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The fuel in small portable lighters is butane (C_4H_{10}). After using a lighter for a few minutes, 1.0 gram (0.017 moles) of fuel was used. How many grams of carbon dioxide would it theoretically produce?	
$2 \operatorname{C_4H_{10}(g)} + 13 \operatorname{O_2(g)} \to 8 \operatorname{CO_2(g)} + 10 \operatorname{H_2O(g)}$	
How many grams of carbon dioxide would this produce?	
A.) 750 mg	B.) 6.0 g
C) 1.5 g	D.) 3.0 g









Combustion Analysis Calculation Ascorbic Acid (Vitamin C) Combustion of a 6.49 mg sample in excess oxygen, yielded 9.74 mg CO₂ and 2.64 mg H₂O Calculate it's Empirical formula! C: 9.74 x10⁻³g CO₂ x(12.01 g C/44.01 g CO₂) = 2.65 x 10⁻³ g C H: 2.64 x10⁻³g H O x (2.016 g H /18.02 gH O)

- $H: 2.64 \times 10^{-3} g H_2 O \times (2.016 g H_2/18.02 g H_2 O)$ = $2.92 \times 10^{-4} g H$
- Mass Oxygen = 6.49 mg 2.65 mg 0.30 mg = 3.54 mg O



QUESTION Erythrose contains carbon, hydrogen and oxygen (MM = 120.0 g/mol). It is an important sugar that is used in many chemical syntheses. Combustion analysis of a 700.0 mg sample yielded 1.027 g CO₂ and 0.4194 g H₂O. Mass Spectrometry produced a molecular ion @ 120 mass units (m/z). What is the molecular formula of erythrose? A) CH₂O B) C₆H₁₂O₆

C) C₃H₆O₃ D) C₄H₈O₄

