

FOREST PRODUCTS CHEMISTRY LABORATORY
FACULTY OF FORESTRY MULAWARMAN UNIVERSITY

PROTOCOL 007



STANDARD OPERATING PROCEDURE

Title : Extraction

Date :

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File:

1. OBJECTIVE

To provide instructions for performing maceration.

2. PRINCIPLES

Maceration is an extraction process involving the soaking of samples in a specific solvent at room temperature.

3. COMPLETENESS WHICH REQUIRED

Lab coat, safety glasses, clean cloth /tissue.

3. MATERIALS AND TOOLS

Materials/reagents	Tool
Sample plant in the form of powder	Maceration container (bottle)
Solvent (n-hexane, diethyl ether, chloroform, ethyl acetate, ethanol, methanol, water or the mixture.	Shaker
	500 ml beaker
	500 ml measuring cylinder

4. PROCEDURE

4.1. SAMPLE PREPARATION

- 4.1.1 Air-dry or oven-dry the plant sample (leaves, stems, roots, bark, etc.) at 40°C
- 4.1.2 Once dried, grind the plant sample using a blender
- 4.1.3 Store the ground plant sample in a clip plastic bag for the next stage

4.2. MACERATION PROCESS

- 4.2.1 Weigh approximately 50 grams of the plant sample (as needed) into the beaker
- 4.2.2 Soak with 250 ml of solvent (enough to submerge the sample)
- 4.2.3 Seal tightly with aluminum foil and plastic wrap
- 4.2.4 Place on a shaker for 24 hours

4.4. NOTE

- 4.4.1 The volume of the sample in the beaker being shaken should be monitored to avoid spillage during agitation;
- 4.4.2 The volume of solvent used should be adjusted according to the weight of the plant sample being macerated, ensuring that the sample is fully submerged in the solvent.

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