



## Below are some suggestions for Pharmaceutical Air Testing.

In general there are no "hard and fast" air quality standards except for breathing air requirements.

One such requirement is OSHA 1910.134 for breathing air in the workplace.

The air used in the manufacturing processes should be evaluated by a competent technical individual to determine the appropriate requirements to protect the safety of the employees and the integrity of the products.

<b>General Guidelines for:</b> →	<b>Employee Breathing Air</b>	<b>Indirect Product Contact</b>	<b>Direct Product Contact</b>
Oil mist/particulate(matter)	Grade D	1 mg/m <sup>3</sup>	0.1 mg/m <sup>3</sup>
Moisture/Dew Point	Grade D	1267ppmv/0 degF	67ppmv/-50degF
Gaseous Hydrocarbons(minus methane)	Grade D	5ppm	2ppm
Halogenated Hydrocarbons	Grade D	5ppm	1ppm

TRI's analytical laboratory is accredited by the American Industrial Hygiene Association. We perform analytical testing on air and the major components and contaminants of air. Below is a partial list. We often customize the customer's requirements to our ability. If you don't see the type of test you may require or have other questions please call us for further information.

<b>Analyte Analyzed</b>	<b>Typical Range Measured by GC</b>
Oxygen	0.5% to 99+%
Nitrogen	0.5% to 99+%
Nitrous Oxide	99+% (special 0.5ppm and up)
Carbon Dioxide	20ppm to 99+% (1 to 20ppm special)
Carbon Monoxide	1ppm and up
Halogenated Hydrocarbons	1ppm and up
Total Gaseous Hydrocarbons	1ppm and up (in Oxygen 5ppm and up) (not reported in N2O)
Methane	1ppm and up
<b>Analyte Analyzed</b>	<b>Typical Range Measured Gravimetrically</b>
Oil mist and particulate (Reported as a combined result or separately as required.)	0.05 mg and up (As mg/m <sup>3</sup> a much lower detection can be reported by running test for and extended sample time.)
<b>Analyte Analyzed</b>	<b>Typical Range Measured with Detection Tubes</b>
Moisture	2ppm(-95F) to >3900ppm(22F)
Sulfur Dioxide	0.1ppm to 3ppm
Nitrogen Dioxide	0.5ppm to 2ppm
Nitric Oxide	0.5ppm to 2ppm
Halogenated Solvents	0.1ppm to 10ppm