Indzawo Optic Connect

Principle of Dual Spectrometer



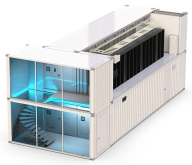
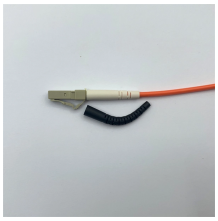
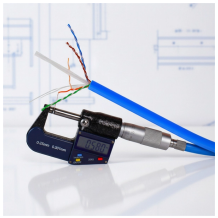
Overview

A double-beam spectrophotometer is an analytical instrument used to measure the amount of light absorbed by a sample. It splits a beam of light into two paths: one passes through the sample, and the other passes through a reference. In order to obtain measurements at a faster speed and with greater precision. This page describes a double beam UV-visible absorption spectrometer. If you pass white light through a colored substance, some of the light gets absorbed.

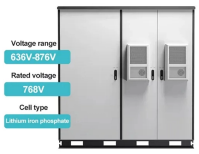


© 2026 Indzawo Optic Connect - All rights reserved

Principle of Dual Spectrometer

	What is a Double Beam Spectrophotometer? Double beam UV-Vis instruments commonly employ an optical setup where light from the monochromator splits into two beams: a reference beam and a ...
	The operation of a double beam spectrophotometer is based on the Beer-Lambert law, which states that the absorbance of a substance is directly proportional to its concentration and the ...
	Learn what a double beam spectrophotometer is and how its dual-beam design provides superior stability and accuracy for kinetics, scanning, and high-precision quantitative analysis.
	The fundamental working principle of a double-beam spectrophotometer is predicated upon the phenomena of light ray reflection and transmittance. The primary component of both single ...
	A dual-beam spectrophotometer measures granules, liquids, powders, pellets and opaque solids and gives you a fast and precise spectrophotometric value. A high-quality dual-beam ...

© 2026 Indzawo Optic Connect - All rights reserved



A double-beam spectrophotometer is an analytical instrument used to measure the amount of light absorbed by a sample. It splits a beam of light into two paths: one passes through the sample, and ...



Dual-beam spectrophotometry will be used when referring to the usual scanning spectrophotometer in which a beam of monochromatic light is split in space and passed through two separate reaction ...



The slit only allows light of a very narrow range of wavelengths through into the rest of the spectrometer. By gradually rotating the diffraction grating, you can allow light from the whole spectrum (a tiny part ...



Spectrophotometers measure the wavelength distribution of light. Double beam spectrophotometers allow real-time referencing using a separate reference position in the spectrophotometer.



An important advantage of a double-beam spectrophotometer over a single-beam spectrophotometer is that a double beam instrument permits compensation for source power fluctuations greatly improving ...

© 2026 Indzawo Optic Connect - All rights reserved

Contact Us

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

Website: https://www.indzawo.co.za
Email: sales@indzawo.co.za
Phone: +27 71 296 8473
Address: 22 Quantum Street, Midrand, 1685, Gauteng, South Africa

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

© 2026 Indzawo Optic Connect - All rights reserved