Date _____

Expt. No. 2 Page No. 4

Aim :

Determination of viscosity of liquid using ostwald viscometer.

Reference :

Requirement :

(a) Chemicals :- Glycerine, distilled water.

(b) Glassware :- Ostwald viscometer, Measuring cylinder, Pipette, beaker, burette stand.

Theory :-

A fluid with large viscosity resists motion because its strong intermolecular forces give it a lot of internal friction, resisting the movement of layers past one another.

Viscosity is a measure of a fluid's resistance to flow. The SI unit of viscosity is poiseille (PI) It's other units are newton-second per square meter ($N s m^{-2}$) or pascal-second ($Pa s$).

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Observation:

S.No	Initial time	final time
1.	0	3:10 min
2.	0	2:99 min
3	0	2:59 min

Average time = $\frac{3:10 + 2:99 + 2:59}{3}$ $\Rightarrow$ $\frac{8:58}{3}$ min

$\Rightarrow$ 2:59 min.

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Procedure:

(i) Wash and dry each glassware.
(ii) Take 50 %. v/v of glycerine and water in a beaker
(iii) Mix it well and put it in ostwald viscometer and fill it at the marking level by closing one end of viscometer.
(iv) Release the closed end of viscometer and measure the time.
(v) Take the reading atleast three time and calculate average viscosity.

Result:

Determination of viscosity of given liquid has been successfully determined in the laboratory.

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