



## Specification:

Measurement Range	<b>Qualitative</b>
No. of Pump Strokes	1 (100 ml)
Sampling Time	2 minutes per pump stroke (100 ml)
Color Change	Refer chart given below
Shelf Life	2 year
Relative standard deviation	± 10 to 15 %

## Concentration of Gas Versus Colour Change:

Compound	Column No	Reaction Principle	Concentration (ppm)	Colour change
Ammonia	A	$\text{NH}_3 + \text{HCl} \rightarrow \text{NH}_4\text{Cl}$	≥5	Yellow → Blue
Diethyl Amines	A	$\text{RNH}_2 + \text{HCl} \rightarrow \text{RNH}_3\text{Cl}$	≥10	Yellow → Blue
Hydrogen chloride	B	$\text{HCl} + \text{Base} \rightarrow \text{Chloride}$	≥10	Yellow → Pink
Hydrogen sulphide	C	$\text{H}_2\text{S} + \text{CuSO}_4 \rightarrow \text{CuS}$	≥10	White → Brown
Sulphur dioxide	D	$\text{SO}_2 + \text{BaCl}_2 + \text{H}_2\text{O} \rightarrow \text{HCl}$ $\text{HCl} + \text{Base} \rightarrow \text{Chloride}$	≥10	Blue → Yellow
Nitrogen dioxide	E	$\text{NO}_2 + \text{O Tolidine} \rightarrow \text{Reaction Product}$	≥5	White → Yellow
Chlorine	E	$\text{Cl}_2 + \text{O Tolidine} \rightarrow \text{Reaction product}$	≥5	White → Yellow
Carbon monoxide	F	$\text{CO} + \text{PdCl}_4 + \text{Na}_2\text{S}_2\text{O}_5 \rightarrow \text{Pd}$	≥25	Yellow → Black
Acetylene	F	$\text{C}_2\text{H}_2 + \text{PdCl}_4 + \text{Na}_2\text{S}_2\text{O}_5 \rightarrow \text{Pd}$	≥200	Yellow → Black
Ethylene	F	$\text{C}_2\text{H}_4 + \text{PdCl}_4 + \text{Na}_2\text{S}_2\text{O}_5 \rightarrow \text{Pd}$	≥10000	Yellow → Black
Phosphine	F	$\text{PH}_3 + \text{PdCl}_4 + \text{Na}_2\text{S}_2\text{O}_5 \rightarrow \text{Pd}$	≥50	Yellow → Black
Hydrogen	F	$\text{H}_2 + \text{PdCl}_4 + \text{Na}_2\text{S}_2\text{O}_5 \rightarrow \text{Pd}$	≥10%	Yellow → Black
Propylene	F	$\text{C}_3\text{H}_6 + \text{PdCl}_4 + \text{Na}_2\text{S}_2\text{O}_5 \rightarrow \text{Pd}$	≥10000	Yellow → Black
Carbon Dioxide	G	$\text{CO}_2 + \text{NaOH} \rightarrow \text{NaCO}_3$	≥5000	Blue → White

## Correction For Environmental Parameters:

Temperature	Not necessary between 0 - 40°C (32 - 104°F).
Relative humidity	Not necessary between 10 - 90 %.