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INSTITUTE OF BUILDING ENGINEERING
DIVISION OF BUILDING AND BUILDING MATERIALS

BUILDING CHEMISTRY

LAB 4

REACTION KINETICS

Names……

Group……	Date…….....

1. Procedure

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2. Test results

Assuming that constant concentration of sulfur causes suitable turbidity of solution, the reaction rate is inversely proportionate to the time given reaction lasted.

$$v = \frac{c_s}{t}$$

where: c_s – sulfur concentration, t – time;

hence:

$$v = const(1/t)$$

Based on this formula, it is possible to calculate a relative reaction rate (v_n')

$$v_1 = const\left(\frac{1}{t_1}\right) \quad v_1' = 1$$

$$v_2 = const\left(\frac{1}{t_2}\right) \quad v_2' = \frac{v_2}{v_1} = \frac{t_2}{t_1}$$

$$v_3 = const\left(\frac{1}{t_3}\right) \quad v_3' = \frac{v_3}{v_1} = \frac{t_3}{t_1}$$

etc.

Nº	Volume of $Na_2S_2O_3$ V_l	Volume of solution V_c	Concentration of $Na_2S_2O_3$ in solution c	Time t	Relative reaction rate v'
	[cm^3]	[cm^3]	[mol/dm^3]	[s]	-
1.					
2.					
3.					
4.					

Draw a graph which shows the relation between relative reaction rate and the concentration of $Na_2S_2O_3$ in solution – v'=f(c).

Graph

3. Conclusions