

VISCOSITY OF SOLUTIONS

Name:

Group:

Date:

1. Goal of the experiment:

2. Results of measurements of the time of flow of reference fluid (water) via the capillary of viscometer:

a) time t_0 of flow of water:

	1	2	3	4	5
t_0 [s]					

mean value of the time of flow $\bar{t}_0 = \dots\dots\dots$

b) time t of flow of glycerol solutions:

	concentration of glycerol solution, c	time of flow, t			mean value	d/d ₀	t/t ₀	η/η ₀	η _s	η _s /c
1										
2										
3										
4										
5										

Make a graph of the dependence $\frac{\eta_s}{c} = f(c)$

3. Intrinsic viscosity of glycerol:

$\eta_{int} \pm \Delta\eta_{int} = \dots\dots\dots$

4. Radius of glycerol molecule:

$r \pm \Delta r = \dots\dots\dots$

5. Estimation of the glycerol molecule radius on the basis of physical-chemical data:

density of glycerol:, Avogadro's number:

molar mass of glycerol:

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Estimated value of glycerol molecule radius $r_{glycerol}$:

