RAE Systems, Inc.
1339 Moffett Park Dr.
Sunnyvale, CA 94089 USA

Telephone 408-752-0723
Tube Orders 1-888-723-8823
Web www.raesystems.com

Gas Detection Tube Data Sheet

Water Vapor (Pipeline) H_2O 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)

Temp (°C/°F)	0/32	10/50	25/77	40/104
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: $H_2O + Mg(ClO_4)_2 \rightarrow Mg(ClO_4)_2 \bullet H_2O$

Cross-sensitivity: Substance	Concentration (ppmv)	Reading* (lbs/MMCF)
CH_4	100%	0
CO	200	0#
CO_2	10%	0#
SO_2	1500	0#
H_2S	2000	<3#
NH_3	250	35
HCl	300	0#
Methanol	80	0‡
Gasoline	saturated	0
Heptane	saturated	0
Ethylene glycol	saturated	0
Triethylene glycol	saturated	0
Toluene	saturated	0

*Data based on RAE pumps and tubes used in standard range.
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.

Other Possible Interferences: Amines, alcohols; no effect of 500 ppm PH_3.

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

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