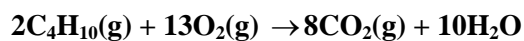


Worked example 1 – Chapter 1

This worked example shows how to determine which is the limiting reactant when molar amounts of the reactants are given.

Which reactant is in excess when 0.0100 mol C₄H₁₀ reacts with 0.0200 mol O₂?



Here we will use the method of dividing the number of moles by the coefficient to quickly determine the limiting reactant:

$$\text{C}_4\text{H}_{10} = \frac{0.0100}{2} = 0.00500 \text{ mol}$$

$$\text{O}_2 = \frac{0.0200}{13} = 0.00154 \text{ mol}$$

0.00154 is smaller than 0.00500, therefore O₂ is the limiting reactant.

C₄H₁₀ is in excess.