

Pre-AP Chemistry
Unit #9 Stoichiometry

Limiting Reactants/Limiting Reagents

1. Convert mass to moles
2. Convert moles to moles
3. Compare Available to Needed moles to determine Limiting Reactant/Limiting Reagent.
4. Determine the theoretical yield/maximum amount/maximum yield of each product produced from the limiting reactant/limiting reagent from the chemical reaction.



A student was given 10.0 grams of methane gas and 10.0 grams of oxygen gas to react in a laboratory experiment. Unfortunately, the reaction didn't go as smoothly as expected. One of the reactants ran out before the reaction could go to completion. Determine the limiting reactant/limiting reagent for the reaction, and what is the maximum amount of the products produced for this combustion reaction?

Maximum Yield/Theoretical Yield of Carbon Dioxide

Maximum Yield/Theoretical Yield of Water