**Finding the water of crystallisation in hydrated iron (II) sulphate, FeSO4.XH2O**

Weigh between 1.3 – 1.5g of the hydrated salt recording your masses below

**Results: [1]**

|  |  |  |
| --- | --- | --- |
|  | Expt 1: Your results | Expt 2: Neighbours results |
| Mass of Crucible / g |  |  |
| Mass of crucible + hydrated salt / g |  |  |
| Mass of crucible + anhydrous salt / g |  |  |

**Calculation: [3]**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Expt 1 | Expt 2 | Mean mass (to two decimal places) |
| Mass of hydrated salt used / g |  |  |  |
| Mass of anhydrous salt formed / g |  |  |  |
| Mass of water removed / g |  |  |  |

1. Calculate the following to 1dp to assess your accuracy, your teacher will award marks compared to their results:

Mean mass of hydrated

Mean mass of anhydrous

**[3]**

1. Calculate the mean moles of water removed when you heated the samples of the hydrated salt. **[1]**
2. Calculate the mean moles of anhydrous salt formed when you heated the samples of the hydrated salt. **[2]**
3. Use your answers in (1) and (2) to calculate the value of **X** in the hydrated salt. Give your answer to the nearest whole number. **[2]**
4. Write an equation for the change that took place when you heated the hydrated salt. Include state symbols. **[2]**