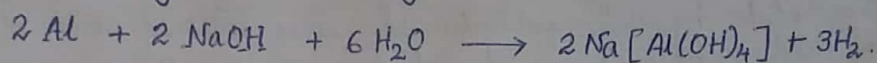
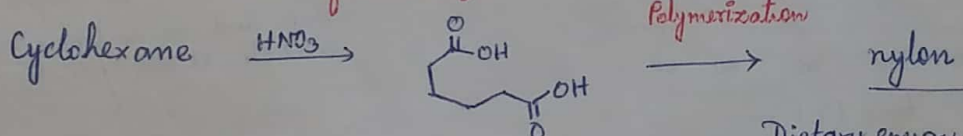
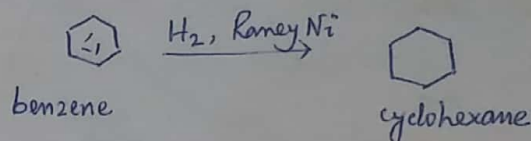


Activation: the alloy is treated with concentrated NaOH (usually 5.0M NaOH) solution. Leaching reaction is given as:



Applications: (a) In industrial process: (i) Reduction of benzene to cyclohexane

[platinum group elements, which are expensive, may be used to perform the same transformation).



Dietary energy
2.6 kcal/g
Sorbitol

4.0 kcal/g
carbohydrate

(ii) Dextrose to sorbitol: (Reduction)

(iii) Reduction of nitro compounds:

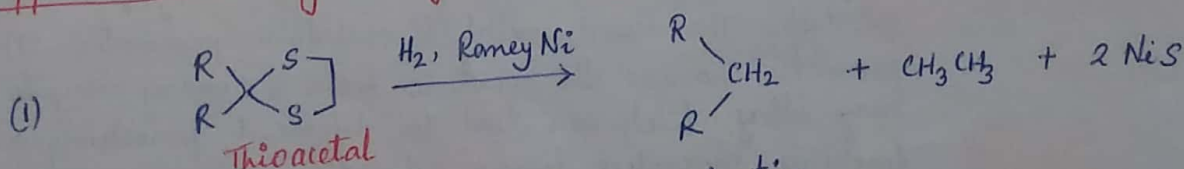
e.g., 2,4-dinitrotoluene to 2,4-tolenediamine

(iv) Nitrile to amines, for example, stearonitrile to stearamine.

(v) Olefins to paraffin, for example, Sulfolene to sulfolane.

(vi) acetylene to paraffins, for example 1,4-butyne diol to 1,4-butanediol.

(b) Application in organic synthesis: (for desulfurization):



This is called Mozingo reduction.

(2) Desulfurization of thiophene:

