

MT-006 ADSORPTION IN PACKED COLUMN



DESCRIPTION : The Adsorption column consist of glass column filled with adsorbent. The feed is introduced from the top of the column . The solute from the feed solution is adsorbed on the adsorbent surface. After the operation the solution drain out and analysed.Steam

RANGE OF EXPERIMENTS TO BE CARRIED OUT :

1. To study the Characteristics of adsorption with chemical reaction
2. To calculate the amount of adsorption of solute on adsorbate
3. To calculate the separation factor
4. To plot the Freundlich adsorption isotherm.

EXPERIMENTAL SETUP :

Column	:	Borosilicate Glass Column
Packing	:	Adsorbate on Teflon ring
Flow Measurement	:	1 No. Pre calibrated Rota meter
Feed Tank	:	1 No. of stainless steel feed tank
Product receiver	:	1 No. SS tank
Feed Circulation	:	By Compressed Air
Pressure Regulator	:	0 – 2 kgf / cm ²
Pressure Gauge	:	Bourdon type 0 – 2 kgf / cm ²
Steam Generator	:	Electrically heated Baby boiler with Pressure Gauge
Piping	:	SS , PVC



Setup Mounting : On sturdy MS stand with powder coated

SPACE REQUIRED : 1.5 m. (L) x 1.0 m (W) X 1.5 m (H).

SERVICE REQUIRED: Air Supply : @ 6 CFM, at 4 Kg /cm²
Power Supply : 230V, 50Hz, A. C.

CHEMICALS REQUIRED: NaOH, HCL, Phenolphthalein indicator,
Distilled water, Acetic acid.

WEIGHT : @ 65 Kg