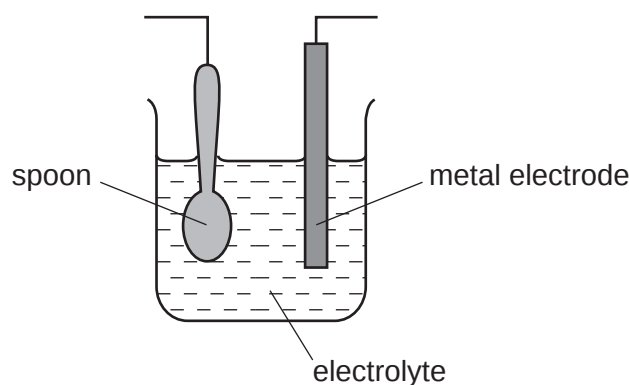


ELECTROPLATING

- 1 A steel spoon can be coated in silver using electrolysis. The spoon must be very clean and free of grease.



(a) Suggest

- (i) **one** advantage of putting a thin layer of silver on the spoon,

..... [1]

- (ii) **one** disadvantage if the spoon is used frequently,

..... [1]

- (iii) why the spoon must be very clean and free of grease?

..... [1]

(b) Which electrode should be the spoon?

..... [1]

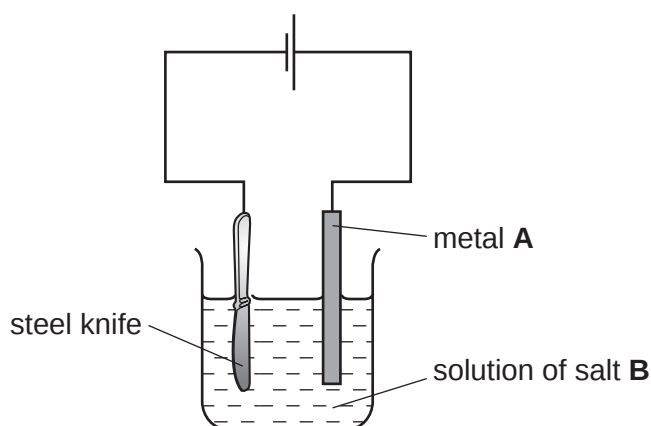
(c) Identify the metal from which the other electrode is made.

..... [1]

[Total: 5]

- (a) (i) prevent rusting or corrosion/more attractive or shiny/so it doesn't oxidise
not less reactive or answers about value [1]
- (ii) silver wears off/will need re-coating
ignore references to rusting [1]
- (iii) so that silver can coat the spoon/stick to the spoon owtte [1]
- (b) negative/cathode [1]
- (c) silver [1]

- 2** The apparatus below was used to deposit a thin layer of chromium on a steel knife. The knife was cleaned carefully and all grease removed before the process started.



- (a)** What is the name of the process when metal objects are coated with other metals?

..... [1]

- (b) (i)** Suggest the identity of metal **A**.

..... [1]

- (ii)** Suggest the name of salt **B**.

..... [1]

- (c)** Give **two** reasons why steel knives are coated with chromium.

1.

2. [2]

[Total: 5]

(a) electroplating [1]

(b) (i) chromium (1)

(ii) any named chromium salt (1) [2]

(c) to stop corrosion owtte (1)
to look attractive owtte (1)

[2]

[Total: 5]