



Humidity Filtering II Tube

For MiniRAE 2000 and Other Photoionization Detectors

Removes humidity effects on photoionization detectors (PIDs) while making VOC measurements

The new Humidity Filtering II Tube utilizes a solid adsorbent to remove moisture without impacting the detection and measurement of most VOCs.

- Enables continuous reading of VOCs under extremely humid conditions for about one half hour (per tube) at room temperature.
- Prevents drifting readings at high humidity when the sensor is dirty. Extends the time needed between sensor cleanings.
- Attaches to the Flex-I-Probe inlet with the same adapter used for ppbRAE Plus VOC zeroing tubes.

- Especially useful for measuring chlorinated solvents and fuels under high humidity conditions as are often encountered during soil and water remediation.
- Can be used with other instruments having a built-in pump such as ppbRAE Plus, UltraRAE, MultiRAE Plus and VRAE when humidity is an issue, such as PID or low-level LEL sensor measurements. (See RAE Systems Technical Note TN-178 for adapter connections.)

Part Number	Description*	Price*
025-2002-010	Humidity Filtering II tubes, box of 10	\$30.00
025-3002-000	Adapter, 7-mm OD tubes to Flex-I-Probe	\$50.00
021-2400-000	6-inch Flex-I-Probe with cap	\$70.00

* Because of ongoing programs to improve our products, these features and prices are subject to change.

Caution:

Absorbs some compounds like ammonia and slows the response of heavy compounds, especially at low concentrations or low temperatures. Check RAE Systems' Technical Note TN-178 for details.



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Specifications

Table 1. Humidity Filtering Capacity

Temp (°C)	Temp (°F)	Relative Humidity (%)	Run time to t ₁₀ (min @ 500 cc/min)	Run time to t ₂₀ (min @ 500 cc/min)
45	113	99	12	14
		75	17	18
		50	35	>40
		25	>40	>40
40	104	100	18	20
		75	25	30
		50	40	>40
30	86	100	22	26
		75	28	32
		50	40	>40
20	68	100	23	
		75	34	>40
		50	40	

Note: The contents of the tubes are non-hazardous, but may absorb hazardous components from the sample gas.

Table 2. Effect on VOC Response

Compound	Conc. (ppm)	Temp (°C)	t ₉₀ (sec)	CF#
Isobutylene	100	22	3	1.0
Isobutylene	10	0	5	1.17
Cyclohexane	10	22	3	1.0
Octane	100	22	3	1.0
Undecane	100	22	60	1.1
Benzene	5	22	3	1.0
Toluene	10	22	3	1.0
Xylene	100	22	10	1.05
Styrene	50	22	10	1.0
Gasoline	100	22	15	1.05
Gasoline	10	22	15	1.0
Gasoline	10	0	28	1.6
Jet Fuel JP-5	10	22	65	1.0
Diesel Fuel	100	22	110	1.3
Vinyl Chloride	10	22	3	1.0
Trichloroethylene	10	22	3	1.0
Trichloroethylene	10	0	5	1.2
Perchloroethylene	10	22	4	1.0
Glutaraldehyde	10	22	NR* (480)	NR* (1.05)
Ethanol	1000	22	3	1.0
Ethanol	100	22	40	1.0
Isopropanol	10	22	90	1.15
Acetone	1000	22	3	1.0
Acetone	100	22	20	1.0
Acetone	10	22	80	1.0
Acetone	10	0	115	1.17
Phenol	20	22	150	1.0
Methyl methacrylate	10	22	150	1.05
Dimethyl sulfide	10	22	3	1.0
Ethyl mercaptan	10	22	4	1.05
Butyl mercaptan	10	22	5	1.05
Hydrogen sulfide	7	22	3	1.0
Ethylamine	high	22	NR*	NR*
Ammonia	50	22	NR*	NR*

CF = Correction Factor. Multiply by reading to get true concentration to correct from some loss.

*Not recommended because of severe losses.

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