

$(\text{NH}_4)_2\text{HPO}_4$ ammonium hydrogen phosphate

$\text{CrCr}_2\text{O}_7^{2-}$ chromium(VI) dichromate

$\text{Cr}_2(\text{Cr}_2\text{O}_7)_3$ chromium(III) dichromate

$\text{Cr}(\text{Cr}_2\text{O}_7)_3$ chromium(VI) dichromate

NaClO sodium hypochlorite

ClO^- hypochlorite

ClO_2^- chlorite

ClO_3^- chlorate

ClO_4^- perchlorate

BrO_3^- bromate

IO_2^- iodite

hydrates ionic compound • # H_2O

$\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ copper(II) sulfate pentahydrate

no H_2O = "anhydrous"

$\text{MgSO}_4 \cdot 9\text{H}_2\text{O}$ magnesium sulfate nonahydrate

ACID NOMENCLATURE

$\text{H} \sim$ inorganic H_2SO_4
 $\text{R} - \text{COOH}$ organic CH_3COOH

BINARY ACIDS

hydro _____ ic acid

HCl(aq) hydrochloric acid HCl(g) hydrogen chloride

HI(aq) hydroiodic acid H_2S hydrosulfuric acid

HCN hydrocyanic acid

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Oxoacids H_aXO_b

"ate" ion \rightarrow ic acid HNO_3 nitric acid
"ite" ion \rightarrow ous acid HNO_2 nitrous acid

ClO^-	$HClO$	hypochlorous acid
ClO_2^-	$HClO_2$	chlorous acid
ClO_3^-	$HClO_3$	chloric acid
ClO_4^-	$HClO_4$	perchloric acid

polyprotic acids

H_2SO_4 sulfuric acid H_2CO_3 carbonic acid

HSO_4^- hydrogen sulfate
bisulfate HCO_3^- hydrogen carbonate
 HCO_3^-

H_3PO_4 phosphoric acid

$H_2PO_4^-$ dihydrogen phosphate

HPO_4^{2-} hydrogen phosphate

PO_4^{3-} phosphate

KH_2PO_4 potassium dihydrogen phosphate

Na_2HPO_4 sodium hydrogen phosphate

$KH_2PO_4^{3-}$

$Na_2H^+PO_4^{3-}$

$$\begin{array}{l}
 A \Rightarrow \text{mass \#} \rightarrow \#p^+ + \#n^0 \quad A \\
 Z \Rightarrow \text{atomic \#} \rightarrow \#p^+ \quad Z
 \end{array}$$

Atomic Mass \rightarrow how "heavy" the atom is

\hookrightarrow "weighted" average of the masses of all the isotopes of an element

$$\text{mass of isotope} \times \% \text{ abundance} =$$

$$\text{-----} +$$

$$\text{unit} = \text{amu} \quad \text{atomic mass unit} \quad \boxed{\text{atomic mass}}$$

$$1 \text{ amu} = \frac{1}{12} \text{ mass } ^{12}\text{C}$$

$$1 \text{ } ^{12}\text{C} \text{ atom} = 12 \text{ amu}$$

average Ge atom is 6.05 times heavier than a ^{12}C atom

$$\text{mass} = ? \quad 6.05 \times 12 = 72.6 \text{ amu}$$

mass spectrometer