

Product Name :

Isothermal Plug Flow Reactor (Coiled Tube Type)

Product Code :

ALABS-A104-481

**Description :****Isothermal Plug Flow Reactor (Coiled Tube Type)**

In an ideal CSTR (Le. an ideal steady state flow reactor) the contents in reactor are well mixed and have uniform composition throughout. Thus the exit stream has the same composition as the fluid within the reactor. This type of reactor is known as mixed flow reactor. This set-up is used to study a non-catalytic homogeneous second order liquid phase reaction under isothermal condition.

The set up consists of two feed tanks through which two reactants are fed to the reactor. Rotameters are provided to measure the individual flow of Chemicals. The flow rate can be adjusted by operating the needle valves provided on respective Rotameter. The magnetic drive pump is used for circulation of feed. The CSTR is fitted with stirrer for proper mixing. From top outlet of it samples are collected for analysis. Constant temperature water bath arrangement is provided to conduct the experiment at various temperatures.

Experiments:

- Sponification Reaction study in Isothermal CSTR
- To determine the Reaction Rate Constant and effect of temperature on it

Utilities Required:

- Water Supply & Drain
- Electricity Supply: I Phase, 220VAC, 1.5kW.
- Instruments, Laboratory Glassware and Chemicals required for analysis as per the system adopted

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