



**STANDARD OPERATING PROCEDURE**

<b>Department:</b> Quality Control	<b>SOP No.:</b>
<b>Title:</b> Operation & Calibration of Viscometer	<b>Effective Date:</b>
<b>Supersedes:</b> Nil	<b>Review Date:</b>
<b>Issue Date:</b>	<b>Page No.:</b>

**1.0 OBJECTIVE:**

To lay down a procedure for operation & calibration of Viscometer.

**2.0 SCOPE:**

This SOP is applicable for operation & calibration of Viscometer in the Quality control department.

**3.0 RESPONSIBILITY:**

Executive, Officer – Quality Control.

Head – Quality Control.

**4.0 PROCEDURE:**

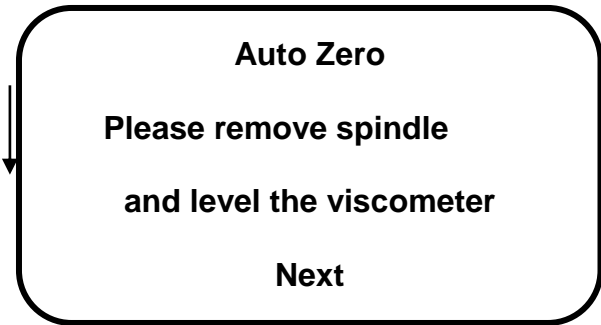
**4.1 Operation:**

4.1.1 Ensure the calibration status of the instrument.

4.1.2 Turn the power switch to the 'ON' position the instrument will display.



4.1.3 The DV2T Viscometer will automatically transition from the about screen to the Auto Zero screen.

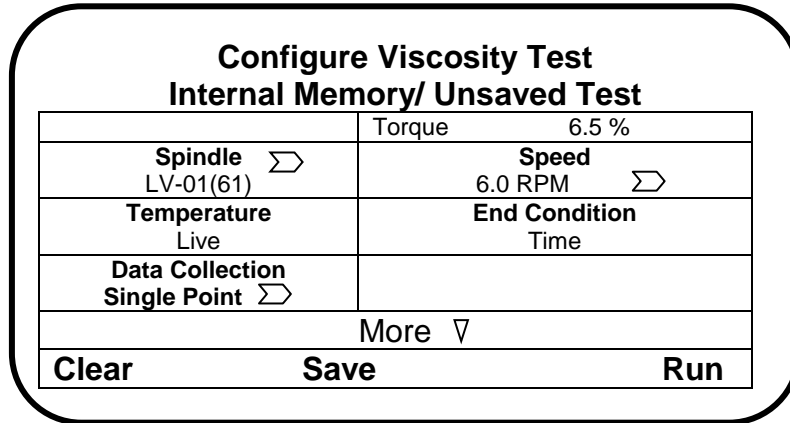


4.1.4 The Operator must ensure that the viscometer is level and remove any attached spindle or coupling. After Zero is complete and the operator presses the next button, the viscometer will transition to the configure Viscosity Test screen.



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- 4.1.5 The DV2T will display the configure Viscosity Test Screen .In this screen select spindle and speed. Confirm that data collection is set to Single Point and that End Condition is set to Time 00:00:00
- 4.1.6 Attach the spindle to the coupling nut and Immerse the spindle in a sample.
- 4.1.7 Adjust the Sample temperature as per the requirement.
- 4.1.7 Press the Run button. The screen will change to the Running Viscosity test Screen
- 4.1.8 When you are ready to record the measurement result, press the Stop test. The screen will change to the Result Table.
- 4.1.9 Record the % torque and viscosity.
- 4.1.10 To run another test, press configure viscosity Test .To return to the Home Screen, Press the Home Icon.
- 4.1.11 Attach spindle as per viscosity range.
- 4.1.12 Adjust the Sample temperature as per the requirement.
- 4.1.13 Immerse the spindle in a sample, set RPM and appropriate spindle No.
- 4.1.14 Press the run button.
- 4.1.15 Precautions :**
- 4.1.15.1 Ensure that the instrument & accessories are cleaned before and after use.
- 4.1.15.2 Spindle guard should be always attached.
- 4.2 Calibration:**
- 4.2.1 Take viscosity standard fluid (10 cp viscosity) bottles & keep in ice bath to attain the temperature of 25°C.



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<b>Issue Date:</b>	<b>Page No.:</b>

- 4.2.2 Operate the instrument as per the operation procedure. Select the spindle and speed as per the required fluid.
- 4.2.3 Put the bottle under the spindle and deep the spindle in fluid up to the mark of spindle.
- 4.2.4 Note down the constant viscosity reading in Annexure – I.
- 4.2.5 Remove the viscosity standard fluid (10 cp viscosity) bottles and repeat the steps 4.2.1 to 4.2.4 for 100 cp, and 1000 cp.
- 4.2.6 If the instrument is out of calibration, put Out of calibration label and proceed as per SOP.
- 4.2.7 Calibration frequency: Quarterly.

**5.0 ANNEXURE (S) :**  
Annexure – I: Calibration Record of Viscometer.

**6.0 REFERENCE (S):**  
SOP: Handling of out of calibration  
SOP: Preparation, Approval, Distribution control, revision and destruction of Standard operating Procedure (SOP).

**7.0 ABBREVIATION (S)/DEFINITION (S):**  
SOP : Standard Operating Procedure  
° C : Degree Celsius.  
% : Percent

**REVISION CARD**

S. No.	REVISION No.	REVISION DATE	DETAILS OF REVISION	REASON (S) FOR REVISION	REFERANCE CHANGE CONTROL No.
1	00	----	----	New SOP	----



**PHARMA DEVILS**  
QUALITY CONTROL DEPARTMENT

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**ANNEXURE I**

**CALIBRATION RECORD OF VISCOMETER**

Reference SOP No.

<b>Location</b>	<b>Page No.</b>	4 of 1
Manufactured By	<b>Model No.</b>	
Frequency	Identification No.	
Date of calibration	Next Calibration Due on	

S.No.	Name of standards fluid	Lot No./B. No.	Stated viscosity at 25° C	Spindle No.	RPM	Observed viscosity at 25°C	Difference between observed and stated viscosity (NMT ± 1 %)
1.	10 cp						
2.	100 cp						
3.	1000 cp						

**Opinion:** The Instrument Calibration is Ok / Not Ok as per IN-HOUSE requirements.

<b>Calibrated By:</b> Date	<b>Checked By:</b> Date	<b>Approved By:</b> Date
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