01 Carbon Dioxide in a Bag Lab (1828008)

Question 1 2 3 4 5 6 7

Description

Materials: 50 mL graduated cylinder, 200 mL graduated cylinder, electronic balance, "Types of Reactions Handout", Periodic table, ziplock baggie, 3.0 M HCl, Na_2CO_3, gas pressure sensor, logger lite software.

Instructions

Objective: To generate enough carbon dioxide to completely fill a zipper lock bag using the reaction between solid sodium carbonate and 3.0 M hydrochloric acid.

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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 Objective and procedure summary [3413760]

Restate the objective in your own words using complete sentences. Summarize the steps in your procedure. (Be sure and include any safety concerns).

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3. Question Details Upload Lab Photo [3413757]

Upload a photo of the lab apparatus with your face in the photo as you perform some part of the lab. Title the image with a unique file name before you upload it.(Maybe use your initials and part of the lab title) Choose File no file selected It must be less than 5 MB in size.

4. Question Details AirBags Lab Balanced Equations [1768004]

Write the balanced equation for the reaction of sodium carbonate with hydrochloric acid.
(Use the lowest possible coefficients. Omit states-of-matter in your answer.)

Write the balanced net ionic equation for the reaction of sodium carbonate with hydrochloric acid.
(Use the lowest possible coefficients. Omit states-of-matter in your answer.)

5. Question Details Air Bags Lab Data [1768057]

a. Enter the volume of the bag in liters: 4.0 ☑ ____ L

b. Enter the temperature of the room: 4.0 ☑ ____ °C

c. Enter the pressure in the room: 4.0 ☑ ____ kPa

d. Calculate the moles of the carbon dioxide needed to fill the bag: 4.0 ☑ ____ mol

e. Calculate the moles of the sodium carbonate needed for the reaction: 4.0 ☑ ____ mol

f. Calculate the moles of hydrochloric acid needed for the reaction: 4.0 ☑ ____ mol

g. Calculate the mass of sodium carbonate needed for the reaction: 4.0 ☑ ____ g

h. Calculate the volume of 3.0 M hydrochloric acid needed for the reaction: 4.0 ☑ ____ mL

6. Question Details Observations, Skills utilized and learning [3413764]

What observations did you make during the lab? What chemistry concepts, laws, and/or skills were necessary to complete this lab? What did you learn or re-learn? Use complete sentences.

7. Question Details Error discussion [3413763]

What are some specific sources of error, and how do they influence the data? Which measurement was the least precise? Does the error make the final value obtained larger or smaller than it should be (give at least one example and trace the steps)? If your calculated percent errors are significant, you must propose valid explanations here.
Instrumental error and human error exist in all experiments, and should not be mentioned as a source of error unless they caused a significant fault. Significant digits and mistakes in calculations are NOT a valid source of error. In writing this section it is sometimes helpful to ask yourself what you would do differently if you were to repeat the experiment and wanted to obtain better precision and accuracy. Use complete sentences.

Assignment Details

Name (AID): **01 Carbon Dioxide in a Bag Lab (1828008)**
Submissions Allowed: **5**
Category: **Lab**
Code:
Locked: **Yes**
Author: **Ryan, Matt (** mryan@allsaintsschool.org **)**
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