

Unit 4: Ch 8 – Nomenclature: Ionic Compounds with Polyatomic Ions

POLYATOMIC IONS:

➤ DEFINITION –

- Ex)
 - _____ atom ; _____ atoms
 - _____ charge of _____
- _____ break apart in nomenclature!! (*Special Ions*)
 - Keep as _____ in nomenclature.

NAMING SYSTEM:

➤ _____ = _____ oxygen than _____

- Ex)

➤ _____ = Most _____ ion

- Ex)

➤ _____ = _____ oxygen than _____

- Ex)

➤ _____ = _____ oxygen than _____

- Ex)

➤ PRACTICE EXAMPLES:

○ Perchlorate = _____ → _____ prefix → _____ suffix

○ Chlorate = _____

○ Chlorite = _____

○ Hypochlorite = _____ → _____ prefix → _____ suffix

NOMENCLATURE RULES:

- 1. Apply _____ rules for _____ compounds.
 - _____
- 2. Use _____:
 - _____ **IF** necessary
 - Applies to transition metals and special cases
 - _____ charge of **compound** = _____ (**neutral**)
- 3. Use prefix _____ and _____ when appropriate.
 - **Association:** _____ → _____ and _____ → _____
- 4. _____ change _____ of **polyatomic ion** names.
 - Very special names: Must be _____ **AND** _____.

PROPERTIES OF IONIC COMPOUNDS:

- 1. _____ melting and boiling points
- 2. _____ (soft)
- 3. High _____
- 4. Held together by _____

PRACTICE EXAMPLES:

1. Co^{3+} PO_4^{3-} → _____ → _____ → _____
2. Ba^{2+} ClO_4^- → _____ → _____ → _____
3. Sodium Persulfate → _____ → _____
4. Lead (II) Hypochlorite → _____ → _____
5. $\text{Al}_2(\text{CrO}_4)_3$ → Name = _____
6. Ammonium Hypocarbonite → Formula = _____
7. K^+ SO_4^{2-} → _____ → Name = _____
8. Ba^{2+} ClO_2^- → _____ → Name = _____