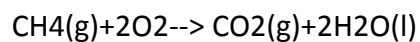


Answer on the question #42929, Chemistry, Physical Chemistry

Question:

What mass of H₂O is produced by combustion of 1.0 mol of CH₄?



Solution:

According to the reaction equation, the amount of methane relates with the water amount as:

$$2n(\text{CH}_4) = n(\text{H}_2\text{O})$$

$$m(\text{H}_2\text{O}) = n(\text{H}_2\text{O}) * M(\text{H}_2\text{O}) = 18.01528 * 2 = 36.03056 \text{ g}$$

Answer: The mass of water, produced by combustion of 1.0 mol of CH₄ is 36.03 g.