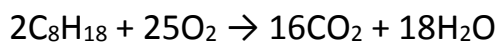


Answer to the Question 63652

Isooctane,  $C_8H_{18}$ , is one of the main constituents of gasoline. calculate the mass of carbon dioxide gas produced by the complete combustion of 692g of isooctane



$$n = \frac{m}{M}$$

$$M(C_8H_{18}) = 114$$

$$n = \frac{692}{114} = 6.07 \text{ mol}$$

$$n(CO_2) = \frac{6.07 \times 16}{2} = 48.56 \text{ mol}$$

$$m = n \cdot M$$

$$M(CO_2) = 44 \text{ g/mol}$$

$$m(CO_2) = 48.56 \times 44 = 2136.7 \text{ g}$$