

Medium Volume Particulate Sampler

SIMULTANEOUS COLLECTION OF PM-2.5 AND PM-10 | URG-3000ABC

URG's Medium Volume Particulate Sampler (URG-3000ABC) allows for the simultaneous measurement of a variety of air quality parameters. This sampler collects (4) PM-2.5 and (4) PM-10 samples simultaneously and the flow on all eight channels is controlled by critical orifices. The enclosure is designed to accommodate additional sampling components such as annular denuders and PUF samplers, making it an ideal sampler for many different sampling scenarios.

Measurement Capabilities

- Can collect multiple PM-2.5 and PM-10 samples simultaneously
- Eight flow rates controlled by critical orifices
- Enclosure has sufficient space for multiple sampling
- Configurations including annular denuders, filter packs, and PUF samplers



Specifications

- Weather-tight aluminum enclosure
- 66Lpm total flow rate
- Available as 115VAC or 220VAC
- Circle timer for on/off settings
- Vaned vacuum pump capable of 16" vacuum at 66Lpm
- Resettable elapsed timer
- Total vacuum gauge
- 24" x 20" x 12" at 20 lb



Medium Volume Particulate Sampler Component Details

Sharp Cut Cyclone

Teflon® coated to minimize the loss of reactive gases in the cyclone's internal surfaces. Available in a variety of cutpoints and flowrates.



47mm Teflon® Filter Packs

Design ensures sample integrity and allows for easy transportation to and from the lab. Available with 1-4 stages to allow for sampling on multiple filters at once.



PM-10 Inlet

Used prior to the cyclone to minimize losses of particles less than 10µm at high wind speeds and to reduce intake of rain and insect debris.



Dry Gas Meter

Mechanically counts liters that have passed through the annular denuder system.



Chemical Species Collected

Gases

HCHO	HF	NO ₂	O ₃	NO _x
HCOOH	SO ₂	CH ₃ COOH	HNO ₂	H ₂ SO ₄
PAN	Nicotine	PAH	NH ₃	Pesticides

Particulate

NO ₃ -	SO ₄ =	NO ₂ -	SO ₄ -
NH ₄ +	HNO ₂ -	H+	Nicotine

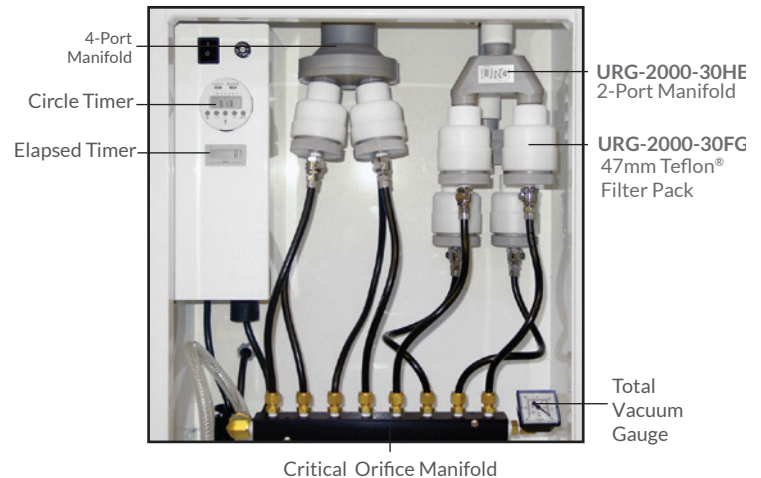
Hazardous Air Pollutants (HAPS)

#78 Ammonia (NH ₃)	#98 Fluoride (F-)	Nitrites (NO ₂)
Hydrochloric Acid	Hydrogen Fluoride (HF)	Fluorine (F)
#126 Sulfuric Acid (H ₂ SO ₄)	#65 Hydrogen Fluoride	#230 Nitrates (NO ₃)

Once collected, the pollutant concentrations are quantified by Ion Chromatography Analysis, Colorimeter Auto Analysis, Thermal-Optical Analysis, GC/MS, GC/FID, or GC/ECD, PIXIE, XRF and Flame Absorption Spectroscopy

URG-3000ABC Internal Components

Configured for (8) 47mm Filter Holders



Additional Literature Available

- Complete URG Parts Catalog
- Compendium of Methods for the Determination of Inorganic Compounds in Ambient Air - IO-4.2 Determination of Reactive Acidic and Basic Gases and Strong Acidity of Fine Particles, USEPA publication 625/R-96/01a
- URG Systems Overview
[Download at www.URGcorp.com](http://www.URGcorp.com)
- Compilation of research papers documenting URG Air Sampling Instruments from 1983 to present
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