

IONIC AND MOLECULAR COMPOUNDS

Иондық және молекулалық қосылыстардың номенклатурасы

Номенклатура ионных и молекулярных соединений

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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

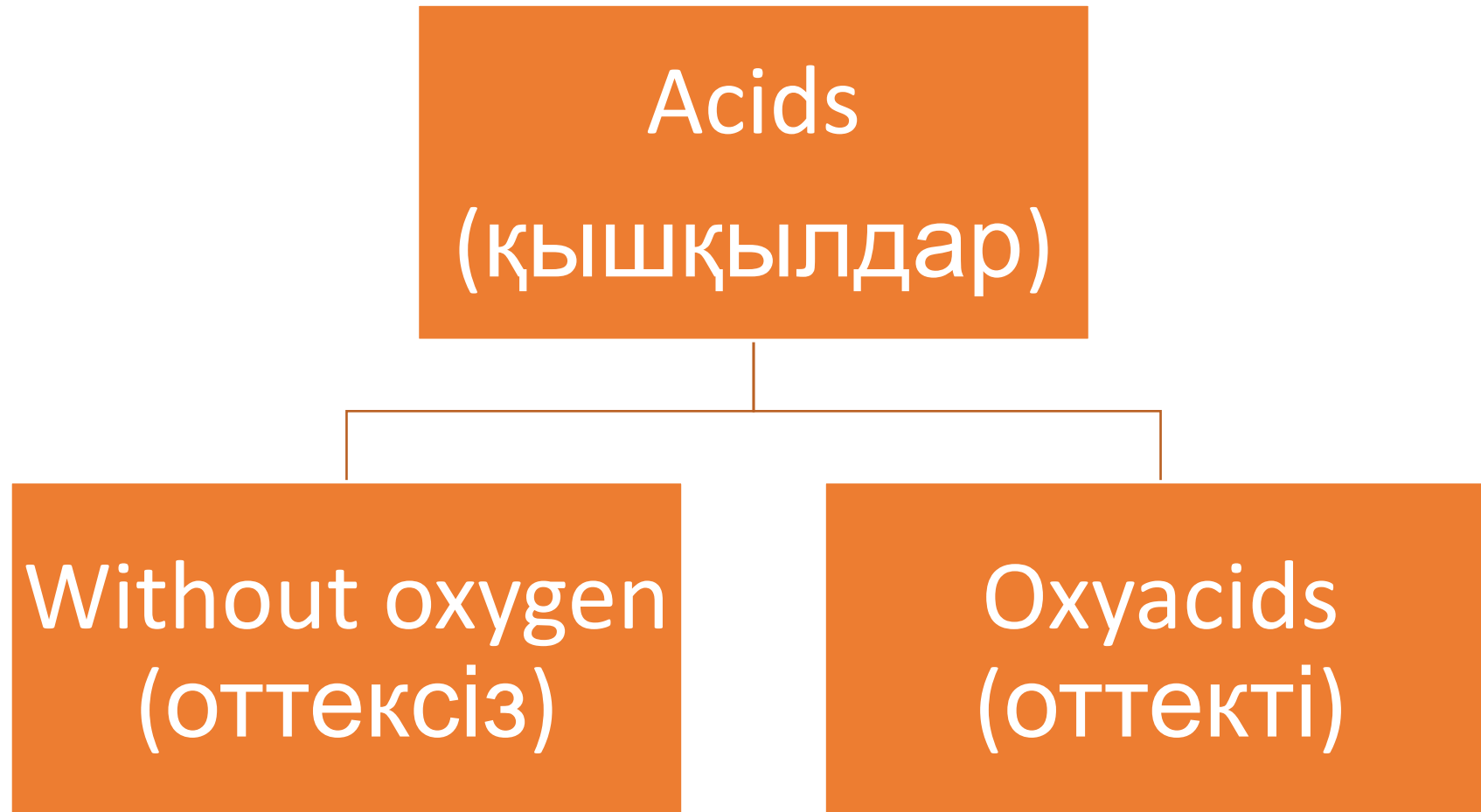
-1		-2	
F ⁻	Fluoride	O ⁻²	Oxide
Cl ⁻	Chloride	S ⁻²	Sulfide
Br ⁻	Bromide	-3	
I ⁻	Iodide	N ⁻³	Nitride
H ⁻	Hydride	P ⁻³	Phosphide

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 ₃ COO ⁻	Acetate	CrO ₄ ⁻²	Chromate
ClO ₂ ⁻	Chlorite	Cr ₂ O ₇ ⁻²	Dichromate
ClO ₃ ⁻	Chlorate	MnO ₄ ⁻²	Manganate
CN ⁻	Cyanide	C ₂ 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 : **Hydrochloric acid**

HI : **Hydroiodic acid**

H₂S : **Hydrosulfuric acid**

HF : **Hydrofluoric acid**

HBr : **Hydrobromic acid**

CH₃COOH : **acetic acid**

Oxyacids (оттекті)

H₃BO₃ : **Boric acid**

H₃PO₄ : **Phosphoric acid**

H₂SO₄ : **Sulfuric acid**

H₂SO₃ : **Sulfurous acid**

HNO₃ : **Nitric acid**

HNO₂ : **Nitrous acid**

H₂CO₃ : **Carbonic 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