Acid–alkali conductometric titration

This resource accompanies the Exhibition Chemistry video and article Shocking revelations, which demonstrates a conductometric titration of barium hydroxide with sulfuric(vi) acid and can be viewed at: <https://rsc.li/3ldVQoD>

Learning objectives

* Identify the ions present in acidic and alkaline solutions.
* Describe the changes in ionic concentrations in an acid-alkali neutralisation.

Questions

1. (a) What do you call the particles in a solution that conducts electricity?

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1. What are the names of these particles in the two solutions being used? Write the symbols for these particles.

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1. (a) What has happened to the number of ions present in the solution when the end point is reached?

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1. If the precipitate is barium sulfate, which ions does this remove from the solution?

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1. (a) What other ions are present at the start of the titration?

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1. What must have happened to these ions when the endpoint is reached?

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1. Write an ionic equation for the reaction between the ions identified in question 3.

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1. Why did the solution conduct again when more barium hydroxide was added after the end point?

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Acknowledgements

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