Name

The empirical formula of magnesium oxide

Different atoms have different masses – you should have some idea about moles, relative atomic masses and so on. We can use the information about these relative masses to work out how much of something was used in a reaction and therefore work out the formula of the product.

Number of moles = mass you have / relative atomic mass

Weigh the empty crucible and lid together. Write down the mass here

Weigh the crucible, lid and polished magnesium ribbon together. Write down the mass here

Place the crucible, lid and ribbon on a clay triangle over a Bunsen burner, light it and open the air hole. Periodically lift the lid carefully (use tongs!) to allow a small amount of oxygen into the crucible. This will make sure the magnesium burns completely, but that no fumes or gases escape.

When you are satisfied that the ribbon has burned completely (it will take a few minutes), wait for it to cool. When it has cooled sufficiently carefully weigh the whole lot again. Write down the mass here

Draw a labelled diagram of your apparatus below.

Name

Why is a lid needed?

Why is the lid lifted from time to time?

How could you use mass measurement to check that the reaction is complete?

What does magnesium oxide look like?

What mass of magnesium ribbon did you start with?

How many moles of magnesium is this (the relative atomic mass of Mg is 24)?

What was the mass of magnesium oxide at the end of the experiment?

What was the mass of the oxygen in the magnesium oxide?

How many moles of oxygen is this (the relative atomic mass of O is 16)?

What is the ratio of the number of moles of magnesium to the number of moles of oxygen?

What is the simplest value of this ratio?

What is the empirical formula of magnesium oxide?

Why might you not get the accepted answer?