

# A Study Of The Rate Of The Reaction Of Chlorine Bleach With Blue Dye

Purpose: To determine the reaction order and the rate constant for the reaction of a food colorant (FD&C Blue #1) with household bleach.

You will be given an article from the September 2007 issue of *Chem 13 News*, a Canadian chemistry magazine for high school and college general chemistry teachers. Adapt the procedure from the article to answer the purpose above. You will have available liquid commercial bleach, a blue dye solution, and solid NaCl.

First find the wavelength of maximum absorption of the food dye. Next you will react food dye and bleach solutions and monitor the absorbance. To interpret the data convert all your absorbances to molar concentrations before graphing.

## Short Write-up

*Title*

*Statement of Purpose from above*

*Procedure*

- Overview
- Detailed procedure

*Results*

- Raw data tables
- Calculated data tables
- Calculations
- Graphs
- Calculations using info from graphs
- Final table summarizing results of experiments

*References*