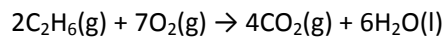


Answer on Question #40373 - Chemistry – Other

Question

The combustion of ethane (C₂H₆) produces carbon dioxide and steam:



How many moles of CO₂ are produced when 5.70 mol of ethane are burned in an excess of oxygen?

Answer:

According to the reaction:

2 mol of C₂H₆ produce 4 mol of CO₂

5.70 mol of C₂H₆ – x moles of CO₂

So, number of moles of CO₂ produced by combustion of 5.70 mol of ethane equals:

$$x = \frac{5.70 \cdot 4}{2} = 11.4 \text{ mol}$$

Answer: n(CO₂) = 11.4 mol.