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# Gas Detection Tube Data Sheet

## Nitrogen Oxides NO<sub>x</sub> No. 10-109-20

(Separate Quantification)

	Extended Range	Standard Range	Extended Range
Range (ppmv)	0.5 - 25	1-50	2-100
No. of Pump Strokes	2	1	0.5
Sample Volume (mL)	200	100	50
Sample Time (min)	2 x 3	3	2.5
Correction Factor	0.5	1	2

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

Linearity with No. of Pump Strokes:  $r^2 = 0.997$

Humidity: 100% RH reduces the response by about 20% vs. dry air

<u>Temperature Range:</u> 0 - 40°C (32 - 104°F)	Temp (°C/°F)	0/32	10/50	25/77	40/104
	Corr. Factor	1.8	1.6	1.0	1.0

Storage Life: 1 year in darkness at 5 - 25°C (40 - 77°F). Refrigeration referred.

Color Change: White → Yellow

Reaction Principle: NO + CrO<sub>3</sub> + H<sub>2</sub>SO<sub>4</sub> → NO<sub>2</sub>                      Pre-tube  
NO<sub>2</sub> + o-Tolidine → Nitratd yellow product                      Meas. tube

<u>Cross-sensitivity:</u> Substance	Concentration (ppmv)	Apparent Reading*
CO	3000	0
CO <sub>2</sub>	10%	0
SO <sub>2</sub>	200	0
CH <sub>4</sub>	25000	0
H <sub>2</sub> S	100	0
Acetone	10000	0

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

Other Possible Interferences: Reducing gases. No response to 5 ppm benzene. No response to 1200 ppm hexane, 100 ppm isobutylene, or 100 ppm toluene.

Separate Quantification: Sampling without the pre-tube gives NO<sub>2</sub> only. Using the pre-tube gives the sum of NO + NO<sub>2</sub>. NO can be obtained by difference.

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