

ION REVISION

TEACHER INSTRUCTIONS (or suggestions for use)

1. This can be used as a class starter as a revision exercise for Yr13 (L3) students.
2. Attach the two sheets and then laminate the template.
3. Leave Column 1 & Row 1 attached and cut the formulae & colours up and students then have to match to Column 1 ions
 - Have class sets, different coloured card enables easy sorting and care.

NAME OF CHEMICAL	FORMULA	COLOUR
Dichromate	$\text{Cr}_2\text{O}_7^{2-}$	orange
Chromate	CrO_4^{2-}	yellow
Chromium ion	Cr^{3+}	green
Iron(II)	Fe^{2+}	hydroxide is green
Iron(III)	Fe^{3+}	hydroxide is yellow/brown
Permanganate	MnO_4^-	purple

Manganese dioxide	MnO₂	brown solid
Manganese ion	Mn²⁺	pale pink (colourless solution)
Manganate ion	MnO₄²⁻	green
Copper ion	Cu²⁺	blue (usually)
Zinc ion	Zn²⁺	white

ION TEST REVISION

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NAME OF ION	FORMULA	TEST SOLUTION	POSITIVE TEST RESULT
Iron(II)	Fe^{2+}	Hydroxide ions	Green ppt
Aluminium	Al^{3+}	Hydroxide ions Ammonium ions	White ppt that dissolves in excess. White ppt that does not dissolve in excess
Iron(III)	Fe^{3+}	Thiocyanate ions	Blood red solution
Silver	Ag^+	Chloride ions	White ppt
Zinc	Zn^{2+}	Hydroxide ions Ammonia solution	White ppt that dissolves in excess. White ppt that dissolves in excess

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Copper	Cu^{2+}	Ammonia solution	Pale blue ppt, excess forms dark blue solution.
Magnesium	Mg^{2+}	Hydroxide ions Ammonium ions	White ppt that does not dissolve in excess White ppt that does not dissolve in excess
Iodide ions	I^-	Silver ions	Yellow ppt. (Does not dissolve in ammonia)
Chloride ions	Cl^-	Silver ions & ammonia solution	White ppt that dissolves in ammonia
Sulfate	SO_4^{2-}	Barium ions & HCl	White ppt that does not dissolve with acid
Bromide ions	Br^-	Silver ions	Cream ppt. (Does not dissolve in ammonia)
Carbonate	CO_3^{2-}	Acid	Fizzes, releasing CO_2