

Operating Manual



Introduction

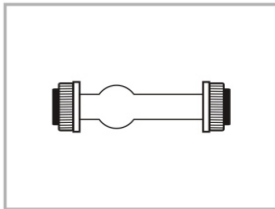
Thank you for selecting the APM-4 manual polarimeter. This manual provides a step-by-step guide to help you operate the instrument, please carefully read the following instructions before use.

Unpacking

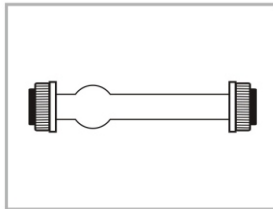
Before unpacking, ensure that the current work environment meet following conditions.

- Ambient temperature is greater than 0° C and less than 40° C.
- No potential electromagnetic and ambient light interference.

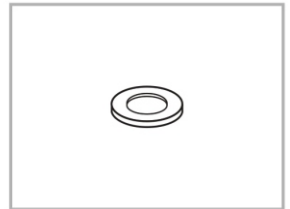
The following list describes the standard accessories of the polarimeter. After the unpacking, please check all accessories are complete. If any are damaged or missing, please contact nearest distributor.



Test tube 100mm



Test tube 200mm

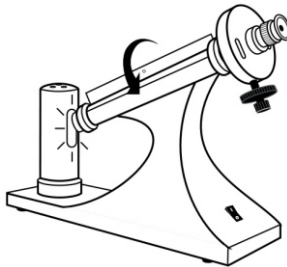


Sealing rings

Prior to Use

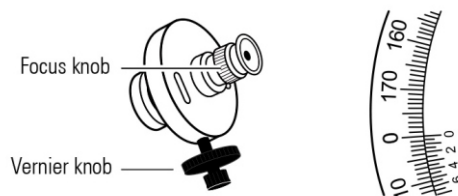
Before plugging the plug into the power outlet, ensure that local mains power voltage matches the polarimeter requirements.

1.1 Close the lid of polarimeter. Press the power switch to the ON position, the sodium lamp will gradually light up.



1.2 Wait for the light source to stabilize, rotate the focus knob until the visual field became legible.

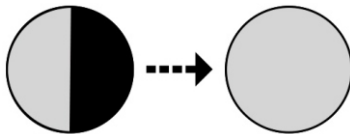
1.3 Rotate the vernier knob makes the vernier scale aim at zero position.



Recording the Reference Point

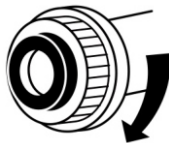
2.1 Place an empty test tube into the sample chamber.

2.2 Rotate vernier knob until the visual field appears uniform brightness. Record the measured value.



Filling the Sample Solution

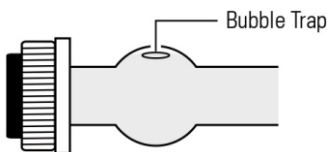
3.1 Take out the test tube from sample chamber. Unscrew the cap, remove the sealing ring and glass disc.



3.2 Rinse the test tube thoroughly with distilled water.

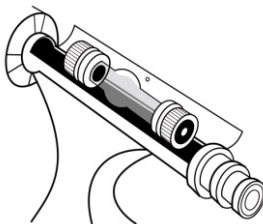
3.3 Pour sample solution into the test tube, then screw on the test tube cap. Wipe away the drops of water on glass disc.

3.4 If necessary, collect all air bubbles into the bubble trap.



Measurement

4.1 Open the lid of polarimeter, place the test tube into the sample chamber. Note, the bubble trap is upward.



4.2 Close the lid, clockwise or anticlockwise rotate vernier knob until the visual field appears uniform brightness. Record the measured value.

4.3 Repeat the above measurements 2 times and calculate the average of measured values.

Calculation

If the measured values are positive angle (Dextrorotatory substance), minus the value of the reference point shall be the actual measured value of the substance. If the measured values are negative angle (Levorotatory substance), minus the 180° shall be the actual value of the substance.

Bubble Trap

Determination Of the Concentration

If you need to determine the purity, concentration or proportion of the sample, please using the formula below.

$$a=[\alpha]LC$$

a Optical Rotation

$[\alpha]$ Specific rotation

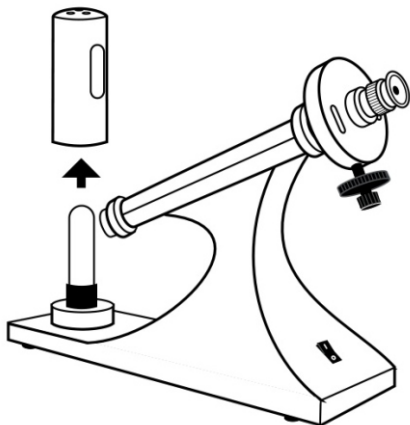
L Tube length (dm)

C Concentration (g/L)

Replacing the Sodium Lamp

Before replacing the sodium lamp, be sure to disconnect the power plug from the wall outlet.

5.1 Wait for the sodium lamp to cool down, remove the lamp cover of polarimeter.



5.2 Pull the sodium lamp from the socket.

5.3 Insert a new lamp into the socket.

5.4 Replace the lamp cover again in such a way that the window point in the direction of the polarizer.

Specifications

Model	APM-4
Measuring Range	-180°~180°
Scale Value	1°
Vernier	0.05°
Magnifier	3X
Light Source	Sodium Lamp, 589.44nm
Test Tube Length	50/100/200mm
Power Requirements	220V/50Hz
Dimensions	500 x 135 x 330
Weight	5kg

LIMITED WARRANTY

ACZET products are warranted against defects in materials and workmanship from the date of delivery through the duration of the warranty period. During the warranty period Aczet will repair, or, at its option, replace any components(S) that proves to be defective at no charge, provided that the product is returned, freight prepaid, to ACZET.

This warranty does not apply if the product has been damaged by accident or misuse, exposed to radioactive or corrosive materials, has foreign material penetrating to the inside of the product, or as a result of service or modification by other than ACZET. In lieu of a properly returned warranty registration card, the warranty period shall begin on the date of shipment to the authorized dealer. No other express or implied warranty is given by Aczet Pvt. Ltd.

As warranty legislation differs from state to state and country to country, please contact aczet or your local ACZET dealer for further details.

ACZET service center will repair the product free of charge subject to terms & condition mentioned below.

TERMS & CONDITION

- 1.It covers only weighing balance purchased from authorized channel and does not covers accessories like Battery, Adaptor, RS232 cable, Pan, Pan support etc
- 2.It does not cover the product of which model and serial number has been altered, removed or defaced and / or is open by unauthorized person and found void sticker has been tampered.
- 3.This warranty is non-transferable and applicable only to first end user purchasing the product from authorized dealer.
- 4.For repair based on this warranty you need to hand over this product or send this product to address mentioned in warranty card in original packing, enclosing copy of this warranty card.
- 5.Aczet Pvt. Ltd. shall not be liable for any consequential damages.

WARRANTY REGISTRATION



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NAME :-

ADDRESS :-

TEL NO. :- MODEL NO. :-

SERIAL NO. :- PURCHASE DATE :-

BRANCH / DISTRIBUTOR / DEALER CONTACT DETAILS
STAMP / SIGN

WARRANTY PERIOD :-

Owners Signature / Date

SEND YOUR WARRANTY CARD DULY FILL TO ABOVE ADDRESS FOR REGISTRATION