

CUTI-CUTI BELAJAR : KIMIA TINGKATAN 4

- 2 Diagram 2 shows the apparatus set-up used in an experiment to determine the empirical formula for an oxide of lead.

Rajah 2 menunjukkan susunan radas yang digunakan dalam eksperimen bagi menentukan formula empirik bagi oksida plumbum.

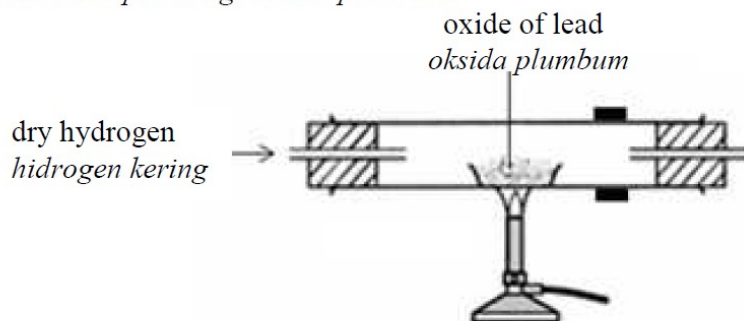


Diagram 2
Rajah 2

The following data was obtained based on the experiment :

Data berikut diperolehi berdasarkan suatu eksperimen:

Mass of an oxide of lead = 4.78 g

Jisim oksida plumbum

Mass of lead = 4.14 g

Jisim plumbum

- (a) What is meant by empirical formula ?
Apakah yang dimaksudkan dengan formula empirik ?

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[1 mark]

- (b) Name one substance that can be used to dry the hydrogen gas.
Namakan bahan yang boleh digunakan untuk mengeringkan gas hidrogen.

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[1 mark]

- (c) Why does the hydrogen gas need to be passed through the combustion tube for a few minutes before heating ?
Mengapakah gas hidrogen dialirkan ke dalam tiub pembakaran beberapa minit sebelum pemanasan ?

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.....

[1 mark]

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(e) Determine the empirical formula for oxide of lead ?
Tentukan formula empirik bagi oksida plumbum ?
 [Relative atomic mass for O = 16 and Pb = 207]
[Jisim atom relatif bagi O = 16 dan Pb = 207]

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3 Diagram 3 shows the positions of 6 elements represented by the letters A, B, C, D, E, F in the Periodic Table of Elements.
Rajah 3 menunjukkan kedudukan 6 unsur yang diwakili oleh huruf A,B,C,D,E, F dalam Jadual Berkala Unsur.

[illegible]

Using these letters, answer the following questions.

Menggunakan huruf-huruf tersebut, jawab soal-soal berikut.

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(b) State one special characteristic of element F .
Nyatakan satu ciri istimewa bagi unsur F.

[1 mark]

- (c) (i) Arrange atoms A, B, C, D and E in decreasing order of atomic size.
Susun atom A, B, C, D dan E mengikut tertib pengurangan saiz atom.

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[1 mark]

- (ii) Explain your answer in (c)(i).
Huraikan jawapan anda dalam (c)(i).

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[3 marks]

- (d) Write the chemical formula for the ion formed by element D.
Tuliskan formula kimia bagi ion yang terbentuk dari unsur D.

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[1 mark]

- (e) Write the chemical equation for the reaction between the oxide of A and water.
Tuliskan persamaan kimia untuk tindakbalas antara oksida A dan air.

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[3 marks]