

**Product Name :**  
Astra Scientific Adiabatic Batch Reactor

**Product Code :**  
Chemical0001



**Description :**

Astra Scientific Adiabatic Batch Reactor

**Technical Specification :**

An adiabatic batch reactor can be defined as a closed system with no input and output streams. This batch reactor training system is operated under adiabatic conditions (Reaction Mass Temperature is not kept constant and keeps on changing), perfect mixture (composition of reaction mixture is kept uniform throughout the operation) and constant volume (volume of the reaction mixture within the reactor is kept constant hence there is no measurable change in the density of reaction mass). This training system is used to study catalytic homogeneous reaction under adiabatic condition.

The training system consists of a Dewar flask of capacity 1 liter with a stirrer fitted inside. The flask is double insulated by ceramic wool insulation to avoid heat loss during operation. The temperature is measured by a digital temp indicator. The whole setup is mounted on a rigid M.S. frame with epoxy paint coating.

### **Aim of Study:**

- Analysis of decomposition in Hydrogen Peroxide with water in presence of an Iodide catalyst.
- To measure the degree of conversion from time-temperature data.

### **TECHNICAL DETAILS:**

Reactor : Material Stainless Steel, Capacity 1 Ltrs. (Approx), Insulated with Ceramic wool.

Stirrer : Teflon Impeller and Stainless Steel shaft coupled with FHP motor.

### **Components mounted on the control panel are:**

Digital Temp. Indicator : 0-199.9°C

Temp. Sensors : RTD PT-100 type

With Standard make on/off switch, Mains Indicator etc.



## **Astra Scientific**

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