09 Molar Mass of a Gas Lab (1671307)

Question 1 2 3 4 5

Description

The goal of the lab is to determine the molar mass of the gas in the can experimentally.

Water Vapor Pressure Table

Instructions

Materials:

Pneumatic trough, triple beam balance, florence flask, 250 mL graduated cylinder, unknown gas (in can), parafilm, gas pressure sensor, logger lite software, thermometer

Safety: The gas is flammable.

Hints:

1. Molar mass can be calculated by the following: Molar mass = mass/ moles
2. The pressure of the atmosphere can be measure with the gas pressure sensor and Logger Lite software.
3. Temperatures can be measure with a thermometer.
4. Volume can be measured with a graduated cylinder.
5. Mass is measured with a balance (Use the triple beam large pan balances).

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1. Question Details Lab Partners [1837468]

Enter the name(s) of your lab partner(s). (If you worked by yourself, enter "none").

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2. Question Details Molar Mass of a gas Lab #2 (procedure) [3781320]

List the experimental procedure (stepwise) that should be followed in this lab (not the calculations).

3. Question Details Unit 9 Molar Mass of a Gas Data [1694897]

a. Enter the experimental mass of the gas: [ ] g

Submit question a. before proceeding. The answer to question a. must be correct before the other questions can be properly evaluated.

b. Enter the pressure of the atmosphere: 4.0 [ ] kPa

c. Enter the water vapor pressure: 4.0 [ ] kPa

d. Enter the pressure of the gas: 4.0 [ ] kPa

Submit question d. before proceeding. The answer to question d. must be correct before the other questions can be properly evaluated.

e. Enter the temperature of the gas in Celcius: 4.0 [ ] °C

f. Enter the temperature of the gas in Kelvin: [ ] K

g. Enter the volume of the gas in Liters: 4.0 [ ] L

h. Enter the moles of the gas: 4.0 [ ] mol

i. Enter the molar mass of the gas: 4.0 [ ] g/mol

4. Question Details % Error Molar Mass of a Gas [2025345]

Enter the molar mass of the gas from question # 2i above: 4.0 [ ] g/mol
Calculate the % error using 58.0 as the accepted value: [ ] %

5. Question Details Unit 9 Molar Mass of Gas [1699792]

A 2.74-g sample of a gas is at a temperature of 27.8 °C and a pressure of 1.18 atm and a volume of 1.35 L.
What is the molar mass of the gas?
4.0 [ ] g/mol

Assignment Details

Name (AID): **09 Molar Mass of a Gas Lab (1671307)**
Submissions Allowed: **7**
Category: **Lab**
Code:
Locked: **Yes**
Author: **Ryan, Matt (** mryan@allsaintsschool.org **)**
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