

## Milk of magnesia extemporaneous preparation

### Teacher and technician sheet

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#### Health and safety note

Make sure that students wear eye protection at all times and that they know how to safely handle hot apparatus.

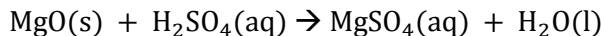
#### Step 1: Preparing magnesium sulfate-7-water

##### Equipment and materials

Each student or pair of student will require

- 25 cm<sup>3</sup> measuring cylinder
- Tripod and gauze
- Bunsen burner
- Stirring rod
- 250 cm<sup>3</sup> beaker
- Evaporating basin
- Balance
- 1 mol dm<sup>-3</sup> sulfuric acid – Irritant
- Magnesium oxide

#### Calculating percentage yield



$$\text{Number of moles of sulfuric acid used} = \frac{(20 \times 1)}{1000} = 0.02$$

$$\text{Theoretical yield of MgSO}_4 \cdot 7\text{H}_2\text{O (rmm 246)} = 0.02 \times 246 = 4.92 \text{ g}$$

$$\text{Percentage yield} = \frac{\text{actual yield}}{\text{theoretical yield}} \times 100\%$$

#### Step 2: Preparing magnesium hydroxide mixture

If students are not familiar with risk assessments, explain what is needed. Remember that a student's risk assessment is not sufficient. **It must be checked, modified if necessary and agreed by a qualified person.**

**DO NOT USE** chloroform in the preparation – omit it from the formulation.

#### Step 3: Magnesium hydroxide mixture assay

##### Method

Again, if students are not familiar with risk assessments, explain what is needed. Remember that a student's risk assessment is not sufficient. **It must be checked, modified if necessary and agreed by a qualified person.**