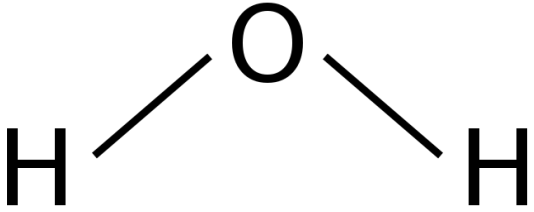
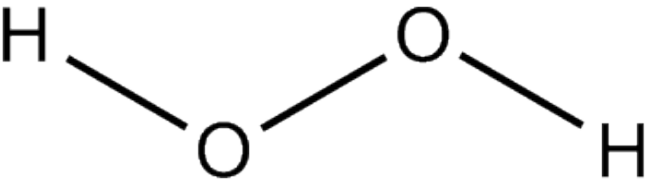

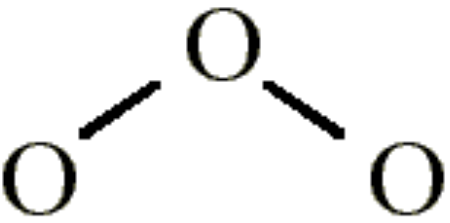


s t a t i o n

1

Atom	Quantity	Color
Hydrogen (H)	2	White
Oxygen (O)	3	Red
Short bonds	3	Light Gray
Long bonds	2	Gray

<p><u>Water: H₂O</u></p> <ul style="list-style-type: none"> - 75% of the human brain is water - 71% of Earth's surface is covered in water. 	
<p><u>Hydrogen Peroxide: H₂O₂</u></p> <ul style="list-style-type: none"> - Water with an extra oxygen - Easily breaks down into hydrogen gas & oxygen gas - Used as an antiseptic in medicine 	
<p><u>Oxygen Gas: O₂</u></p> <ul style="list-style-type: none"> - 20.8% of Earth's atmosphere - Used in cellular respiration 	
<p><u>Ozone: O₃</u></p> <ul style="list-style-type: none"> - Pale blue gas with a pungent smell - Harmful for us to breath - Protects us from UV rays 	

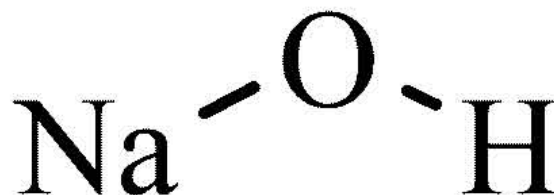
s t a t i o n

2

Atom	Quantity	Color
Hydrogen (H)	1	White
Oxygen (O)	3	Red
Sodium (Na)	1	Grey
Chlorine (Cl)	1	Green
Carbon (C)	1	Black
Long bonds	2	Gray
Short bonds	4	Light Gray

Sodium Hydroxide: NaOH

- Toxic and corrosive
- Used to manufacture soaps, rayon, paper & explosives.



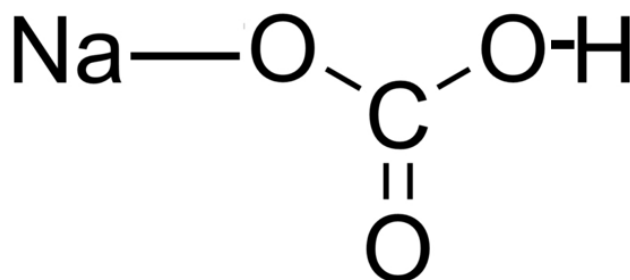
Sodium Chloride: NaCl

- Common table salt



Sodium Bicarbonate: NaHCO₃

- Baking soda
- Reacts with acid to create carbon dioxide gas (bubbles)



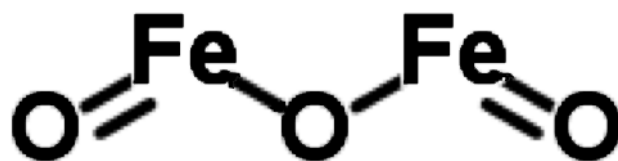
s t a t i o n

3

Atom	Quantity	Color
Iron (Fe)/Calcium (Ca)	2	Grey
Oxygen (O)	3	Red
Chlorine (Cl)	3	Green
Long bonds	4	Gray
Short bonds	3	Light Gray

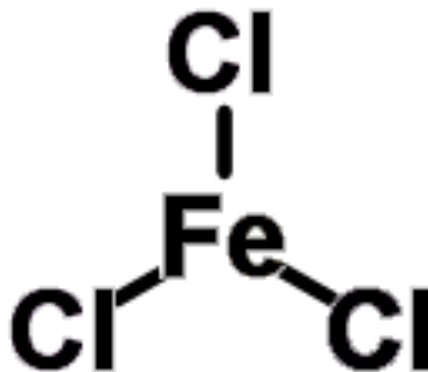
Iron (III) Oxide: Fe₂O₃

- rust



Iron (III) Chloride: FeCl₃

- used to treat waste water



Calcium Chloride: CaCl₂

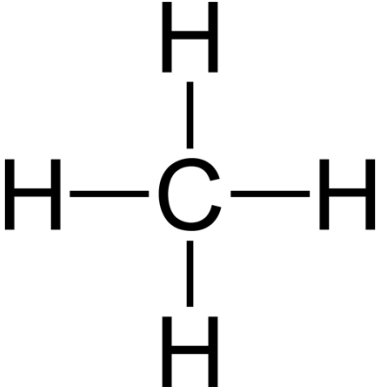

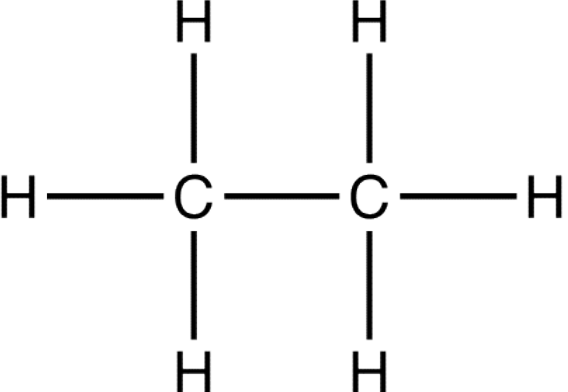
- Used to de-ice roads
- Absorbs moisture



s t a t i o n

4

Atom	Quantity	Color
Carbon (C)	2	Black
Oxygen (O)	2	Red
Hydrogen (H)	6	White
Short bonds	7	Light Gray
Long bonds	4	Gray

<p><u>Methane: CH₄</u></p> <ul style="list-style-type: none"> - Fuel - Greenhouse gas - Made from decomposing organisms 	
<p><u>Carbon Dioxide: CO₂</u></p> <ul style="list-style-type: none"> - .04% of the atmosphere - required for photosynthesis - released from cellular respiration 	
<p><u>Ethane: C₂H₆</u></p> <ul style="list-style-type: none"> - Fuel - Heavier than air 	

s t a t i o n

5


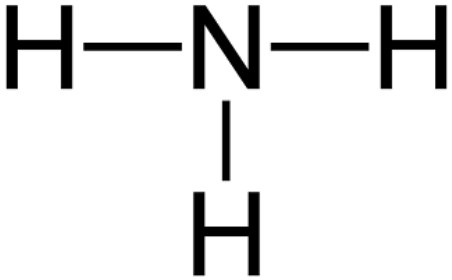
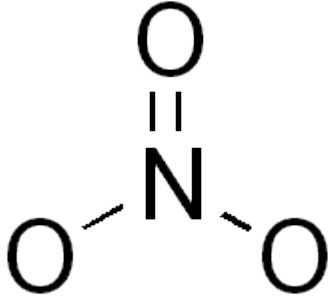
Atom	Quantity	Color
Carbon (C)	2	Black
Oxygen (O)	2	Red
Calcium (Ca)	1	Grey
Hydrogen (H)	2	White
Long bonds	3	Gray
Short bonds	4	Light Gray

<p><u>Calcium Carbide: CaC₂</u></p> <ul style="list-style-type: none"> - Highly reactive to water. - Produces acetylene gas when combined with water 	$\text{C} \equiv \text{C} - \text{Ca}$
<p><u>Acetylene Gas: C₂H₂</u></p> <ul style="list-style-type: none"> - Used in welding 	$\text{H} - \text{C} \equiv \text{C} - \text{H}$
<p><u>Calcium Hydroxide: Ca(OH)₂</u></p> <ul style="list-style-type: none"> - Used in mortars, plasters and cement 	$\text{H} \backslash \text{O} - \text{Ca} - \text{O} / \text{H}$

s t a t i o n

6

Atom	Quantity	Color
Nitrogen (N)	2	Blue
Oxygen (O)	3	Red
Hydrogen (H)	3	White
Long bonds	3	Gray
Short bonds	3	Light Gray

<p><u>Nitrogen Gas: N₂</u></p> <ul style="list-style-type: none"> - 78% of the air we breath - Present in all living things - Found in proteins 	
<p><u>Ammonia: NH₃</u></p> <ul style="list-style-type: none"> - Found in household cleaners - Used in the manufacturing of plastics, explosives, textiles, pesticides, dyes, etc. 	
<p><u>Nitrate: NO₃</u></p> <ul style="list-style-type: none"> - Nitrates are preservatives for meat to keep bacteria from growing. 	

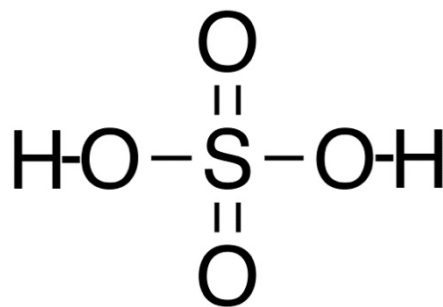
s t a t i o n

7

Atom	Quantity	Color
Oxygen (O)	4	Red
Hydrogen (H)	2	White
Sulfur (S)	1	Yellow
Short bonds	6	Light Gray
Long bonds	4	Gray

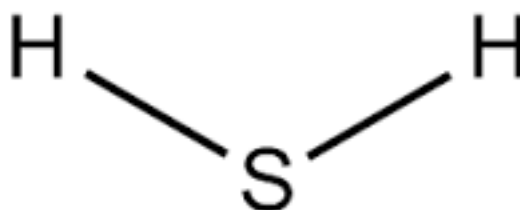
Sulfuric Acid: H₂SO₄

- Used in fertilizers and automobile batteries
- Component of Acid Rain



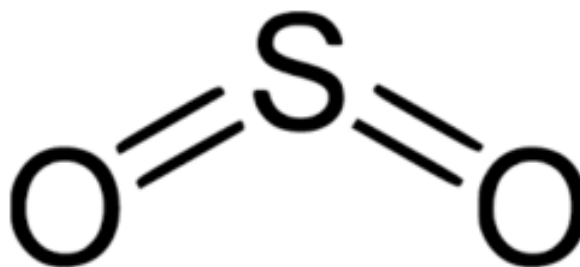
Hydrogen Sulfide: H₂S

- Produced from decaying organic matter
- Released from sulfur hot springs



Sulfur Dioxide: SO₂

- Used as a preservative for dried fruit.



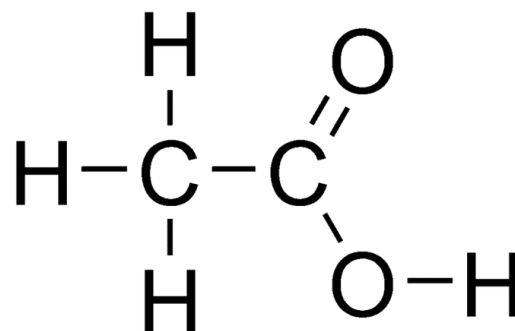
s t a t i o n

8

Atom	Quantity	Color
Manganese (Mn)	1	Grey
Oxygen (O)	2	Red
Hydrogen (H)	4	White
Carbon (C)	2	Black
Short bonds	6	Light Gray
Long bonds	4	Gray

Acetic Acid: CH₃COOH

- Common name- vinegar
- Used in foods
- Reacts with baking soda to make carbon dioxide gas



Manganese Dioxide: MnO₂

- Used in rechargeable batteries
- Catalyst (makes chemical reactions happen faster)



Hydrogen Gas: H₂

- Lightest element in the universe
- Used in weather balloons



s t a t i o n 9

Atom	Quantity	Color
Carbon (C)	6	Black
Oxygen (O)	6	Red
Hydrogen (H)	12	White
Short bonds	22	Light Gray
Long bonds	2	Gray

Glucose: C₆H₁₂O₆

- Simple Sugar
- Product of photosynthesis
- Stored in plants
- Broken down in cellular respiration to produce energy
-

