

Major Species Present in a Water Environment				
Type of substance	Solubility in Water	Examples	Species Present	
ionic compounds	high	Na_2SO_4 (s) KBr (s)	Na^+ (aq) SO_4^{2-} (aq) K^+ (aq) Br^- (aq)	H_2O (l)
	low	CaCO_3 (s)	CaCO_3 (s)	H_2O (l)
molecular compounds	high	$\text{C}_6\text{H}_{12}\text{O}_6$ (s)	$\text{C}_6\text{H}_{12}\text{O}_6$ (aq)	H_2O (l)
	or low	NH_3 (g) $\text{C}_2\text{H}_5\text{OH}$ (l)	NH_3 (aq) $\text{C}_2\text{H}_5\text{OH}$ (aq)	
strong acids	high	HCl (aq) HNO_3 (aq)	H_3O^+ (aq) Cl^- (aq) H_3O^+ (aq) NO_3^- (aq)	H_2O (l)
weak acids	high	HF (aq) CH_3COOH (aq)	HF (aq) CH_3COOH (aq)	H_2O (l)

7. Identify the species present when each of the following is placed in water.

