

Table 2. Names and Formulas of Some Common Substances

A. *Elements that occur as polyatomic molecules:*

		normal state			normal state
hydrogen	H <sub>2</sub>	gas	nitrogen	N <sub>2</sub>	gas
fluorine	F <sub>2</sub>	gas	oxygen	O <sub>2</sub>	gas
chlorine	Cl <sub>2</sub>	gas	ozone	O <sub>3</sub>	gas
bromine	Br <sub>2</sub>	liquid	sulfur	S <sub>8</sub>	solid
iodine	I <sub>2</sub>	solid	phosphorus	P <sub>4</sub>	solid

B. *Compounds that are solids at room temperature:*

ammonium chloride	NH <sub>4</sub> Cl	silver nitrate	AgNO <sub>3</sub>
calcium chloride	CaCl <sub>2</sub>	sodium acetate	NaC <sub>2</sub> H <sub>3</sub> O <sub>2</sub>
calcium nitrate	Ca(NO <sub>3</sub> ) <sub>2</sub>	sodium carbonate	Na <sub>2</sub> CO <sub>3</sub>
magnesium chloride	MgCl <sub>2</sub>	sodium chloride	NaCl
nickel sulfate	NiSO <sub>4</sub>	sodium sulfate	Na <sub>2</sub> SO <sub>4</sub>
potassium bromide	KBr	sodium	
potassium cyanide	KCN	hydrogen carbonate †	NaHCO <sub>3</sub>

C. *Compounds that are liquids at room temperature:*

benzene	C <sub>6</sub> H <sub>6</sub>	ethanol (ethyl alcohol)	C <sub>2</sub> H <sub>5</sub> OH
carbon tetrachloride	CCl <sub>4</sub>	methanol (methyl alcohol)	CH <sub>3</sub> OH
chloroform	CHCl <sub>3</sub>	hydrogen peroxide	H <sub>2</sub> O <sub>2</sub>
water	H <sub>2</sub> O	octane	C <sub>8</sub> H <sub>18</sub>

D. *Compounds that are gases at room temperature:*

ammonia	NH <sub>3</sub>	methane	CH <sub>4</sub>
carbon dioxide	CO <sub>2</sub>	nitric oxide	NO
carbon monoxide	CO	nitrogen dioxide	NO <sub>2</sub>
hydrogen chloride	HCl	sulfur dioxide	SO <sub>2</sub>
hydrogen cyanide	HCN	sulfur trioxide	SO <sub>3</sub>
hydrogen sulfide	H <sub>2</sub> S		

E. *Acids*

acetic acid	HC <sub>2</sub> H <sub>3</sub> O <sub>2</sub>	perchloric acid	HClO <sub>4</sub>
sulfuric acid	H <sub>2</sub> SO <sub>4</sub>	nitric acid	HNO <sub>3</sub>
sulfurous acid	H <sub>2</sub> SO <sub>3</sub>	nitrous acid	HNO <sub>2</sub>
hydrochloric acid	HCl (aqueous solution of hydrogen chloride)		

F. *Bases*

ammonia	NH <sub>3</sub>	potassium hydroxide	KOH
calcium hydroxide	Ca(OH) <sub>2</sub>	sodium hydroxide	NaOH

† Sodium hydrogen carbonate is often called sodium bicarbonate. It is also baking soda.