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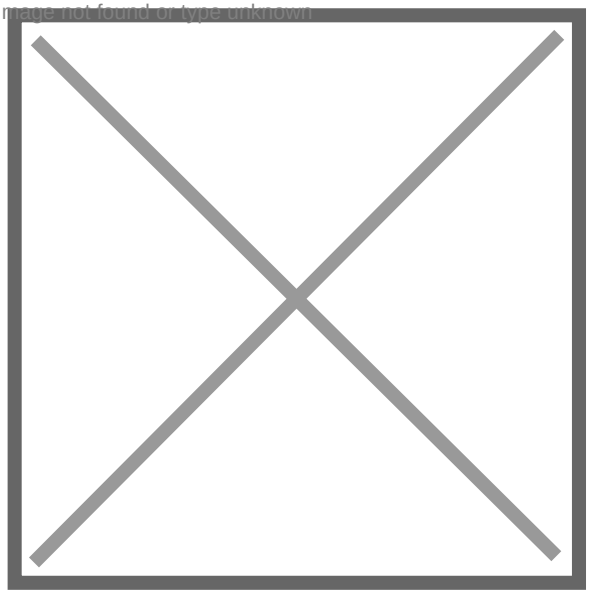
Product Name :

Kit for Demonstrating CO2 Emission and Heat Production in Germinating Seeds

Product Code :

SCL221/011

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Description :

Kit for Demonstrating CO2 Emission and Heat Production in Germinating Seeds (Product Code: SCL221/011) lets a class prove two things about germination with one set-up: sprouting seeds give off carbon dioxide, and they warm up as they respire. It includes Erlenmeyer flasks, a three-neck flask, a 0–100°C thermometer, baryta water (barium hydroxide solution) and an aspiration pump to draw air through the system. This school biology lab equipment is made by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, Ambala, India.

Specifications

Parameter	Detail
Erlenmeyer flasks	Two, 250 ml
Tubing and stoppers	A pair of silicone tubes with 2-hole rubber stoppers
Extra stopper	1 single-hole rubber stopper
Three-neck flask	Glass, 500 ml
Thermometer	0–100°C
Indicator	Barite (baryta) water bottle – bottle with barium hydroxide solution
Pump	1 three-valve aspiration pump

Typical Use

Germinating seeds are placed in the 500 ml three-neck flask, with the 0–100°C thermometer fitted through one neck to track temperature. The aspiration pump draws air over the seeds and on through the silicone tubing into a 250 ml Erlenmeyer flask of baryta water; as carbon dioxide arrives, the clear solution turns cloudy with a white barium carbonate precipitate. The second Erlenmeyer flask can hold baryta water at the air inlet, so students see that incoming air causes little change while the air leaving the seeds does.

A matching flask of boiled seeds, or a comparison of the thermometer reading with room temperature, gives a clear control for a school biology lab setup. Pump air slowly and steadily so bubbles can be counted and the cloudiness builds gradually. Barium hydroxide is harmful if swallowed and irritating to skin and eyes, so students should wear gloves and goggles, keep the bottle closed and wash their hands after the practical.

Manufacturer

Jain Scientific Equipments Private Limited, trading as ScienceLab, is an Ambala, Haryana manufacturer of science teaching apparatus, including a series of plant physiology demonstration kits. The company profile explains more about the business and its range.

Related Laboratory Equipment

Spare and companion items for this germination practical: