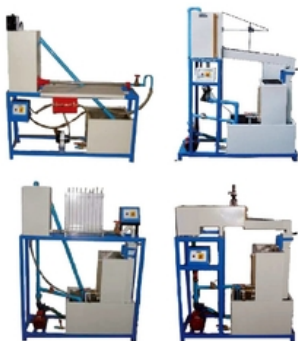


## Isothermal Semi-Batch Reactor



**Product Categories:** [Chemical Reaction Engineering Lab](#), [Engineering Equipment](#)

**Product Page:** <https://www.labappara.com/product/isothermal-semi-batch-reactor/>

### Product Description

#### Isothermal Semi-Batch Reactor

##### **Description:**

The set up consists of a Reactor fitted in a constant temperature water bath. Before starting the reaction the reactor is charged with measured quantity of one reactant. From a overhead feed tank another reactant is fed to the reactor. Using a sampling pipette samples can be taken out for analysis after fixed interval. Rota-meter is provided to measure the flow of reactants. One stirrer is fitted for mixing the reactants in reactor and other is fitted in water bath to keep the uniform temperature throughout in the bath.

The temperature of bath can be maintained from ambient to 70°C with the help of Digital Temperature indicator Cum Controller. A iso-thermal semi-batch reactor is a semi-closed system with one input stream. It is operated under conditions like Iso-thermal (Temperature of Reaction Mass remains constant) and perfectly mixed (composition of reaction mixture is uniform throughout). This set-up is used to study a non-catalytic homogeneous reaction under iso-thermal condition.

##### **Technical Details:**

Reactor : Material Stainless Steel, Capacity 2 Ltrs. (approx).

Water Bath : Material Stainless Steel, Double wall,  
Insulated with Ceramic Wool.

Heater : Nichrome wire Heater

Agitator : Material Stainless Steel Impeller and shaft coupled with FHP motor

Impeller : Material Stainless Steel, 4 square bladed (1 No.)

Baffles : Material Stainless Steel,(4 Nos.) Detachable, symmetrically placed

Feed Tank (1No.) : Material Stainless Steel, Capacity - 20 Ltrs.

Feed Circulation : By Polypropylene magnetic pump.

Flow Measurement : Rotameter.

Piping : Material Stainless Steel and PVC/PU pipe.

Stop Watch : Electronic

Temp. Sensor : RTD PT-100 type