



1 Sodium is extracted by the electrolysis of molten sodium chloride.

a Write a half equation for the conversion of sodium ions to sodium atoms in this process.

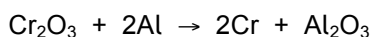
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b Explain whether the production of sodium in this method is an oxidation or reduction process.

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2 Chromium can be extracted from chromium(III) oxide (Cr₂O₃) in a displacement reaction with aluminium.



a Write a half equation for the conversion of chromium ions to chromium atoms in this process.

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b Write a half equation for the conversion of aluminium atoms to aluminium ions in this process.

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c Write an ionic equation for this process.

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d Explain, in terms of electrons, why aluminium is more reactive than chromium.

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e Explain, in terms of electrons, why this is a redox reaction.

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