Lab Report for 26/12/23:

* All gaps in the data in the Excel spreadsheets have been filled in.
* The test for varying copper ion concentrations has been conducted (absorbance data to be obtained on Thursday 28/12/23).
* A copper calibration curve has been plotted.

Gap Filling Experiments

* The solvents were boiled for 3 minutes.

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| --- | --- | --- | --- | --- |
| **Solvent** | **Mass of PPP (g)** | **Extraction Methd** | **Observations** | **Absorbance** |
| 50% Ethanol | 0.028 | Heating Mantle | Olive green, high turbidity, brown ppt. | 0.205 |
| Ethanol | 0.048 | Heating Mantle | Olive green, medium turbidity, brown and blue ppt. | 0.117 |
| Methanol | 0.053 | Heating Mantle | Golden yellow, high turbidity, brown and blue ppt. | 0.062 |
| Methanol | 0.057 | Magnetic Stirrer | Golden yellow, high turbidity, brown and blue ppt. | 0.140 |

Varying copper concentrations

* The data about this experiment:

|  |  |  |
| --- | --- | --- |
| **Solvent** | **Metal concentration (moldm-3)** | **Mass of PPP (g)** |
| Water | 0.025 | 0.050 |
| Water | 0.075 | 0.055 |
| 50% Ethanol | 0.025 | 0.053 |
| 50% Ethanol | 0.075 | 0.054 |

Copper Calibration Curve

* The data about this experiment:

|  |  |  |
| --- | --- | --- |
| **Metal concentration (moldm-3)** | **Mass of CuSO4 (g)** | **Absorbance** |
| 0.005 | 0.126 | 0.028 |
| 0.01 | 0.247 | 0.039 |
| 0.025 | 0.624 | 0.146 |
| 0.05 | 1.247 | 0.389 |
| 0.075 | 1.872 | 0.286 |