

সবাইকে লাল গোলাপ শুভেচ্ছা।



TEACHER

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ELECTROMEDICAL
TECHNOLOGY

Dhaka Mohila Polytechnic Institute

STUDENTS

Technology: ELECTROMEDICAL

6th Semester

Subject: Diagnostic and Laboratory
Equipment.

Shift: Both

Water Bath

A water bath is a laboratory equipment that is used to incubate samples at a constant temperature over a long period of time. Water bath is also used to enable certain chemical reactions to occur at high temperature.

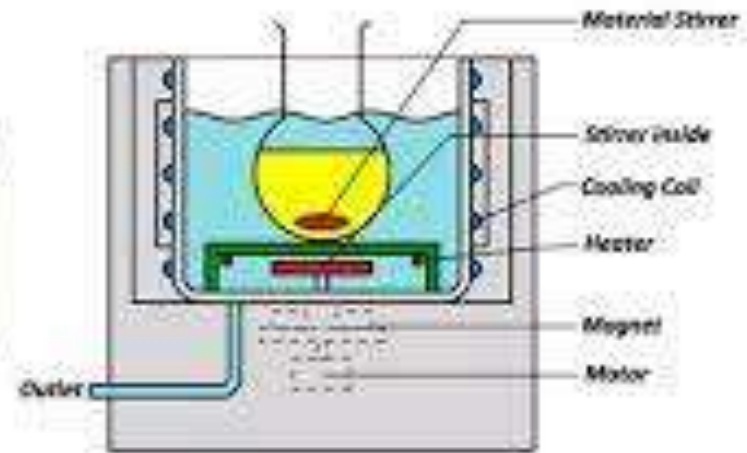
The other areas of its utilizations include warming of reagents, melting of substrates, or incubation of cell cultures.

Water Bath

Water Bath



WORKING PRINCIPLE



DFY Structure Diagram

Types of Water Baths

- 1- Circulating water bath.
- 2- Non-circulating water bath.
- 3- Shaking water bath

Parts of Water Bath

The main parts of water bath:

- Container or tank bath
- Heater.
- Thermometer.
- Thermostat or regulator.
- Propeller or stirrer device

Working Principle

- **Container or Tank Bath:** In the container, the test samples are kept in hot water for a long period of time. The container of a Laboratory Water Bath is made up of insulated metal such as stainless steel.
- **Heater:** A laboratory water bath contains a $Cu\epsilon_0$ temperature sensor, which helps to generate heat.

Working Principle

Thermometer: This helps to check the temperature of the water bath. It can be inbuilt or placed individually.

- Thermostat or regulator: A thermostat helps to maintain the temperature of a water bath at a constant level.

Propeller or stirrer device: It helps to circulate the water inside the water bath (Found in Circulating water baths).

Uses of water bath

- Used to improve the solubility of poorly soluble substances.
- It used for melting of some substances.
- It used for warming of chemical reagents. 4- It used for facilitating of some chemical reactions.
- For incubation of cell cultures.
- It is used as a heat source for some substance such as flammable chemicals.

বাড়ির কাজ

- ১। Water bath এর ব্যবহার লিখ।
- ২। Water bath এর কার্যপ্রণালি বর্ণনা কর।

সবাইকে ধন্যবাদ।

