Answer on Question #60296, Chemistry / General Chemistry

1) 3.2 grams of magnesium reacts with oxygen. How many grams of oxygen were consumed?

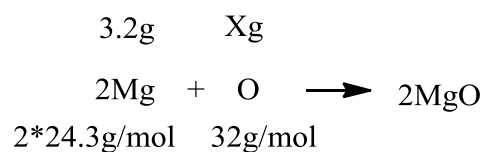**Solution:**

Condition:

m(Mg)=3.2g

Ar(Mg)=24.3g/mol

Mr(O_2)=32g/mol

M(O_2) - ?

1. The magnesium react with oxygen and form the magnesium oxide. From the chemical reaction we get that:

$$\begin{array}{cc} 3.2g & Xg \\ 2Mg \ + \ O & \longrightarrow \ 2MgO \\ 2*24.3g/mol & 32g/mol \end{array}$$

2. 3.2[g]/(2*24.3[g/mol]) = X[g]/32[g/mol].
   Hereof X=3.2*32/48.6=2.11[g]

   Answer: 2.11g of oxygen were consumed on reaction with 3.2g magnesium.