

CHAPTER 7	Qualitative Analysis	BLM 7.1.3
OVERHEAD		

The Colour of Some Common Ions in Aqueous Solution

	Ions	Symbol	Colour
Cations	chromium(II)	$\text{Cr}^{2+}(\text{aq})$	blue
	copper(II)	$\text{Cu}^{2+}(\text{aq})$	
	chromium(III)	$\text{Cr}^{3+}(\text{aq})$	green
	copper(I)	$\text{Cu}^{+}(\text{aq})$	
	iron(II)	$\text{Fe}^{2+}(\text{aq})$	
	nickel(II)	$\text{Ni}^{2+}(\text{aq})$	
	iron(III)	$\text{Fe}^{3+}(\text{aq})$	pale yellow
Anions	chromate	$\text{CrO}_4^{2-}(\text{aq})$	yellow
	dichromate	$\text{Cr}_2\text{O}_7^{2-}(\text{aq})$	orange
	permanganate	$\text{MnO}_4^{-}(\text{aq})$	purple

The Flame Colour of Selected Metallic Ions

Ion	Symbol	Colour
lithium	$\text{Li}^{+}(\text{aq})$	red
sodium	$\text{Na}^{+}(\text{aq})$	yellow
potassium	$\text{K}^{+}(\text{aq})$	violet
cesium	$\text{Cs}^{+}(\text{aq})$	violet
calcium	$\text{Ca}^{2+}(\text{aq})$	yellowish-red
strontium	$\text{Sr}^{2+}(\text{aq})$	red
barium	$\text{Ba}^{2+}(\text{aq})$	yellowish-green
copper	$\text{Cu}^{2+}(\text{aq})$	bluish-green
boron	$\text{B}^{2+}(\text{aq})$	yellowish-green
lead	$\text{Pb}^{2+}(\text{aq})$	bluish-white