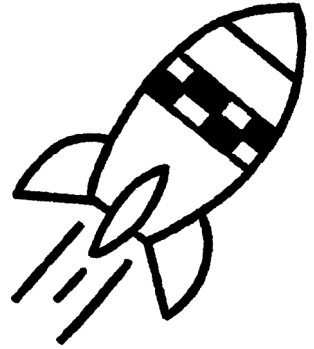


Magacaabista xeryahooda (compounds)



Sayniska

Cutub: Atamka (Atoms), curiyeyaasha (elements) iyo xeryahooda (compounds)

Natiijo

Waxaan magacaabi karaa xeryahooda (compounds) iyadoo laga eegayo qaacidada kiimikada.

Erayada muhiimka ah

salfayt bir ah (metal sulfate)

**kaarboonayt bir ah (metal
carbonate)**

**naytarayt bir ah (metal
nitrate)**

Erayada muhiimka ah

Xarun sulfayt bir ah (metal sulfate) waxay ka samaysan tahay bir ku xidhan koox sulfayt ah. Kooxda sulfaytku waa -SO_4 .

Xarun kaarboonayt bir ah (metal carbonate) waxay ka samaysan tahay bir ku xidhan koox kaarboonayt ah. Kooxda kaarboonaytku waa -CO_3 .

Xarun naytarayt bir ah (metal nitrate) waxay ka samaysan tahay bir ku xidhan koox naytarayt ah. Kooxda naytaraytku waa -NO_3 .

Qaabka casharka

Magacaabista xeryahooda (compounds)



Magacaabista xeryaha birta iyo kuwa aan bir ahayn



Xeryaha ay ku jirto oksijiin (oxygen)



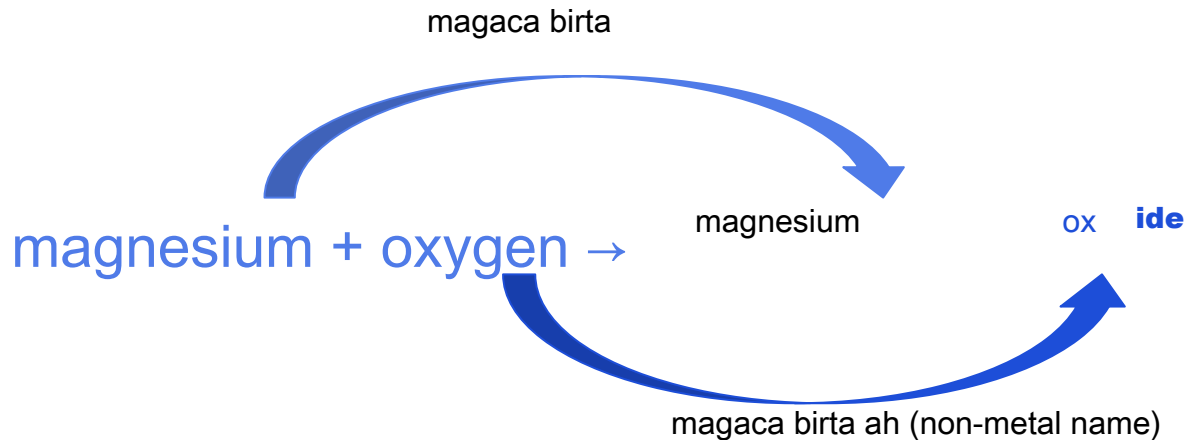
Salfaytyada (sulfates), kaarboonaytyada (carbonates) iyo naytaraytyada (nitrates)

Magacaabista xeryaha birta iyo kuwa aan bir ahayn

Xeryuhu waxay leeyihiin magacyo kala duwan iyadoo ku xiran isku darka curiyeyaasha (elements) ay ka kooban yihiin.

																H hydrogen															He helium
Li lithium		Be beryllium																B boron	C carbon	N nitrogen	O oxygen	F fluorine	Ne neon								
Na sodium		Mg magnesium																Al aluminium	Si silicon	P phosphorus	S sulfur	Cl chlorine	Ar argon								
K potassium	Ca calcium	Sc scandium	Ti titanium	V vanadium	Cr chromium	Mn manganese	Fe iron	Co cobalt	Ni nickel	Cu copper	Zn zinc	Ga gallium	Ge germanium	As arsenic	Se selenium	Br bromine	Kr krypton														
Rb rubidium	Sr strontium	Y yttrium	Zr zirconium	Nb niobium	Mo molybdenum	Tc technetium	Ru ruthenium	Rh rhodium	Pd palladium	Ag silver	Cd cadmium	In indium	Sn tin	Sb antimony	Te tellurium	I iodine	Xe xenon														
Cs caesium	Ba barium	La [*] lanthanum	Hf hafnium	Ta tantalum	W tungsten	Re rhenium	Os osmium	Ir iridium	Pt platinum	Au gold	Hg mercury	Tl thallium	Pb lead	Bi bismuth	Po polonium	At astatine	Rn radon														

Magacaabista xarun ka samaysan bir iyo aan bir ahayn:



Haddii ay jiraan laba curiye (elements) oo isku xidhaya, dhammaadka magaca aan birta ahayn waxaa loo beddelaa -ide.

Jadwalku wuxuu muujinayaa tusaalooyin kala duwan oo birta ah (non-metals) oo ku jira isku-dhafka (compounds). Dhammaantood waxay ku dhamaanayaan -ide.

magaca birta (metal name)	magaca birta ah (non-metal name)	magaca isku-dhafka (compound name)
silver	oxygen	
iron (iron)	sulfur (sulfur)	
lithium	chlorine	
potassium	fluorine	
silver	bromine	
zinc (zinc)	iodine (iodine)	

Jawaabaha:

Magacaabista iskudhisyada birta iyo aan-birta ahayn (metal and non-metal compounds)

Sodium (Sodium) wax la falgalaa chlorine (chlorine) si loo sameeyo iskudhis (compound).
Waa maxay magaca iskudhiska (compound)?

a

sodium (sodium) chlorine (chlorine)

b

sodium chloride (sodium chloride) ✓

c

chloride (chloride) sodium (sodium)



cusbo
(salt)

Waa maxay iskudhiska (compound) copper chloride (copper chloride) laga sameeyay?

a copper (copper) iyo fluorine (fluorine)

b copper (copper) iyo chloride (chloride)

c copper (copper) iyo chlorine (chlorine) ✓

d copper (copper) iyo oxygen (oxygen)



copper chloride (copper chloride)

Buuxi macluumaadka maqan:

magaca birta (metal name)	magaca aan-birta ahayn (non-metal name)	magaca isku-dhafka (compound name)
silver (silver)	oxygen (oxygen)	silver oxide (silver oxide)
iron (iron)	oxygen (oxygen)	
sodium (sodium)		<u>sulfide (sulfide)</u>
	iodine (iodine)	potassium _____ (potassium _____)
zinc (zinc)		<u>chloride (chloride)</u>
		sodium fluoride (sodium fluoride)

magaca birta (metal name)	magaca birta ahayn (non-metal name)	magaca isku-dhafka (compound name)
silver (silver)	oxygen (oxygen)	silver oxide (silver oxide)
iron (iron)	oxygen (oxygen)	
sodium (sodium)		sulfide (sulfide)
	iodine (iodine)	potassium (potassium)
zinc (zinc)		chloride (chloride)
Jawaabaha:		sodium fluoride (sodium fluoride)

Qaabka casharka

Magacaabista xeryaha (Naming compounds)



Magacaabista xeryaha birta iyo kuwa aan birta ahayn (Naming metal and non-metal compounds)



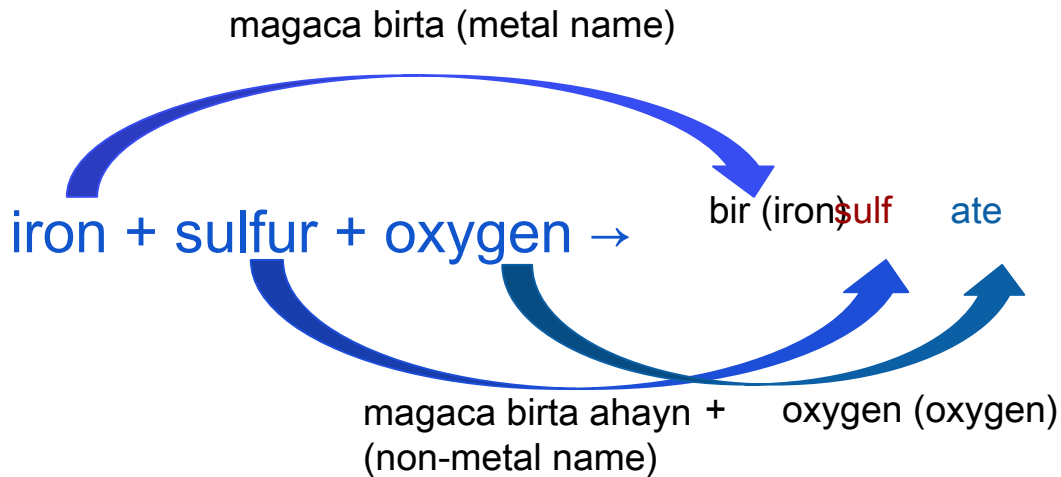
Xeryo ay ku jirto oxygen (Compounds including oxygen)



Sulfates, carbonates iyo nitrates (Sulfates, carbonates and nitrates)

Xeryahooda ay ku jirto oxygen (Compounds including oxygen)

Marka bir ay falgalto (reaction) si ay u samayso xeryo leh non-metal iyo oxygen, qaybta non-metal ee magaca xeryaha waxay ku dhammaataa -ate.



Jadwalku wuxuu tusaalayaa xeryahooda (compounds) la sameeyo marka falgalku (reaction) uu ku jiro bir (metal), aan-bir ahayn (non-metal) iyo oksijiin (oxygen).

magaca birta (metal name)	magaca birta ahayn (non- metal name)	waxaa sidoo kale ku jira (also includes)	magaca xeryaha (compound name)
bir (iron)	sulfur (sulfur)	oxygen (oxygen)	iron sulfate (iron sulfate)
lithium (lithium)	carbon (carbon)	oxygen (oxygen)	lithium carbonate (lithium carbonate)
potassium (potassium)	nitrogen (nitrogen)	oksijiin (oxygen)	potassium nitrate (potassium nitrate)

Xeryaha ay ku jirto oksijiin (oxygen)

Xeryaha (compounds) kee/kuwee ka kooban yahay oksijiin (oxygen)?

a sulfides (sulfides)

b sulfates (sulfates) ✓

c carbonates (carbonates) ✓

d nitrates (nitrates) ✓

Run mise been?

Haddii bir (metal), aan-bir ahayn (non-metal) iyo oksijiin (oxygen) ay falgalaan (react) oo sameeyaan xar (compound), magaca xaruhu (compound) wuxuu ku dhammaanayaa -ide.



Run



Been



Sabab u sheeg jawaabtaada

a

Marka bir (metal) iyo oksijiin (oxygen) ay ku lug yeeshaan falgal (reaction), xaruhu (compound) wuxuu ku dhammaanayaa -ate.

b

Marka bir (metal), aan-bir ahayn (non-metal) iyo oksijiin (oxygen) ay ku lug yeeshaan falgal (reaction), xaruhu (compound) wuxuu ku dhammaanayaa -ate.



Waa maxay magaca xaraha (compound) la sameeyo marka calcium, carbon iyo oksijiin (oxygen) ay falgalaan (react)?

a

calcium carbonite (calcium carbonite)

b

calcium carbonate (calcium carbonate)



c

carbonate calcium (carbonate calcium)

d

carbon calcate (carbon calcate)



marble chips iyo chalk waxay ka samaysan yihiin calcium carbonate (calcium carbonate)



Hawsha B Xeryaha ay ku jirto oksijiin (oxygen)



Buuxi jadwalka.

magaca birta (metal name)	magaca birta ahayn (non-metal name)	waxaa kaloo ku jira (also includes)	Magaca isku-dhafka (Name of the compound)
bir (iron)	nitrojiin (nitrogen)	oksijiin (oxygen)	
magnesium (magnesium)	oksijiin (oxygen)		
nikel (nickel)	bromiin (bromine)	oksijiin (oxygen)	
naxaas (copper)	kloriin (chlorine)		
		oksijiin (oxygen)	potassium sulfate (potassium sulfate)
			lithium carbonate (lithium carbonate)

Buuxi shaxda. (Complete the table.)

magaca birta (metal name)	magaca birta ahayn (non-metal name)	waxaa kaloo ku jira (also includes)	Magaca isku-darka (compound)
bir (iron)	nitrojiin (nitrogen)	oksijiin (oxygen)	
magnesium	oksijiin (oxygen)		
nikel (nickel)	bromine	oksijiin (oxygen)	
naxaas (copper)	koloriin (chlorine)		
		oksijiin (oxygen)	potassium sulfate
Jawaabaha:			
iron nitrate		magnesium oxide	lithium carbonate

nickel bromate

copper chloride

potassium

sulfur

lithium

kaarboon (carbon)

Naming compounds



Naming metal and non-metal compounds



Compounds including oxygen



Sulfates, carbonates and nitrates

Sulfates, carbonates and nitrates are examples of compounds ending in -ate.

compound ending	general name
sulfate	metal sulfate
carbonate	metal carbonate
nitrate	metal nitrate

Sulfates, carbonates and nitrates

Sulfate, carbonates iyo nitrates waxaa lagu matali karaa astaamo (symbols).

compound ending	compound ending symbol	atoms involved
sulfate	SO ₄	1 × sulfur, 4 × oxygen
carbonate (carbonate)	CO ₃	1 × carbon, 3 × oxygen
nitrate (nitrate)	NO ₃	1 × nitrogen, 3 × oxygen

- copper sulfate waxaa loo qori lahaa CuSO₄
- calcium carbonate waxaa loo qori lahaa CaCO₃
- potassium nitrate waxaa loo qori lahaa KNO₃

Sulfates, carbonates iyo nitrates

Na waa astaanta sodium. Magacow xarunta NaNO_3 .

a

sodium sulfate

b

sodium nitrate



c

sodium carbonate



NaNO_3

Sulfates, carbonates iyo nitrates

Waa maxay dhammaadka qaacidada zinc sulfate?

SO₄ ✓

CO₃

NO₃

Isra waxay qoraysaa xeerar magacaabista xeryahooda (compounds) ay ku jirto oksijiin (oxygen). Dhammaystir ama six fikiradeeda.



Marka bir (metal) falgal (reaction) ku sameyso curiye (element) aan bir ahayn iyo oksijiin (oxygen), xeryaha (compound) wuxuu yeelanayaa magac ku bilaabma -ate.

CuSO₄ waa qaacidada (formula)

_____ wuxuu leeyahay qaacidada
(formula) PbCO₃.

dhammaadka xeryaha (compound ending)	calaamadda dhammaadka xeryaha (compound ending symbol)
sulfate	
	CO ₃
nitrate	

Isra waxay qoraysaa xeerar magacaabista xeryahooda (compounds) ay ku jirto oksijiin (oxygen). Dhammaystir ama six fikiradeeda.



Marka bir (metal) falgal (reaction) ku sameyso bir la'aan (non-metal) iyo oksijiin (oxygen), xeryaha (compound) wuxuu yeelanayaa magac -ate.

CuSO_4 waa qaacidada (formula)

wuxuu leeyahay qaacidada (formula) PbCO_3 .

dhammaadka xeryaha (compound ending)	calaamadda dhammaadka xeryaha (compound ending symbol)
sulfate	
	CO_3
nitrate	

Jawaabaha:

xerye (compound)

SO_4

ku dhammaada

carbonate (kaarboonaayt)

NO_3

Isku dhig foomka (formula) iyo magaca isku-darka (compound).

PbSO_4

lead (leed)

nitrate (nitraat)

NaNO_3

copper
(naxaas)

BaSO_4

potassium
(botashiyaam)

sulfate (sulfaat)

CuCO_3

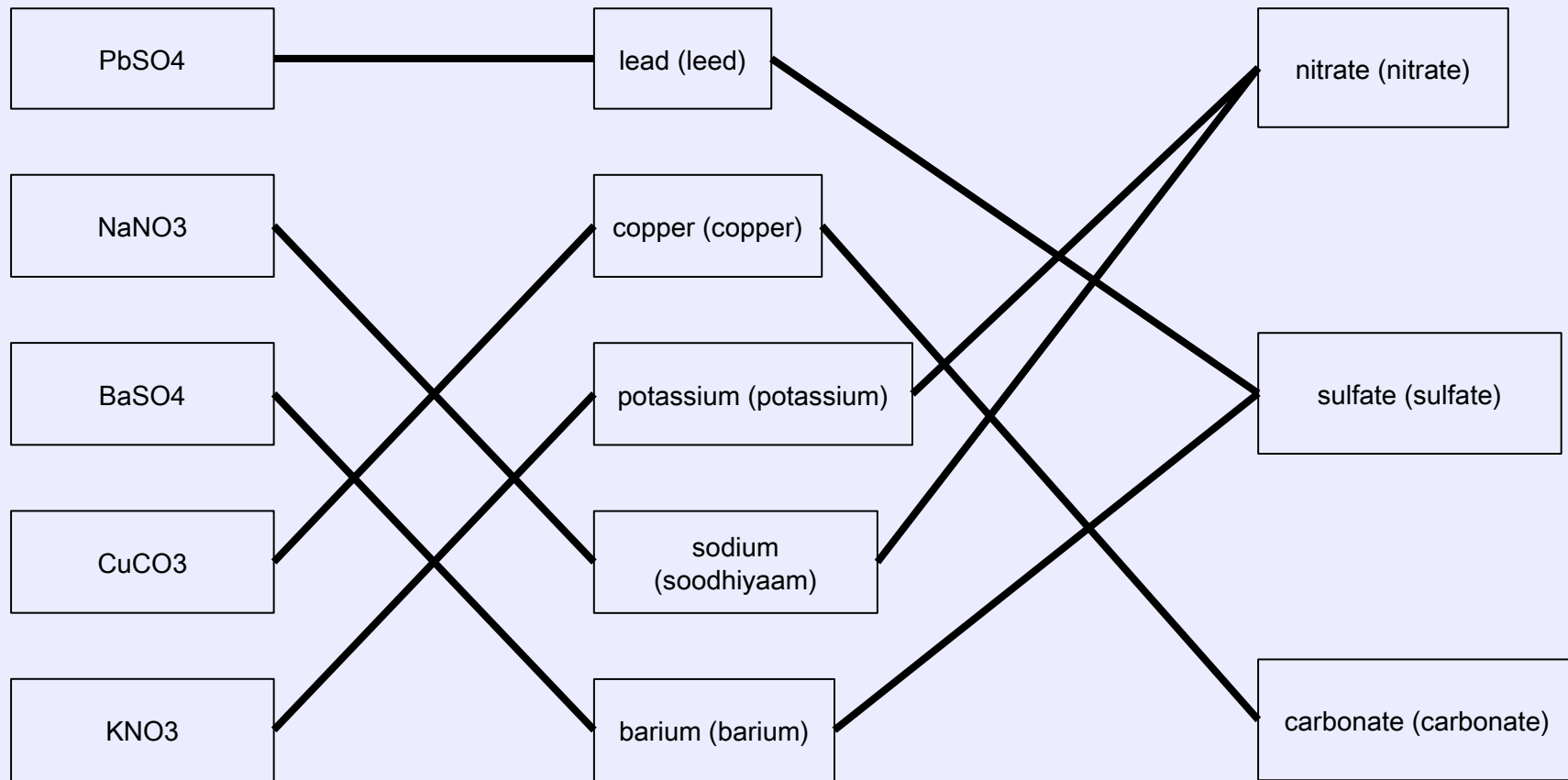
sodium
(soodhiyaam)

KNO_3

barium
(baariyaam)

carbonate
(kaarboonayt)

Hawsha C Sulfates (sulfaato), carbonates (kaarboonayt) iyo nitrates (nitraat)



Soo koobid Magacaynta iskudhafka (compounds)

Magaca iskudhafka bir-furan ee fudud wuxuu ku dhamaadaa -ide si loo muujiyo in isku-xidhku dhacay.

Magaca iskudhafka bir-furan ee fudud wuxuu ku dhamaadaa -ate haddii oksijiin (oxygen) sidoo kale ku lug leedahay.

Iskudhafka birlaha (metals) ee ku xidhan -CO_3 waxaa loo yaqaan carbonates-ka birlaha (metal carbonates).

Iskudhafka birlaha (metals) ee ku xidhan -SO_4 waxaa loo yaqaan sulfates-ka birlaha (metal sulfates).

Iskudhafka birlaha (metals) ee ku xidhan -NO_3 waxaa loo yaqaan nitrates-ka birlaha (metal nitrates).