

**LABORATORY OF FOREST PRODUCTS CHEMISTRY
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PROTOKOL 001



| STANDARD OPERATING PROCEDURE | | |
|--|-------|-------------------------------|
| Merk: YENACO | Tipe: | Date : |
| Title: How to Use a Shaking Temperature Bath | | Created by: Irawan W. Kusuma. |
| | | File: |

1. OBJECTIVE

To provide guidelines for the proper, effective, and efficient use of the shaking temperature bath instrument.

2. PRINCIPLE

The shaking temperature bath is a device that assists in the agitation of samples (extraction, reaction, incubation, etc.) at a specific temperature.

3. REQUIRED EQUIPMENT

Lab coat, safety glasses, clean cloth/tissue.

4. PROCEDURE

4.1. EQUIPMENT SETUP

- 4.1.1 Connect the cable from the shaking temperature bath to a power source.
- 4.1.2 Fill the shaking temperature bath with clean water up to the fill line.
- 4.1.3 Place the wire mesh rack to hold the samples.

4.2. USING THE SHAKING TEMPERATURE BATH

- 4.2.1 Open the cover panel of the shaking temperature bath instrument;
- 4.2.2 Set the bath temperature according to the experimental procedure by adjusting the thermostat dial/knob.
- 4.2.3 Once the desired temperature is reached, place the sample tubes on the wire mesh rack, ensuring adequate spacing between samples to prevent collisions during agitation.
- 4.2.4 Adjust the stirring/shaking/agitation speed by turning the speed control dial/knob to the desired rpm.
- 4.2.5 Close the shaking temperature bath instrument with the cover panel.
- 4.2.6 Regularly check the water level to prevent the heating bath from drying out, especially when using high temperatures.
- 4.2.7 Add water at a temperature within the heating bath's range if the water volume is well below the fill line.
- 4.2.8 Operate the shaking temperature bath for the duration specified in the experimental procedure.
- 4.2.9 Once the experiment is complete, stop the agitation by turning the dial/knob until the rpm reaches zero.
- 4.2.10 Open the instrument cover panel and remove the samples from the shaking temperature bath.

4.3. DISCONTINUING THE USE OF THE SHAKING WATER BATH

- 4.3.1 When not in use, turn off the shaking water bath and disconnect the instrument's power cord from the outlet.
- 4.3.2 Clean the work area and parts of the shaking water bath with a damp cloth.

4.4. ATTENTION

- 4.4.1 The volume of the sample in the tube to be agitated must be within limits to prevent spillage during agitation;
- 4.4.2 If using high temperatures during agitation, always check the water level in the heating bath to avoid dryness;
- 4.4.3 Before and after use, the work area and the shaking water bath device must always be kept clean;

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Validated by: