

IONIC AND MOLECULAR COMPOUNDS

Иондық және молекулалық қосылыстардың номенклатурасы

Номенклатура ионных и молекулярных соединений

Құрастырған:
Жұмағұлов
Нұрболат
@newchemist

Cations and anions (катиондар мен аниондар)

Monoatomic cations (Metal ions) - Біратомды катиондар

+1		+2	
H ⁺	Hydrogen	Mg ⁺²	Magnesium
Na ⁺	Sodium	Hg ⁺²	Mercury (II)
K ⁺	Potassium	Ca ⁺²	Calcium
Hg ⁺	Mercury (I)	Cu ⁺²	Copper (II)
Ag ⁺	Silver	Ba ⁺²	Barium
Cu ⁺	Copper (I)	Ni ⁺²	Nickel
Li ⁺	Lithium	Zn ⁺²	Zinc

Cations and anions (катиондар мен аниондар)

Monoatomic cations (Metal ions) - Біратомды катиондар

+2	
Fe ⁺²	Iron (II)
Cr ⁺²	Chromium (II)
Pb ⁺²	Lead (II)
Sn ⁺²	Tin (II)

+3	
Fe ⁺³	Iron (III)
Cr ⁺³	Chromium (III)

+4	
Pb ⁺⁴	Lead (IV)
Sn ⁺⁴	Tin (IV)

+1	
NH ₄ ⁺	Ammonium
H ₃ O ⁺	Hydronium

Polyatomic Cations – Көпатомды катиондар

Cations and anions (катиондар мен аниондар)

Monoatomic Anions (Nonmetal ions) – Біратомды аниондар

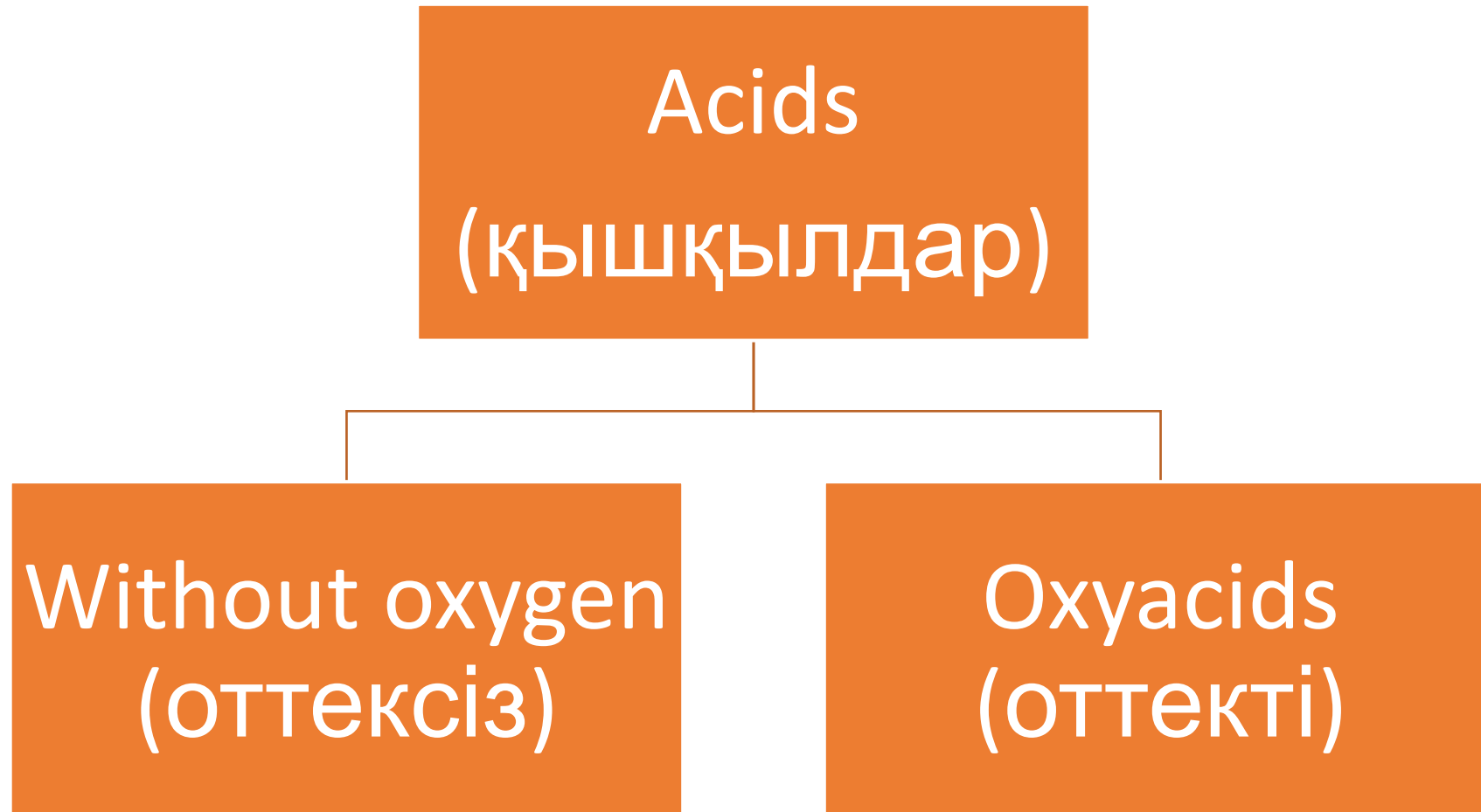
-1		-2	
F ⁻	Fluoride	O ⁻²	Oxide
Cl ⁻	Chloride	S ⁻²	Sulfide
Br ⁻	Bromide	-3	
I ⁻	Iodide	N ⁻³	Nitride
H ⁻	Hydride	P ⁻³	Phosphide

Cations and anions (катиондар мен аниондар)

Polyatomic Anions – Көпатомды аниондар

-1		-2	
OH^-	Hydroxide	SO_4^{-2}	Sulfate
NO_3^-	Nitrate	SO_3^{-2}	Sulfite
NO_2^-	Nitrite	CO_3^{-2}	Carbonate
CH_3COO^-	Acetate	CrO_4^{-2}	Chromate
ClO_2^-	Chlorite	$\text{Cr}_2\text{O}_7^{-2}$	Dichromate
ClO_3^-	Chlorate	MnO_4^{-2}	Manganate
CN^-	Cyanide	$\text{C}_2\text{O}_4^{-2}$	Oxalate
MnO_4^-	Permanganate		
-3			
PO_4^{-3}	Phosphate	PO_3^{-3}	Phosphite

Naming of acids – Қышқылдарды атау



Naming of acids – Қышқылдарды атау

Without oxygen (оттексіз)

HCl : **Hydro**chloric acid

HI : **Hydro**iodic acid

H_2S : **Hydro**sulfuric acid

HF : **Hydro**fluoric acid

HBr : **Hydro**bromic acid

CH_3COOH : acetic acid

Oxyacids (оттекті)

H_3BO_3 : Bor**ic** acid

H_3PO_4 : Phosphor**ic** acid

H_2SO_4 : Sulfur**ic** acid

H_2SO_3 : Sulfur**ous** acid

HNO_3 : Nitr**ic** acid

HNO_2 : Nitr**ous** acid

H_2CO_3 : Carbon**ic** acid

Naming of bases – Негіздерді атау

*Metal name (charge) + **hydroxide***

KOH : Potassium **hydroxide**

NaOH : Sodium **hydroxide**

Mg(OH)₂ : Magnesium **hydroxide**

Ba(OH)₂ : Barium **hydroxide**

Al(OH)₃ : Aluminium **hydroxide**

Cu(OH)₂ : Copper (II) **hydroxide**

Fe(OH)₃ : Iron (III) **hydroxide**

NH₃*H₂O : Ammonium **hydroxide** (ammonia)

Naming of oxides – Оксидтерді атау

Number + Name of Nonmetal + Number + oxide

Mono	1	Hexa	6
Di	2	Hepta	7
Tri	3	Octa	8
Tetra	4	Nona	9
Penta	5	Deca	10



Nonmetals : H, N, F, Cl, Br, At, C, I, S, P, Si, As

Naming of oxides – Оксидтерді атау

Name of metal (charge)+ oxide

K_2O : Potassium **oxide**

Na_2O : Sodium **oxide**

MgO : Magnesium **oxide**

Al_2O_3 : Aluminium **oxide**

CuO : Copper (II) **oxide**

Fe_2O_3 : Iron (III) **oxide**

Mn_2O_7 : Manganese (VII) **oxide**

Metals : Li, Na, K, Al, Fe,

Naming of salts – Тұздарды атау

Cation name (charge)+ Anion name

KCl : Potassium chloride

NaBr : Sodium bromide

Mg(HSO₄)₂ : Magnesium hydrosulfate

BaOHCl : Barium hydroxochloride

Al(NO₃)₃ : Aluminium nitrate

CuI₂ : Copper (II) iodide

Fe₂(SO₄)₃ : Iron (III) sulfate

(NH₄)₂Cr₂O₇ : Ammonium dichromate