



Naming Inorganic Compounds

Topic Summary

- Compounds are divided into two big classes - organic (carbon chemistry) and inorganic (everything else)
- Metals donate electrons and are on the left of the periodic table, non-metals take or share electrons and are found on the right of the table.
- Simple ionic compounds are named by keeping the metal name the same and using the suffix '-ide' for the non-metal (e.g., NaCl, Sodium chloride).
- Learn the common polyatomic ions, such as: CO_3 (carbonate) and SO_4 (sulphate)
- Roman numerals are used to identify transition metal compounds based on ion charge (e.g., FeCl_2 is Iron(II) chloride whilst FeCl_3 is Iron(III) chloride).
- Covalent compounds (made from only nonmetal elements) start with the element from the lowest group number or the element furthest down the table if both are from the same group.
- Apply Greek prefixes to name covalent compounds (e.g., CO_2 is carbon **d**ioxide).
- Recognise exceptions with common names like water (H_2O) and ammonia (NH_3).



Easy ones first to build your confidence

Here are a few simple compounds to start with. For each one, write out the name of the compound. The first one has been done for you.

LiCl Lithium Chloride.....

MgO

CaO

RbF



Now a bit trickier

These next few have different ratios of ions in them.

K_2O

CaF_2

AlBr_3

MgCl_2

Li_2O

Al_2O_3





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These compounds contain polyatomic anions...

You'll need to remember the names of these anions as you won't find polyatomic ions in the periodic table (they are not elements!)

MgCO_3

CuSO_4

Al(OH)_3

LiNO_3

$\text{Al}_2(\text{CO}_3)_3$



Now some covalent ones...

Remember that you will need to use the Greek prefixes for your second element here, watch out.

CO

SO_2

NO_2

PCl_3



Do this later...

Give your brain a break and come back to these questions later. Cover the rest of the sheet while you have a go. By doing this 24-48 hours after watching the video you will boost your chances of remembering the key points in an exam. If you struggle with these questions, re-watch the video and then try again.

This is a mixed bag of examples to test you.

LiCl

CaF_2

Na_2SO_4

Ba(OH)_2

$\text{Al(NO}_3)_3$