

## Incubator



An **incubator** is a laboratory instrument used to maintain a controlled environment for the growth of microbiological cultures, cell cultures, and other biological samples. It provides stable conditions such as **temperature, humidity, and CO<sub>2</sub> levels** to support optimal growth.

### Key Features of an Incubator

- **Temperature Control:** Usually ranges from **5°C above ambient temperature to 60-70°C**.
- **Humidity Regulation:** Prevents sample drying.
- **CO<sub>2</sub> Control (for specialized incubators):** Maintains optimal pH for cell cultures.
- **Sterility & Contamination Prevention:** HEPA filters and UV sterilization in some models.

### Applications

- Microbiology & medical research

- Cell culture studies
- Food & pharmaceutical testing
- Biotechnology experiments