

Exercise 7.2

Reactions of Carbonates

1. Write a balanced chemical equation for each of the following reactions.
Include states of matter.
 - (a) Na_2CO_3 reacts with excess $\text{H}^+(\text{aq})$
 - (b) BaCO_3 reacts with excess $\text{H}^+(\text{aq})$
 - (c) Cs_2CO_3 reacts with excess $\text{HCl}(\text{aq})$
 - (d) MgCO_3 reacts with excess $\text{HCl}(\text{aq})$

2. Write a balanced chemical equation for each of the following reactions.
Include states of matter.
 - (a) CO_2 reacts with excess $\text{LiOH}(\text{aq})$
 - (b) CO_2 reacts with excess $\text{NaOH}(\text{aq})$
 - (c) CO_2 reacts with excess $\text{Ca}(\text{OH})_2(\text{s})$
 - (d) CO_2 reacts with excess $\text{Ba}(\text{OH})_2(\text{aq})$

3. Write a balanced chemical equation for each of the following reactions.
Include states of matter.
 - (a) CaCO_3 decomposes upon heating
 - (b) BaCO_3 decomposes upon heating