

## SAFE QUALITY FOOD—ISO 8573 COMPRESSED AIR PURITY TESTING



Compressed air is widely used in the manufacturing, processing, product distribution and packaging in the medical device, pharmaceutical, food/beverage industries and more. Supply compressed air may appear clean to the naked eye, but do you know what you can't see? Compressed air systems can be a source of unknown particulate, chemical and biological contamination which can negatively impact the quality and safety of products and equipment. The Safe Quality Food (SQF) Institute, SQF Code Ed. 7.2 states *"Compressed air that contacts food or food contact surfaces shall be clean and present no risk to food safety; Compressed air systems used in the manufacturing process shall be maintained and regularly monitored for purity."*

The main contaminants of concern include; solid particulate, water vapor, total oil, and microbiological contamination. These contaminants are good indicators of the overall purity of compressed air. Additional purity testing parameters include oil vapor and organic solvents, gaseous contaminants, and liquid water.

Purity Class	Maximum number of Particles per m <sup>3</sup>			Pressure Dewpoint °C	Concentration of Total Oil mg/m <sup>3</sup>
	0.1 - 0.5 µm	0.5 - 1.0 µm	1.0 - 5.0 µm	Liquid Water C <sub>w</sub> - g/m <sup>3</sup>	
0	As specified by equipment user or supplier and more stringent than Class 1.				
1	≤20,000	≤400	≤10	≤ -70 °C	≤0.01
2	≤400,000	≤6,000	≤100	≤ -40 °C	≤0.1
3	Not Specified	≤90,000	≤1,000	≤ -20 °C	≤1
4	Not Specified	Not Specified	≤10,000	≤ +3 °C	≤5
5	Not Specified	Not Specified	≤100,000	≤ +7 °C	>5
6	0 < C <sub>p</sub> ≤ 5 mg/m <sup>3</sup>			≤ +10 °C	-
7	5 < C <sub>p</sub> ≤ 10 mg/m <sup>3</sup>			C <sub>w</sub> ≤ 0.5 g/m <sup>3</sup>	-
8	C <sub>p</sub> > 10 mg/m <sup>3</sup>			0.5 < C <sub>w</sub> ≤ 5 g/m <sup>3</sup>	-
9	-			5 < C <sub>w</sub> ≤ 10 g/m <sup>3</sup>	-
X	-			C <sub>w</sub> > 10 g/m <sup>3</sup>	-

Not all encompassing. See ISO Standard 8573 for complete information.

### About LEGEND

Our primary goal is to combine extensive laboratory and regulatory experience to deliver a diverse range of services to our clients, while supplying the best analytical and consulting services value. We are committed to the continuous improvement in the quality and scope of the services we provide.

LEGEND's routine parameters of compressed air purity testing includes:

- Real-time testing for particulates ranging from 0.3 - 5.0+ microns
- Real-time testing for water vapor and temperature in pressurized systems (vapor pressure dew point -60 °C to +20°C)
- Oil content
- Microbial content including bacteria and gram staining

Contact our St. Paul, MN Office for further information on Safe Quality Food compressed air purity testing.

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