#### CHEM 116/222

Exp. 6,7: Preparing Standard Acid and Base; Using a pH Electrode for an Acid-Base Titration

| Name:      | Date: |
|------------|-------|
| TA's Name: |       |

### EXP. 6 DATA: SODIUM HYDROXIDE

HYDROCHLORIC ACID

|                       | trial 1 | trial 2 | trial 3 | trial 4 | trial 1 | trial 2 | trial 3 | trial 4 |
|-----------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| <i>m</i> standard (g) |         |         |         |         |         |         |         |         |
| V titrant (mL)        |         |         |         |         |         |         |         |         |
| molarity              |         |         |         |         |         |         |         |         |
| std dev, % rel        | /       |         |         | /       |         |         |         |         |

#### EXP. 7 DATA:

# UNKNOWN ACID (unknown number \_\_\_\_\_)

| M base for titration                 | titration curve | first derivative | second derivative |
|--------------------------------------|-----------------|------------------|-------------------|
| mass of unknown (g)                  |                 |                  |                   |
| indicator endpt for 100 mL soln (mL) |                 |                  |                   |
| equivalence volume (mL)              |                 |                  |                   |
| molecular weight (g/mol)             |                 |                  |                   |

## UNKNOWN BASE (unknown number \_\_\_\_\_)

| M acid for titration            |      | titration curve | first derivative | second derivative |
|---------------------------------|------|-----------------|------------------|-------------------|
| mass of unknown (g)             |      |                 |                  |                   |
| indicator endpt for 100 mL soln | (mL) |                 |                  |                   |
| equivalence volume (mL)         |      |                 |                  |                   |
| molecular weight (g/mol)        |      |                 |                  |                   |

Note: include computer generated graphs of titration curve, d(pH)/dV and  $d^2(pH)/dV^2$  in report.