

# SIRA ENVINET



## **SIRA – Spectroscopic Aerosol Monitoring System**

The ideal solution for monitoring environmental air radioactivity. Based on Scienta Envinet's tried-and-tested, reliable spectroscopic solution SARA, SIRA detects extremely low amounts of artificial radioactivity in the air. The robust design, high automation, flexible analysis, easy handling and seamless integration into existing surveillance networks make SIRA the comprehensive answer to your air monitoring requirements.

# SPECTROSCOPIC AEROSOL MONITORING SYSTEM

SIRA is Scienta Envinet's solution for the automatic, permanent monitoring of airborne radioactivity. The gamma spectroscopic aerosol monitor combines industry-leading, tried-and-tested components, namely Scienta Envinet's SARA from Germany and an aerosol sampler made by Digital Elektronik AG of Switzerland. A perfectly coordinated mechanical design is paired with sophisticated algorithms that control the monitor with maximum precision and analyze the measurement data in situ.

## APPLICATIONS

SIRA can be used for:

- Nationwide networks
- Ring monitoring around nuclear power plants
- Area monitoring

## FEATURES

SIRA is designed to provide maximum reliability and a minimum error rate, well above the standard. It is able to rapidly detect extremely low levels of artificial radiation in the air. Furthermore, it offers the following features:

- Detector: CeBr<sub>3</sub>, optional NaI (TI)
- Internal heating of sampling pipe (optional)
- Gamma nuclide activity evaluation for each spectrum according to ISO11929
- Freely configurable nuclide library
- Flow rate: 0.3 – 5.7 m<sup>3</sup>/h
- Filter size: 47 mm
- Filter magazine for 60 days autonomous operation
- Compact size, small footprint
- Low energy consumption
- Local spectrum evaluation and data storage
- No compressed air, no counting gas, no cooling required

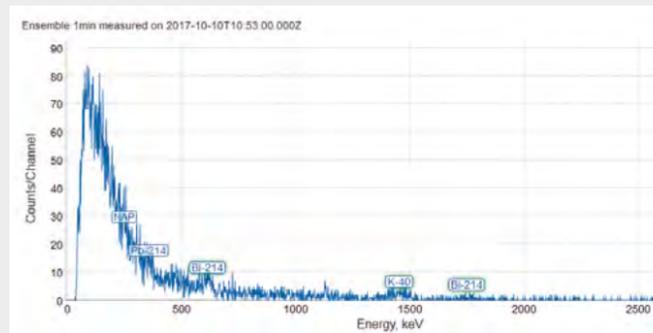


Filters and filter magazine

## DESCRIPTION

SIRA consists of a sophisticated collecting unit: up to 5.7 m<sup>3</sup> of ambient air are pumped per hour through the sampler where the aerosols are separated on the filter. With its automatic switching mechanism, the filter magazine enables the maintenance-free operation. Each of the 60 filters can be removed individually, making it easy to carry out follow-up analysis in the lab if required at any time. However, this is rarely necessary as SARA's gamma spectroscopic CeBr<sub>3</sub> detector that is located directly above the filter enables the station to identify radionuclides automatically, directly alerting the monitoring center in the event of an incident. This eliminates the need for complex background corrections, which are prone to error.

As SIRA can be integrated in existing and new NMC monitoring networks, it is the perfect complement to dose rate probes in monitoring networks.



Spectrum



## FUNCTIONS

- Individual filters, each separately exchangeable, e.g. for optional lab re-analysis in the case of unusually high readings
- Immediate data analysis during air accumulation, fast response
- Detection of lowest artificial activity contribution, even in the case of strongly variable, natural radon background
- Multiple active measurement intervals in parallel to simultaneously achieve fast alarming and low detection limits
- Signal processing, evaluation and alarm generation directly in the station. Should the network connection or the data management software ever fail, the measurement will still be fully functional.

## BENEFITS

SIRA is an easy-to-operate, highly reliable air monitoring system that is able

- To detect extremely low levels of artificial radiation in the air
- To improve early warning and counter-measures due to its rapid detection technology and nuclide identification

Thanks to SIRA's high degree of automation

- Operator-training is kept to a minimum
- Installation is simple and maintenance minimized
- Total cost of ownership is low

## GOOD TO KNOW

Not just reliable, SIRA is also compact and economical. What's more, a measurement container is redundant, thanks to the optional, IP54-certified field casing.



For even more information, such as the probe's low maintenance requirement, contact your Scienta Envinet consultant at [info@envinet.com](mailto:info@envinet.com).

Or just pick up the phone and dial +49 89 456657-0. We look forward to hearing from you.



### IN USE AROUND THE WORLD

For more than 35 years, our customers have been relying on Scienta Environet's solutions for monitoring environmental parameters with more than 5,000 stations.



**ENVINET GmbH**

Hans-Pinsel-Str. 4  
85540 Haar / Munich  
Germany  
+49 89 456657-0  
info@scientaenvinet.com  
www.scientaenvinet.com