NAME _____ DATE _____ SECTION _____

INSTRUCTOR _____ GRADE _____

EXPERIMENT 9: REPORT FOR THE MOLECULAR WEIGHT DETERMINATION OF A PURE SUBSTANCE USING THE IDEAL GAS EQUATION

DATA/RESULTS

Sample number _____

	Example	*Trial 1*	*Trial 2*
*1. Weight (g) of flask plus stopper and moist air	122.447		
*2. Weight (g) of flask plus stopper and unknown gas	123.028		
*3. Temperature (°C) of water bath (which is the temperature of gas in the flask)	93.0		
*4. Pressure (torr) from the Barometer	757.9		
*5. Volume (mL) of distilled water in flask (which is the volume occupied by unknown gas)	271		
6. Density (g/liter) of Moist Air	1.18	1.18	1.18
7. Weight (g) of Moist Air in Flask	0.320		
8. Weight (g) of Flask Plus Stopper	122.127		
9. Weight (g) of Unknown Gas in Flask	0.901		
10. Molecular Weight (g/mole) of Gas (volatile liquid)	100		
11. Average Molecular Weight (g/mole) from the two trials	100		

CALCULATIONS

*Numbers (items) with asterisks represent data taken in the lab, while the other numbers (items) were calculated from the lab data.