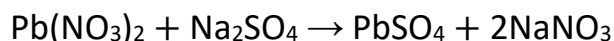


Name:

Class:



Lead nitrate reacts with sodium sulfate to produce lead sulfate and sodium nitrate.



The theoretical yield of lead sulfate for this reaction was 2.85 g.

The actual yield of lead sulfate obtained was 2.53 g.

Calculate the percentage yield of lead sulfate in this experiment.

Give your answer to **two** significant figures.

$$\text{Percent yield} = (\text{actual yield} \div \text{theoretical yield}) \times 100$$

$$\text{Percent yield} = (2.53 \div 2.85) \times 100 = 88.8\%$$

$$\text{Percent yield} = \mathbf{89\%}$$

Explain the difference between a strong acid and a weak acid.

A strong acid is completely ionises/dissociates in solution.

A weak acid is only partly ionises/ dissociates in solution.

State the method used to extract Aluminium.

Electrolysis

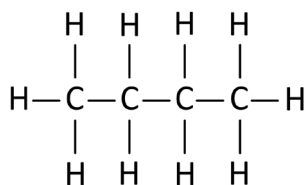
State the figure for Avogadro's constant?

$$6.02 \times 10^{23}$$

How many atoms are present in 2 moles of N^{14} ?

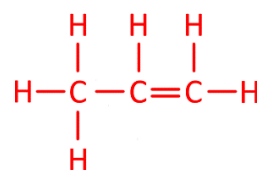
$$2 \times 6.02 \times 10^{23} = 1.24 \times 10^{24}$$

Name the substance below.



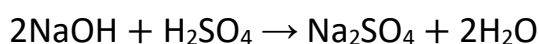
Butane

Draw the structure of propene. Showing all bonds.



Accept any correct version of above.

In a titration, 25.0 cm^3 of a sodium hydroxide solution is titrated with 0.200 mol/dm^3 sulfuric acid, 24.80 cm^3 of acid are required to neutralise 25.0 cm^3 of the sodium hydroxide solution.



Calculate the concentration of the sodium hydroxide solution, NaOH, in mol /dm^3 .

$$\text{mol of acid} = (24.80 \div 1000) \times 0.200 = 0.00496 \text{ mol}$$

$$\text{mol NaOH} = 2 \times 0.00496 = 0.00992 \text{ mol}$$

$$\text{conc. of NaOH} = 0.00992 \div (25.0 \div 1000) = 0.3968 = 0.397$$

$$\text{conc. of NaOH} = \mathbf{0.397 \text{ mol dm}^{-3}}$$