

## ChemLogic Long Life SG Mineral Acids Detection Tape

ChemLogic Long Life SG Mineral Acids Detection Tapes are designed to be selective, quick responding and highly sensitive to target gases. The ChemLogic Long Life SG Mineral Acids Detection Tape is designed to detect Hydrogen Fluoride, Hydrogen Chloride, Hydrogen Bromide, Nitric Acid, Sulfuric Acid and Phosphoric Acid. It also responds to Boron Trifluoride (BF<sub>3</sub>).

In addition to the target gases listed above, other substances will react to the ChemLogic Mineral Acids Detection Tape.

**The following list includes the substances that will react on a ChemLogic Long Life SG Mineral Acid Detection Tape.**

Hydrogen Fluoride (HF)*	Nitric Acid (HNO <sub>3</sub> )*	Phosphoric Acid (H <sub>3</sub> PO <sub>4</sub> )
Hydrogen Chloride (HCl)*	Nitrogen Trifluoride (NF <sub>3</sub> )**	Boron Trifluoride (BF <sub>3</sub> )*
Hydrogen Bromide (HBr)*	Sulfuric Acid (H <sub>2</sub> SO <sub>4</sub> )	

\*Note – gases are available calibrations on ChemLogic CLPx, CL1, CL8 and CL96

\*\*Note – with a pyrolyzer option, NF<sub>3</sub> can be detected with the ChemLogic Long Life SG Mineral Acid Detection Tape

Gases or vapors, which react with ambient moisture to form acids, are also detectable with the ChemLogic Long Life SG Mineral Acids Tape.

### Compounds which hydrolyze to HBr:

Boron Tribromide (BBr <sub>3</sub> )
Phosphorus Tribromide (PBr <sub>3</sub> )

### Compounds which hydrolyze to HCl:

Arsenic Trichloride (AsHCl <sub>3</sub> )	Hexachlorodisilane (SiCl <sub>2</sub> )	Phosphorus Pentachloride (PCl <sub>5</sub> )	Tin Tetrachloride (SnCl <sub>4</sub> )
Boron Trichloride (BCl <sub>3</sub> )	Phosphorus Oxychloride (POCl <sub>3</sub> )	Phenyl Trichlorosilane (SiCl <sub>3</sub> Ph)	Trichlorosilane (SiHCl <sub>3</sub> )
Dichlorosilane (SiH <sub>2</sub> Cl <sub>2</sub> )	Phosphorus Trichloride (PCl <sub>3</sub> )	Silicon Tetrachloride (SiCl <sub>4</sub> )	

## Compounds which hydrolyze to HF:

Arsenic Trifluoride (AsF <sub>3</sub> )	Chlorine Trifluoride (ClF <sub>3</sub> )	Phosphorus Trifluoride (PF <sub>3</sub> )	Sulfur Tetrafluoride (SF <sub>4</sub> )
Arsenic Pentafluoride (AsF <sub>5</sub> )	Fluosilic Acid (H <sub>2</sub> SiF <sub>6</sub> )	Phosphorus Pentafluoride (PF <sub>5</sub> )	Tetrafluorosilane (SiF <sub>4</sub> )
Carbonyl Fluoride (COF <sub>2</sub> )	Germanium Tetrafluoride (GeF <sub>4</sub> )	Silicon Tetrafluoride (SiF <sub>4</sub> )	Tungsten Hexafluoride (WF <sub>6</sub> )

## \*Compounds which hydrolyze to H<sub>2</sub>SO<sub>3</sub>:

Sulfur Dioxide (SO <sub>2</sub> )
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\*The hydrolysis of Sulfur Dioxide (SO<sub>2</sub>) will generate weak acid substance (H<sub>2</sub>SO<sub>3</sub>), which might cause the change of pH and produce a response on Mineral Acid cassette. However, no stable stain will be generated and observed due to the weak acidity of H<sub>2</sub>SO<sub>3</sub>.

## The ChemLogic Long Life SG Mineral Acids Detection Tape will NOT respond to:

Alcohols	Fluoromethanes	Isopropyl Alcohol	Solvents
Amines	Freon's	Isocyanates	Sulfur Hexafluoride
Ammonia	Hydrides	Methyl Chloride	Xenon Difluoride
Arsine	Hydrazine	Methylene Chloride	
Carbon Tetrachloride	Hydrocarbons	Nitrogen	
Carbon Tetrafluoride	Hydrogen	Nitric Oxide	
Chloroform	Hydrogen Cyanide	Nitrous Oxide	
Dichloroethylene	Hydrogen Peroxide	Ozone	
Dimethyl Sulfate	Hydrogen Sulfide	Phosgene	