

## Wax Extraction Machine :

It is an electric device used in the acrylic lab to extract and clean the wax found in the metal flask before acrylic filling.

### ► Parts of Wax Extraction:

1) Sink: Fully automatic wax removal of up to 12 half flasks, it's used to store the amount of the water, and in the lower part of the sink connected with a filter to separate molten wax from water.



➤ **Parts of Wax Extraction:**

**2) Heater:** it used for heating the water according to uses.

**3) Hand shower:** Separate hand shower for manual spray, it is used for washing and cleaning of flasks from any excess of wax.



4) Control: Multi-function touchscreen controls with easy programming this control connected within the device for setting temperature and time required.



5) Cover. This device is made of stainless steel construction



## **polymerization devices**

**Polymerization process:** the process of curing of acrylic resin

**The polymerization devices divided into two types:**

1. The first type used with acrylic heat and self polymerization such as Ivomate. it is used in crown & bridge, acrylic lab, or orthodontic lab.
2. The second type used with heat acrylic to help it to reach complete polymerization by applied wet heating on the acrylic

## **Equipment used to in polymerization of acrylic :**

- 1- Water bath – heat cure acrylic ( complete denture , partial denture)
- 2- Ivomat oven – crown and bridge and orthodontic
- 3- pressure pot – cold cure acrylic repair
- 4- light cure oven – heat and cold cure ( special tray , record base, repair )
- 5- microwave oven – heat cure acrylic

## 1. Water bath oven :

1- Water bath curing , made from stainless steel tank that is filled with water and at the base of the water tank there is electric heater , it has time and temperature regulator for short or long curing cycle for heat curing acrylic . The Curing of the acrylic resin with this device about 12 hours and 30°C - 100°C.



## Ivomat oven :

used for both heat and cold cure acrylic in crown and bridge and orthodontic it consist of

- 1- air filter control
- 2- safety lever
- 3- bold knob
- 4- pressure chamber lid
- 5- pressure chamber
- 6- thermostat
- 7- manometer
- 8- timer
- 9- main switch
- 10- pilot lamp ,
- 11- polymerization container lid , 12- clip , 13- polymerization container



**Pressure pot** :is used in repair or denture and partial denture it consist of stainless steel pot supplied with pressure gauge safety valve and air valve to introduce air into the pot .

Hot water is placed in the pot with the work the pot is closed with the lid air pressure is applied usually polymerization take place from 5-20 min according to the type of acrylic and work



**Light cure oven :** It is an instrument capable of generating and transmitting a high intensity blue light to polymerize dental material .the acrylic used is special type that is polymerize with light.



**Microwave oven :** is used as alternative source of heat to polymerize heat cure acrylic by electromagnetic waves at 500 – 600 W, curing time 3- 12 min, the flask used is non-metallic flask ( fiberglass reinforced plastic , ordinary or special acrylic may be used the advantages of microwave curing is that it is easy , clean , short processing time .  
Dimensionally stable



