

Selected Organic Vapors (SOV) Indicator (hplc solvents)

HPLC solvents vapors include:

Acidic vapors (i.e. acetic acid, hydrochloric acid and trifluoroacetic acid), Acetone, Acetonitrile, Acrylonitrile, Carbon tetrachloride, Chloroform, DCM/Methylene Chloride (Dichloromethane), Ethanol, Ethyl Acetate, Ethyl acrylate, Ethyl ether, HFIP Hexafluoroisopropanol, Methanol, Methyl acrylate, Phenol, Sulfolane and THF (Tetrahydrofuran).

Performance Specification

To determine the sensitivity of the SOV indicator, a solution/mixture of 10% solvent in water was bubbled with ambient air at a flow rate of 5cc/min. The airflow was passed through the breakthrough detector until a color change was observed. The elapsed time to observe the first noticeable and the final colors for the respective organic solvent is depicted in the table below.

Cross interferences and limitations

Basic vapors in high concentrations impair the performance of the organic vapors breakthrough indicator. The indicator does not respond to aliphatic hydrocarbons (i.e. hexane, pentane and octane), aromatic hydrocarbons (i.e. benzene, toluene and xylene), aldehydes (i.e. formaldehyde) or basic organic vapors (i.e. pyridine and aliphatic amines). No other interferences or limitations are known.

Solvent (10% in Water)	Breakthrough Detection Time	
	First Noticeable Color (min)	Final Color (min)
Acetic acid	6	14
Acetone	10	30
Acetonitrile	10	30
Acrylonitrile	7	42
Carbon tetrachloride	10	30
Chloroform	2	5
Ethanol	2	5
Ethyl acetate	2	5
Ethyl acrylate	7	39
Ethyl ether	>1	5
HFIP Hexafluoroisopropanol	1	4
Hydrochloric acid	> 1	4
Methanol	2	5
Methyl acrylate	4	36
Methylene chloride	2	4
Phenol	4	12
Sulfolane	8	17
Tetrahydrofuran	10	20
Trifluoroacetic acid	4	30

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