



SECURE MINERS' HEALTH BEFORE THE DUST SETTLES

On-site Silica Analyzer

Constant exposure to high levels of silica dust, a class 1 human carcinogen adversely affects a miner's health and future life. Effects include silicosis, lung cancer, pulmonary tuberculosis, and chronic obstructive pulmonary disease, some of them irreversible. Miners who spend their shift working in dusty conditions have the same questions at the end of a shift: "What is the level of dust in my area?" and "When will I know the results of the samples from my section?". Constantly shifting work sites in different geological strata with varying levels of silica make traditional analysis methods ineffective, expensive, labor intensive, and take weeks before exposure data is received.

Decision makers need timely, reliable, and actionable information about silica dust to prevent overexposure of workers. They need quick turnaround times not constrained by the sampling site, even in remote areas.

Introducing the PerkinElmer Silica Analyzer

for rapid, on-site and non-destructive quantification of respirable crystalline silica (RCS) deposited on PVC sampling filters. Store all relevant and critical data at a single location through Field Analysis of Silica Tool (FAST) software and share quickly across devices to promptly deal with overexposures.





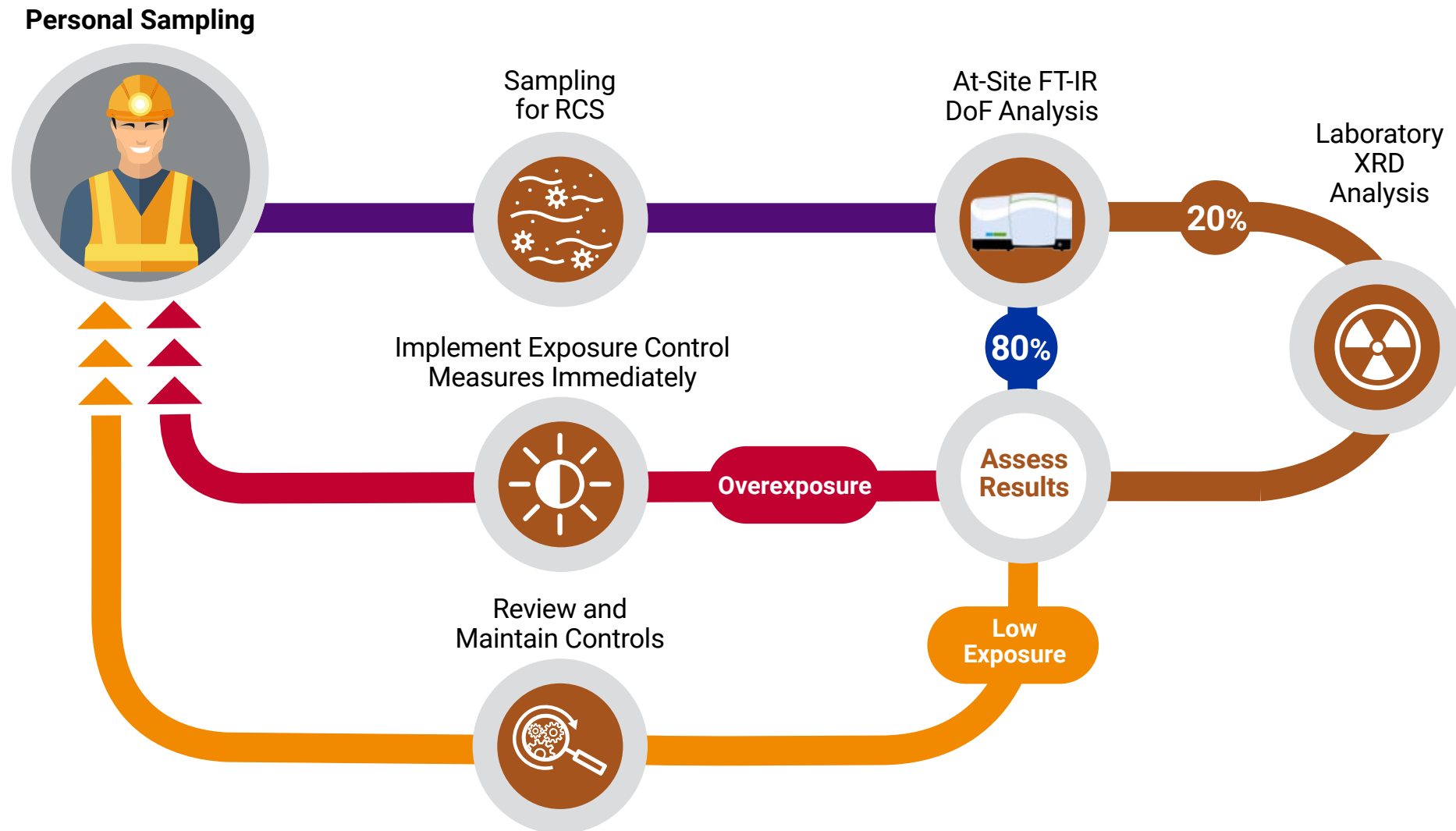
Silica Analyzer Highlights

- **Rapid analysis of samples, on-site and at the end of a shift**
High sample throughput and fast turnaround for dynamic response to changing workplace environment
- **Dust samples are analyzed directly on a PVC filter**
No sample preparation required for easy and repeatable analysis
- **On-site commissioning and support provided by experts, Sedulitas**
Ensure the data collected is useful and impactful from day one
- **Only the PVC filters are required as a repeat expense**
Low cost of analysis
- **Small footprint and portability**
Powerful analysis with the capability to move between sites*



* If analysis is carried out at a new site where the dust composition may vary, a new calibration/ site-specific correction factor may be required.

User Workflow for Silica Analyzer



Results Specific to Each Mine

Included in this package is the ability to generate a site-specific correction factor. The inclusion of a site-specific correction factor has been shown to improve accuracy of results significantly.

The RCS analysis system requires no solvents or gases and can easily be moved between sites*. It is the adaptability of this solution which makes it ideal for implementation in a mining or excavation environment.



Application Note: At-site quantification of crystalline Silica

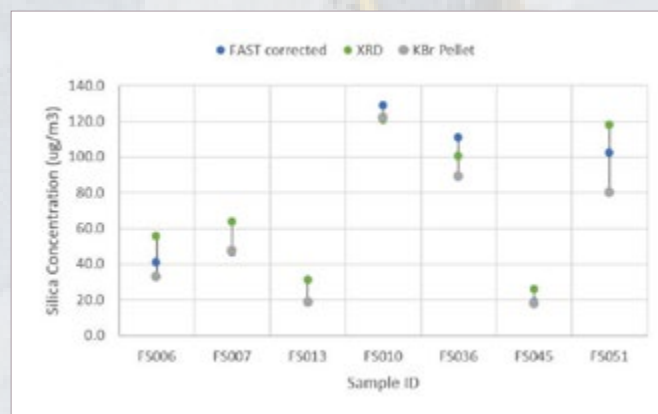
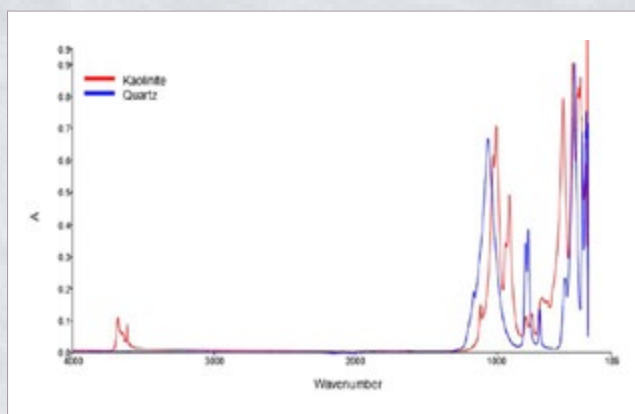
Non-destructive quantification of respirable crystalline silica deposited on sampling filters, at site where sample collection has occurred.

[LEARN MORE](#)

Fast Yet Powerful Data

An infrared spectrum will usually be collected within 30 seconds, making this solution one of the fastest on the market.

Despite the speed and convenience of this technique, the results obtained are comparable to those measured using more classical techniques.



Experience You Can Trust

With over 75 years of experience in Infrared spectroscopy, PerkinElmer bring that deep-seated experience to a new generation of infrared systems that are up to any challenge. Powerful and adaptable, our wide range of fourier transform infrared (FT-IR) and diode array (DA) spectrometers provide you accurate, reliable analytical results to meet all your current analysis needs and can be expanded as your goals evolve. Choose our market-leading infrared spectrometers and instrumentation with a low-maintenance design, intuitive software, and unrivalled flexibility for superior spectroscopic performance in demanding applications.

PerkinElmer, Inc.
940 Winter Street
Waltham, MA 02451 USA
P: (800) 762-4000 or
(+1) 203-925-4602
www.perkinelmer.com



For a complete listing of our global offices, visit www.perkinelmer.com/ContactUs

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