

## Test Gases for Adsorption / Desorption Tests

The table below lists our standard test gases and the typical test concentrations.

Please contact [steffan.trnetschek@fiatec.com](mailto:steffan.trnetschek@fiatec.com) for e.g.

- other gases
- other concentrations
- mixed gases (multi gas tests)
- customer designed tests / outside of the standard test conditions

Standard conditions regarding temperature and relative humidity are 20-25 ( $\pm 1$ ) °C and 30-75 ( $\pm 2$ ) % rel. humidity.

Pre conditioning will be made in a controlled climate chamber.

Desorption tests are feasible up to 100 °C.

The inner size of the test chamber is 600\*300 mm. A height of > 500 mm is possible but should be verified depending on the other dimension.

With an extension a sample size of ca. 750\*450\*120 mm is possible.

Tests in ppb concentrations are possible for some test gases but must be discussed in detail.

Test gas	Chemical formula	Typical concentrations [ppm]
Acetaldehyde	C <sub>2</sub> H <sub>4</sub> O	3-100
Acetone	C <sub>3</sub> H <sub>6</sub> O	3-100
Acetic acid	CH <sub>3</sub> COOH	5-100
Ammonia	NH <sub>3</sub>	3-50
1,3 Butadiene	C <sub>4</sub> H <sub>6</sub>	3-100
Diethylamine, Methylamine or similar		upon request
n-Butane	C <sub>4</sub> H <sub>10</sub>	3-250
Carbon monoxide	CO	5-200
Cyclohexane	C <sub>6</sub> H <sub>12</sub>	5-5.000
Dimethyl sulfide	(CH <sub>3</sub> ) <sub>2</sub> S	5-50
Ethyl acetate	C <sub>4</sub> H <sub>8</sub> O <sub>2</sub>	8-1.000
Ethanol	C <sub>2</sub> H <sub>5</sub> OH	3-100
Formaldehyde	CH <sub>2</sub> O	10
Heptanal	C <sub>7</sub> H <sub>14</sub> O	upon request
Hexanal	C <sub>6</sub> H <sub>12</sub> O	3-100
Hydrogen sulfide	H <sub>2</sub> S	0,5-50
Limonene	C <sub>10</sub> H <sub>16</sub>	3-100
Methylethylketone (MEK)	C <sub>4</sub> H <sub>8</sub> O	3-100
Methylmercaptan	CH <sub>3</sub> SH	5-50
Nitrogen dioxide	NO <sub>2</sub>	0,5-50
Nitrogen monoxide	NO	0,5-50
1-Octen-3-ol	C <sub>8</sub> H <sub>16</sub> O	3-10
Ozone	O <sub>3</sub>	0,15-3
2-Propanol (Isopropyl alcohol)	C <sub>3</sub> H <sub>8</sub> O	3-100
Styrene	C <sub>8</sub> H <sub>8</sub>	upon request
Sulfur dioxide	SO <sub>2</sub>	0,5-50
Toluene	C <sub>7</sub> H <sub>8</sub>	8-100
Trimethylamine	(CH <sub>3</sub> ) <sub>3</sub> N	2-10
1,3,5-Trimethylbenzene (TMB)	C <sub>9</sub> H <sub>12</sub>	upon request
Valeric acid	C <sub>4</sub> H <sub>9</sub> COOH	3-10
Xylene	C <sub>8</sub> H <sub>10</sub>	3-100
Mixed gases		upon request