

First and Last Name: _____

Student ID Number: _____

Regular TA: _____

Lab Section: _____

Date Performed: _____

Make-up TA (If applicable): _____

Part 1. Preparing a phosphate buffer

- Please record the measured values with the correct number of significant figures

| Chemical | Amount |
|---------------------------|--------|
| Na_2HPO_4 | (g) |
| NaH_2PO_4 | (g) |
| H_2O | (mL) |

Part 3. Measuring pH of buffered bromothymol blue stock solution

- Please record the ambient temperature and the pH of the stock solution with the correct number of significant figures

| | |
|-------|--|
| T°, C | |
| pH | |

Part 4. Preparing bromothymol solutions at acidic, neutral and basic pH

- Please record the measured values with the correct number of significant figures

| Solution color | Stock solution, V(mL) | 1M NaOH, V(mL) | 1M HCl, V(mL) | DI H ₂ O, V(mL) | pH range |
|----------------|-----------------------|----------------|---------------|----------------------------|----------|
| Yellow | | x | | x | |
| Blue | | | x | x | |
| Green | | x | x | | |

Part 5. Acquiring absorbance spectra and measuring absorbance values of bromothymol solutions at 453 nm and 616 nm

- Please record the measured absorbance values for each solution with the correct number of the significant figures

| Solution color | A _{453nm} | A _{616nm} |
|----------------|--------------------|--------------------|
| Yellow | | |
| Blue | | |
| Green | | |