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Oxygen 93 Percent

DEFINITION

Oxygen 93 Percent is Oxygen produced from air by the molecular sieve process. It contains NLT 90.0% and NMT 96.0% by volume of oxygen (O₂), the remainder consisting mostly of argon and nitrogen.

IDENTIFICATION

- **A.** The paramagnetic signal exhibited by the *Sample gas* in the *Assay* confirms the presence of oxygen.
- **B.** The *Sample gas* in the *Assay* meets the *Acceptance criteria*.

ASSAY

• **PROCEDURE**

The certified standards called for in the following test are listed in [Reagents, Indicators, and Solutions](#).

Zero gas: Nitrogen certified standard

Span gas: 93% Oxygen certified standard

Sample gas: Oxygen 93 Percent under test

Mode: Paramagnetic oxygen measurement (see [Medical Gases Assay \(415\)](#))

Analysis: Determine the concentration of oxygen in percentage by volume in Oxygen 93 Percent using a suitable paramagnetic analyzer.

Acceptance criteria: 90.0%–96.0% oxygen by volume

IMPURITIES

Change to read:

See [Impurities Testing in Medical Gases](#) [▲] (ERR-1-Nov-2020) (413). The detector tubes called for in the following tests are listed in [Reagents, Indicators, and Solutions](#).

• **CARBON DIOXIDE**

Sample: Detector tube manufacturer's recommended volume ±5% of Oxygen 93 Percent

Analysis: Pass the *Sample* through a carbon dioxide detector tube at the rate specified for the tube by the detector tube manufacturer.

Acceptance criteria: NMT 300 ppm

• **CARBON MONOXIDE**

Sample: Detector tube manufacturer's recommended volume ±5% of Oxygen 93 Percent

Analysis: Pass the *Sample* through a carbon monoxide detector tube at the rate specified for the tube by the detector tube manufacturer.

Acceptance criteria: NMT 10 ppm

ADDITIONAL REQUIREMENTS

- **PACKAGING AND STORAGE:** Preserve in pressurized containers. Container connections shall be appropriate for Oxygen 93 Percent. Adaptors shall not be used to connect containers to patient use supply system piping or equipment.
- **LABELING:** If Oxygen 93 Percent is piped from a remote location to the patient point of use, label each outlet "Oxygen 93 Percent".

Auxiliary Information - Please [check for your question in the FAQs](#) before contacting USP.

Topic/Question	Contact	Expert Committee
OXYGEN 93 PERCENT	Documentary Standards Support	SM52020 Small Molecules 5
REFERENCE STANDARD SUPPORT	RS Technical Services RSTECH@usp.org	SM52020 Small Molecules 5

Chromatographic Database Information: [Chromatographic Database](#)

Most Recently Appeared In:

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