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Simple gravimetric chemical analysis – weighing molecules the microscale way

Activity 1: Student worksheet

M1 = mass of bottle tops plus nichrome wire = _____ g

M2 = mass of magnesium plus nichrome wire and magnesium = _____ g

Mass of magnesium ribbon used (M2−M1) = _____ g

Moles of magnesium = mass of Mg/gram formula mass of Mg = _____

M3 = mass of the bottle top plus nichrome wire and magnesium oxide =_____ g

Mass of oxygen used = M3−M2 = _____ g

Moles of oxygen = mass of O/gram formula mass of O = _____

Ratio of magnesium to oxygen = moles Mg/moles O = _____

This gives a molar ratio of approximately 1 magnesium to ____ oxygen(s), which suggests the formula of magnesium oxide is _____.