SAMPLING SOLUTIONS

For Asthma Studies

Recognition

Asthma is a major occupational and public health concern. This lung disease can be caused by exposure to vapors and particulate contaminants in dusts, fumes, mists, and smoke. The chemical composition, mass concentration, and particle size of particulate contaminants determine the ultimate effects of exposure on health, so the sampling method used must provide information about each of these factors.[1]

SKC offers active and passive sampling solutions for evaluating target compounds in asthma studies. 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 a sample pump.

Severe asthma attacks can result from workplace sensitization and exposure to isocyanates. *See Sampling Solutions for Isocyanates, SKC Publication 1869.*

See the SKC equipment recommended for sampling in asthma studies.

[1] White Paper: Size-selective Sampling for Particulates, SKC Publication 1205

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 asthma studies, including air sample pumps, active and passive samplers, sorbent tubes, and filters 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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Sample Collection

Active Air Sampling Solutions

Depending on the method and application, SKC recommends the size-selective samplers and media below.

Note: *When using a sorbent tube with an AirChek Touch Series pump, a low flow tube holder is required.*

Target Compound	Select Methods*	SKC Sample Collection Media/Sampler and Cat. No.	SKC Sample Pump and Cat. No.	Notes
Formaldehyde	EPA IP-6	Sorbent tube 226-119 or 226-120	Pocket Pump TOUCH 220-1000TC	226-120 is used in the presence of ozone.
PM10 PM2.5	EPA IP-10A	PTFE filter 225-1709 with Personal Environmental Monitor (PEM) 761 Series. Flow rate determines pump recommended. *See below.*		Single-stage impactor Choose model for desired PM size and flow rate.
		2 or 4 L/min PEM	AirChek TOUCH, Essential, Essential+, Connect	
		10 L/min PEM	AirChek TOUCH, Essential, Essential+, Connect	
		Sioutas Impactor 225-370 with four PTFE collection substrates 225-3708 and an optional PTFE after-filter 225-1709		Multi-stage impactor with a designated flow rate of 9 L/min
	EPA IP-10A	PTFE filter 225-1709 or quartz filter 225-1822 with Personal Modular Impactor (PMI) 225-350 or 225-352	AirChek TOUCH, Essential, Essential+, Connect	Single-stage impactor with a designated flow rate of 3 L/min. Choose model for desired PM size. *Requires 225-355 impaction substrates*
	EPA IP-10A	PTFE filter 225-1747 or quartz filter 225-1823 with IMPACT Sampler 225-390 or 225-392	Leland Legacy 100-3002	Single-stage impactor with a designated flow rate of 10 L/min. Choose model for desired PM size. *Requires 225-395 impaction substrates*

* Other methods may apply. SKC recommends those listed.

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Passive Air Sampling Solutions

Target Compound	Select Methods*/ SKC Validation	SKC Sample Collection Media and Cat. No.	Notes
Formaldehyde	EPA IP-6C OSHA 1007/Research Reports 1608 and 1661	UME^{X} 100 500-100	HPLC analysis
Organic vapors	EPA TO-17/Research Reports 1667 and 1812	ULTRA® 690 Series	Thermal desorption and GC analysis

* Other methods may apply. SKC recommends those listed.

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