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Gas Detection Tube Data Sheet

Acetone C₃H₆O

No. 10-111-40

	Extended Range	Standard Range	Extended Range
Range (ppmv)	0.05 - 1%	0.1 - 2%	0.2 - 4%
No. of Pump Strokes	2	1	0.5
Sample Volume (mL)	200	100	50
Sample Time (min)	2 x 2	2	1.5
Correction Factor	0.5	1	2

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

Linearity with No. of Pump Strokes: $r^2 = 0.992$

Humidity: No effect 5 - 85% RH

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

Temp (°C/°F)	0/32	10/50	25/77	40/104
Corr. Factor	1.25	1.15	1.0	0.95

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

Color Change: Orange → Black

Reaction Principle: $\text{CH}_3\text{COCH}_3 + \text{Cr(VI)} + \text{H}_2\text{SO}_4 \rightarrow \text{Cr(III)} + \text{Oxidation Prods.}$

Cross-sensitivity: Substance	Concentration (ppmv)	Apparent Reading*	Corr. Factor
Methyl ethyl ketone	0.6%	0.55%	1.1
Methyl propyl ketone	1.0%	0.65%	1.5
Methyl isobutyl ketone	1.0%	0.40%	2.5
CO	1.5%	0	-
CO ₂	1.5%	0	-
CH ₄	2.5%	0	-
NH ₃	5.0%	1.4% brown	3.6
H ₂ S	300	0.5% diffuse [#]	-
Ethyl Acetate	1.0%	0.85% diffuse [#]	-
Hexane	0.24%	entire tube [#]	-
Isobutylene	0.20%	entire tube [#]	-
Toluene	400	0.3% diffuse [#]	-

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

[#] Faint black color over entire stain length. Ketones can be distinguished by their darker stains and sharp endpoints.

Other Possible Interferences: Other hydrocarbons.

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