

GENERAL CERTIFICATE OF SECONDARY EDUCATION

TWENTY FIRST CENTURY SCIENCE

ADDITIONAL SCIENCE A

Unit A154: controlled assessment

A154

CHEMISTRY A

Unit A174: controlled assessment

A174

Factors that affect how calcium carbonate is dissolved by acid

Information for Candidates (1)

To be issued to candidates at the start of the task.

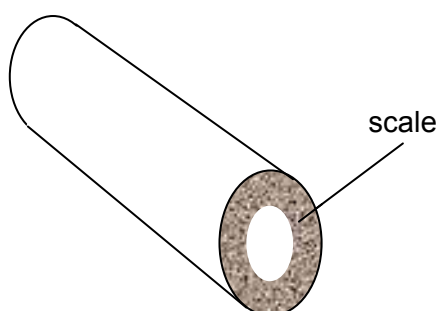
Marks from this specimen task must not be submitted to OCR.

Information for candidates

You are going to carry out an investigation on factors that affect how calcium carbonate is dissolved by acid.

Background

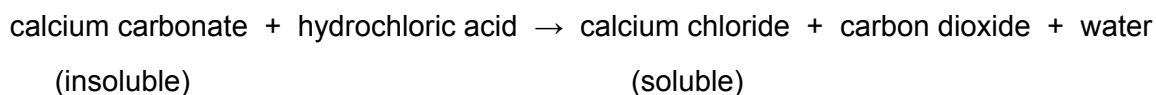
In many parts of Britain, our water supply has small amounts of calcium hydrogencarbonate dissolved in it. When the water is heated, for example in kettles or boilers, the heat turns calcium hydrogencarbonate into calcium carbonate, which sticks to the insides of kettles, boilers and hot water pipes, forming 'hard water scale' that blocks up the spout or pipe.



Hot water pipes can become almost completely blocked by calcium carbonate.

The scale can be removed by using acid, which dissolves it.

For example:



This reaction with acid has been used for many years to remove calcium carbonate deposits, both in the home and on an industrial level.

You will choose a factor and investigate this factor's effect on how calcium carbonate is dissolved by acid.

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