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Block 4/ Mr.Tagami

Chemistry Honors

**Stoichiometry**

**Chapter 9**

1. **Introduction to stoichiometry** (299-301)
2. Composition stoichiometry deals with the mass relationships of elements in compounds.
3. Reaction stoichiometry involves the mass relationships between reactants and products in a chemical reaction.
4. A mole ratio is a conversion factor that relates the amounts in moles of any two substances involved in a chemical reaction.
5. None
6. None
7. **Ideal stoichiometric calculations** (304-311)
8. None
9. Figure 1: pg.305, Figure 2, pg.306, Figure 3, pg.308, & Figure 4: pg.310
10. Solution plan for problems which the given and unknown quantities are expressed in moles. Solution plan for problems in which the given quantity is expressed in moles and the unknown quantity is expressed in grams. A solution plan for problems in which the given quantity is expressed in grams and the unknown quantity is expressed in moles. A solution plan for problems in which the given quantity is expressed in grams and the unknown quantity is also expressed in grams.
11. **Limiting reactants and percentage yield** (312-318)
12. The limiting reactant is the reactant that limits the amount of the other reactant that can combine and the amount of product that can form in a chemical reaction.
13. The substance that is not used up completely in a reaction is called the excess reactant.
14. The theoretical yield is the maximum amount of product that can be produced from a given amount of reactant.
15. The measured amount of a product obtained from a reaction is called the actual yield of that product.
16. The percentage yield is the ratio of the actual yield to the theoretical yield, multiplied by 100.
17. Figure 5: pg.312
18. If you think of a mole as a multiple of molecules and atoms, you can see why the amount of O2 is in excess.

*Review questions:*

1. What is stoichiometry? Mass relationships of elements in compounds.
2. What mass of HCl is consumed by the reaction of 2.50moles of magnesium?
3. How many moles of CS2 is formed? 2 moles