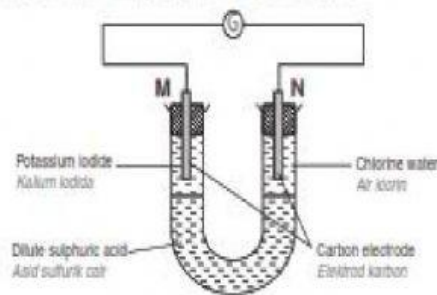




Exercise / Latihan

- 1 The diagram below shows the set-up of apparatus to investigate redox reaction.

Rajah di bawah menunjukkan susunan radas untuk mengkaji tindak balas redoks.



- (a) How do you know that the reaction has started? / Bagaimanakah anda mengenal pasti bahawa tindak balas telah bermula?

- (b) What is the function of dilute sulphuric acid? / Apakah fungsi asid sulfurik cair?

To allow the H^+ to flow

- (c) What is the colour change of the solution around M electrode after 30 minutes of experiment?

Apakah perubahan warna bagi larutan di sekeliling elektrod M selepas eksperimen dijalankan selama 30 minit?

(d) (i) Write half equation for the reaction that occurs at M electrode of the U-tube.

Tuliskan persamaan setengah bagi tindak balas yang berlaku di elektrod M dalam tiub-U.

(ii) Write half equation for the reaction that occurs at N electrode of the U-tube.

Tuliskan persamaan setengah bagi tindak balas yang berlaku di elektrod N dalam tiub-U.

(e) Describe a chemical test to determine the product formed in the solution at M electrode of the U-tube. / Huraikan ujian kimia yang boleh digunakan untuk menentukan hasil yang terbentuk dalam larutan pada elektrod M dalam tiub-U.

(f) (i) What is the change in oxidation number of chlorine in the reaction?
Apakah perubahan nombor pengoksidaan bagi klorin dalam tindak balas ini?

(ii) What is the change in oxidation number of iodine in the reaction?
Apakah perubahan nombor pengoksidaan bagi iodin dalam tindak balas ini?

(g) (i) What is the substance that is being oxidised in the experiment? Explain your answer.
Apakah bahan yang teroksida dalam eksperimen ini? Terangkan jawapan anda.

ion. electrons to form / Oxidation number of from -

(ii) State the name of the oxidising agent. / Nyatakan nama agen pengoksidaan.

- (h) State the name of one substance that can replace chlorine water in order to get the same product at M electrode.

Nyatakan satu bahan yang boleh menggantikan air klorin untuk mendapatkan hasil yang sama di elektrod M.

- (i) (i) If potassium iodide is replaced by iron(II) chloride, what will be observed at electrodes M and N?

Jika kalium iodida digantikan dengan ferum(II) klorida, apakah yang akan diperhatikan di elektrod M dan N?

Electrode M / Elektrod M :

Electrode N / Elektrod N :

- (ii) Explain your answer. / Terangkan jawapan anda.

At M electrode, iron(II) ion electron to become At N electrode, chlorine molecule :

electrons to become :