**A Spectrophotometric Study of Fluorescein**

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Course\_\_\_\_\_\_\_\_Section\_\_\_\_\_\_\_Date\_\_\_\_\_\_\_\_\_\_\_

(Assume the standard solution concentration is 75 µM fluorescein at start.)

Calibration Curve:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Fluorescein concentration(µM) | Average Absorbance |  | Fluorescein concentration(µM) | Average Intensity |
| Standard 1 |  |  | Standard 5 |  |  |
| Standard 2 |  |  | Standard 6 |  |  |
| Standard 3 |  |  | Standard 7 |  |  |
| Standard 4 |  |  | Standard 8 |  |  |
| Standard 5 (optional) |  |  | Standard 9 (optional) |  |  |
| Standard 6 (optional) |  |  | Standard 10 (optional) |  |  |
| Equation from Excel | |  | |  | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Absorbance | Concentration (µM fluorescein) | Intensity | Concentration  (µM fluorescein) |
| Standard 1 |  |  |  |  |
| Standard 2 |  |  |  |  |
| Standard 3 |  |  |  |  |
| Standard 4 |  |  |  |  |
| Standard 5 |  |  |  |  |
| Standard 6 |  |  |  |  |
| Standard 7 |  |  |  |  |
| Standard Deviation |  | |  | |
| MDL reported in µM fluorescein |  | |  | |

MDL:

Fluorescein in Antifreeze Determination (graphs, procedure for dilutions and calculations should all be reflected in the notebook pages):  
  
Range of Standards (include your units):\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Linear Regression Equation from Excel:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Unknown intensity (I) or absorbance (A) value (specify):\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Concentration of fluorescein in the antifreeze sample:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_