

Argon gas for spectrometers



Article Overview

Not all spectrometers use argon gas; its use depends on the type of spectrometer and the analytical requirements.

Role of Argon in Spectrometry

Argon is commonly used in optical emission spectrometers (OES) and inductively coupled plasma mass spectrometry (ICP-MS) because it provides an inert atmosphere that prevents oxidation or nitridation of the sample during high-temperature excitation, ensuring accurate spectral measurements . Argon also has a low ionization potential, which reduces the breakdown voltage needed for spark or plasma excitation, producing stable and clear atomic spectra . Additionally, argon is transparent to vacuum ultraviolet light below 200 nm, which is critical for detecting elements like carbon, nitrogen, sulfur, and phosphorus .

Spectrometers That Do Not Use Argon

Some spectrometers, such as vacuum spectrometers, operate without argon. Instead, they evacuate the chamber to a low vacuum, removing air and other gases to prevent interference from oxygen and nitrogen . In these systems, the absence of air allows accurate detection of light elements without the need for an inert gas.

Summary

- Argon is essential in many OES and ICP-MS systems for providing an inert environment, stabilizing plasma, and enabling accurate detection of certain elemen...

Article Content

Apr 20, 2026

Purespark

Purespark Argon Purifier Designed and manufactured in Germany The rare gas purification system for any

Jan 03, 2026

ARGON SPEKTRO W2 Gasgemisch | Air Liquide

Produkt ist deutschlandweit verfügbar. Gefahrenkennzeichnung: Enthält unter Druck stehendes Gas; kann unter Hitzeeinwirkung

Oct 29, 2025

Light Sources for Calibrating Spectrometers -

The output socket has an SMA-905 connector and optical fibres direct the light directly to the spectrometer or to the

May 09, 2026

The impact of argon purity on full-spectrum direct-reading ...

Summary: Argon gas is like the "blood" of a full-spectrum direct-reading spectrometer. 5N-grade high-purity argon

Feb 07, 2026

Best Argon Detector for Leak Detection (2026 update)

Argon gas detectors are essential to protect people from inhaling a dangerous level of the

Nov 29, 2025

How much do you know about the three key points of using argon gas

This article will start from three aspects: the principle of using argon gas in a direct reading spectrometer, laboratory

Sep 17, 2025

Argon Gas in Optical Emission Spectrometer: Smart Choice

Why argon gas is used in optical emission spectrometer work: inert, cheap, readily available, and helps improve

Dec 17, 2025

Inductively coupled plasma atomic emission spectroscopy

The argon gas is ionized in the intense electromagnetic field and flows in a particular rotationally symmetrical pattern towards the

Nov 05, 2025

The Use of Argon as a Carrier Gas in Gas Chromatography-Mass ...

While the choice of carrier gas is a critical parameter in optimizing Gas Chromatography-Mass Spectrometry (GC-MS) performance,

Jul 13, 2026

Check the argon and nitrogen gas supplies

Check both argon and nitrogen regulators to determine how much gas is in the tank. Check the regulator to make sure there is

Jul 31, 2025

analyticalsciencejournals.onlinelibrary.wiley

Hier sollte eine Beschreibung angezeigt werden, diese Seite lässt dies jedoch nicht zu.

Mar 27, 2026

Atomic Absorption Spectroscopy

Atomic Absorption Spectroscopy (AAS) uses the absorption of light to measure the concentration of atoms in the gas phase. The

Mar 17, 2026

Exploring the Advantages of Argon Gas for OES

Unlock the potential of Argon gas for OES. Enhance spectrometer performance with Argon

Apr 11, 2026

Principles and Theory

The use of Argon as the main gas A plasma can be created using many gases. Argon is usually preferred because of its

Feb 26, 2026

Ultra High Purity Gases » The Advantages of UHP

In mass spectrometry, UHP Argon Gas serves as a collision gas, facilitating controlled fragmentation of

Nov 17, 2025

Why Argon Is Used in Optical Emission Spectrometers | SYENS Insight

Learn why argon is the preferred working gas in optical emission spectrometers. SYENS explains its role in stability, accuracy, and

Aug 01, 2025

Resolving the challenges of analyzing samples with high and variable ...

The use of argon gas, provided directly from the instrument, is an attractive way to dilute the sample online at no additional cost.

Feb 25, 2026

High Purity Argon Gas

High-purity argon from Messer – your reliable gas supply Messer offers a wide range of argon products in

Aug 23, 2025

Optical Emission Spectroscopy (OES) Setup: Identifying Spectral

Optical Emission Spectroscopy is a powerful tool for identifying and analyzing the spectral lines of gases like argon

Jan 14, 2026

Argon 4.8 für Spektrometrie | Technische Gase von Linde online kaufen

Home Online-Shop Gase kaufen Reingase Argon 4.8 für Spektrometrie In den Warenkorb

Sep 18, 2025

Analysis of high matrix samples using argon gas dilution with the ...

Argon gas dilution significantly improves plasma robustness allowing the direct analysis of high matrix samples such as undiluted

Nov 17, 2025

Spectrometer Wavelength Calibration Light Sources

Ensure accurate spectrometer calibration with our gas-discharge sources. Choose from mercury, krypton, neon, argon & xenon light

Aug 04, 2025

Inductively Coupled Argon Plasma Mass Spectrometry (ICP MS)

ICP MS is a versatile routine analytical tool utilized in diverse fields. It comprises MS coupled with argon ICP. The key

Dec 17, 2025

Why argon gas is used in spectrometer?

Following are the reason why Argon Gas used in Optical emission Spectrometry.

1.Argon gas is inert in nature. When

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://www.chromadecksigns-eastrand.co.za>

Email: sales@chromadecksigns-eastrand.co.za

Phone: +32 2 318 5792

Address: Avenue Louise 500, 1050 Brussels, Belgium

This document is for informational purposes only. Specifications subject to change without notice.

