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Chapter 8

Solubility Rule:

- Solubility - tendency of a compound to dissociate in water (if aqueous)

Observation: large ions w/ low charges are most soluble

soluable (+ ← charge)	insolvable (− ← charge)
always	
- Alkali (Li^+, Na^+, K^+)	$-NO_3^-$
- Ammonium (NH_4^+)	$-(C_2H_3O_2)^-$
usally	
	- halides (Cl^-, Br^-, I^-) (no^+ F^-)
	except: Ag^+, Hg_2^{2+}, Pb^{2+}
	- Sulfate (SO_4^{2-}) including ($mgSO_4$)
	except: Ba, Ca^{2+}, Sr^{2+}, Ba^{2+}
	heavy metals: Ag^+, Pb^{2+}

solvable +	insolvable —
usally insolvable	OH^- hydroxide except: above (alkali) NH_4^+ • Ca^{2+}, Sr^{2+}, Ba^{2+} slightly solvable S^{2-} sulfide
Almost always insolvable	CO_3^{2-} (carbonate) PO_4^{3-} (phosphate) (except alkali & NH_4^+)