

Apparatus required : 10 cm. magnesium ribbon, crucible with cover, pipe-clay triangle, retort stand, Bunsen burner or gasolene blast lamp, balance.

Discuss particulars with the class first, and try to get from them suggestions for a practical method of collecting all the ash.

Clean 10 cm. of magnesium ribbon with emery-paper, roll into a spiral, place in a clean, dry crucible, cover with the lid, and weigh carefully to the nearest centigram. Place the crucible on the triangle and heat very gently at first, and then increase the heat until the bottom of the crucible becomes red hot; with a piece of copper wire raise one edge of the lid slightly for an instant; repeat this at short intervals until the magnesium ceases to glow brilliantly when the edge of the lid is raised; continue heating for five minutes with the lid partly raised, so that there will be free access of air. Let the crucible cool, and then place on the balance and weigh again. Tabulate results as follows:

Weight of crucible + lid + magnesiumg
Weight of crucible + lid + ashg
Increase in weightg

Test the white ash as in Experiment 1, and see if it is the same substance.

In discussing the result with the pupils, draw from them the different interpretations. The increase in weight might be due to the crucible absorbing something from the flame or air, or to the magnesium absorbing something from the air. Discuss methods of testing the first supposition. What would the constant lifting of the lid and the attendant glowing indicate, as to which is the correct interpretation? The final conclusion will be that the