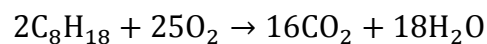


Answer on Question #66579, Chemistry | General Chemistry

How many moles of H₂O are produced when 0.257 mol of octane is burned?

Solution

The reaction for the combustion of octane:



The ratio to octane to H₂O is 2 : 18 mol, so

$$(0.257 \text{ mol C}_8\text{H}_{18}) \times \left(\frac{18 \text{ mol H}_2\text{O}}{2 \text{ mol C}_8\text{H}_{18}} \right) = 2.313 \text{ mol H}_2\text{O}$$

Answer

We have 2.313 mol of H₂O.

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