calculation of **I-131, I-132, I-133** and **I-135** activity concentration
- 16(20)-filters capacity removable cartridge, up to 2-month autonomy
- Evaluation of measurement results according to ISO 11929
- Automatic filter change when total activities or differential pressure thresholds are exceeded, or after the expiration of the specified measurement time;
- two programmable thresholds (notification and alarm) for radiological events;
- Automatic stabilization of gamma spectrometric channel with K-40 peak
- Continuous self-testing procedures with an alarm signal and messages

Parameter	Value
Detector type	$SrI_2(Eu)$ ($LaBr_3(Ce)$, $CeBr_3$ or NaI(Tl) optionally)
Gamma energy range	from 50 keV to 3 MeV
Energy resolution at the 662 keV line	3.2% (for $SrI_2(Eu)$ Ø38.1×38.1 mm)
Measurement range of I-131 volumetric activity	from 10^{-2} to 10^6 Bq/m^3
Decision threshold for I-131 (ISO 11929):	• 10 min: not more than 1.5 Bq/m^3 • 60 min: not more than 0.2 Bq/m^3 • 360 min: not more than 0.01 Bq/m^3
Nominal flow rate	adjustable, from 3 to 10 m^3/h
Flow regulation accuracy	2% max.
Noise level (ISO 2151)	not more than 62 dB(A)
Power supply	230 V / 50 Hz
Operating temperature range	+5°C … +40°C

Baltic Scientific Instruments
Ramulu str. 3
Riga, LV-1005
Latvia

Phone: +371 67383947
E-mail: sales@bsi.lv
www.bsi.lv

Gamma-rays