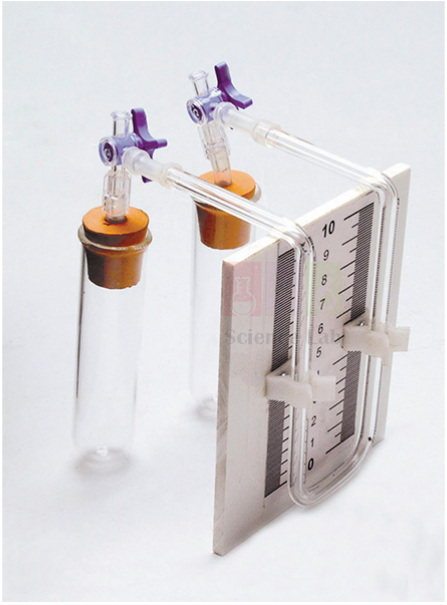
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Product Name :

Respirometer

Product Code :

SLE/BL/040



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Description :

Respirometer (Product Code: SLE/BL/040) is a compact manometer apparatus used to compare the rates at which small organisms absorb or give off gases during respiration in school and college biology laboratories. Students set up two stoppered boiling tubes — one for the organisms, one acting as a control thermo-barometer — joined by three-way taps to a graduated manometer. It is made by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, an OEM manufacturer, at its own factory in Ambala, India, among its biology lab equipment in India.

Specifications

Parameter	Detail
Chambers	Two stoppered boiling tubes
Connection	Three-way taps to either limb of a graduated manometer
Experimental tube	Holds the organisms; fitted with a syringe for altering the manometer liquid level during set-up
Control tube	Acts as a control thermo-barometer
Organism support	Complete with wire baskets for supporting organisms
Working principle	CO2 given off by the respiring organisms is absorbed by potassium hydroxide in the experimental chamber, changing the liquid level in the manometer tube
Purpose	Comparing rates of absorption or evolution of gases by small organisms during respiration
Product code	SLE/BL/040
Manufacturer	Jain Scientific Equipments Pvt Ltd (ScienceLab) — OEM
Country of origin	India (made in Ambala, Haryana)

What Is the Respirometer Used For?

A typical practical places germinating seeds or small invertebrates such as woodlice on the wire basket of the experimental tube, above a layer of potassium hydroxide solution; the control tube is prepared the same way with inert material, such as glass beads, in place of living organisms. With the taps open, the syringe brings the manometer liquid to a starting level, then the taps are closed and timing begins. As the organisms take in oxygen and their carbon dioxide is absorbed, the gas volume in the experimental tube falls and the liquid moves along the graduated scale.

Readings taken at regular intervals give a rate that can be compared between species, temperatures or stages of germination. The thermo-barometer is what makes those comparisons fair: room temperature and air pressure act on both tubes equally, so only the organisms' gas exchange shows as a difference, and standing both tubes in one water bath helps further. Potassium hydroxide is corrosive, so wear eye protection, keep the organisms clear of the liquid and return live animals to their habitat — routine good practice for any biology lab setup in schoo

OEM

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