Chemistry 221 Worksheet 4c

1. Balance: C11H24 + O2 → CO2 + H2O

How many moles of water are produced if four moles of C11H24 are consumed?

2. Balance: Li + O2 → Li2O

How many moles of Li2O are produced if eight moles of Li are consumed?

3. Determine the mass percent composition of lithium sulfate.

4. Given the following reaction: C3H8 + 5 O2 → 3 CO2 + 4 H2O

How many grams of CO2 (g) are produced from 88.22 g of propane?

5. A student combusts 250.0 grams of octane, C8H18 (l), in an excess amount of oxygen. How many grams of carbon dioxide are produced?

6. What is the mass percent compositions of the elements in octane?

7. 95.6 g of arachidic acid (molar mass = 312.53 g/mol) are burned in oxygen gas to give 269 g CO2 and 110 g H2O. What is arachidic acid's empirical and molecular formulas?