

NATURAL DRAFT TRAY DRYER (EE-1636)

Natural Draft Tray Dryer is a dryer in which moisture removal takes place by heat under natural condition. The set-up consists of an insulated Stainless Steel chamber fitted with heater. Inside the chamber a tray is attached directly to an electronic weighing balance, which is fitted on the bottom, outside the chamber. Material for drying is placed in the tray and regular loss of weight is monitored. Temperature controller fitted in the set-up maintains the required temperature in the chamber.

SCOPE OF EXPERIMENTATION

- To study the drying characteristics of a solid material under batch drying condition.
- Determination of drying rate and to plot moisture lost with time under for different operating conditions.

UTILITIES REQUIRED

- Electricity Supply : 1 Phase, 220 V AC, 2 kW.
- Drying Solids
- Table for setup support



TECHNICAL DETAILS

- Drying Chamber :
 - Material : Stainless Steel
 - Size : 30 x 30 x 30 cm insulated by Ceramic wool and housed in a MS Chamber.
- Maximum Chamber : 120° C.
- Heater : Nichrome wire heater.
- Weighting Balance : Digital, 0-1000 gm. of ± 1 gm resolution
- Temp. Sensor : RTD PT-100 type
- Control panel comprises of Digital Temp. Controller 0-199° C for Drying Chamber and with Standard make on/off switch, Mains Indicator etc.
- Instruction Manual : An ENGLISH instruction manual will be provided along with the Apparatus