

Flame tests for metal ions

Metal ion	Flame colour
Lithium	Bright red
Sodium	Bright yellow
Potassium	Pale lilac
Calcium	Orange-red
Strontium	Red
Barium	Pale green
Copper	Green with streaks of blue

Testing for metal ions with sodium hydroxide solution

Quiz 3.3 of the Royal Society of Chemistry's – Practical skills quizzes.

Cation in solution	Three drops of NaOH(aq) added to 3 cm ³ of solution of cation	10 cm ³ of NaOH(aq) added to 3 cm ³ of solution of cation
Potassium, K ⁺	No precipitate	No precipitate
Sodium, Na ⁺	No precipitate	No precipitate
Calcium, Ca ²⁺	A white precipitate of Ca(OH) ₂ forms	White precipitate remains
Magnesium, Mg ²⁺	A white precipitate of Mg(OH) ₂ forms	White precipitate remains
Aluminium, Al ³⁺	A white precipitate of Al(OH) ₃ forms	White precipitate dissolves to give a colourless solution
Ammonium ion, NH ₄ ⁺	No effect. Heat and test vapour with damp red litmus paper. Paper turns blue.	



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