**POLYATOMIC IONS TO MEMORIZE!**

**YOU MUST MEMORIZE NAME, FORMULA, AND CHARGE!**

Polyatomic ions are groups of elements that, when bonded together, have a charge… meaning electrons are either lost or gained. Polyatomic ions are very important in several of our upcoming units! Therefore, it is very important that you learn them, and LEARN THEM WELL!!!

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Per\_\_\_\_ate** | **\_\_\_\_\_ate** | **\_\_\_\_ite** | **hypo\_\_\_\_ite** | **Monatomic anions For REFERENCE** |
| **ClO4—**  per**chlor**ate | **ClO3—**  **chlor**ate | **ClO2—**  **chlor**ite | **ClO—**  hypo**chlor**ite | **Cl—**  **chlor**ide |
| **BrO4—**  per**brom**ate | **BrO3—**  **brom**ate | **BrO2—**  **brom**ite | **BrO—**  hypo**brom**ite | **Br—**  **brom**ide |
| **IO4—**  per**iod**ate | **IO3—**  **iod**ate | **IO2—**  **iod**ite | **IO—**  hypo**iod**ite | **I—**  **iod**ide |
| xxx | **NO3—**  **nitr**ate | **NO2—**  **nitr**ite | xxx | N3**—**  **nitr**ide |
| xxx | **SO42—**  **sulf**ate | **SO32—**  **sulf**ite | xxx | **S2—**  **sulf**ide |
| xxx | **PO43—**  **phosph**ate | **PO33—**  **phosph**ite | xxx | P3**—**  **phosph**ide |
| xxx | **CO32—**  **carbon**ate | xxx | xxx | C4**—**  **carb**ide |
| xxx | **CrO42—**  **chrom**ate | xxx | xxx | xxx |

per\_\_\_ate: has one more oxygen than “ATE”

**Video:**

[**https://youtu.be/69ZbHNNcfz0**](https://youtu.be/69ZbHNNcfz0)

**https://vimeo.com/177635152**

\_\_\_ate: most common form

\_\_\_ite: one less oxygen than “ATE”

hypo\_\_ite: two less oxygens than “ATE”

**OTHERS:**

|  |  |  |  |
| --- | --- | --- | --- |
| **MnO4—** | permanganate | **Cr2O72—** | dichromate |
| **C2H3O2—** | acetate | **OH—** | hydroxide |
| **HCO3—** | hydrogen carbonate (bicarbonate) | **CN—** | cyanide |
| **NH4+** | ammonium | **(note positive charge)** | |

NOTE: The number should be shown before the charge BUT you would not lose credit if you had the charge first! Also, if a charge is either +1 or –1, you may show just the sign (+ or –). The 1 is not required to be shown.