



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 (Metric) H₂O No. 10-120-30

	Extended Range	Standard Range	Extended Range
Range (mg/L)	0.025 - 0.5	0.05 - 1.0	0.1 - 2.0
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	0.46	1	2.1

Precision (Relative Standard Deviation)*: $\leq \pm 12\%$

Linearity with No. of Pump Strokes: $r^2 = 0.999$

Temperature Range: 0 - 40°C (32 - 104°F)	Temp (°C/°F)	0/32	10/50	25/77	40/104
	Corr. Factor	0.95	0.95	1.0	1.0

Storage Life: 2 years in darkness at 5 - 25°C (40 - 77°F). Refrigeration preferred.

Color Change: Yellow → Dark Green**

Reaction Principle: $\text{H}_2\text{O} + \text{Mg}(\text{ClO}_4)_2 \rightarrow \text{Mg}(\text{ClO}_4)_2 \cdot \text{H}_2\text{O}$

Cross-sensitivity: Substance	Concentration (ppmv)	Reading* (mg/L)
CH ₄	100%	0
Propane (C ₃ H ₈)	10000	0
CO	200	0#
CO ₂	10%	0#
SO ₂	1500	0#
H ₂ S	600	0#
NH ₃	250	0.6
PH ₃	500	0
HCl	300	0#
Methanol	100	~0.02‡
Triethylene glycol	Saturated	~0.05
Toluene	400	<0.1

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

No interference in mixtures with water vapor. ‡ No response below 100 ppm. Positive interference when methanol is above 100 ppm. 250 ppm alone reads ~0.5 mg/L.

Other Possible Interferences: Amines, alcohols.

**Note: Read tube at end of dark green stain. Color tends towards purple as temperature decreases.

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



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