

Examples of Inorganic Nomenclature and Charges of Ions:

CATIONS		ANIONS	
Formula	Name	Formula	Name
Li^+	lithium ion	N^{3-}	nitride ion
Na^+	sodium ion	P^{3-}	phosphide ion
K^+	potassium ion	O^{2-}	oxide ion
Rb^+	rubidium ion	S^{2-}	sulfide ion
Cs^+	cesium ion	Se^{2-}	selenide ion
Mg^{2+}	magnesium ion	F^-	fluoride ion
Ca^{2+}	calcium ion	Cl^-	chloride ion
Sr^{2+}	strontium ion	Br^-	bromide ion
Ba^{2+}	barium ion	I^-	iodide ion
Cr^{2+}	chromium(II) ion	CN^-	cyanide ion
Cr^{3+}	chromium(III) ion	OH^-	hydroxide ion
Mn^{2+}	manganese(II) ion	CO_3^{2-}	carbonate ion
Fe^{2+}	iron(II) ion	HCO_3^{-}	hydrogen carbonate ion (bicarbonate ion)
Fe^{3+}	iron(III) ion	NO_3^-	nitrate ion
Co^{2+}	cobalt(II) ion	NO_2^-	nitrite ion
Co^{3+}	cobalt(III) ion	PO_4^{3-}	phosphate ion
Ni^{2+}	nickel(II) ion	HPO_4^{2-}	hydrogen phosphate ion
Cu^+	copper(I) ion	H_2PO_4^-	dihydrogen phosphate ion
Cu^{2+}	copper(II) ion	PO_3^{3-}	phosphite ion
Sn^{2+}	tin(II) ion	AsO_4^{3-}	arsenate ion
Sn^{4+}	tin(IV) ion	SO_4^{2-}	sulfate ion
Zn^{2+}	zinc ion*	HSO_4^-	hydrogen sulfate ion
Al^{3+}	aluminum ion*	SO_3^{2-}	sulfite ion
Ag^+	silver ion*	ClO_4^-	perchlorate ion
Cd^{2+}	cadmium ion*	ClO_3^-	chlorate ion
NH_4^+	ammonium ion	ClO_2^-	chlorite ion
$\text{**CH}_3\text{NH}_3^+$	methylammonium ion**	ClO^-	hypochlorite ion
$\text{**(CH}_3)_2\text{NH}_2^+$	dimethylammonium ion**	BrO_4^-	perbromate ion
$\text{**(CH}_3)_3\text{NH}^+$	trimethylammonium ion**	BrO_3^-	bromate ion
		BrO_2^-	bromite ion
		BrO^-	hypobromite ion
		IO_4^-	periodate ion
		IO_3^-	iodate ion
		IO_2^-	iodite ion
		IO^-	hypoiodite ion
		CH_3COO^-	acetate ion
		CHOO^-	formate ion
		MnO_4^-	permanganate ion
		CrO_4^{2-}	chromate ion
		$\text{Cr}_2\text{O}_7^{2-}$	dichromate ion

* no Roman numerals a necessary since the ion only exists in one oxidation state

** for Chem 102

Required Weak Acids and Weak Base Nomenclature for Chem 102:

(See notes for required acids and bases for Chem 101)

WEAK ACIDS		WEAK BASES	
Formula	Name	Formula	Name
CH ₃ COOH	acetic acid	NH ₃	ammonia
CHOOH	formic acid	CH ₃ NH ₂	methylamine
HCN(aq)	hydrocyanic acid	(CH ₃) ₂ NH	dimethylamine
HF(aq)	hydrofluoric acid	(CH ₃) ₃ N	trimethylamine
HClO	hypochlorous acid		
HBrO	hypobromous acid		
HNO ₂	nitrous acid		

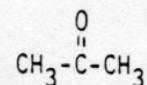
For interest:

Some Simple Organic Compounds

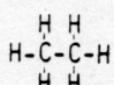
Methane/CH₄



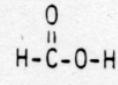
Acetone/CH₃COCH₃



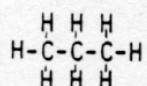
Ethane/C₂H₆



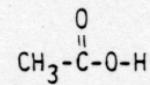
Formic Acid/HCOOH



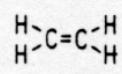
Propane/C₃H₈



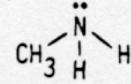
Acetic Acid/CH₃COOH



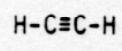
Ethylene/C₂H₄
(Ethene)



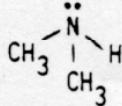
Methylamine/CH₃NH₂



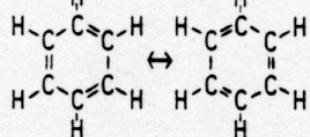
Acetylene/C₂H₂
(Ethyne)



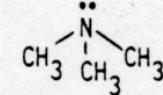
Dimethylamine/(CH₃)₂NH



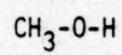
Benzene/C₆H₆



Trimethylamine/(CH₃)₃N



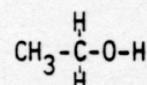
Methanol/CH₃OH



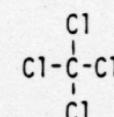
Chloroform/CHCl₃
(Trichloromethane)



Ethanol/C₂H₅OH



Carbon Tetrachloride/CCl₄
(Tetrachloromethane)



Note: CH₃ = H-C-