Upper six

Lab # 19/11/08.

TITLE: To determine the accuracy and precision of measurements using a burette, a pipette and a measuring cylinder.

APPARATUS & MATERIALS:

 1 50cm3 Class B burette

 1 10cm3 graduated pipette

 1 10 cm3 measuring cylinder

 9 vials and stoppers

 Top loading balance

 Distilled water

 Pipette filler

 Small beaker

METHOD:

1. Wash all apparatus clean with distilled water. Label empty sample vials.
2. Weigh the empty vials with their stoppers. ( be sure not to interchange the stoppers of the vials)
3. Use the graduated pipette, measuring cylinder and the burette to transfer 10cm3 of the distilled water into different sample vials. Stopper the vials and weigh and record the loaded masses.
4. Repeat this procedure until three loaded sample vials were obtained for each piece of measuring equipment.
5. Tabulate all results.

TREATMENT OF RESULTS

Tabulate all results.

For EACH piece of measuring apparatus, calculate

1. Mean
2. Standard deviation

DISCUSSION

 From your results, determine the most accurate and the most precise piece of equipment ought to be used for determining volumetric measurements. Is there any error associated with the use of these pieces of apparatus for such a determination? Is there a way to experimentally determine this error?