

Name \_\_\_\_\_ Section \_\_\_\_\_

Partner \_\_\_\_\_

### CHM 115 Lab 14 Report Form Kinetics – Concentration Effects

[I<sup>-</sup>] Effect:

Initial Concentrations in flask: [S<sub>2</sub>O<sub>3</sub><sup>2-</sup>] \_\_\_\_\_ [H<sub>2</sub>O<sub>2</sub>] \_\_\_\_\_

Flask	Initial [I <sup>-</sup> ]	Time of clock reaction in s	Rate
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____

Attach graph of ln (Rate) vs. ln [I<sup>-</sup>] Slope of best straight line \_\_\_\_\_

Order of reaction: with respect to I<sup>-</sup> \_\_\_\_\_

[H<sub>2</sub>O<sub>2</sub>] Effect:

Initial Concentrations in flask: [S<sub>2</sub>O<sub>3</sub><sup>2-</sup>] \_\_\_\_\_ [I<sup>-</sup>] \_\_\_\_\_

Flask	Initial [H <sub>2</sub> O <sub>2</sub> ]	Time of clock reaction in s	Rate
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____

Attach graph of ln (Rate) vs. ln [H<sub>2</sub>O<sub>2</sub>] Slope of best straight line \_\_\_\_\_

Order of reaction with respect to H<sub>2</sub>O<sub>2</sub> \_\_\_\_\_

Calculate Rate Constant (k) using the orders of the reaction determined above:

Flask #	1	2	3	4
[I <sup>-</sup> ] Effect trials	_____	_____	_____	_____
[H <sub>2</sub> O <sub>2</sub> ] Effect trials	_____	_____	_____	_____

Average rate constant from all trials: \_\_\_\_\_