

ISO 8573-1:2010 Contaminants & Purity Classes

The ISO 8573-1 specification is used by a variety of industries requiring clean, dry, and contaminant free compressed air. Industries that use this compressed air testing specification include Food, Pharmaceutical, Medical Device, Power Generation, Plastics, Automotive, Electronics, and more. Any process that uses compressed air and needs clean compressed air having no contaminants flawing the final product often use ISO 8573 in its entirety or adopt sections of it, creating a custom specification.

ISO 8573-1 Purity Classes are listed below; shaded areas indicate classes for which Trace Analytics methods apply:

| Class | Particles | | | Water | | | Oil | |
|-------|---|--------------|--------------|-------------------|-------------------|-------|------------------|--------|
| | By Particle Size (maximum number of particles per m ³) <i>See Note 3</i> | | | By Mass | Pressure Dewpoint | | Liquid | |
| | 0.10 – 0.5 µm | 0.5 – 1.0 µm | 1.0 – 5.0 µm | mg/m ³ | °C | °F | g/m ³ | |
| 0 | <i>As specified by the equipment user or supplier and more stringent than class 1</i> | | | | | | | |
| 1 | ≤ 20000 (3) | ≤ 400 | ≤ 10 | - | ≤ -70 | ≤ -94 | - | ≤ 0.01 |
| 2 | ≤ 400000 (3) | ≤ 6000 | ≤ 100 | - | ≤ -40 | ≤ -40 | - | ≤ 0.1 |
| 3 | - | ≤ 90000 | ≤ 1000 | - | ≤ -20 | ≤ -4 | - | ≤ 1 |
| 4 | - | - | ≤ 10000 | - | ≤ +3 | ≤ +37 | - | ≤ 5 |
| 5 | - | - | ≤ 100000 | - | ≤ +7 | ≤ +45 | - | - |
| 6 | - | - | - | 0 – ≤5 | ≤ +10 | ≤ +50 | - | - |
| 7 | - | - | - | 5 – ≤10 | - | - | ≤0.5 | - |
| 8 | - | - | - | - | - | - | 0.5 – ≤5 | - |
| 9 | - | - | - | - | - | - | 5 – ≤10 | - |
| X | - | - | - | > 10 | - | - | > 10 | > 5 |

Note 1: Shaded areas indicate classes for which Trace Analytics methods apply. Others require techniques outside of Trace Analytics scope. See note 3.

Note 2: ISO 8573 Oil includes aerosol, vapor and liquid oil. Liquid oil is typically sampled when wall flow is present, contamination is suspected, or results are greater than 5 mg/m³. Trace Analytics, LLC can provide a separate kit for liquid oil testing.

Note 3: For Particle Class 1 & 2 (0.1 - 0.5 µm range only), a laser particle counter is required. Rental of this equipment is available on a reservation basis.

For additional information, contact Trace Analytics at CDATest@AirCheckLab.com or 512-263-0000 x4.