

Chemistry C4 Chemical Calculations

Key Knowledge Questions

1. In a chemical reaction no atoms are lost or gained this is called the:
2. The sum of protons and neutrons is called the _____ number
3. The atomic number of an atom is the number of _____
4. The sum of the mass of all the atoms in a compound is called the _____ mass
5. What is the term for the molecules that react in a reaction?
6. What is the term for the molecules formed in a reaction?
7. The apparent mass of the products in a reaction could decrease if one of the products is a:
8. Why does a chemical formula equation need balancing?
9. **HT** Avogadro's number is:
10. **HT** The mass of one mole of a substance in grams is numerically equal to its _____
11. What two things do you need to know to calculate the concentration of a solution?
12. What is the standard unit for the concentration of a substance?
13. **HT** In a chemical reaction, if one reactant is in excess, the other reactant is known as what?

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14. What is the YIELD of a chemical reaction?
15. Give a reason for not obtaining the expected yield in a reaction.
16. What is the measure of the amount atoms from the reactants that end up in the useful products known as?
17. What is the volume of 1 mole of any gas at room temperature and pressure?

Key Knowledge Answers (C4)

1. Conservation of mass
2. Mass
3. Protons (or Electrons)
4. Relative Formula
5. reactants
6. products
7. gas
8. Because mass is conserved/no atoms lost or gained
9. 6.02×10^{23}
10. Relative formula mass
11. Mass of solute and volume of solvent
12. g/dm^3
13. Limiting reactant

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14. The amount of product obtained.
15. Reaction may be reversible, difficult to collect/separate product from reactants, some reactants may react in different ways to the expected reaction.
16. Atom economy.
17. 24dm^3 .