## Answer on Question \#54891-Chemistry - General chemistry

## Question:

How many grams of $\mathrm{O}_{2}(\mathrm{~g})$ are needed to completely burn 87.3 g of $\mathrm{C}_{3} \mathrm{H}_{8}(\mathrm{~g})$ ?

$$
\begin{gathered}
\mathrm{C}_{3} \mathrm{H}_{8}+5 \mathrm{O}_{2} \rightarrow 3 \mathrm{CO}_{2} \uparrow+4 \mathrm{H}_{2} \mathrm{O} \\
\frac{m_{c_{3} H_{8}}}{M_{c_{3} H_{8}}}=\frac{m_{O_{2}}}{5 \times M_{O_{2}}} \\
\frac{87.3}{44.1}=\frac{m_{O_{2}}}{5 \times 32} \\
m_{o_{2}}=\frac{87.3 \times 5 \times 32}{44.1} \\
m_{o_{2}}=316.73 \mathrm{~g}
\end{gathered}
$$

Answer: 316.73g

