# 78-1 Magnetic Stirrer With Hotplate

### ( I )Brief Instruction

The working theory of this product is using micro electrical machinery to drive the heatproof magnet to spin, thus creating a magnetic field. This magnetic field will drive the stir bar to spin in the container and later it will cause spin of the solvent. Meanwhile, it can heat the solvent so that it can be fully mixed at set temperature. This product has been widely applied in biology, medicine, chemistry, chemical engineering and other related fields.

#### (II) Characteristics

- 1. Fuse jack, knob-operated for easy replacement.
- 2. Heating part of the heat type electric heating, a machine, quick heating, no fire, safety and reliability.
- 3. Adopt DC brushless motor, stable performance, low noise, long life and no spark.
- 4. Stepless speed, low speed stable, high speed strong.

#### (III)Specifications

- 1. Power: Single-phase alternating current 220V 50Hz
- 2. Motor power:25W Heating power: 150W
- 3. Infinite Speed Variation: Starting-2400 rpm
- 4. Max capacity:1000ml

## (IV)Usage

- 1. When using this apparatus, make sure that the fitting parts are complete.
- 2.Place the beakers needing agitating in the center of the plate, and the stir bar into the solution which has been filled into the beakers.
- 3.Put the plug into the outlet and turn on the power add the speed adjusting switches. Once the indictor is on, the machine is ready for operation. Be sure to adjust speed gradually from the low to high. You must not stare the apparatus at high speed, or else the stir bar won't go synchronously.
- 4. Turn on the heating switch, and the heating plate starts to work.
- 5.At the end of the experiment, turn off the heating switch and turn the speed control

knob to the left.

6. Turn off the power switch and cut off the power

7. The apparatus should always be kept clean and dry. Solutions should be kept out of the inside of the machine so as not to damage it.

8.To ensure security, the machine should be grounded in operation and the power should cut off after operation.

#### (V)Cautions

- 1. When agitating, if you find the agitator vibrates violently of stops agitation, please cut off the power and inspect the bottom of the beaker to see if it is level and if its position is proper while checking the voltage to see if it is  $220V \pm 10V$ . Other while the irregular phenomena like above will certainly occur.
- 2. It is not proper to heat too long. To use it at intervals can prolong the life of the apparatus.
- 3. If the power is on and he indicator is not lit, please inspect whether the fuse pipe is damaged for it has the function of the protection of the motor when power changes and the motor is overloaded. If the fuse is damaged, replace it with the fuse supplied together with the machine or a proper one of the same specification you can find.
- 4. If the electric motor refuses to turn under the proper power after a long time of operation, please inspect whether the screws connected with the motor's axle are loose.
- 5. If current leak occurs after a long time of operation, please inspect if the heating ceramic pipe is damaged because the heating wire is directly supplied with 220V or inspect if lines touch one another or the insulation pipe has dropped off. Those who know little of electricity are forbidden to repair the machine.
- 6. The attached list is as follows:

One operation manual

One support and gripping device

One stir bar

One fuse