

# Mass percentages of $\text{NaHCO}_3$

Bicarbonate of soda ( $\text{NaHCO}_3$ ) is a useful compound in for neutralizing acids. Find the mass percentages of (mass %) of Na, H, C and O in sodium hydrogen carbonate.

# Mass percentages of $\text{NaHCO}_3$

Bicarbonate of soda ( $\text{NaHCO}_3$ ) is a useful compound in for neutralizing acids. Find the mass percentages of (mass %) of Na, H, C and O in sodium hydrogen carbonate.

Solution: Step 1. Determine the molecular mass and the masses of each of the elements.

Step 2. Calculate the ratios of the elements to the molar mass x 100%.

# Mass percentages of $\text{NaHCO}_3$

Bicarbonate of soda ( $\text{NaHCO}_3$ ) is a useful compound in for neutralizing acids. Find the mass percentages of (mass %) of Na, H, C and O in sodium hydrogen carbonate.

Solution: Step 1. Determine the molecular mass and the masses of each of the elements.

$$M_{m,\text{NaHCO}_3} = 23 + 1 + 12 + 3(16) = 84 \text{ amu}$$

Na, H and C are trivial since there is only one of each.

For O we have

$$M_{m,\text{O}_3} = 3(16) = 48 \text{ amu}$$

# Mass percentages of $\text{NaHCO}_3$

Bicarbonate of soda ( $\text{NaHCO}_3$ ) is a useful compound in for neutralizing acids. Find the mass percentages of (mass %) of Na, H, C and O in sodium hydrogen carbonate.

Step 2. Calculate the ratios of the elements to the molar mass x 100%.

$$\text{For Na: } \% \text{ Na} = 23/84 (100\%) = 27.4 \%$$

$$\text{For H: } \% \text{ H} = 1/84 (100\%) = 1.2 \%$$

$$\text{For C: } \% \text{ C} = 12/84 (100\%) = 14.3 \%$$

$$\text{For O: } \% \text{ O} = 48/84 (100\%) = 57.14 \%$$