**Name** _____Mark Prior_____      **Date** __09/14/05

**TA** _____Carlos Zambrano_____      **Section #** __52420

**Title: "Are the Densities of Coke and Diet Coke Different?"**

**Objective:** To measure and compare densities of Coke and Diet Coke. To evaluate precision of the volume measurements performed with a 5 ml volumetric pipette, a 10 ml graduated cylinder, and a 50 ml burette. To verify that density is an intensive property.

Sample:

Sample temperature:

**Part 1. "Are the Densities of Coke and Diet Coke Different?"**

**My data**

|  | Volumetric Pipette | | Graduated Cylinder | | Burette | |
|---|---|---|---|---|---|---|
|  | **Trial 1** | **Trial 2** | **Trial 1** | **Trial 2** | **Trial 1** | **Trial 2** |
| **Mass of Empty Beaker (g)** |  |  |  |  |  |  |
| **Mass of Beaker + Liquid Sample (g)** |  |  |  |  |  |  |
| **Mass of Liquid Sample (g)** |  |  |  |  |  |  |
| **Volume Delivered (ml)** |  |  |  |  |  |  |
| **Calculated Density (g/ml)** |  |  |  |  |  |  |

**Sample Calculation for Trial 1:**

**Results from the combined class data**

| Sample | Average Density ± Standard Deviation (g/ml) | | |
|--------|---------|-----------|---------|
| | **Pipette** | **Grad. Cyl.** | **Burette** |
| *Coke* | | | |
| *Diet Coke* | | | |

**Part 2. "Does the size of the sample affect the density?"**

Sample:

Volume assigned:

| | Trial 1 | Trial 2 |
|--|---------|---------|
| **Mass of Empty Beaker (g)** | | |
| **Mass of Beaker + Liquid Sample (g)** | | |
| **Mass of Liquid Sample (g)** | | |
| **Volume Delivered (ml)** | | |

| Sample | Density (g/ml) determined from the plot |
|--------|-----------------------------------------|
| *Coke* | |
| *Diet Coke* | |