

Prism-type Spectrometer



Overview

A prism spectrometer is an optical spectrometer which uses a dispersive prism as its dispersive element. The prism refracts light into its different colors (wavelengths). The dispersion occurs because the angle of refraction is dependent on the refractive index of the prism's material, which in turn is slightly dependent on the wavelength of light that is traveling through it. TheoryLight is emitted from a source such as a. A slit selects a thin strip of light which passes through the where it gets parallelized. The aligned light then passes through the prism in which it is refracted tw. A prism spectrometer may be used to determine the composition of a material from its emitted. A prism spectrometer may be used to measure the refractive index of a material if the wavele. • Physics Laboratory Guide, Durham University • • Virtual Laboratory, Amrita University.



Article Content

Nov 08, 2025

Prism Spectrometers | Precision, Versatility & Usage

Prism spectrometers stand as pivotal instruments in the exploration of light's spectrum. These devices harness the refraction properties of prisms to disperse light into its constituent colors ...

May 07, 2026

Prism spectrometer

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PRISM SPECTROMETER

With a prism, the angle of refraction is not directly proportional to the wave-length of the light. Therefore, to measure wavelengths using a prism, a calibration graph of the angle of deviation versus ...

Feb 14, 2026

THE PRISM SPECTROMETER

As a light source, we will use a mercury lamp, which emits light at several discrete wavelengths. The device we are using is called a prism spectrometer because, once the prism is calibrated, it can be ...

Jun 24, 2026

Prism Spectrometers, Two Typical Spectrometers Used in ...

Both the resolving power and spectral range of a prism spectrometer are determined by the optical properties of the prism material; specifically, resolving power is defined by material dispersion, and ...

Feb 03, 2026

THE PRISM SPECTROMETERS 3.1. Introduction

Following the now classical work of Jacquinot (1954) it is interesting at this point to compare in detail estimates of the magnitudes of $L \times R_{pot}$ that are attainable with a prism spectrometer to those with ...

Oct 16, 2025

Prism Spectrometers

Prism spectrometers are the oldest spectrometers known to man. Seneca, during the first century A.D., and the Chinese even earlier, made observations on the generation of colors by prisms.

Feb 14, 2026

Spectrometer Prism – Typical Designs

In this article we present an overview of main spectrometer prisms – typical prism designs used for optical spectrometry.

Jun 21, 2026

Prism Spectrometry: Understanding the Basics

Prism spectrometry is a **spectroscopic technique** that uses a **prism** to **split** light into its constituent wavelengths, creating a spectrum. Unlike the rainbow you see after rain, a ...

Contact Us

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