

# IQAir Model Selection Chart for Gaseous Contaminant Control

Most of the below chemicals have a corresponding IQAir model that is recommended for the control of that particular gaseous contaminant. The selection of the IQAir models is based upon light concentrations of these contaminants, i.e. generally 10 PPM or less. The tests were undertaken by the media manufacturers.

Chemical Name	Physical State	Formula	Odour Characteristics	Recommended IQAir Model
Acetaldehyde	Liquid	CH <sub>3</sub> CHO	penetrating, fruity	IQAir ChemiSorber
Acetic acid	Liquid	CH <sub>3</sub> COOH	strong vinegar-like	IQAir MultiGas (IQAir HealthPro)**
Acetone	Liquid	(CH <sub>3</sub> ) <sub>2</sub> CO	Characteristic odor	IQAir MultiGas (IQAir HealthPro)**
Acetylene	Gas	HC=CH	not unpleasant when pure, but disagreeable when impure	IQAir ChemiSorber
Acrolein	Liquid	CH <sub>2</sub> =CHCHO	piercing, disagreeable; causes tears	IQAir MultiGas (IQAir HealthPro)**
Acrylonitrile	Liquid	CH <sub>2</sub> =CHCN	mild	IQAir MultiGas (IQAir HealthPro)**
Ammonia	Gas	NH <sub>3</sub>	penetrating, pungent, suffocating	IQAir AM
Arsine	Gas	AsH <sub>3</sub>	disagreeable garlic	IQAir ChemiSorber *
Benzene	Liquid	C <sub>6</sub> H <sub>6</sub>	characteristic	IQAir VOC
1.3 Butadiene	Gas	CH <sub>2</sub> =CHCH=CH <sub>2</sub>	mild aromatic	IQAir MultiGas (IQAir HealthPro)**
Butane	Gas	C <sub>4</sub> H <sub>10</sub>	odorless	IQAir VOC
Butyric acid	Liquid	CH <sub>3</sub> CH <sub>2</sub> CH <sub>2</sub> COOH	unpleasant, rancid	IQAir MultiGas (IQAir HealthPro)**
Carbon dioxide	Gas	CO <sub>2</sub>	odorless	IQAir ChemiSorber
Carbon disulfide	Liquid	CS <sub>2</sub>	strong, disagreeable, or sweetish	IQAir MultiGas (IQAir HealthPro)**
Carbon monoxide	Gas	CO	odorless	<i>not controlled by adsorption/oxidation</i>
Carbon tetrachloride	Liquid	CCl <sub>4</sub>	ether-like	IQAir VOC
Chlorine	Gas	Cl <sub>2</sub>	suffocating, irritating	IQAir VOC
Chlorine dioxide	Gas	ClO <sub>2</sub>	unpleasant, similar to that of chlorine and reminiscent of nitric acid	IQAir MultiGas (IQAir HealthPro)**
Chloroform	Liquid	CHCl <sub>3</sub>	pleasant, sweet	IQAir VOC
Chloropicrin	Liquid	CCl <sub>3</sub> NO <sub>2</sub>	sharp, penetrating, causes tears	IQAir VOC
Cresol	Liquid	CH <sub>3</sub> C <sub>6</sub> H <sub>4</sub> OH	phenolic	IQAir MultiGas (IQAir HealthPro)**
Cyclohexane	Liquid	C <sub>6</sub> H <sub>12</sub>	mild, sweet, resembling chloroform or benzene	IQAir VOC
Cyclohexanone	Liquid	C <sub>6</sub> H <sub>10</sub> O	reminiscent of peppermint and acetone	IQAir MultiGas (IQAir HealthPro)**
1.1 Dichloroethane	Liquid	CHCl <sub>2</sub> CH <sub>3</sub>	chloroform-like	IQAir VOC
Diethylamine	Liquid	(C <sub>2</sub> H <sub>5</sub> ) <sub>2</sub> NH	fishy, ammonia-like	IQAir MultiGas (IQAir HealthPro)**
Dimethylamine	Gas	(CH <sub>3</sub> ) <sub>2</sub> NH	pungent, fishy or ammonia-like	IQAir MultiGas (IQAir HealthPro)**
Ethane	Gas	C <sub>2</sub> H <sub>6</sub>	odorless	<i>not controlled by adsorption/oxidation</i>

Chemical Name	Physical State	Formula	Odour Characteristics	Recommended IQAir Model
Ethanol	Liquid	C <sub>2</sub> H <sub>5</sub> OH	pleasant, sweet	IQAir MultiGas (IQAir HealthPro)**
Ethyl acetate	Liquid	CH <sub>3</sub> COOC <sub>2</sub> H <sub>5</sub>	pleasant, fruity	IQAir MultiGas (IQAir HealthPro)**
Ethyl acrylate	Liquid	CH <sub>2</sub> =CHCOOC <sub>2</sub> H <sub>5</sub>	sharp, acrid	IQAir MultiGas (IQAir HealthPro)**
Ethylamine	Liquid	CH <sub>3</sub> CH <sub>2</sub> NH <sub>2</sub>	ammonia-like	IQAir MultiGas (IQAir HealthPro)**
Ethylene	Gas	CH <sub>2</sub> CH <sub>2</sub>	sweet	IQAir ChemiSorber
Ethylene oxide	Gas	C <sub>2</sub> H <sub>4</sub> O	-	IQAir VOC
Formaldehyde	Gas	HCHO	pungent, suffocating	IQAir ChemiSorber
Formic acid	Liquid	HCOOH	pungent, penetrating	IQAir MultiGas (IQAir HealthPro)**
Freon 11	Gas	CCl <sub>3</sub> F	faint ether-like	IQAir VOC
Hydrazine	Liquid	H <sub>2</sub> NNH <sub>2</sub>	penetrating, resembling that of ammonia	IQAir ChemiSorber
Hydrogen chloride	Gas	HCl	irritating, pungent	IQAir MultiGas (IQAir HealthPro)**
Hydrogen cyanide	Gas	HCN	bitter almond-like	IQAir ChemiSorber
Hydrogen sulfide	Gas	H <sub>2</sub> S	strong, like rotten eggs	IQAir ChemiSorber
Indole	Solid	C <sub>8</sub> H <sub>7</sub> N	intense, fecal	IQAir VOC
Isoprene	Liquid	CH <sub>2</sub> CCH <sub>3</sub> CHCH <sub>2</sub>	-	IQAir MultiGas (IQAir HealthPro)**
Isopropanol	Liquid	CH <sub>3</sub> CHOHCH <sub>3</sub>	like rubbing alcohol	IQAir MultiGas (IQAir HealthPro)**
Methane	Gas	CH <sub>4</sub>	odorless	<i>not controlled by adsorption/oxidation</i>
Methanol	Liquid	CH <sub>3</sub> OH	slight alcoholic odor when pure	IQAir MultiGas (IQAir HealthPro)**
Methyl acrylate	Liquid	CH <sub>2</sub> =CHCOOCH <sub>3</sub>	sharp, sweet, fruity	IQAir MultiGas (IQAir HealthPro)**
Methyl chloride	Gas	CH <sub>3</sub> Cl	faint, sweet odor, not noticeable at dangerous concentrations	IQAir VOC
Methyl chloroform	Liquid	CH <sub>3</sub> CCl <sub>3</sub>	mild, like chloroform	IQAir VOC
Methyl disulfide	Liquid	CH <sub>3</sub> SSCH <sub>3</sub>	disagreeable	IQAir MultiGas (IQAir HealthPro)**
Methyl ethyl ketone	Liquid	CH <sub>3</sub> COCH <sub>2</sub> CH <sub>3</sub>	acetone-like	IQAir MultiGas (IQAir HealthPro)**
Methyl mercaptan	Gas	CH <sub>3</sub> SH	like rotten cabbage	IQAir MultiGas (IQAir HealthPro)**
Methyl sulfid	Liquid	(CH <sub>3</sub> ) <sub>2</sub> S	disagreeable	IQAir MultiGas (IQAir HealthPro)**
Methyl vinyl ketone	Liquid	CH <sub>3</sub> COCHCH <sub>3</sub>	pungent	IQAir MultiGas (IQAir HealthPro)**
Methylamine	Gas	CH <sub>3</sub> NH <sub>2</sub>	strong ammoniacal odor, but more fishy, particularly at lower concentr.	IQAir MultiGas (IQAir HealthPro)**
Methylene chloride	Liquid	CH <sub>2</sub> Cl <sub>2</sub>	like chloroform	IQAir VOC
Nitric Oxide	Gas	NO	sharp, sweet	IQAir ChemiSorber
Nitrobenzene	Liquid	C <sub>6</sub> H <sub>5</sub> NO <sub>2</sub>	like black paste shoe polish	IQAir VOC
Nitrogen dioxide	Gas	NO <sub>2</sub>	pungent, acrid	IQAir ChemiSorber
Nitroglycerine	Liquid	CH <sub>2</sub> NO <sub>3</sub> CHNO <sub>3</sub> CH <sub>2</sub> NO <sub>3</sub>	-	IQAir MultiGas * (IQAir HealthPro)**

Chemical Name	Physical State	Formula	Odour Characteristics	Recommended IQAir Model
Nitrous oxide	Gas	N <sub>2</sub> O	slightly sweetish, laughing gas	<i>not controlled by adsorption/oxidation</i>
Ozone	Gas	O <sub>3</sub>	pleasant, characteristic in concentrations less than 2 ppm	IQAir MultiGas (IQAir HealthPro)**
Phenol	Solid	C <sub>6</sub> H <sub>5</sub> OH	characteristic, sweet tarry	IQAir MultiGas (IQAir HealthPro)**
Phosgene	Gas	COCl <sub>2</sub>	low concentr.: sweet, like hay; high concentr.: sharp, pungent	IQAir VOC
Phosphine	Gas	PH <sub>3</sub>	fishy	IQAir ChemiSorber *
Propane	Gas	CH <sub>3</sub> CH <sub>2</sub> CH <sub>3</sub>	odorless	<i>not controlled by adsorption/oxidation</i>
Pyridine	Liquid	C <sub>5</sub> H <sub>5</sub> N	penetrating, sickening	IQAir VOC
Silane	Gas	S <sub>3</sub> H <sub>4</sub>	repulsive	IQAir ChemiSorber *
Skatole	Solid	C <sub>9</sub> H <sub>9</sub> N	fecal	IQAir MultiGas (IQAir HealthPro)**
Styrene	Liquid	C <sub>6</sub> H <sub>5</sub> CH=CH <sub>2</sub>	low concentr.: sweet aromatic; high concentr.: sharp, disagreeable	IQAir MultiGas (IQAir HealthPro)**
Sulfur dioxide	Gas	SO <sub>2</sub>	strong, suffocating	IQAir ChemiSorber
Sulfuric acid	Liquid	H <sub>2</sub> SO <sub>4</sub>	odorless	IQAir VOC
Sulfur trioxide	Gas	SO <sub>3</sub>	-	IQAir MultiGas (IQAir HealthPro)**
Toluene	Liquid	C <sub>6</sub> H <sub>5</sub> CH <sub>3</sub>	benzene-like	IQAir VOC
Trichloroethylene	Liquid	CCl <sub>2</sub> =CHCl	characteristic odor resembling chloroform	IQAir MultiGas (IQAir HealthPro)**
Triethylamine	Liquid	(C <sub>2</sub> H <sub>5</sub> ) <sub>3</sub> N	strong, ammonia-like, fishy	IQAir MultiGas (IQAir HealthPro)**
Trimethylamine	Gas	(CH <sub>3</sub> ) <sub>3</sub> N	pungent, fishy, ammonia-like odor	IQAir MultiGas (IQAir HealthPro)**
Vinyl chloride	Gas	CH <sub>2</sub> =CHCl	ether-like odor	IQAir MultiGas (IQAir HealthPro)**
Xylene	Liquid	C <sub>6</sub> H <sub>4</sub> (CH <sub>3</sub> ) <sub>2</sub>	aromatic odor	IQAir VOC

**Important Note:** Although specific IQAir models may be recommended for the control of certain contaminants, the manufacturers make no claim as to the specific air cleaning results that can be achieved under the user's individual operating conditions. The actual indoor air quality improvements that can be achieved with air cleaning systems depend not only on the system's performance, but also on factors which are specific to that indoor environment. Important factors which will influence the air quality improvements include, intensity of the contaminant and its source, the size of the indoor environment, the operating speed of the system, the number of air cleaners placed in the environment and the state of saturation of the individual filter elements.

\* no laboratory test work

\*\* the IQAir HealthPro alternative is only recommended for lower chemical concentrations