

<u>Ion</u>	<u>Solubility</u>	<u>Exceptions</u>
NO_3^-	soluble	none
ClO_4^-	soluble	none
Cl^-	soluble	except Ag^+ , Hg_2^{2+} , Pb^{2+}
I^-	soluble	except Ag^+ , Hg_2^{2+} , Pb^{2+}
SO_4^{2-}	soluble	except Ca^{2+} , Ba^{2+} , Sr^{2+} , Hg^{2+} , Pb^{2+} , Ag^+
CO_3^{2-}	insoluble	except Group IA and NH_4^+
PO_4^{3-}	insoluble	except Group IA and NH_4^+
OH^-	insoluble	except Group IA, Ca^{2+} , Ba^{2+} , Sr^{2+}
S^{2-}	insoluble	except Group IA, IIA and NH_4^+
Na^+	soluble	none
NH_4^+	soluble	none
K^+	soluble	none

*slightly soluble

METAL ACTIVITY SERIES

Potassium
 Sodium
 Barium
 Strontium
 Calcium
 Magnesium
 Aluminum
 Zinc
 Iron
 Nickel
 Tin
 Lead
 Hydrogen
 Copper
 Arsenic
 Mercury
 Silver
 Platinum
 Gold

Ion	Name
Hg_2^{2+}	mercury (I)
NH_4^+	ammonium
NO_3^-	nitrate
$\text{C}_2\text{H}_3\text{O}_2^-$	acetate
OH^-	hydroxide
CN^-	cyanide
ClO_3^-	chlorate
MnO_4^-	permanganate
NCS^-	thiocyanate
BrO_3^-	bromate

Ion	Name
CO_3^{2-}	carbonate
SO_4^{2-}	sulfate
$\text{Cr}_2\text{O}_7^{2-}$	dichromate
CrO_4^{2-}	chromate
O_2^{2-}	peroxide
$\text{C}_2\text{O}_4^{2-}$	oxalate
PO_4^{3-}	phosphate

DATA

$R = 0.0821 \text{ Latm/molK}$

$R = 8.314 \text{ L kPa/molK}$

$1 \text{ atm} = 760 \text{ torr} = 760 \text{ mmHg} = 101.325 \text{ kPa} = 101,325 \text{ Pa}$

STP: $V = 22.4\text{L/mol}$, $T = 0^\circ\text{C}$ and $P = 101.325 \text{ kPa}$

SATP: $V = 24.8\text{L/mol}$, $T = 25^\circ\text{C}$ and $P = 100 \text{ kPa}$