ESCUDERO METHOD
RULES FOR NAMING TERNARY OXYANIONS AND OXYACIDS

OXYACID -IC FORM				OXYANION -ATE FORM		
GROUP (CAS)						
	IIIa	IVa	Va	VIa	VIIa	
n = # of O's	3	3	4	4	3	n = # of O's
m = # of H's	3	2	3	2	1	m = neg. ionic charge

NOTE: **Nitic acid** (HNO_3) and the corresponding **nitrate ion** (NO_3^{1-}) are **EXCEPTIONS** to the above rules. **Their names and formulas MUST be memorized.**

Binary acids such as HCl all have names that begin with the prefix "hydro-" and end with the suffix "-ic acid." These acids are not covered by the rules that follow. All binary acids follow the form " hydro----ic acid."

The naming of oxyacids and oxyanions is based on knowing the name and formula of what I will call the standard form. For an acid the standard form ends in "-ic acid" as in chloric acid. For an oxyanion the standard form ends in "ate" as in carbonate ion. Note that in neither of the two does a prefix appear in the name.

The chart given at the top of the page gives the number of oxygens and either the number of hydrogens in the oxyacid or the negative charge of the oxyanion for the "standard" form. The other oxyacids and oxyanions must be built from this standard form.

If the oxyacid or oxyanion contains one more oxygen than the standard form use the prefix "per" and keep the suffix the same.

If the oxyacid contains one less oxygen than the standard form use the suffix "ous" for the oxyacid.
If the oxyanion contains one less oxygen than the standard form use the suffix "ite" for the oxyanion.

If the oxyacid contains two less oxygens than the standard form use the prefix "hypo" and the suffix "ous" for the oxyacid.
If the oxyanion contains two less oxygens than the standard form use the prefix "hypo"and the suffix 'ite' for the oxyanion.

OXYACID		OXYANION	
$H_m X O_{n+1}$	per - ic acid	per - ate ion	$X O_{n+1}^{m-}$
$H_m X O_n$	**- ic acid**	**- ate ion**	**$X O_n^{m-}$**
$H_m X O_{n-1}$	- ous acid	- ite ion	$X O_{n-1}^{m-}$
$H_m X O_{n-2}$	hypo - ous acid	hypo - ite ion	$X O_{n-2}^{m-}$

Examples:

$HClO_4$	perchloric acid	perchlorate ion	ClO_4^{1-}
$HClO_3$	**chloric acid**	**chlorate ion**	**ClO_3^{1-}**
$HClO_2$	chlorous acid	chlorite ion	ClO_2^{1-}
$HClO$	hypochlorous acid	hypochlorite ion	ClO^{1-}