

UNIT EIGHT. CHEMICAL NAMES & FORMULAS

Learning Targets	Textbook Section:
Explain how to determine the charges of monatomic ions.	9.1
Explain how polyatomic ions differ from and are similar to monatomic ions.	9.1
Apply the rules for naming and writing formulas for binary <i>ionic</i> compounds.	9.2/9.3
Apply the rules for naming and writing formulas for <i>ionic</i> compounds with polyatomic ions.	9.2/9.3
Apply the rules for naming and writing formulas for binary <i>molecular</i> compounds.	9.3/9.3

Suggested Reading:

Chapter 9:

Section 9.1 (pages 264-270)

Section 9.2 (pages 271-279)

Section 9.3 (pages 280-283)

End of Chapter Practice:

57, 58, 59, 61, 62, 63, 64, 65, 66, 67, 68, 70, 71, 72, 73, 74, 75, 76

Table 5.4 Names of Common Polyatomic Ions

Ion	Name	Ion	Name
NH_4^+	ammonium	CO_3^{2-}	carbonate
NO_2^-	nitrite	HCO_3^-	hydrogen carbonate (bicarbonate is a widely used common name)
NO_3^-	nitrate	ClO^-	hypochlorite
SO_3^{2-}	sulfite	ClO_2^-	chlorite
SO_4^{2-}	sulfate	ClO_3^-	chlorate
HSO_4^-	hydrogen sulfate (bisulfate is a widely used common name)	ClO_4^-	perchlorate
OH^-	hydroxide	$\text{C}_2\text{H}_3\text{O}_2^-$	acetate
CN^-	cyanide	MnO_4^-	permanganate
PO_4^{3-}	phosphate	$\text{Cr}_2\text{O}_7^{2-}$	dichromate
HPO_4^{2-}	hydrogen phosphate	CrO_4^{2-}	chromate
H_2PO_4^-	dihydrogen phosphate	O_2^{2-}	peroxide