

Centre Number						Candidate Number				
Surname										
Other Names										
Candidate Signature										

For Examiner's Use Total Task 2



General Certificate of Education
Advanced Level Examination
June 2011

Chemistry

CHM6X/PM2

Unit 6X A2 Externally Marked Practical Assignment

Task Sheet 2

To be completed before the EMPA Written Test

For submission by 15 May 2011

For this paper you must have:

- a ruler
- a calculator.

The investigation of a weed killer

The aim of Task 2 is to determine the concentration of iron(II) ions in the weed killer by titration of a solution of the weed killer with a $0.0200 \text{ mol dm}^{-3}$ solution of potassium manganate(VII).

Task 2 Titration

Wear eye protection at all times.

Assume that all of the solutions are toxic and corrosive.

Procedure

- 1 Rinse the burette with the potassium manganate(VII) solution provided. Set up the burette and use a funnel to fill it with the potassium manganate(VII) solution. Record the initial burette reading in a table of your own design on the Candidate Results Sheet for Task 2.
- 2 Use a pipette filler to rinse the pipette with the weed killer solution provided. Use this pipette to transfer 25.0 cm^3 of the weed killer solution to a 250 cm^3 conical flask.
- 3 Use a measuring cylinder to transfer approximately 10 cm^3 of dilute sulfuric acid to the conical flask.
- 4 Add the potassium manganate(VII) solution from the burette until the mixture in the conical flask just turns pink. Record your final burette reading in your table.
- 5 Rinse the conical flask with distilled or deionised water and repeat the titration until you obtain **two** concordant titres. You should do no more than five titrations.

Have one of your final burette readings checked by your teacher.

- 6 Calculate and record the average titre on the Candidate Results Sheet for Task 2. Indicate clearly the titres that you used in calculating this average titre.

You are not required to carry out any further calculations on the Candidate Results Sheet for Task 2. You will use your results to determine the concentration of iron(II) ions in the weed killer in **Section A** of the Written Test.

Candidate Results Sheet for Task 2

Teacher Group

Results

Record your titration results in an appropriate table in the space below.

Average titre / cm³

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R		P	
C		A	

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There are no questions printed on this page

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ANSWER IN THE SPACES PROVIDED**