

Polyatomic Ions

Name KEY Per _____

Polyatomic ions. "poly" means many. Ions are particles with a positive or negative charge. So polyatomic ions are groups of (many) two or more atoms that have a charge. The *group as a whole shares the charge*. Most polyatomic ion's names end in "**-ate**" some end in "**-ite**". Only a few end in "**-ide**". Most polyatomic ions are negative.

1. Look up the following polyatomic ions Write down the formula (*including the charge*):

ammonium <u>NH_4^+</u>	acetate <u>CH_3COO^-</u>	carbonate <u>CO_3^{-2}</u>
dichromate <u>$\text{Cr}_2\text{O}_7^{-2}$</u>	hydroxide <u>OH^-</u>	nitrate <u>NO_3^-</u>
oxalate <u>$\text{C}_2\text{O}_4^{-2}$</u>	sulfate <u>SO_4^{-2}</u>	phosphate <u>PO_4^{-3}</u>
permanganate _____	nitrite <u>NO_2^-</u>	cyanide <u>CN^-</u>
sulfite <u>SO_3^{-3}</u>	hydrogen carbonate <u>HCO_3^-</u>	

2. What is common about most of the names of the polyatomic ions?

end in "ate" or "ite"

3. What element do most of the polyatomic ions have in the formula?

oxygen

4. What type of elements are found in the polyatomic ions? (metal nonmetal)

5. Look up the following polyatomic ions Write down the name.

SO_4^{2-} sulfate

NO_2^- nitrite

ClO_3^- chlorate

IO_3^- iodate

CO_3^{2-} carbonate

BrO_3^{1-} bromate