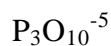


Polyatomic Ions and Their Charges (it takes up two pages...just warning)

		+1 Charge	
*Ammonium	NH_4^{+1}	Mercury (I)	Hg_2^{+2}
Hydronium	H_3O^{+1}		
		-1 Charge	
*Acetate	$\text{C}_2\text{H}_3\text{O}_2^{-1}$	Hydrogen Sulfide	HS^{-1}
? Aluminate	AlO_2^{-1}	Hydrogen Sulfite	HSO_3^{-1}
Amide	NH_2^{-1}	*Hydroxide	OH^{-1}
Azide	N_3^{-1}	Hypobromite	BrO^{-1}
Benzoate	$\text{C}_6\text{H}_5\text{COO}^{-1}$	Hypochlorite	ClO^{-1}
*Bicarbonate	HCO_3^{-1}	Hypoiodite	IO^{-1}
Bisulfite	HSO_3^{-1}	Iodate	IO_3^{-1}
Bromate	BrO_3^{-1}	Iodite	IO_2^{-1}
? Borohydride	BH_4^{-1}	*Nitrate	NO_3^{-1}
*Chlorate	ClO_3^{-1}	*Nitrite	NO_2^{-1}
Chlorite	ClO_2^{-1}	Perbromate	BrO_4^{-1}
? Chromite	CrO_2^{-1}	*Perchlorate	ClO_4^{-1}
Cyanate	OCN^{-1}	Periodate	IO_4^{-1}
*Cyanide	CN^{-1}	*Permanganate	MnO_4^{-1}
Dihydrogen Phosphate	$\text{H}_2\text{PO}_4^{-1}$	Sorbate	$\text{C}_6\text{H}_7\text{O}_2^{-1}$
Dihydrogen Phosphite	$\text{H}_2\text{PO}_3^{-1}$	Superoxide	O_2^{-1}
Formate	HCOO^{-1}	Thiocyanate	SCN^{-1}
Glutamate	$\text{C}_5\text{H}_8\text{NO}_4^{-1}$	Triiodide	I_3^{-1}
Hydrogen Carbonate	HCO_3^{-1}	? Vanadate	VO_3^{-1}
Hydrogen Sulfate	HSO_4^{-1}		
		-2 Charge	
* Carbonate	CO_3^{-2}	* Peroxide	O_2^{-2}
Carbide	C_2^{-2}	? Peroxydisulfate	$\text{S}_2\text{O}_8^{-2}$
* Chromate	CrO_4^{-2}	Phthalate	$\text{C}_8\text{H}_4\text{O}_4^{-2}$
Dichromate	$\text{Cr}_2\text{O}_7^{-2}$? Selenate	SeO_4^{-2}
? Disulfate	S_2^{-2}	Silicate	SiO_3^{-2}
Hexafluorosilicate	SiF_6^{-2}	* Sulfate	SO_4^{-2}
Hydrogen Phosphate	HPO_4^{-2}	* Sulfite	SO_3^{-2}
Hydrogen Phosphite	HPO_3^{-2}	Tartrate	$\text{C}_4\text{H}_4\text{O}_6^{-2}$
Imide	NH^{-1}	? Tellurate	TeO_4^{-2}
Manganate	MnO_4^{-2}	Tetraborate	$\text{B}_4\text{O}_7^{-2}$
? Metasilicate	SiO_3^{-2}	Thiosulfate	$\text{S}_2\text{O}_3^{-2}$
? Molybdate	MoO_4^{-2}	? Tungstate	WO_4^{-2}
Monohydrogen phosphate	HPO_4^{-2}	? Zincate	ZnO_2^{-2}
Oxalate	$\text{C}_2\text{O}_4^{-2}$		
		-3 Charge	
Arsenate	AsO_4^{-3}	? Hypophosphite	PO_2^{-3}
? Arsenite	AsO_3^{-3}	* Phosphate	PO_4^{-3}
Borate	BO_3^{-3}	Phosphite	PO_3^{-3}
Citrate	$\text{C}_6\text{H}_5\text{O}_7^{-3}$		
		-4 Charge	
Orthosilicate	SiO_4^{-4}	? Pyrophosphate	$\text{P}_2\text{O}_7^{-4}$

? Tripolyphosphate



-5 Charge

* means that they're pretty common / important ones...learn these

? means Dusch has never used these but found them in a reference and though he'd include them

A rule or two about polyatomic ions

From -ate...adding an oxygen makes per- -ate...taking away an oxygen (from the original -ate) makes -ite...taking away another oxygen makes hypo- -ite...

An example:	Hypochlorite	ClO^{-1}
	Chlorite	ClO_2^{-1}
Base ion →	Chlorate	ClO_3^{-1}
	Perchlorate	ClO_4^{-1}

Taking an -ate and adding hydrogen to it makes "hydrogen -ate" and adds +1 to the charge...adding another hydrogen makes "dihydrogen -ate" and adds another +1 to the charge...(also works for -ite's becoming "hydrogen -ite" or "bi- -ite" by adding one hydrogen or "dihydrogen -ite" by adding two hydrogens)...

An example:	Phosphate	PO_4^{-3}	
	Hydrogen Phosphate	HPO_4^{-2}	(sometimes called "biphosphate")
	Dihydrogen Phosphate	$H_2PO_4^{-1}$	
