

CRE-004 SEMI BATCH REACTOR



DESCRIPTION : Semi Batch reactor is simple, needs little supporting equipment and therefore ideal for small scale experimental studies on reaction kinetics. Industrially it is used when relatively small amounts of material are to be treated.

RANGE OF EXPERIMENTS

1. Study of Semi Batch Reactor.
2. To calculate the reaction rate constant k for given reaction in Semi batch reactor

EXPERIMENTAL SETUP :

Reactor : Material Stainless steel (SS) ,
 Feed Circulation : By Compressed Air
 Pressure Regulator : $0-2 \text{ kgf / cm}^2$
 Pressure Gauge : Bourdon type $0 - 2 \text{ kgf / cm}^2$
 Feed Tank : 1 No. of stainless steel feed tank
 Flow Measurement : 1 No. Pre calibrated Rota meter
 Stirrer : 1 No. SS impeller and shaft coupled to FHP Motor
 Piping : SS , PVC
 Setup Mounting : On sturdy MS stand with Powder coated

CHEMICALS REQUIRED : NaOH, Ethyl Acetate ,HCL ,
Phenolphthalein indicator , Distilled water

SERVICE REQUIRED : Air Supply : @ 4 Kg /cm^2
 Water Supply : @ 2 lpm
 Power Supply : $230 \text{ V, } 50 \text{ Hz, A.C.}$

SPACE REQUIRED : $1 \text{ m. (L) } \times 1.0 \text{ m (W) } \times 1 \text{ m (H).}$

WEIGHT : @ 50 Kg