

**Product Name :**  
RTD Studies in Plug Flow Reactor**Product Code :**  
ALABS-A104-102**Description :****RTD Studies in Plug Flow Reactor**

Real reactors do not satisfy the idealized flow patterns, back mix flow or plug flow deviation from ideality can be due to channeling of fluid through the vessel, recycling of fluid within the vessel or due to the presence of stagnant region or pockets of fluid in the vessel. To predict the exact behavior of a vessel as a Chemicals reactor, RTD or stimulus response technique is used. The setup consists of one feed tank through which water is fed to the reactor. The flow rate can be adjusted by operating the needle valve and measured by Rotameter. The magnetic drive pump is used for circulation of feed. It is a helical coil tube type plug flow reactor made up of Stainless steel pipe. Reactants enter at lower end coming out of the top of coil from where samples are collected for analysis.

For understanding the RTD characteristics, a special arrangement to inject tracer into the lower end of reactor, using a syringe is provided

**Experiments**

- To plot RTD curve for Plug Flow Reactor

- To determine the Dispersion No

#### **Utilities Required**

- Water Supply & Drain
- Instruments, Laboratory Glassware and Chemicals required for analysis as per the system adopted



### **Equipments Exporters**

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**Address:** 75, Lajpat Nagar-IV, New Delhi-110024 **Phone:** +91-9311469084