**SPIKE RECOVERY AND DETERMINING A METHOD DETECTION LIMIT (Fe-Bipyridyl)**

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

**Calibration Curve** (*Actual*)

|  |  |  |
| --- | --- | --- |
|   | Concentration (mg/L)  | Average Absorbance  |
| Standard 1  |   |   |
| Standard 2  |   |   |
| Standard 3  |   |   |
| Standard 4  |   |   |
| Standard 5  |   |   |
| Standard 6  |   |   |
| Standard 7 |  |  |
| Equation from Excel:   |

**MDL** (*Best Solution*)

|  |  |  |
| --- | --- | --- |
|   | Absorbance  | Concentration (mg/L)  |
| Aliquot 1  |   |   |
| Aliquot 2  |   |   |
| Aliquot 3  |   |   |
| Aliquot 4  |   |   |
| Aliquot 5  |   |   |
| Aliquot 6  |   |   |
| Aliquot 7  |   |   |

Standard Deviation of Replicate Aliquots (mg/L) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Determined MDL (mg/L) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Is the method sensitive enough? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Spike Recovery**

(Expected) Concentration increase from spike (mg/L) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Measured Fe in the sample solution (mg/L) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Measured Fe in spiked sample solution (mg/L) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Percent Recovery (%) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Sample Information** (*Measured*)

Amount of Fe in the sample tablet (mg) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Percent Fe compared to label value (%) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_