

Your Company Name / Logo	INSTRUMENT AIR QUALITY TEST SOP	Doc no: SOP INST 018	Rev: 0
Department: Instrumentation	Standard operating procedure	Date:	Page: see footer

1. Purpose

To protect positioners, I/P converters and actuators from water, oil and dirt in the air supply.

2. Scope

Instrument air systems from dryer outlet to the farthest users.

3. References

- ANSI/ISA 7.0.01 quality standard for instrument air
- ISO 8573-1 air purity classes
- Dryer and filter manuals

4. Responsibilities

- Instrument technician: carries out the work and records results.
- Instrument engineer or supervisor: reviews and approves the records.
- Operations: grants the permit, isolates the process and returns the equipment to service.

5. Safety precautions

- Work only under a valid permit to work and follow the site isolation (lockout tagout) procedure.
- Wear the PPE required for the area: safety helmet, glasses, gloves and safety shoes as a minimum.
- In hazardous areas use certified or intrinsically safe test equipment, or obtain a gas free certificate and hot work permit.
- Inform the control room before starting, and before returning the instrument to service.
- Bleed air slowly; compressed air jets can injure.

6. Tools and equipment

- Portable dew point meter
- Oil and particle test kit or filter membrane holder
- Pressure gauge

7. Prerequisites

- Test points identified: dryer outlet and end of headers.

8. Procedure

8.1 Dew point

- 8.1.1 Connect the dew point meter at line pressure and wait for a stable reading.
- 8.1.2 Compare with the requirement: at least 10 °C below the minimum ambient temperature (ISA 7.0.01).

8.2 Oil and particles

- 8.2.1 Pass a measured volume of air through the test membrane or detector tube.
- 8.2.2 Compare with the site limit or ISO 8573-1 class.

8.3 Pressure

- 8.3.1 Record header pressure at the end user during normal demand.

8.4 Record and act

- 8.4.1 Record results; raise work orders for dryer, filter or drain problems.

9. Acceptance criteria

- Pressure dew point at least 10 °C below minimum ambient.
- Oil and particles within site limits.
- Supply pressure within the design range at end users.

10. Records

- Instrument air header schedule (free template: instrumentationblog.in/downloads/templates/instrument-air-header-schedule/)
- Instrument maintenance log (free template: instrumentationblog.in/downloads/templates/instrument-maintenance-log/)

11. Approval

	Prepared by	Reviewed by	Approved by
Name			
Signature			
Date			

This procedure is a generic template. Adapt it to your site permit system, the manufacturer instructions and your quality system before use.