

သင်ကြားမည့်ခေါင်းစဉ်များ

- Symbols
- Metals and Non-metals
- Oxidation number and valence
- Writing binary compound formulae
- Acids and acid radicals
- Bases and base radicals
- Writing salt formulae
- General equation patterns

Symbols

Shorthand notation of an element

First letter

Carbon = C

Hydrogen = H

First letter + Another letter

Calcium = Ca

Chlorine = Cl

Latin name

Potassium = Kalium = K

Iron = Ferrum = Fe

First letter

- Carbon = C
- Sulphur = S
- Phosphorus = P
- Oxygen = O
- Hydrogen = H
- Nitrogen = N
- Iodine = I

First letter + Another letter

- Calcium = Ca
- Barium = Ba
- Magnesium = Mg
- Manganese = Mn
- Aluminium = Al
- Zinc = Zn
- Chromium = Cr
- Platinum = Pt
- Chlorine = Cl
- Bromine = Br

Latin name

• Potassium	=	<u>K</u> alium	=	K
• Sodium	=	<u>N</u> atrium	=	Na
• Iron	=	<u>F</u> errum	=	Fe
• Lead	=	<u>P</u> l <u>u</u> m <u>b</u> um	=	Pb
• Tin	=	<u>S</u> t <u>a</u> n <u>n</u> um	=	Sn
• Copper	=	<u>C</u> u <u>p</u> ru <u>m</u>	=	Cu
• Mercury	=	<u>H</u> yd <u>r</u> arg <u>y</u> ru <u>m</u>	=	Hg
• Silver	=	<u>A</u> rg <u>e</u> ntu <u>m</u>	=	Ag
• Gold	=	<u>A</u> u <u>r</u> um	=	Au
• Antimony	=	<u>S</u> t <u>i</u> b <u>i</u> um	=	Sb

Element

Metals

Non-metals

ပို၊ဆို၊ကယ်၊ဘော၊
မောင်၊မက်၊လူ၊ဇင့်၊
ခရို၊အိုင်း၊လဒ်၊တင်း၊ကော့၊
မာ၊ဆေး၊ဂိုး၊ပလက်၊
Metals အားလုံးမှတ်ထားကွဲ့။

ကာ၊ဆာ၊ဖော့၊အောက်၊ဟိုက်၊နို
က်၊
ကလိုရင်း၊ဘရိုမင်း၊အိုင်အိုဒင်း၊
Non-metals လေးမှတ်ပါမင်း။

Oxidation number and Combining capacity (valence)

Oxidation number → + or – sign
Valence → without sign

For example

Oxidation number of Na → + 1

Oxidation number of Fe → +2,+3

Oxidation number of Cl → -1

For example

Valence of Na → 1

Valence of Fe → 2,3

Valence of Cl → 1

Metals $\rightarrow$ oxidation numbers $\rightarrow$

metal

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graph TD; A[metal] --> B[Fixed Oxidation number]; A --> C[Variable oxidation number];
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Fixed

Oxidation number

Variable

oxidation number

Fixed oxidation number ရှိသော metals များ

ပို၊ ဆို၊ ဆေးလဗား = +1 ထား
ဘရို၊ ဘော၊ မောင့်၊ ဇင့်၊ ကယ်လဆီ = +2 မှတ်ပါမည်
Al တစ်ခုတည်း = +3 ပဲ

Name	Oxidation number	Valence (combining capacity)
Potassium (K)	+1	1
Sodium (Na)	+1	1
Silver (Ag)	+1	1
Beryllium (Be)	+2	2
Barium (Ba)	+2	2
Magnesium (Mg)	+2	2
Zinc (Zn)	+2	2
Calcium (Ca)	+2	2
Aluminium (Al)	+3	3

Variable oxidation number ရှိသော metals များ

ကျော့၊ မာ = +1, +2

အိုင်း = +2, +3

တင်းန့်လဒ် = +2, +4 မှတ်

Manganese (Mn) = +2, +4, +7 မှတ်ရန်

Name	Oxidation number	Valence (combining capacity)
Copper (Cu)	+1,+2	1,2
Mercury (Hg)	+1,+2	1,2
Iron (Fe)	+2,+3	2,3
Tin (Sn)	+2,+4	2,3
Lead (Pb)	+2,+4	2,4
Manganese (Mn)	+2,+4,+7	2,4,7

Non metals များ၏ oxidation numbers များ

	ဟိုက်	1
	ကာ	2,4
2	ဆာ	4,6
	ဖော့.	3,5
3	နိုက်	1 to 5
2	အောက်	
	Cl, Br, I တွေက	
(-1)	ပါဗျ။	

Name	Oxidation number	Valence (combining capacity)
Hydrogen (H)	+1	1
Carbon (C)	+2,+4	2,4
Sulphur(S)	-2,+4,+6	2,4,6
Phosphorus (P)	+3,+5	3,5
Nitrogen (N)	-3,+1,+2,+3,+4,+5	1,2,3,4,5
Oxygen (O)	-2	2
Chlorine (Cl)	-1	1
Bromine (Br)	-1	1
Iodine(I)	-1	1

Binary compounds များ၏ formula များရေးတတ်ခြင်း

Metal
(Fixed O.N.)



Metal
(variable O.N.)



Non-metal

Non-metal



Non-metal



Non-metal

Metal (Fixed oxidation number)	Non-metal (-----ide)
Potassium (K) = 1	Hydride (H) = 1
Sodium (Na) = 1	Sulphide (S) = 2
Silver (Ag) = 1	Phosphide (P) = 3
Beryllium (Be) = 2	Nitride (N) = 3
Barium (Ba) = 2	Oxide (O) = 2
Magnesium (Mg) = 2	Chloride (Cl) = 1
Zinc (Zn) = 2	Bromide (Br) = 1
Calcium (Ca) = 2	Iodide (I) = 1
Aluminium (Al) = 3	

Name	အကြမ်း	Formula	Name	အကြမ်း	Formula
Sodium chloride			Potassium hydride		
Silver sulphide			Sodium iodide		
Potassium nitride			Silver oxide		
Barium bromide			Beryllium chloride		
Magnesium oxide			Magnesium sulphide		
Zinc phosphide			Zinc oxide		
Aluminium hydride			Calcium bromide		
Aluminium oxide			Aluminium chloride		
Aluminium nitride			Aluminium phosphide		
Calcium nitride			Zinc sulphide		

Metal (Variable O.N)	Non-metal(-----ide)
Copper (Cu)=1	Hydride (H) =1
Copper (Cu)=2	Sulphide (S) = 2
Mercury (Hg)=1	Phosphide (P) =3
Mercury (Hg)=2	Nitride (N) =3
Iron (Fe)=2	Oxide (O) = 2
Iron (Fe)=3	Chloride(Cl) = 1
Tin (Sn)=2	Bromide(Br) = 1
Tin (Sn)=4	Iodide (I) = 1
Lead (Pb)=2	
Lead (Pb)=4	
Manganese (Mn)=2	
Manganese (Mn)=4	
Manganese (Mn)=7	

Name	အကြမ်း	Formula	Name	အကြမ်း	Formula
Mercury(I) chloride			Lead (II) sulphide		
Copper (II)oxide			Lead(II) chloride		
Iron (III) sulphide			Lead(II) oxide		
Tin (II) sulphide			Manganese(II)oxide		
Lead (IV) oxide			Manganese(IV)oxide		
Manganese (II)bromide			Iron(II)nitride		
Mercury (II) oxide			Mercury (I) bromide		
Copper (I) nitride			Mercury(I)oxide		
Iron (II) oxide			Tin (IV) oxide		
Iron(III) oxide			Copper(II) sulphide		

Non-metal	Non-metal
1 = (-----)	1 = mono
2 = di	2 = di
3 = tri	3 = tri
4 = tetra	4 = tetra
5 = penta	5 = penta

Name	formula	Name	Formula
Dinitrogen monoxide		Di iodine pentoxide	
Nitrogen monoxide		Phosphorus trichloride	
Dinitrogen trioxide		Phosphorus pentachloride	
Dinitrogen pentoxide		Dinitrogen tetroxide	
Carbon tetrachloride		Silicon dioxide	
Nitrogen trichloride		Carbon disulphide	
Carbon monoxide		Boron trifluoride	
Carbon dioxide		Phosphorus pentafluoride	
Sulphur dioxide		Phosphorus trifluoride	
Sulphur trioxide		Dihydrogen monoxide	

Acids and Acid Radicals (အက်ဆစ်ထဲက Hကိုဖယ် acid radical)

Name of acid	Formula of acid	Acid radical	Name of acid radical	Oxidation number	Number of acid radical
Hydrochloric acid	HCl		Chloride		
Hydrobromic acid	HBr		Bromide		
Hydriodic acid	HI		Iodide		
Nitrous acid	HNO ₂		Nitrite		
Nitric acid	HNO ₃		Nitrate		
Sulphurous acid	H ₂ SO ₃		Hydrogen sulphite		
			Sulphite		
Sulphuric acid	H ₂ SO ₄		Hydrogen sulphate		
			Sulphate		
Chloric acid	HClO ₃		Chlorate		
Carbonic acid	H ₂ CO ₃		Hydrogen carbonate		
			Carbonate		
Phosphoric acid	H ₃ PO ₄		Dihrogen phosphate		
			Hydrogen phosphate		
			Phosphate		

Salt အမည်များ ရေးကျင့်ခြင်း

(metal + acid radical=salt)

Name	Formula	Formula	Name
Sodium chloride		Calcium nitrite	
Sodium chlorate		Calcium nitrate	
Sodium hydrogen sulphate		Calcium hydrogen phosphate	
Sodium nitrite		Calcium dihydrogen phosphate	
Sodium nitrate		Potassium hydrogen sulphate	
Calcium carbonate		Zinc sulphite	
Calcium hydrogen carbonate		Zinc sulphate	
Calcium sulphite		Zinc nitrite	
Calcium sulphate		Zinc nitrate	
Calcium phosphate		Zienc bromid	