

SIRA ENVINET



SIRA – Spectroscopic Aerosol Monitoring System

The ideal solution for monitoring environmental levels of airborne 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

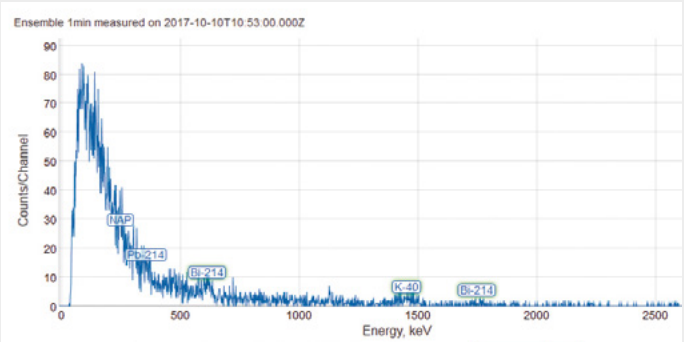
- SIRA is designed to provide maximum reliability and a minimum error rate, exceeding the standards' requirements. It is able to rapidly detect extremely low levels of artificial radiation in the air. SIRA-B can in addition measure the count rate of Beta particles by employing an innovative phoswich detector system. Furthermore, SIRA offers the following features:
- Available as pure γ - and as combined β - γ -monitor (SIRA-B)
 - Detector: SIRA: CeBr₃, NaI (TI), SIRA-B: NaI + plastic
 - 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 m³/h
 - Filter size: 47 mm
 - Filter magazine for 60 filter holders. Length of autonomous operation is dependent on filter change frequency.
 - 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 m³ 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 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 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 back-ground 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

- 60 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 gamma activity contribution, even in the case of strongly variable, natural radon background
- Beta detection (SIRA-B)
- 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@scientaenvinet.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

Since 1985, our customers have been relying on Scienta Envinet's solutions for monitoring environmental parameters with more than 5,000 stations.



www.scientaenvinet.com

EUROPE:

ENVINET GmbH

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

Scienta Sensor Systems AB

Danmarksgatan 22
753 23 Uppsala
Sweden
+46 18 4805800
info@scientaenvinet.com

US:

Scienta Omicron, Inc.

3222 E. 1st Ave, #521
Denver, CO 80206
United States
+1 901 538-1258
sales.us@scientaenvinet.com

CHINA:

Scienta Omicron (Beijing) Analytical Instrument Co., Ltd.

Room 12C5, Building No. 2
No. 1 Xizhimen Street
Xi Cheng District,
Beijing 100044, China
+86 010 58301883
sales.china@scientaenvinet.com