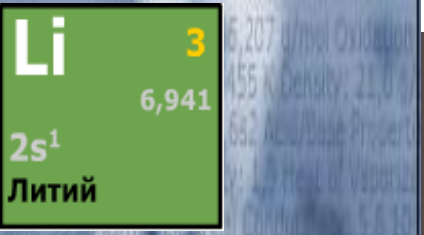
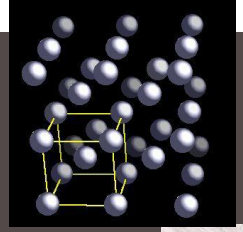
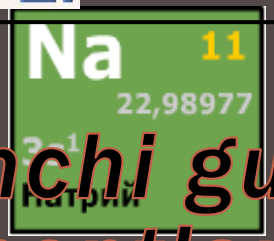
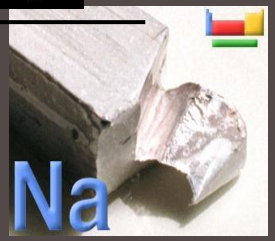
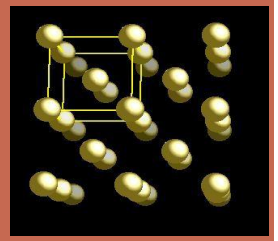






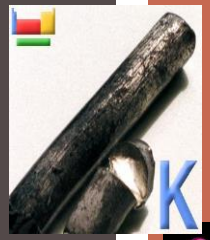


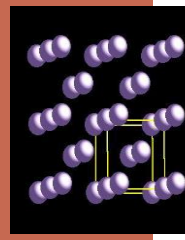


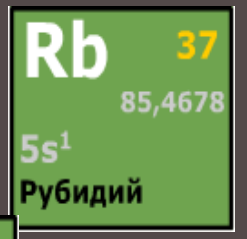
Birinchi guruh elementlari (Ishqoriy metallar)

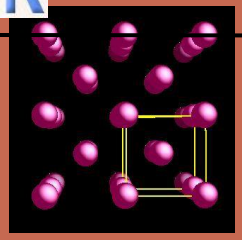
Mavzu rejasi

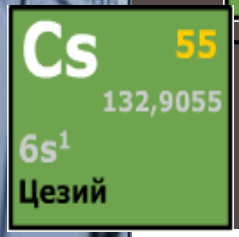
Elementlar ning umumiy tavsifi
Elementlar ning tabiatda tarqalishi
Elementlar ning Olinishi
Fizik hossalari
Kimyoviy hossalari







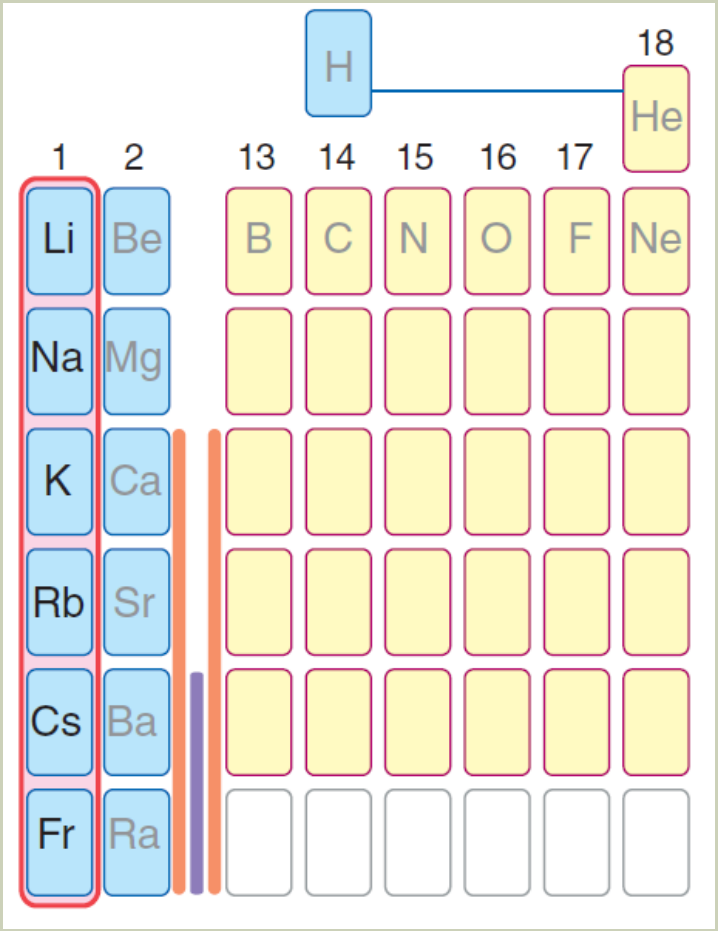


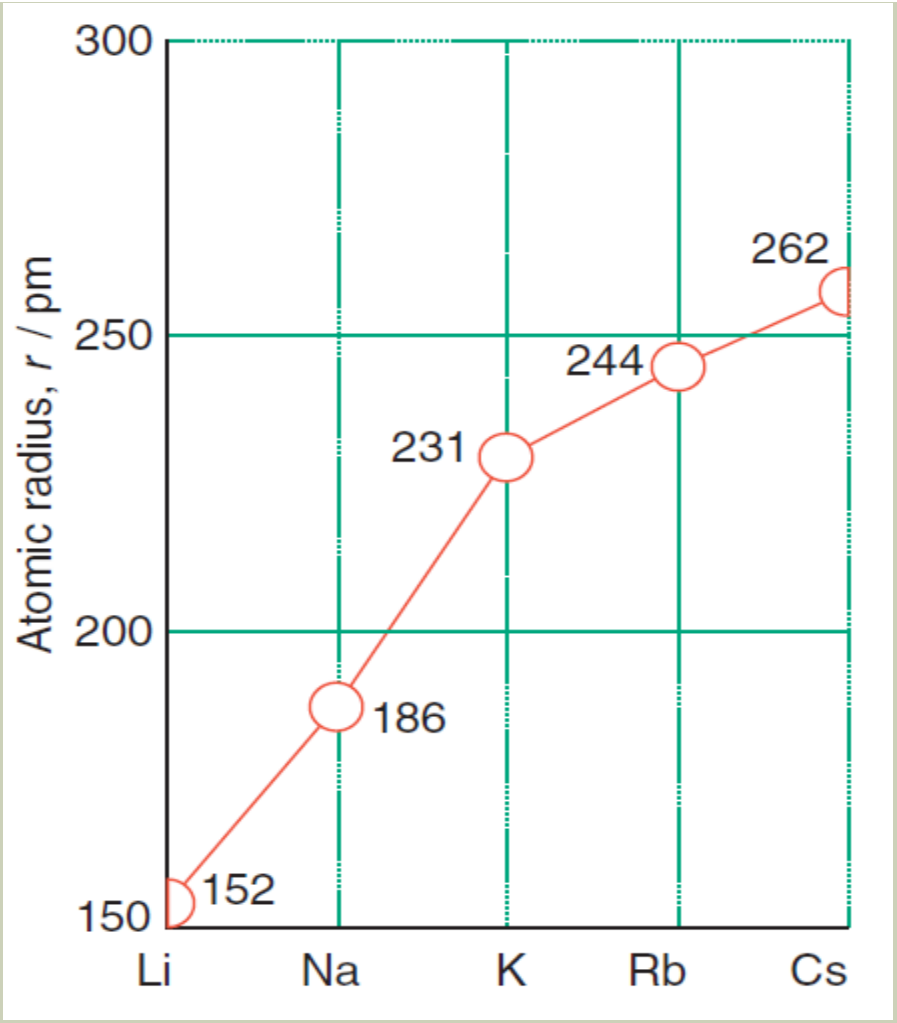


BIRINCHI GURUX ELEMENTLARI UMUMIY HOSSALARI

Element	Ar	Elektron qavati	Tashqi qavatidagi elektroni	Atom radiusi	Kimyoviy faolligi	Qaytaruvchilik hossasi
Li	7	))	$2s^1$	↓ ortadi	↓ ortadi	↓ ortadi
Na	23	)))	$3s^1$			
K	39	))))	$4s^1$			
Rb	85	)))))	$5s^1$			
Cs	133	))))))	$6s^1$			
Fr	[223]	)))))))	$7s^1$			

Atom radiusini ortib borish grafigi





TABIATDA TARQALISHI VA OLINISHI

NaCl –osh (tosh) tuzi

$Na_2SO_4 \cdot 10H_2O$ – glauber tuzi

$KCl \cdot NaCl$ – silvinit

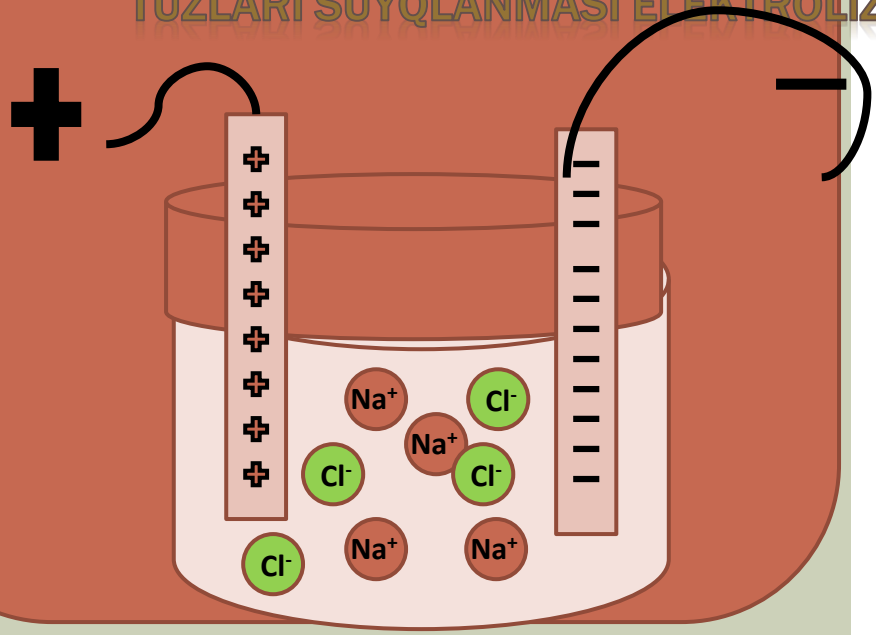
$KCl \cdot MgCl_2 \cdot 6H_2O$ – karnalit




Tosh tuz	Glauber tuzi	Silvinit	Karnallit

OLINISHI

TUZLARI SUYQLANMASI ELEKTROLIZ



$NaCl \rightarrow Na^+ + Cl^-$

$2NaCl \rightarrow 2Na + Cl_2$

FIZIK XOSSALARI

Seziy ampulada

Suyuq tem 28.4 kaftda eriydi

Ishqoriy metallar

Tez suyuqlanuvchan

yumshoq

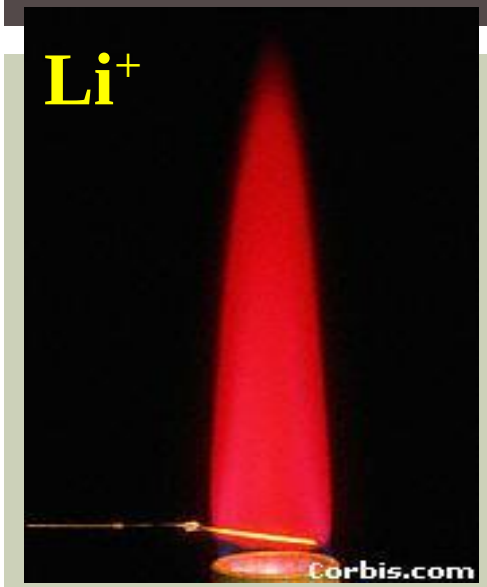
Kumushrang - oq

Rubidiy ampulada

Kaliy yumshoq metall

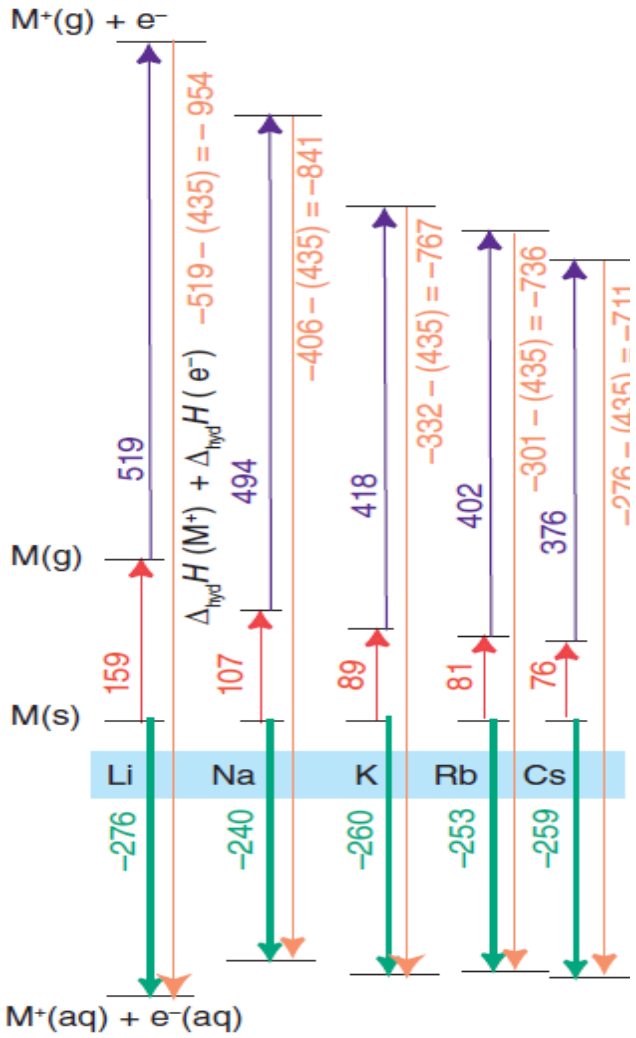
Natriy yumsoq pichoq bilan kesiladi

Alanga Rangini bo'yashi



Li	Na	K	Rb	Cs
Crimson	Yellow	Red to violet	Violet	Blue

AGREGAT HOLATLARIDAGI VA GALOGENLI BIRIKMALARINI ENTALPIYA O'ZGARISHLARI



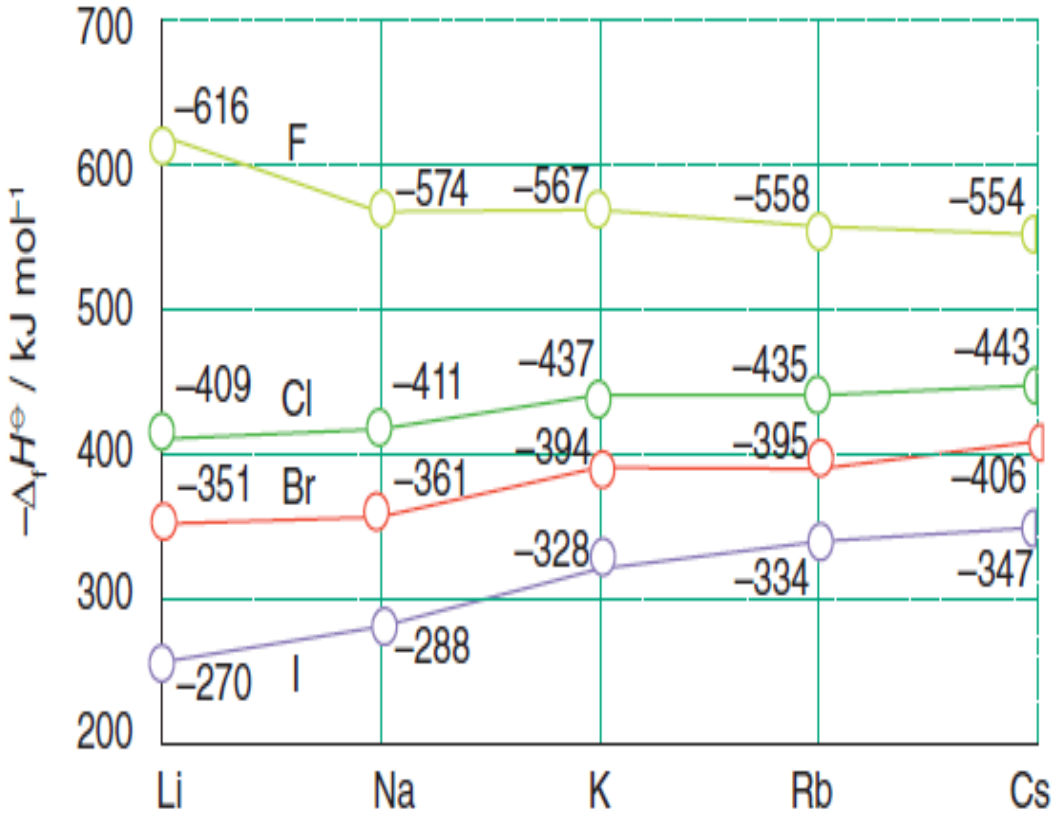


Figure 11.6 The standard enthalpies of formation of the halides of Group 1 elements at 298 K.

KIMYOVIY XOSSALARI

- faqat Li: $2Li + 2C \rightarrow Li_2C_2$,
- $2Э + H_2 \rightarrow 2ЭH$,
- $2Э + Г_2 \rightarrow 2ЭГ$ (Г = F, Cl, Br, I),
- $4Li + O_2(mo'l) \rightarrow 2Li_2O$,
- $2Na + O_2(mo'l) \rightarrow Na_2O_2$,
- $Э + O_2(mo'l) \rightarrow ЭO_2$ (Э = K, Rb, Cs),
- $3Э + P \rightarrow Э_3P$,
- $6Э + N_2 \rightarrow 2Э_3N$ (Li sovuqda),
- $2Э + S \rightarrow 2Э_2S$,
- $Э + S \rightarrow Э_2S_n$ [n_{max} = 2(Li), 5(Na), 6(K, Rb, Cs)],
- Э + Me → qotishma va intermetallar.

Kimyoviy xossalari

- $2Э + 2HCl \rightarrow 2ЭCl + H_2$,
- $2Э + 2H_2O \rightarrow 2ЭOH + H_2$,
- $2Э + H_2SO_4 \rightarrow Э_2SO_4 + H_2$,
- $4Э + 6HNO_{3(kons)} \rightarrow 4ЭNO_3 + N_2O + 3H_2O$,
- $2Э + 2ЭOH \rightarrow 2Э_2O + H_2$,
- $2Э + 2C_2H_5OH \rightarrow 2C_2H_5OЭ + H_2$,
- $2Э + 2NH_{3(g)} \rightarrow 2ЭNH_2 + H_2$,
- metal amidlari
- $2Э + 2NH_{3(suyuq)} \xrightarrow{katalizator - Pt, Fe^{3+}} 2ЭNH_2 + H_2$,

$$Li_2O(s) + H_2O(l) \rightarrow 2\ Li^+(aq) + 2\ OH^-(aq)$$

$$Na_2O_2(s) + 2\ H_2O(l) \rightarrow 2\ Na^+(aq) + 2\ OH^-(aq) + H_2O_2(aq)$$

$$2\ KO_2(s) + 2\ H_2O(l) \rightarrow 2\ K^+(aq) + 2\ OH^-(aq) + H_2O_2(aq) + O_2(g)$$

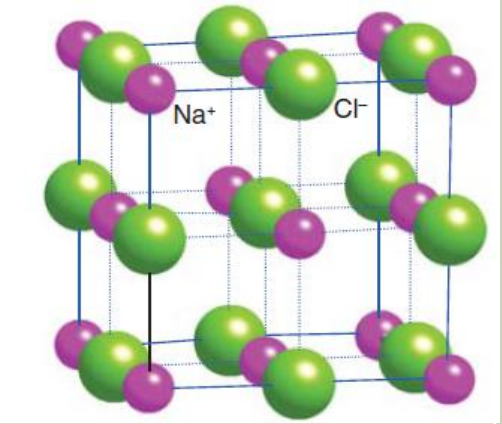
ISHLATILISHI

Natriy xlorning (0,9%) tibbiyotda fizologik eritma sifatida

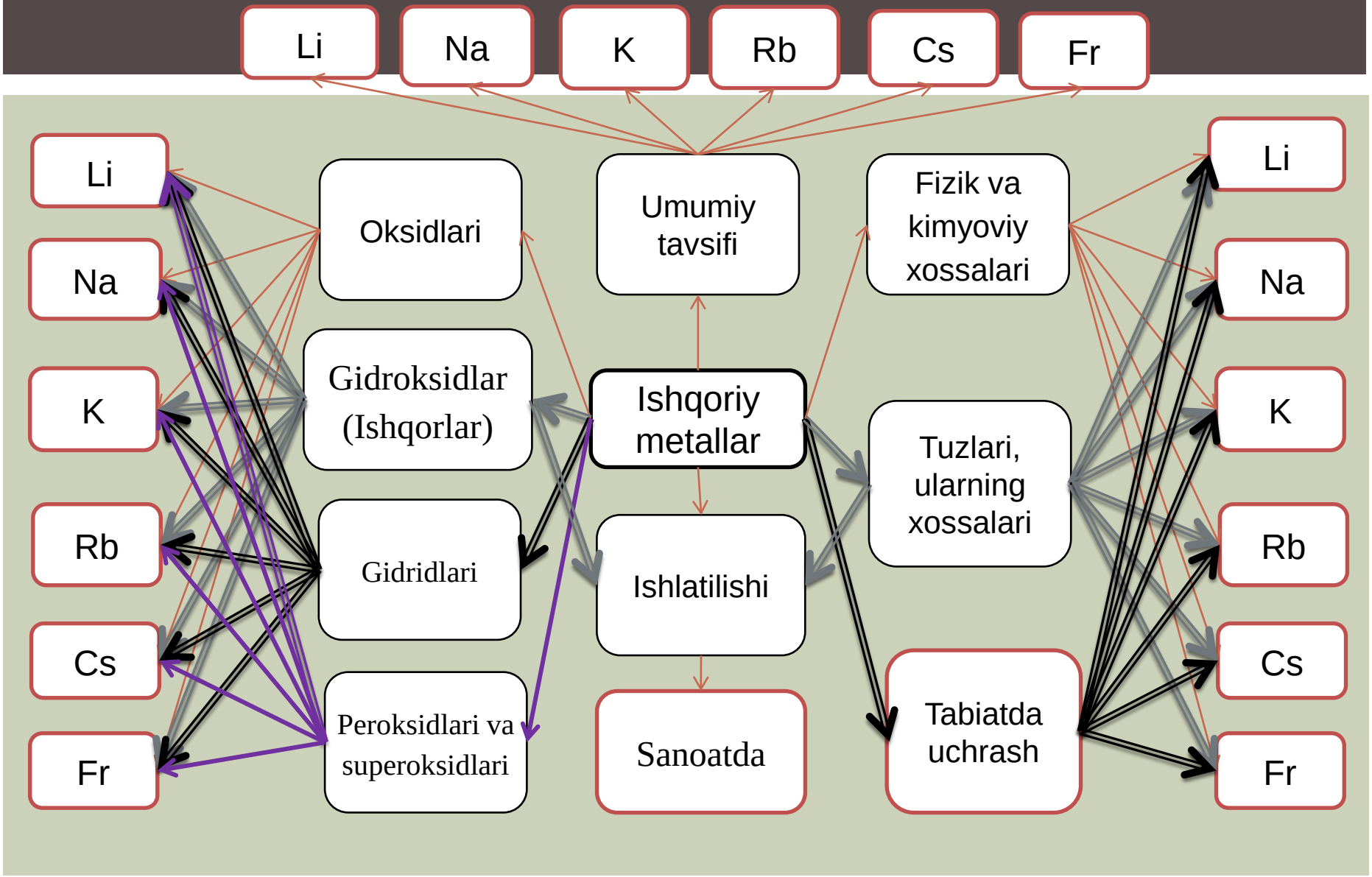
Ichimlik sodasi pishiriq pishirishga va osh tuzi oziq ovqat sanoatida

Kaliyli birikmalar o’gitlar sifatida

Li 10 %
Na 0,08%
K 0,23%
Rb 10 %
Cs 10 %



Ishqoriy metallarga oid ma’lumotlar asosida klaster



TOPSHIRIQNI BAJARING. REAKSIYA TENGLAMASINI YOZING.

1 variant

1). $NaOH + H_2SO_4 =$

2). $NaOH + SO_3 =$

3). $NaOH + CuSO_4 =$

4). $NaOH +$ fenolftalein =

2 variant

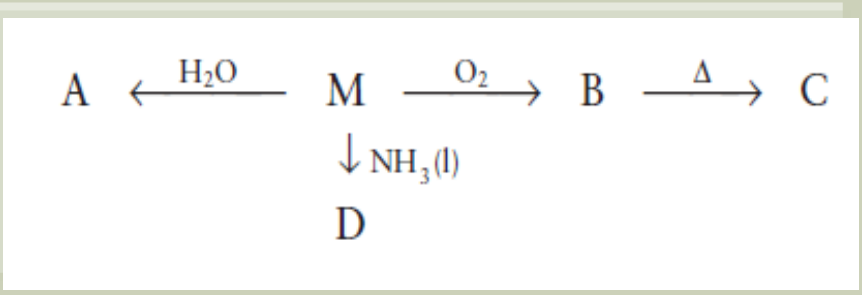
1). $KOH + HNO_3 =$

2). $KOH + N_2O_5 =$

3). $KOH + Cu(NO_3)_2 =$

4). $KOH +$ lakmus =

3 Variant M=Li,Cs



4 Variat

(a) $CH_3Br + Li \rightarrow$

(b) $MgCl_2 + LiC_2H_5 \rightarrow$

(c) $C_2H_5Li + C_6H_6 \rightarrow$