

Binary Ionic Compounds:

- only 2 elements in the compound
- can have more than 2 atoms

ex: Li_3N , CaCl_2 , MgS

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Polyatomic Ions:

- ions that contain more than 1 element

Common Polyatomic Ions			
$\text{C}_2\text{H}_3\text{O}_2^-$	acetate	OH^-	hydroxide
NH_4^+	ammonium	ClO_2^-	hypochlorite
CO_3^{2-}	carbonate	NO_3^-	nitrate
ClO_2^-	chlorate	NO_2^-	nitrite
ClO_2^-	chlorite	$\text{C}_2\text{O}_4^{2-}$	oxalate
CrO_4^{2-}	chromate	ClO_4^-	perchlorate
CN^-	cyanide	MnO_4^-	permanganate
$\text{Cr}_2\text{O}_7^{2-}$	dichromate	PO_4^{3-}	phosphate
HCO_3^-	bicarbonate	SO_4^{2-}	sulfate
HSO_4^-	bisulfate	SO_3^{2-}	sulfite
HSO_3^-	bisulfate		

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Naming with Polyatomic Ions:

1. Write the whole name of the cation
2. Write the whole name of the polyatomic ion
3. DO NOT CHANGE EITHER OF THE NAMES

EX: NaOH

sodium hydroxide
 CuOH
 copper (I) hydroxide

NH_4Cl
 ammonium chloride

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PRACTICE:

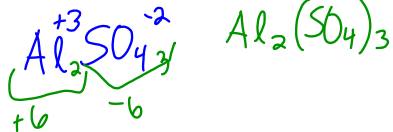
1. CaCO_3 Calcium carbonate
2. NH_4Cl Ammonium chloride
3. $\text{Ca}(\text{NO}_3)_2$ Calcium nitrate
4. $\text{Mg}_3(\text{PO}_4)_2$ ~~magnese dhydrogen phosphate~~
magnesium phosphate

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Writing Compounds with Polyatomic Ions

1. Determine the charge of both ions
2. Balance the charges
3. If you need more than 1 polyatomic ion, use parenthesis
4. **DO NOT CHANGE THE SUBSCRIPTS FOR POLYAOMTIC IONS!**

EX: aluminum sulfate



PRACTICE:

1. sodium carbonate Na_2CO_3
2. barium hydroxide $\text{Ba}(\text{OH})_2$
3. lithium phosphite Li_3PO_3
4. magnesium sulfite MgSO_3

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