



Sampling Solutions for Fugitive Emissions/Fenceline Testing

Introduction

Fugitive emissions are emissions of gases and vapours due to leaks from components in pressurized equipment including pipe connections, valves, and mechanical seals. Fugitive emissions also occur at waste management facilities, storage tanks, and agricultural sites. Fugitive emissions contribute to air pollution and climate change and can affect public health, particularly that of residents in nearby communities. In 2015, U.S. EPA published Method 325 to address fugitive emission of benzene from petroleum refineries. It includes two sub-parts with Method 325B addressing sample preparation and analysis using passive diffusive samplers.



SKC offers passive sampling solution for Method 325B for fenceline monitoring of benzene. In addition, SKC offers active sampling solutions for target compounds and an environmental perimeter air station for multiple compounds.

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.

SKC method-based sampling solutions for fugitive emissions/fenceline testing include air sample pumps, sample tubes, sample bags, passive samplers, and innovative portable instruments.



Sample Collection

Active Air Sampling Solutions

Target Compound	Select Methods*	SKC Sample Collection Media and Part No.	SKC Sample Pump and Part No.	Notes
Carbon dioxide [§]	NIOSH 6603 OSHA ID 172	Tedlar® sample bag 231-05 or 232-05	Pocket Pump TOUCH 220-1000TC	Requires PTFE tubing
Methane	---	Tedlar or FlexFoil sample bag		Requires PTFE tubing
Nitrogen dioxide/Nitric acid	NON 59	Sorbent tube 226-40A		
Sulphur dioxide	OSHA ID 200	Sorbent tube 226-80		
Sulphur hexafluoride [§]	NIOSH 6602	Tedlar sample bag 231-03 or 232-03		Requires PTFE tubing
VOCs	EPA TO-17	Sorbent tube 226-300 Series		
VOCs	NIOSH 1500 NIOSH 1501	Sorbent tube 226-01		

[§] For these target compounds, SKC also recommends using Tedlar 232 Series, FlexFoil 262 Series, or FlexFoil PLUS 252 Series sample bags with the Vac-U-Chamber 231 Series and AirChek XR5000 sample pump.

* Other methods may apply. SKC recommends those listed.

Passive Air Sampling Solutions

Target Compound	Select Methods* / SKC Validation	SKC Sample Collection Media and Part No.	Notes
Benzene	EPA 325A and B	Passive TD Tube 226-520 (includes diffusion cap); Sampling Shelter 226-526 available	
Nitrogen dioxide and/or sulphur dioxide	Research Reports 1781 and 1789	UME^x 200 Passive Sampler for NO ₂ /SO ₂	
VOCs	EPA TO-17 /Research Report 1812	ULTRA® 690 Series , choice of four sorbents	

* Other methods may apply. SKC recommends those listed.

Monitoring Solutions

Target Compound	Instrument	Notes
VOCs	HAZ-SCANNER EPAS	Custom configured