

Ternary Ionic Compounds

- We have learned that monatomic ions are atoms of 1 element with a charge & that binary ionic compds are made up of 1 cation & 1 anion.

- Sometimes ionic compounds can form that act like an anion or cation, but are composed of more than 1 atom.

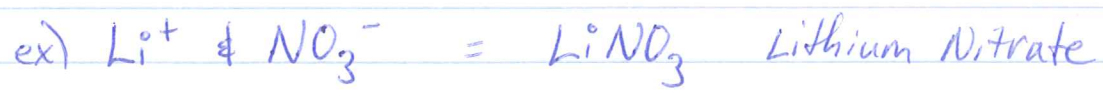
* these ionic compounds w/charge are known as polyatomic ions

They behave like monatomic ions in compounds

ex) NH_4^+	OH^-	NO_3^-	CO_3^{2-}
Ammonium	Hydroxide	Nitrate	Carbonate

* Treat these polyatomic ions as monatomic ions when making formulas.

When a monatomic (or sometimes polyatomic) cation bonds ionically with a polyatomic anion, they form a ternary ionic compound (T.I.C) has at least 3 diff. elements

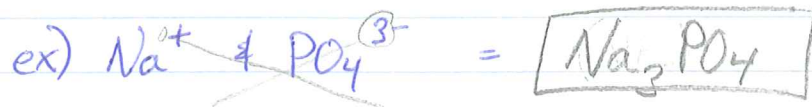


* Use parenthesis when you need to have multiple copies of a polyatomic cation or anion.

* remember, subscript # = # of atoms in compound.



②



* Notice that in naming polyatomic ion, those that contain oxygen (known as oxyanions) often end with -ite or -ate

-ite tends to imply less oxygen ex) NO_2^-

-ate tends to imply more oxygen ex) NO_3^-

ex) What are the names of: SO_3^{2-} ? Sulfite

SO_4^{2-} ? Sulfate

* Many acids are the result of ionic compounds made of H^+ ions & polyatomic anions

