

Salts and electrolysis (Quick Questions)

1. What do alkalis contain?
2. What do acids contain?
3. What do the following state symbols mean: (aq), (l), (s), (g)?
4. How can you measure the acidity or alkalinity of a substance?
5. Salts can be made by reacting acids with metals when is this not possible?
6. Why can't sodium and potassium be added to acids even though they are more reactive than hydrogen?
7. What is the general equation that describes a neutralisation reaction?
8. The salt made when reacting acids and bases depends on the acid used. What salts are made when using; A: hydrochloric acid, B: sulfuric acid, C: nitric acid?
9. What is a precipitation reaction?
10. How can you separate an insoluble salt from the reaction mixture?
11. What is electrolysis?
12. Where do ions move to during electrolysis?
13. What happens to the ions at the electrodes?
14. What is oxidation?
15. What is reduction?
16. Give 4 reasons why we need aluminium?
17. Why is cryolite added to bauxite during the electrolysis of aluminium oxide?

Salts and Electrolysis (Quick Answers)

1. Hydroxide ions (OH^-)
2. Hydrogen ions (H^+)
3. (aq) = aqueous - dissolved in water, (l) = liquid, (s) = solid, (g) = gas
4. You can use universal indicator (UI). Depending on the colour it changes to depends on the strength of the acid or alkali.
5. It's not possible if the metals are less reactive than hydrogen (remember to look at your data sheet to help you work this out).
6. The reaction is too violent to be carried out safely.
7. Acid + base \rightarrow a salt + water
8. A: chlorides B: sulphates C: nitrates
9. When you add two solution containing different soluble slats that react to make an insoluble salt. This is an insoluble solid and called a precipitate.
10. By filtration using filter paper.
11. Electrolysis means splitting up using electricity.
12. The positive ions move towards the negative electrode (cathode) and the negative ions move towards the positive electrode (anode) (PANIC)
13. The positive ions gain electrons and the negative ion lose electrons.
14. Oxidation is the loss of electrons. (OIL)
15. Reduction is the gain of electrons. (RIG)
16. Any 4 from: pans, overhead power cables, aeroplanes, cooking foil, drink cans, window and patio door frames, bicycle frames and car bodies.
17. The cryolite lowers the melting point of aluminium oxide so that it can be carried out at lower temperature thus reducing heating costs and the pollution.