



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 Diesel & Jet Fuel

No. 10-143-10

	Extended Range	Standard Range	Extended Range
Range (ppmv)	Do not extend	0.5 - 25	Do not extend
No. of Pump Strokes		4	
Sample Volume (mL)		400	
Sample Time (min)		4 x 1.5	
Correction Factor		1	

Precision (Relative Standard Deviation)*: $\leq \pm 20\%$ for undecane

Humidity: 0 - 95%RH	% RH	<5%	30%	50%	80%	95%
	Temp (°C/°F)	0/32	10/50	20/68	40/104	
Temperature Range: 0 - 40°C (32 - 104°F)	Corr. Factor	1.0	0.8	0.7	0.7	0.7
	Corr. Factor	1.9	1.3	1.0	0.8	

Storage Life: 1 year in darkness at 5 - 25°C (40 - 77°F). Refrigeration preferred.
Color Change: White → Brown-green Ring (Over-Range: White → Pale Yellow)
Reaction Principle: $C_nH_m + I_2O_5 + H_2S_2O_7 \rightarrow I_2 + \text{Oxidation Products}$

Cross-sensitivity: Substance	Concentration (ppmv)	Apparent Reading*	Correction Factor
Undecane (C ₁₁ H ₂₄)	25	25	1.0 [#]
Diesel, whole (Automotive or Marine)	50	20	2.5
Diesel vapors	10	~20	~0.4
JP-5, whole (kerosene)	25	22	1.1
JP-8, whole (kerosene) †	10	11.5	0.87 [†]
Gasoline, whole	25	10	2.5
CO ₂	10000	0	-
CO	10	10	1.0
CH ₄	25000	0	-
H ₂ S	60	0	-
Butane	25	0	-
Propane	100	0	-
Hexane	25	0.5 ^{**}	~50
Octane	5	10	0.5
Benzene	25	1 ^{**}	~25
Toluene	25	0.5 ^{**}	~50
Xylene	25	0.5	~50
Styrene	20	0.4	~50
Ethanol	2000	0	-
Isopropanol	200	0	-
Acetone	50	0	-

*Data based on RAE pumps and tubes used in standard range. # Calibrated to undecane.

** Very faint brown stain. † Can use 1 stroke @ CF = 7.2 or 2 strokes @ CF = 2.5.

Other Possible Interferences: No response to 50 ppm HCl, or 100 ppm SO₂, NH₃, or NO₂.

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