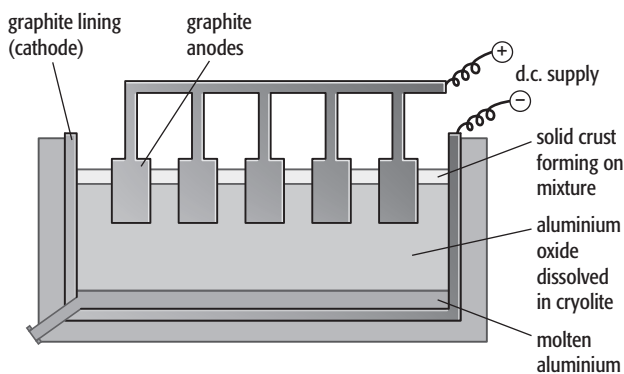


Worksheet 9.2

The extraction of aluminium

The diagram shows the electrolysis of alumina (aluminium oxide) purified from bauxite.



1 a What is the formula for aluminium oxide?

b What ions are present in aluminium oxide?

c What is the purpose of the cryolite in the process?

.....
.....

2 Write down half-equations for the processes occurring during electrolysis at:

a the anode:

b the cathode:

3 Complete the two statements.

a Oxidation (..... of electrons) occurs at the

b Reduction (..... of electrons) occurs at the

4 The graphite anodes have to be replaced regularly. Why is this?

.....
.....

5 Why is it so much more cost-effective to recycle aluminium than to extract new aluminium?

.....
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