

SAMPLING SOLUTIONS

For Hydraulic Fracturing (Fracking) Exposure at Oil and Gas Sites

Recognition

Hydraulic fracturing (fracking) is the process of injecting large volumes of water mixed with sand and chemicals into the ground at high pressure to fracture the shale and allow gas and oil to flow freely. Through this process, workers are exposed to respiratory and other health hazards from respirable crystalline silica in the sand, aromatic hydrocarbons such as benzene in flowback fluids, glutaraldehyde in biocides, methanol in fracking fluids, hydrogen sulfide, and diesel particulate matter (DPM).

SKC offers active and passive solutions for sampling compounds to which oil and gas workers are exposed during fracking. SKC active samplers require an air sample pump to collect hazardous gases, vapors, and particulates in air; passive samplers collect hazardous vapors by diffusion without the use of an air sample pump.

See the SKC air sampling equipment recommended for sampling:

- Benzene and other aromatic hydrocarbons
- DPM
- Glutaraldehyde
- Hydrogen sulfide
- Methanol
- Respirable crystalline silica (*also see Sampling Solutions for Respirable Crystalline Silica, SKC Publication 1881*)

Evaluation with SKC Sampling Solutions

For over 50 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 many SKC sampling solutions for fracking at oil and gas sites, including air sample pumps, active and passive samplers, sorbent tubes, and filter cassettes following agency methods and established protocols.

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

Sample Collection

Active Air Sampling Solutions

Target Compound	Select Methods*	SKC Sample Collection Media and Cat. No.	SKC Sample Pump and Cat. No.	Notes
Benzene and other aromatic hydrocarbons	NIOSH 1501 OSHA 1005	Sorbent tube 226-01	Pocket Pump TOUCH 220-1000TC	
Diesel particulate matter	NIOSH 5040	DPM cassette 225-317 with GS cyclone 225 Series	AirChek® TOUCH 220-5000TC	Preloaded quartz filter without internal impactor available as 225-401
Glutaraldehyde	OSHA 64	Preloaded coated filter cassette 225-9003	AirChek TOUCH 220-5000TC	During sampling, use open-face cassette.
Hydrogen sulfide	OSHA 1008	Sorbent tube 226-177	Pocket Pump TOUCH 220-1000TC	
Methanol (methyl alcohol)	NIOSH 2000	Sorbent tube 226-51	Pocket Pump TOUCH 220-1000TC	
	OSHA 5001	Sorbent tube 226-82	Pocket Pump TOUCH 220-1000TC	Two tubes in series
Respirable crystalline silica	NIOSH 7500 NIOSH 7602 OSHA ID 142	Preloaded PVC filter cassette 225-803 and cyclone 225-01-02 or 225-100 OR Parallel Particle Impactor 225-385 with PVC filter 225-5-37 and support pad 225-27	AirChek TOUCH 220-5000TC	These cyclones have flow rates of 2.5 L/min and 2.75 L/min, respectively.

Passive Air Sampling Solutions

Target Compound	Select Methods*/SKC Validation	SKC Sample Collection Media and Cat. No.	Notes
Benzene and other aromatic hydrocarbons	OSHA 1005	VOC Chek® 575-002	Follow the SKC operating instructions depending on the VOC.
	Various	VOC Chek 575-001 or 575-002	
Methanol (methyl alcohol)	Research Report 1895	VOC Chek 575-007	Sampler includes (and requires) a secondary diffusion barrier.

* Other methods may apply. SKC recommends those listed.

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SKC Ltd www.skcltd.com
+44 1258 480188 enquiries@skcltd.com