

Product Name :
Isothermal Continuous Stirred Tank Reactor

Product Code :
NLAB-EDUCATIONTVET16024

Description :

Isothermal Continuous Stirred Tank Reactor

Technical Specification :

Isothermal Continuous Stirred Tank Reactor -

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

It has two feed tanks through which two reactants are fed to the reactor. The magnetic drive pump is used for circulation of feed. School Lab Instrument CSTR is fitted with a stirrer for proper mixing.

From the top outlet of it, samples are collected for analysis. To determine the individual flow of Chemicals, Rotameters are used.

The flow rate can be adjusted by operating the needle valves provided on respective Rotameter.

Constant temperature water bath arrangement is provided to conduct the experiment at various temperatures.

Isothermal Continuously Stirred Tank Reactor School Lab is used to augment the feasible and reliable bio-process system for the treatment of hydrocarbon-rich industrial wastewaters.

This condition is applicable when we try to use a continuous agitated tank reactor to get the desired output.

The behaviors of CSTR are determined by using a Continuous Ideally Stirred Tank Reactor (CISTR).

These reactors are also known as vat or back mix reactor.

All calculations are based on perfect mixing.

Experiment:-

Saponification Reaction study in Isothermal Continuous Stirred Tank Reactor (CSTR).

To determine the Reaction Rate Constant and effect of temperature on it.

Utilities Required:-

Electricity Supply: I Phase, 220VAC, 1.5kW.

Water Supply and Drain.

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