

Rotary (Rotatory) Evaporator Apparatus

Principle:

A rotary evaporator works on the principle of evaporation under reduced pressure. Lowering the pressure decreases the boiling point of the solvent. Continuous rotation of the flask increases surface area, allowing rapid and gentle solvent removal.

Main Parts:

- Rotating round-bottom flask (sample flask)
- Water or oil bath (for controlled heating)
- Condenser (cools solvent vapors)
- Receiving flask (collects condensed solvent)
- Vacuum pump (reduces pressure)

Uses:

- Concentration of solutions
- Removal and recovery of solvents
- Purification of reaction products
- Pharmaceutical, chemical, and research laboratories

Advantages:

- Fast and efficient solvent evaporation
- Suitable for heat-sensitive compounds
- Reduced solvent loss and decomposition