

MT-004 ABSORPTION IN PACKED COLUMN



DESCRIPTION: The Absorption column is consist of glass column packed with Rasching rings. The device is equipped with a gas inlet and distributing space at the bottom, a liquid inlet and distributor at the top, gas and liquid outlet at top and bottom respectively. The gas and air are metered separately, and then passed through the bed vertically upwards and absorbed in liquid. All the flow rates can be independently varied to simulate different conditions.

RANGE OF EXPERIMENTS TO BE CARRIED OUT:

- 1. To study the Characteristics of absorption with chemical reaction
- 2. To calculate the rate of absorption per unit volume
- 3. To calculate the interfacial area per unit volume

EXPERIMENTAL SETUP:

Column : Borosilicate Glass Column

Packing : Raschig Ring

Flow Measurement : 3 No. Pre calibrated Rota meter Feed Tank : 1 No. of stainless steel feed tank

Product receiver : 1 No. SS tank

Gas supply : 1 No. of gas cylinder with Pressure

Gauge

Piping : SS, PVC

Setup Mounting : On sturdy MS stand with powder

Coated

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 $\begin{array}{ll} \textbf{SPACE REQUIRED} & : & 1.5 \text{ m. (L)} \times 1.0 \text{ m (W)} \times 2.5 \text{ m (H)}. \\ \textbf{SERVICE REQUIRED} : & \text{Air Supply} : @ 6 CFM, at 4 Kg /cm2 \\ \end{array}$

CHEMICALS REQUIRED: NaOH, HCL, Phenolphthalein indicator,

Distilled water

WEIGHT : @ 55 Kg