

# **ANSI/ISA-S7.0.01-1996**

Approved November 12, 1996

**Standard**



# **Quality Standard for Instrument Air**



ANSI/ISA-S7.0.01 — Quality Standard for Instrument Air

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## Preface

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This preface, as well as all material contained in the footnotes and annexes, is included for information purposes and is not part of the ISA-S7.0.01.

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This Standard, complete with all updates, incorporates the following previous SP7 Subcommittees and documents:

SP7.1	Pneumatic Control Circuit Pressure Test
SP7.3	Air Quality Standards for Pneumatic Instruments
SP7.3S	Application and Tests for Quality Standards for Instrument Air
SP7.4	Air Pressures for Pneumatic Controllers and Transmission Systems
SP7.6	Pneumatic Control Circuit Transmission Distances
ISA-RP7.1-1956	Pneumatic Control Circuit Pressure Test
ISA-S7.3-1975 (R1981)	Quality Standard for Instrument Air
ISA-S7.4-1981	Air Pressures for Pneumatic Controllers, Transmitters and Transmission Systems
ISA-RP7.7-1984	Producing Quality Instrument Air

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## 1 Scope

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The scope of this Standard is

- a) to provide limits for moisture content in instrument quality air;
- b) to provide limits for entrained particle size and oil content in instrument quality air;
- c) to establish an awareness of possible sources of corrosive or toxic contamination entering the air system through the compressor suction, plant air system cross connection, or instrument air connections directly connected to processes;
- d) to establish standard air supply pressures (with limit values) and operating ranges for pneumatic devices;
- e) to specify ranges of pneumatic transmission signals used in measurement and control systems between elements of systems. It includes, but is not limited to, the following:
  - 1) Pneumatic controllers
  - 2) Pneumatic transmitters and information transmission systems
  - 3) Current-to-Pressure transducers
  - 4) Pneumatic control loops; and
- f) to establish criteria for testing compliance with instrument-quality air standards.

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## 2 Purpose

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The purpose of this Standard is to establish a standard for instrument quality air.

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## 3 Definitions

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**3.1 ambient temperature:** The temperature of the medium surrounding a device.

**3.2 dew point temperature:** The temperature, referred to at a specific pressure, at which water vapor condenses.