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Product Name :

Calorimeter Set, Copper, Joules

Product Code :

SLE/PHY/142



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Description :

Calorimeter Set, Copper, Joules (Product Code: SLE/PHY/142) is an electrically heated calorimeter used to find the specific heat capacity of a liquid by Joule's electrical method in senior-school and college physics labs. A Constantan coil of about 6 ohms, fed through two 4 mm sockets in the ebonite lid, runs at 0.5 A (1 A maximum) inside a lagged, nickel-plated copper vessel. It is made by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, an OEM manufacturer, at its own factory in Ambala, India.

Specifications

Parameter	Detail
Inner calorimeter	Nickel-plated copper, 75 x 50 mm (diameter)
Outer vessel	100 x 75 mm (diameter); the calorimeter is lagged and enclosed within it
Lid	Close-fitting ebonite lid with wire stirrer
Terminals	Pair of 4 mm socket terminals connected to the heating coil
Heating coil	Constantan wire, approximately 6 ohms
Current	0.5 A recommended, 1 A maximum
Thermometer	Not supplied
Application	Specific heat capacity of a liquid by the electrical method
Product code	SLE/PHY/142
Manufacturer	Jain Scientific Equipments Pvt Ltd (ScienceLab) — OEM
Country of origin	India (made in Ambala, Haryana)

What Is the Joule Calorimeter Used For?

Joule's method equates electrical energy with heat. The energy put in by the coil, voltage × current × time, or the reading on a joulemeter, is set equal to the heat gained by the liquid plus the heat gained by the copper vessel, and the only unknown left is the specific heat capacity of the liquid. Recording the temperature every half minute also lets students plot a heating graph and apply a cooling correction.

As a calorimeter experiment kit for India's Class 11 and 12 thermal physics practicals, the set needs only a low-voltage supply, meters and a thermometer. Constantan is chosen for heating coils because its resistance changes very little as it warms, so the current stays steady. Switch on only when the coil is fully covered by liquid, and keep stirring throughout the run.

What to Specify When Ordering

- Number of sets for your practical batch.
- A thermometer for each set, since none is supplied; state the type or ask us to suggest one.
- A low-voltage supply able to deliver 0.5 A (1 A maximum) and leads with 4 mm plugs
- d.

OEM

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