SAMPLING SOLUTIONS

For Respirable Crystalline Silica

Recognition

Exposure to respirable crystalline silica occurs in common workplace operations such as cutting, sawing, drilling, and crushing of concrete, brick, block, rock, and stone and in operations that use sand products such as sand blasting and glass cutting.[1] Silica exposure has been linked to lung disease silicosis and to increased risks for lung cancer, tuberculosis, airway diseases, and other ill health effects. In recent years, there has been a particular focus on exposure in hydraulic fracturing (fracking) operations in the oil and gas industries. *See Sampling Solutions for Hydraulic Fracturing (Fracking) Exposure at Oil and Gas Sites, PDP 1870.*

The new U.S. OSHA and MSHA Final Rules on Respirable Crystalline Silica set a lower PEL of 50 µg/m^3 for all industries covered by the rule, adopts the more conservative ISO/CEN criteria of a 4-µm cut-point for respirable dust samplers, and allows any sampler conforming to ISO 7708/CEN criteria to be used. SKC offers active sampling solutions for silica, including respirable dust samplers that meet the performance criteria in (and are listed in) the OSHA and MSHA final rules. SKC active samplers require an air sample pump to collect hazardous particulates in air.

[1] OSHA Safety and Health Topics: Silica, Crystalline, https://www.osha.gov/silica-crystalline

Evaluation with SKC Sampling Solutions

For over 60 years, SKC has led the research, design, and manufacture of quality sampling equipment and media to aid health and safety professionals in the evaluation of occupational and environmental hazards.

Choose from the SKC sampling solutions for respirable crystalline silica, including air sample pumps, size-selective respirable dust samplers, and filter cassettes following agency methods and established protocols.

See reverse side for specific method and sampling equipment/media information.

Notice: This publication is intended for general information only and should not be used as a substitute for reviewing applicable government regulations, equipment operating instructions, or legal standards. The information contained in this document should not be construed as legal advice or opinion nor as a final authority on legal or regulatory procedures.

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PDP 1881 Rev 260115

Sample Collection

Active Air Sampling Solutions

Target Compound	Select Methods*	SKC Sample Collection Media and Cat. No.	SKC Sample Pump and Cat. No.	Notes
Respirable crystalline silica (quartz and cristobalite)	NIOSH 7500 NIOSH 7602 OSHA ID 142	Preloaded **preweighed** PVC filter in cassette 225-8208A and cyclone 225-01-02 or 225-100 OR Parallel Particle Impactor 225-3851-PW preloaded with **preweighed** PVC filter	AirChek TOUCH, Essential, Essential+, Connect	Flow rates to meet ISO/CEN/OSHA criteria: 225-01-02, **2.5 L/min** 225-100, **2.75 L/min**
				PPI 225-3851-PW is operated at 2 L/min. Models are available for 4 and 8 L/min. The 4 and 8 L/min flow rates can be used for shorter-term sampling and allow for detection of lower airborne concentrations.
Respirable dust	NIOSH 0600			

** Other methods may apply. SKC recommends those listed.*

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