

CHEMISTRY – Ions & Acids to Memorize

(MISC)

The following should be memorize and remembered for the rest of this course, both semesters.

1. For each column of the periodic chart you will need to know the charge on the ions of elements in:

- Group 1A 1^+
- Group 2A 2^+
- Group 3A (13) 3^+
- Group 6A (16) 2^-
- Group 7A (17) 1^-

I will give you the symbol for an element (Na, or Al, or Cl, etc) and you have to recognize what group the element is in and what the charge will be when the element forms an ion.

2. For the following **polyatomic ions** you will need to know their names and what charges they have. For our fill-in-the-blank (not multiple choice) quizzes, I will give you an ion (like NO_3^- , or CO_3^{2-} , or ClO_3^- , etc) and you have to write out the name of the ion with correct spelling. Or, I will give you the name of the ion (like acetate, phosphate, or carbonate), and you have to be able to write out its chemical formula.

POSITIVE POLYATOMIC IONS

NH_4^{1+} ammonium ion

NEGATIVE POLYATOMIC IONS

1- ions	2- ions	3- ions
NO_3^{1-} nitrate ion	SO_4^{2-} sulfate ion	PO_4^{3-} phosphate ion
$\text{C}_2\text{H}_3\text{O}_2^{1-}$ acetate ion	CO_3^{2-} carbonate ion	
OH^{1-} hydroxide ion	CrO_4^{2-} chromate ion	
ClO^{1-} hypochlorite ion	$\text{Cr}_2\text{O}_7^{2-}$ dichromate ion	
ClO_2^{1-} chlorite ion		
ClO_3^{1-} chlorate ion		
ClO_4^{1-} perchlorate ion		

3. Common acids you will need to know:

I will give you the name of the acid (like hydrochloric acid, acetic acid, nitric acid, etc) and you have to be able to write the formula for the acid. Or I will give you the formula of the acid (like H_2SO_4 , or H_3PO_4 , etc) and you have to be able to remember and write out the name of the acid and spell it correctly.

- a. HCl hydrochloric acid
- b. H_2SO_4 sulfuric acid
- c. H_3PO_4 phosphoric acid
- d. $\text{HC}_2\text{H}_3\text{O}_2$ acetic acid
- e. HF hydrofluoric acid
- f. HNO_3 nitric acid

Here is all of this stuff organized differently. It may help in your study: [Memorize Ions Quiz - Help](#)