

Question 1: How many moles of glucose are in 7.8×10^{24} molecules of glucose?

Question 2: How many molecules of carbon dioxide are in 10.2 moles of carbon?

Question 3: Using the periodic table, calculate the molar mass of each substance below to the hundredths place.

1. table salt (NaCl) _____
2. aspirin ($\text{C}_9\text{H}_8\text{O}_4$) _____
3. caffeine ($\text{C}_8\text{H}_{10}\text{N}_4\text{O}_2$) _____
4. baking soda (NaHCO_3) _____
5. $\text{Mg}(\text{OH})_2$ _____

Question 4: Perform the following molar mass conversions.

1. What is the mass in grams of 5.00 moles of CH_4 ?
2. How many moles of oxygen gas O_2 , are present in a 38 g sample of O_2 ?
3. How many grams are contained in a 12 mol sample of CaCO_3 ?