

## **Uniphos Gas Detection Tubes for Natural Gas**

Detector tubes are an economical way to reliably determine gas concentrations on the spot in the natural gas industry. The primary gases measured using detector tubes are **water vapor**, hydrogen sulfide, mercaptans and carbon dioxide.

The Uniphos system consists of a manually operated hand pump and the detector tube for the specific gas. The detector tube system is often used with a gas sampling bulb connected directly to the gas supply.



The detector tubes are calibrated by the

manufacturers and delivered with an expiration

date stamped on the packets. The pumps are hand operated aspirating type pumps which should be leak tested prior to use. Leak testing the ASP-40 piston style pump takes only three minutes.

## How to leak test:

- Insert an unopened Uniphos detector tube into the inlet of the pump
- Align the red dots on the bottom of the pump and the piston shaft
- Pull the handle all the way back to the "100" ring on the piston shaft
- Wait three minutes
- Grip the pump and handle firmly (high vacuum)
- Rotate handle 90 degrees, while holding firmly
- If handle pulls back to start position, there are no leaks
- If there is a leak, refer to the instruction manual for maintenance





There are two types of tubes available for low range H2S measurements. The lead acetate indicator changing color from white to brownish tan and a mercuric chloride indicator changing color from yellow to pink. The lead acetate has no interferences from anything in the natural gas, but the mercuric chloride will produce a similar stain when mercaptans are present. The mercuric chloride-based tubes provide a fast, more sensitive method.

₩25 ₩2	



## **Tubes for Measurement in Natural Gas**

Gas	Description	P/N	Standard Range	Strokes	RAE Equiv.	Kitagawa Equiv.
CO <sub>2</sub>	Carbon Dioxide	SCD-8M	0.5-10 Vol%	1	10-104-50	126SH
H₂S	Hydrogen Sulfide	SHS-1HNG	0.5-7 ppm	1	10-103-06	120SE
	Hydrogen Sulfide	SHS-1	0.5-10 ppm	5	None	None
	Hydrogen Sulfide	SHS-2	1-30 ppm	2	None	120SD
	Hydrogen Sulfide	SHS-3L	2.5-60 ppm	1	10-103-10	None
	Hydrogen Sulfide	SHS-3	5-100 ppm	1	10-103-12	120SB
	Hydrogen Sulfide	SHS-4L	10-250 ppm	1	10-103-18	None
	Hydrogen Sulfide	SHS-4	50-800 ppm	1	10-103-20	120SF
	Hydrogen Sulfide	SHS-5M	100-2,000 ppm	1	10-103-30	120SC
	Hydrogen Sulfide	SHS-7M	0.1-2.0 Vol%	1	10-103-40	None
	Hydrogen Sulfide	SHS-7	0.5-4.0 Vol%	1	None	120SH
	Hydrogen Sulfide	SHS-8L	0.2-7.0 Vol%	1	None	None
	Hydrogen Sulfide	SHS-8M	0.5-10 Vol%	1	None	None
	Hydrogen Sulfide	SHS-9	2-40 Vol%	0.5	10-103-50	120UT
C <sub>2</sub> H <sub>6</sub> S	Ethyl Mercaptan	SEM-2M	1-20 ppm	1	None	165SA
	Ethyl Mercaptan	SEM-4L	5-120 ppm	1	10-129-20	None
	Ethyl Mercaptan	SEM-4M	25-500 ppm	1	None	111U©
CH₃SH	Methyl Mercaptan	SMM-2M	1-20 ppm	1	None	130U
	Methyl Mercaptan	SMM-4L	5-120 ppm	1	10-129-20	164SA
H <sub>2</sub> O	Water Vapor	SWA-4L	2-10 lb/MMCF	2	10-120-10	177UR2
	Water Vapor	SWA-4	6-40 lb/MMCF	1	10-120-20	177UL
	Water Vapor	SWA-7M/lb	62.5-1125 lb/MMCF	1	None	None
	Water Vapor	SWA-7/lb	62.5-1875 lb/MMCF	1	None	None



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