

Solubility Chart

Table 17.3 Solubilities of Ionic Compounds* aq = aqueous (dissolves in water); s = solid (does not dissolve in water)

Ions	Acetate	Bromide	Carbonate	Chlorate	Chloride	Fluoride	Hydrogen Carbonate	Hydroxide	Iodide	Nitrate	Nitrite	Phosphate	Sulfate	Sulfide	Sulfite
Aluminum	s	aq		aq	bc	s		s	—	aq		s	aq	—	
Ammonium	aq	aq	aq	aq	bc	bc	aq	—	bc	aq	aq	bc	aq	aq	aq
Barium	aq	aq	s	aq	bc	s		bc	bc	aq	aq	s	s	—	s
Calcium	aq	aq	s	aq	bc	s		s	bc	aq	aq	s	s	—	s
Cobalt(II)	aq	aq	s	aq	bc	—		s	bc	aq		s	aq	s	s
Copper(I)	aq	aq	s	aq	bc	bc		s		aq		s	aq	s	
Iron(II)	aq	aq	s		bc	s		s	bc	aq		s	aq	s	s
Iron(III)	—	aq			bc	s		s	bc	aq		s	aq	—	
Lead(II)	aq	s	s	aq	s	s		s	s	aq	aq	s	s	s	s
Lithium	aq	aq	aq	aq	bc	bc	aq	bc	bc	aq	aq	s	aq	aq	aq
Magnesium	aq	aq	s	aq	bc	s		s	bc	aq	aq	s	aq	—	aq
Nickel	aq	aq	s	aq	bc	bc		s	bc	aq		s	aq	s	s
Potassium	aq	aq	aq	aq	bc	bc	aq	bc	bc	aq	aq	bc	aq	bc	bc
Silver	s	s	s	aq	s	bc		—	s	aq	s	s	s	s	s
Sodium	aq	aq	bc	aq	bc	bc	aq	bc	bc	aq	aq	bc	aq	bc	bc
Zinc	aq	aq	s	aq	bc	bc		s	bc	aq		s	aq	s	s

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Rules:

Find the section of the chart where your two ions intersect.

If you find 's' that means the products are solid and a precipitate will form.

If you find 'aq' that means the products are aqueous and a precipitate will not form.