



Performance

Number of pump strokes	n=1
Sampling time	30 seconds per 1 pump stroke (100mL)
Shelf life	2 years

Reaction principle

See the table below

Detecting layer		NH ₃ (Pink)	H ₂ S (Yellow)	HC (Yellowish brown)
Name (Original colour)				
Reaction principle		$2\text{NH}_3 + \text{H}_2\text{SO}_4 \rightarrow (\text{NH}_4)_2\text{SO}_4$ or $2\text{R} \cdot \text{NH}_2 + \text{H}_2\text{SO}_4 \rightarrow (\text{R} \cdot \text{NH}_3)_2\text{SO}_4$	$\text{H}_2\text{S} + \text{HgCl}_2 \rightarrow \text{HSHgCl} + \text{HCl}$ $\text{HCl} + \text{Base} \rightarrow \text{Chloride}$	$\text{Cr}^{6+} + \text{H}_2\text{SO}_4 \rightarrow \text{Cr}^{3+} + \dots$
Substances & expected concentration	Ammonia (≥ 0.5 ppm) (≥ 5 ppm)	Yellow (Inlet) Yellow (9 mm)		
	Hydrogen sulphide (≥ 0.5 ppm) (≥ 2 ppm)		Red (Inlet) Red (4 mm)	
	Sulphur dioxide (≥ 2 ppm)		Red (4 mm)	
	Hydrogen chloride (≥ 5 ppm)		Red (8 mm)	
	Chlorine (≥ 1 ppm)		Red (10 mm)	
	Nitrogen dioxide (≥ 3 ppm)		Red (4 mm)	
	Butane (≥ 500 ppm)			Dark brown (Whole layer)
	Gasoline (≥ 2 ppm) (≥ 20 ppm)			Greenish brown (Inlet) Greenish brown (Whole layer)
LPG (≥ 5000 ppm)			Dark brown (Whole layer)	

Parenthesized values after substances show their concentrations, and those after the reaction colours show the lengths of their reaction colour layers.