



# INSTALLATION QUALIFICATION PROTOCOL FOR AUTOMATIC POLARIMETER

DOCUMENT NO. : .....

**INSTALLATION QUALIFICATION PROTOCOL FOR AUTOMATIC POLARIMETER**

**TABLE OF CONTENTS**

<b>1.0</b>	<b>PROTOCOL APPROVALS</b> .....	<b>3</b>
<b>2.0</b>	<b>OBJECTIVE</b> .....	<b>5</b>
<b>3.0</b>	<b>SCOPE</b> .....	<b>5</b>
<b>4.0</b>	<b>SYSTEM DESCRIPTION</b> .....	<b>5</b>
<b>5.0</b>	<b>SYSTEM / EQUIPMENT QUALIFICATION</b> .....	<b>6</b>
<b>5.1</b>	<b>Verification of Equipment Details</b> .....	<b>7</b>
<b>5.2</b>	<b>Documentation</b> .....	<b>8</b>
<b>5.3</b>	<b>Verification of Supporting Utilities</b> .....	<b>8</b>
<b>5.4</b>	<b>Verification of Equipment Installation &amp; Details</b> .....	<b>9</b>
<b>6.0</b>	<b>DEVIATIONS / DISCREPANCIES RECORD</b> .....	<b>10</b>
<b>7.0</b>	<b>ABBREVIATIONS</b> .....	<b>10</b>
<b>8.0</b>	<b>ENCLOSURES</b> .....	<b>10</b>
<b>9.0</b>	<b>SUMMARY &amp; CONCLUSION</b> .....	<b>11</b>

DOCUMENT NO. : .....

**INSTALLATION QUALIFICATION PROTOCOL FOR AUTOMATIC POLARIMETER**

**1.0 PROTOCOL APPROVALS**

<b>Prepared By</b>			
<b>Name</b>	<b>Department</b>	<b>Designation</b>	<b>Signature/Date</b>

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DOCUMENT NO. : .....

**INSTALLATION QUALIFICATION PROTOCOL FOR AUTOMATIC POLARIMETER**

**Instrument Name** : AUTOMATIC POLARIMETER

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**Instrument Id. No.** :

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**Make** :

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**Model** :

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**Purpose** : A polarimeter is a scientific instrument used to measure the angle of rotation caused by passing polarized light through an optically active substance.

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**Other Details (if any)** : Not Applicable

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DOCUMENT NO. : .....

## INSTALLATION QUALIFICATION PROTOCOL FOR AUTOMATIC POLARIMETER

### 2.0 OBJECTIVE

The purpose of installation qualification is as follows

- To provide documentary evidence that the mentioned Automatic Polarimeter is installed as per design.
- To ensure that the Automatic Polarimeter installed confirms to purchase specification and manufacturer literature, and to document the information that the Automatic Polarimeter meets the specification.

### 3.0 SCOPE

Scope is limited to the following

Instrument name	Automatic Polarimeter
ID Number	
Location	

### 4.0 SYSTEM DESCRIPTION

#### Brief description of the equipment

..... make Automatic Polarimeter is designed and supplied to (Company name) for Automatic Polarimeter is an instrument used to measure the angle of rotation caused by passing polarized light through an optically active substance.

S.No.	Required Specification	
1.	Measurement modes	Optical rotation
2.	Wavelength	589.44 nm
3.	Light Source	LED +interference filter
4.	Measurement range	$\pm 45^\circ$ (optical rotation)
5.	Accuracy	$\pm(0.01 + \text{measuring value} \times 0.05\%)^\circ$ (optical rotation)
6.	Minimum indicating value	$0.002^\circ$ (optical rotation)
7.	Repeatability	$\leq 0.01^\circ$
8.	sample transmittance	10%
9.	Display	5-inch LCD
10.	Test Tube	100mm/200mm (regular)
11.	Interface	RS232
12.	Weight(Gross)	36 kg
13.	Overall Dimensions	730 mm x 480 mm x 470 mm

**DOCUMENT NO. : .....**

**INSTALLATION QUALIFICATION PROTOCOL FOR AUTOMATIC POLARIMETER**

**5.0 SYSTEM / EQUIPMENT QUALIFICATION**

The Installation qualification of the Automatic Polarimeter shall be done based on the following parameters –

1. Verification of equipment details.
2. Identification and verification of documents
3. Identification and verification of supporting utilities
4. Verification of equipment installation and details

DOCUMENT NO. : .....

**INSTALLATION QUALIFICATION PROTOCOL FOR AUTOMATIC POLARIMETER**

**5.1 Verification of Equipment Details**

**Purpose** : The purpose of this test is to verify the details of the Automatic Polarimeter.

**Test procedure** : Check that the pH meter identification plate is clearly visible. Verify the make, model no. and size of the pH meter from the nameplate; record the serial no. and location of the pH meter.

**Acceptance Criteria:** The observed details for the given parameters should be same as the specifications.

S.No	Parameter/Description	Specification	Observation	Discrepancy Yes / No	Checked by [sign/date]
1	Equipment nameplate	Should be clearly visible			
	Instrument & Accessories appearance checks	No Damages to instrument & accessories			
2	Equipment Name	Automatic Polarimeter			
3	Make				
4	Model				
5	Equipment id no.				
6	Location				
7	Date of Installation	–			

**Comments**

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Reviewed by: \_\_\_\_\_ [Sign & Date]

DOCUMENT NO. : .....

**INSTALLATION QUALIFICATION PROTOCOL FOR AUTOMATIC POLARIMETER**

**5.2 Documentation**

**Purpose** : To identify and verify the availability of documents associated with the instrument.

**Procedure** : Verify the availability of the documents along with their reference no., revision no., date and location.

S.No	Name of Documents	Documents available Yes/No
1.	Automatic Polarimeter Manual	
2.	Declaration for conformity	
3.	All Calibration certificate.	
4.	List of recommended spare parts	

**Comments**

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Reviewed by: \_\_\_\_\_ [Sign & Date]

**5.3 Verification of Supporting Utilities**

**Purpose** : The purpose of this test is to demonstrate that the utilities (electricity, air, etc.as applicable) required for installation and operation of the Automatic Polarimeter have been provided and to verify that they are as per the specifications.

**Test procedure:** Using a Clamp-meter, measure the voltage and current supply to be connected to the pH meter.

**Acceptance criteria:** AC (220 + 22) V, (50 + 1) Hz, Size (mm).

S.N.o	Item	Observed	Discrepancy Yes / No	Checked by [sign/date]
1	Power Supply			

**Comments**

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Reviewed by: \_\_\_\_\_ [Sign & Date]



DOCUMENT NO. : .....

**INSTALLATION QUALIFICATION PROTOCOL FOR AUTOMATIC POLARIMETER**

**5.4 Verification of Equipment Installation & Details**

**Purpose** : To verify that the Automatic Polarimeter is installed (ie levelled; earthed; cleaned) properly as per the specifications

**Tools Required:** Spirit level indicator

**Test procedures** :

- Leveling* - Using a spirit level indicator check the levelling of the instrument directions.
- Cleanliness* - Visually check that the instrument is cleared of any debris and cleaned.

**Acceptance criteria:** The instrument should be installed as per the specifications.

Parameter / Description	Specification	Observed	Discrepancy Yes / No	Checked by [sign/date]
Cleanliness	All access ports are examined and cleared of any debris			
	Record the methodology adopted for cleaning the equipment / instrument in observations column.			
Levelling & anchoring	Instrument is installed on foundation & securely anchored			
	Equipment / system is levelled properly as per manufacturer recommendations			

**Comments**

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**Reviewed by:** \_\_\_\_\_ [Sign & Date]

DOCUMENT NO. : .....

**INSTALLATION QUALIFICATION PROTOCOL FOR AUTOMATIC POLARIMETER**

**6.0 DEVIATIONS / DISCREPANCIES RECORD**

Deviation / Discrepancy No.	Test / Parameter & page no.	Description of the Deviation / Discrepancy Observed	Type Minor/Major*	Closure Date	Remarks	Checked by [sign/date]

\_\_\_\_\_

\_\_\_\_\_

Reviewed by: \_\_\_\_\_ [Sign & Date]

**7.0 ABBREVIATIONS**

Abbreviation	Expansion
PM	AUTOMATIC POLARIMETER

**8.0 ENCLOSURES**

S.no	Title / Description	No. of pages	Remarks
1			
2			
3			

DOCUMENT NO. : .....

**INSTALLATION QUALIFICATION PROTOCOL FOR AUTOMATIC POLARIMETER**

**9.0 SUMMARY & CONCLUSION**

**Summary**

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**Conclusion**

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Compiled by: \_\_\_\_\_

Date: \_\_\_\_\_