Diameter of the given Tube

(i) 2.94 cm (ii) 2.90 cm

 (iii) 2.92 cm

 Mean D = 2.92 cm

Radius of the tube [R] = 1.46 cm

Area of cross section of the tube

 A = π R2  = 6.696 cm2

**Observation Table:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Obs. No.** | **Weight in Pan gm** | **Reading of the burette** | **Reading on the Scale** |
| **V1****cm3** | **V2****cm3** | **mean V*****V* = *V*1 +*V*2****2****cm3** | **L1****cm** | **L2****Cm** | **mean*****L* = *L*1 + *L*2****2****cm** |
| **1** | **0** | **21** | **22.8** | **21.9** | **61.5** | **62.8** | **62.15** |
| **2** | **500** | **23.2** | **24.5** | **23.85** | **62.9** | **63.5** | **63.2** |
| **3** | **1000** | **24.6** | **26** | **25.3** | **64** | **64.5** | **64.25** |
| **4** | **1500** | **26.2** | **27.3** | **26.75** | **64.9** | **65.2** | **65.05** |
| **5** | **2000** | **28** | **28.4** | **28.2** | **65.8** | **66** | **65.9** |
| **6** | **2500** | **29.6** | **29.6** | **29.6** | **66.9** | **66.9** | **66.9** |

Slope = 1.818

 **Slope** =$ \frac{AB}{BC}$ = $ \frac{27-25}{65.1-64}$ =$ \frac{2}{1.1} $ = 1.818

$$σ= \frac{1}{2} \left(1-\frac{1}{A}\*Slope\right)$$

 =0.364