



Performance

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

Reaction principle

See the table below

Detecting layer		NH ₃ or Amines (Pink)	SO ₂ (Blue)	H ₂ S (White)	CO (Yellow)
Name (Original colour)					
Reaction principle		$2\text{NH}_3 + \text{H}_2\text{SO}_4 \rightarrow (\text{NH}_4)_2\text{SO}_4$ or $2\text{R} \cdot \text{NH}_2 + \text{H}_2\text{SO}_4 \rightarrow (\text{R} \cdot \text{NH}_3)_2\text{SO}_4$	$\text{SO}_2 + \text{BaCl}_2 + \text{H}_2\text{O} \rightarrow \text{BaSO}_3 + 2\text{HCl}$ $\text{HCl} + \text{Base} \rightarrow \text{Chloride}$	$\text{H}_2\text{S} + \text{CuSO}_4 \rightarrow \text{CuS}$	$\text{CO} + \text{Na}_2\text{Pd}(\text{SO}_3)_2 \rightarrow \text{Pd}$
Substances & expected concentration	Ammonia (≥ 0.5 ppm) (≥ 5 ppm)	Yellow (Inlet) Yellow (9 mm)			
	Hydrogen chloride (≥ 5 ppm)		Yellow (3 mm)		
	Chlorine (≥ 1 ppm)		Yellow (3 mm)		
	Sulphur dioxide (≥ 1 ppm) (≥ 2 ppm)		Yellow (Inlet) Yellow (6 mm)		
	Nitrogen dioxide (≥ 3 ppm)		Purple (Inlet)		
	Hydrogen sulphide (≥ 10 ppm)			Brown (Inlet)	
	Carbon monoxide (≥ 10 ppm)				Blackish brown (Inlet)
	Hydrogen (≥ 10000 ppm)				Blackish brown (Whole layer)
	Olefin HCs (≥ 10000 ppm)				Blackish brown (Whole layer)
	Mercaptans (≥ 10 ppm)				Blackish brown (Inlet)

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