

OCR

Oxford Cambridge and RSA

Wednesday 19 June 2019 – Morning**A Level Chemistry B (Salters)****H433/03** Practical skills in chemistry

Practical Insert

Time allowed: 1 hour 30 minutes**INSTRUCTIONS**

- Do not send this insert for marking; it should be retained in the centre or destroyed.

INFORMATION

- This document consists of **4** pages. Any blank pages are indicated.

Method

- Four samples of approximately 5 g of the spinach leaves provided were weighed by difference, accurately, using a 2 decimal place balance. All the weighings were recorded.
- Each weighed sample of spinach was added to about 100 cm³ of sulfuric acid in a beaker and allowed to stand for various amounts of time.
After standing each sample was filtered into a 250 cm³ volumetric flask. The original beakers were washed several times with de-ionised water and the washings transferred to the flask. The solution was made up to the mark with de-ionised water.
- 25 cm³ of one of the solutions was pipetted into a conical flask.
- The above solution was titrated against a $5.0 \times 10^{-6} \text{ mol dm}^{-3}$ solution of KMnO_4 from a burette until at least two concordant results were obtained.
- Steps 3, 4 and 5 were repeated with each of the sample solutions.

Results and Analysis**Weighings**

	Mass of weighing boat/g	Mass of spinach + weighing boat/g	Mass of spinach/g
Sample 1	1.43	6.75	5.32
Sample 2	1.43	6.98	5.55
Sample 3	1.43	6.40	4.97
Sample 4	1.43	6.53	5.10

Table 1**Titration**

		Sample 1	Sample 2	Sample 3	Sample 4
	Time/mins	30	60	90	120
Rough titre	Initial vol/cm³	0.00	0.00	0.00	0.00
	Final vol/cm³	6.80	7.25	7.70	8.20
	Titre/cm³	6.80	7.25	7.70	8.20
Titre 1	Initial vol/cm³	7.00	8.00	8.00	10.00
	Final vol/cm³	13.80	15.10	15.55	18.05
	Titre/cm³	6.80	7.10	7.55	8.05
Titre 2	Initial vol/cm³	15.00	16.00	16.00	20.00
	Final vol/cm³	21.75	23.15	23.50	27.95
	Titre/cm³	6.75	7.15	7.50	7.95

Table 2

OCR

Oxford Cambridge and RSA

Copyright Information

OCR is committed to seeking permission to reproduce all third-party content that it uses in its assessment materials. OCR has attempted to identify and contact all copyright holders whose work is used in this paper. To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced in the OCR Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download from our public website (www.ocr.org.uk) after the live examination series.

If OCR has unwittingly failed to correctly acknowledge or clear any third-party content in this assessment material, OCR will be happy to correct its mistake at the earliest possible opportunity.

For queries or further information please contact The OCR Copyright Team, The Triangle Building, Shaftesbury Road, Cambridge CB2 8EA.

OCR is part of the Cambridge Assessment Group; Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.