

Name: _____

Date: _____

Laboratory Challenge 4: Identifying An Unknown Acid

Problem

You will be given a vial containing either maleic acid, $C_4H_4O_4$, fumaric acid, $C_4H_4O_4$, or tartaric acid, $C_4H_6O_6$. Design and carry out an experiment with the materials provided to determine the number of ionizable (acidic) H^+ ions possible for each molecule of the acid given.

Experimental Plan

Materials

- | | |
|---|---|
| <input type="checkbox"/> Electronic balance | <input type="checkbox"/> Beral pipet (graduated if available) |
| <input type="checkbox"/> 125-mL Erlenmeyer flasks | <input type="checkbox"/> Weigh boats |
| <input type="checkbox"/> 500-mL Erlenmeyer flask | <input type="checkbox"/> Stirring rod |
| <input type="checkbox"/> 50-mL graduated cylinder | <input type="checkbox"/> Distilled water |
| <input type="checkbox"/> 10-mL graduated cylinder | <input type="checkbox"/> 0.250 M NaOH |
| <input type="checkbox"/> Spatula | <input type="checkbox"/> Phenolphthalein solution |

Before beginning your experiment, you must get approval from the instructor.	Examiner's Signature
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Procedure

Data and Observations

Calculations:

Explain any sources of error and how they affected your results. How could you correct for these in future experiments?