**\_\_\_/50 your name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Rubric: Experiment 2:Chem 6614   
*Determination of the Concentration of Ni(II) and Cu(II) in an Unknown Mixture via UV-VIS Spectrophotometry***

**\_\_\_2 industry standard followed**. Subsections titled

**\_\_\_2 Purpose:** states actual desired goal and is done succinctly in full sentences

Which technique ? which species studied ?

/ **3** **Procedure:**

\_\_\_Description/mention of scans made on Ni(II) and Cu(II) for peak wavelengths λ1 and λ2 ; why this is done;

**\_\_\_** Description of how you measure calibration curves; (which instrument(s)) ;

how many curves collected ?

\_\_**\_**\_ unknown absorbance collection at λ1 and λ2

\_\_\_\_ what instrument is used ?

**\_3 Observations**

\_\_\_**\_**\_ tables of 4 measurements present

\_**\_**\_ table labeling clear (wavelength, sample

\_\_\_**\_**units of concentration and measured response (absorbance) listed explicitly

\_\_**\_**\_\_ unknown absorbances and wavelengths clear

**\_/7 Calculations**

**\_**\_**\_**\_\_linear regressions done correctly and recorded clearly : plots/equations/r2

\_\_**\_\_**Equations for λ1 and λ2 unknown A set up; slopes and intercepts clearly defined

\_\_\_**\_**\_ two equation/two unknown solution clearly laid out and execute

\_\_\_\_\_ right answer based on slopes and intercepts derived

\_\_\_\_Why certain data fits are not used

**\_**\_**25 Results**

\_**\_** /**3** Table of slopes (k)

\_**\_/20** Answers for [Cu(II)] and [Ni(II)]

±5% => no deductions [Cu] range {0.0095-0.105} [Ni] range {0.0114-0.0126}

±>5-8% => -5 [Cu] range {0.0092-0.108} Ni range {0.0110-0.013}

±>8-12% => -10 [Cu] range 0.0088-0.112] Ni range {0.106-0.0134}

Beyond 12% …no points awarded (-20)

\_**\_/2** Wavelengths of analysis

\_\_\_/**7 Miscellany** (format,neatness, English, evidence of good faith effort)

**Other Comments**