LABORATORY OF FOREST PRODUCT CHEMISTRY AND RENEWABLE ENERGY

FACULTY OF FORESTRY MULAWARMAN UNIVERSITY



STANDARD OPERATING PROCEDURE		
Brand: Gerhardt	Туре:	Date:
Title: UV-Vis Spectrophotometer		Created by:
		File

1. OBJECTIVES

To provide instructions for the proper, effective, and efficient use of the UV-Vis Spectrophotometer.

2. PRINCIPLE

A spectrophotometer is a tool used to measure the absorbance or % transmittance of a sample at a specific wavelength and to create a standard curve from several standard solutions.

3. REQUIRED EQUIPMENT

Glove

4. PROCEDURE

4.1. HOW TO TURN ON

- 4.1.1 Connect the UV-Vis Spectrophotometer to a power source
- 4.1.2 Press the power button "ON" on the back of the appliance
- 4.1.3 Wait for the loading process to complete and the monitor screen shows the main menu

4.2. HOW TO USE

- 4.2.1 Select OPTIONS, then the Setup parameter will appear
- 4.2.2 Determine whether to measure Absorbance or % Transmittance
- 4.2.3 Set the wavelength by pressing λ .
- 4.2.4 Rinse the cuvette with distilled water, then fill it with a blank solution
- 4.2.5 Insert the cuvette containing the blank into the spectrophotometer
- 4.2.6 Press "AUTO ZERO" to reject Absorbance or Transmittance
- 4.2.7 Remove the blank cuvette from the spectrophotometer.
- 4.2.8 Rinse the cuvette with distilled water, then fill it with a sample solution to measure its absorbance or transmittance.
- 4.2.9 Insert the cuvette into the spectrophotometer.
- 4.2.10 Press the "START" button and the display will show the absorbance or transmittance value and record it.
- 4.2.11 Repeat the same process for other samples.
- 4.2.12 Record and save measurement data.

4.3. ENDING THE USE OF UV-VIS SPECTROPHOTOMETER

- 4.3.1 When not in use, switch off the appliance by pressing the OFF button on the appliance and disconnect the cord from the power source;
- 4.3.2 Clean the work area to remove any residual extract and other debris.

4.4. CAUTION

4.4.1 When inserting a cuvette into a spectrophotometer ensure that the side of the cuvette with the arrow is facing the UV light.

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