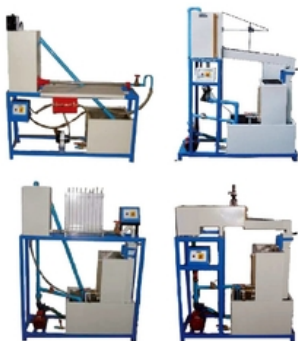


Plug Flow Reactor (Coiled Tube Type)



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

Product Page:

<https://www.labappara.com/product/plug-flow-reactor-coiled-tube-type/>

Product Description

Plug Flow Reactor (Coiled Tube Type)

Technical Description:

In an ideal Plug Flow Reactor (PFTR) there is no mixing in the direction of flow and complete mixing perpendicular to direction of flow. Concentration of reactants varies along the length of reactor but not in radial direction. This set-up is used to study a non-catalytic homogeneous reaction under ambient condition.

The set up consists of two feed tanks through which two reactants are fed to the reactor. Rota meters are provided to measure the individual flow of Chemicals. The flow rate can be adjusted by operating the needle valves provided on respective Rota meter. The compressed air is used for circulation of feed. Samples are collected for analysis from the outlet of reactor. Pressure Regulator, Pressure Gauge and Safety Valve are fitted in the compressed air line.

Learning Objectives/Experiments:

Specifications Reaction Study in straight tube Plug Flow Reactor.

To determine Reaction Rate Constant.

Required for Operation:

Compressed Air Supply at 2 Bar, 0.5 CFM.

Water Supply. Drain.

Instruments, Laboratory Glassware and Chemicals required for analysis as per the system adopted.

Technical Specifications:

Reactor : Material Stainless Steel, OD-16 mm, ID-13 mm approx.

Feed Tank (2 Nos.): Material Stainless Steel, Capacity - 20 Ltrs.

Feed Circulation: By compressed air.

Flow Measurement: Rota-meter 2 Nos. (one each for Reactants).

Piping : Stainless Steel and PVC

Pressure Regulator: 0-2 Kg/cm².

Pressure Gauge: Bourdon type 0-2 Kg/cm².

Stop Watch: Electronic.

The whole set-up is ingeniously designed and schematically arranged on a powder-coated rigid structure.