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Product Name :

Spectral Tube Set with Voltage Source (for high school)

Product Code :

SCL267/043



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Description :

Spectral Tube Set with Voltage Source (for high school) (Product Code: SCL267/043) contains five gas discharge tubes and the high voltage source needed to light them, so a class can see the characteristic glow and emission lines of different gases. When the source is connected, an electrical discharge passes through the gas and the tube lights up in a colour that belongs to that gas alone. The set is manufactured by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, Ambala, India, and is a natural companion to a spectrometer in India's school and college physics labs.

Specifications

Parameter	Detail
Number of tubes	5
Gases	Hydrogen (H_2), oxygen (O_2), argon (Ar), carbon dioxide (CO_2), neon (Ne)
Electrodes	Two, at the ends of each tube
Tube length	About 200 mm
Tube shape	Narrowed in the middle to allow spectroscopic observation of the emission lines
Voltage source	High voltage source with adaptable support for connecting the tubes, included in the set
Power consumption	4.5 W

Typical Use

Fit one tube into the support, switch on, and darken the room: the narrow middle section glows brightly, and each gas gives a visibly different colour, with neon's red-orange standing out at once. Viewing the glowing capillary through a spectroscope or a direct-vision spectroscope then reveals a set of separate bright lines rather than a rainbow. Hydrogen is usually studied first because its few visible lines are easy to pick out and connect to the energy levels of the atom.

Working through all five gases lets students build their own table of spectral fingerprints and discuss how astronomers identify elements in stars. The source works at high voltage, so switch it off before changing tubes, let each tube cool for a moment, and hold tubes by their ends. Treat the set as teacher-operated physics lab equipment for India's senior secondary classes.

Manufacturer

Jain Scientific Equipments Private Limited manufactures laboratory apparatus at its factory in Ambala, Haryana, and markets this spectral tube set under the ScienceLab brand for physics and chemistry teaching. More about the company is on our company profile.

Related Lab Equipment

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