

Chemical Rkn of Halohydrocarbons(R-X)

Nucleophilic Substitution of Alkyl Halides (R-X)



Reagent	Nucleophile (Nu ⁻)	Substitution product R-Nu	Class of main product
NaOH (KOH)	HO ⁻	ROH	Alcohol
H ₂ O	H ₂ O	ROH	Alcohol
NaOR'	R'O ⁻	ROR	Ether
NaI	I ⁻	R-I	Alkyl iodide
NH ₃	NH ₃	RNH ₂	Primary amine
RNH ₂	R'NH ₂	RNHR'	Sec. amine
RR'NH	R'R''NH	RNRR'	Tert. amine
KCN	C≡N ⁻	RCN	Nitrile (cyanide)
AgCN	Ag-CN:	RNC (isocyanide)	Isonitrile
KNO ₂	O=N-O	R-O-N=O	Alkyl nitrite
AgNO ₂	Ag-O-N=O	R-NO ₂	Nitroalkane
R'COOAg	R'COO ⁻	RCOOR	Ester
LiAlH ₄	H ⁻	RH	Hydrocarbon
R-M ⁺	R ⁻	RR	Alkane