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## Gas Detection Tube Data Sheet Water Vapor (Pipeline) H<sub>2</sub>O No. 10-120-20

	Extended Range	Standard Range	Extended Range
Range (lbs/MMCF)	3 - 20	6 - 40	12 - 80
No. of Pump Strokes	2	1	0.5
Sample Volume (mL)	200	100	50
Sample Time (min)	2 x 1.5	1.5	1
Correction Factor	0.45	1	2.3

Precision (Relative Standard Deviation)\*: ≤ ± 20% Linearity with No. of Pump Strokes:  $r^2 = 0.994$ 

Temperature Range: 0 - 40°C (32 - 104°F)

0/32 10/50 25/77 40/104 Temp (°C/°F) Corr. Factor 1.33 1.09 1.0 0.74

Storage Life and Conditions: 2 years in darkness at 5 - 25°C (40 - 77°F)

Color Change: Yellow → Dark Green\*\*

Reaction Principle:  $H_2O + Mg(CIO_4)_2 \rightarrow Mg(CIO_4)_2 \bullet H_2O$ 

Cross-sensitivity: Substance	Concentration (ppmv)	Reading* (lbs/MMCF)
CH₄	100%	0
CO	200	0#
CO <sub>2</sub>	10%	0#
SO <sub>2</sub>	1500	0#
H₂S	2000	<3#
NH <sub>3</sub>	250	35
HCI	300	0#
Methanol	80	0‡
Gasoline	saturated	0
Heptane	saturated	0
Ethylene glycol	saturated	0
Triethylene glycol	saturated	0
Toluene	saturated	0

<sup>\*</sup>Data based on RAE pumps and tubes used in standard range.

Other Possible Interferences: Amines, alcohols; no effect of 500 ppm PH<sub>3</sub>.

<u>Caution</u>: Dispose of spent or expired tubes according to local regulations. Possibly hazardous materials are given under the section Reaction Principle.

<sup>#</sup> No interference in mixtures with water vapor. ‡ No response below 80 ppm. Light green stain when methanol is above 80 ppm, 340 ppm alone reads ~30 lbs/MMCF. Water can be measured in a mixture with methanol by reading the dark green stain only, ignoring the light green methanol stain beyond the dark green end point.

<sup>\*\*</sup>Note: Read tube at end of dark green stain. Color tends towards purple as temperature decreases. Light green stain of methanol can be ignored.