LIMITING REACTANTS II

1. Photosynthesis reactions in green plants use carbon dioxide and water to produce glucose \((C_6H_{12}O_6)\) and oxygen. If a plant has 88.0 g carbon dioxide and 64.0 g of water available for photosynthesis:

A.) What is the limiting reactant:

B.) What is the excess reactant and the mass in excess

C.) The mass of glucose produced.

2. An alkaline battery produces electrical energy according to the equation listed below. If 25.0 g of zinc and 30.0 g of \(\text{MnO}_2\) are used:

\[
\text{Zn} + 2\text{MnO}_2 + \text{H}_2\text{O} \rightarrow \text{Zn(OH)}_2 + \text{Mn}_2\text{O}_3
\]

A.) What is the LR?

B.) What is the excess reactant?

C.) Determine the mass of zinc hydroxide produced

3. Lithium reacts spontaneously with bromine gas to produce lithium bromide. If 25.0 g of lithium and 25.0 g of bromine are present at the beginning of the reaction:

A.) What is the LR?

B.) The excess reactant and the mass in excess

C.) The mass of lithium bromide produced.