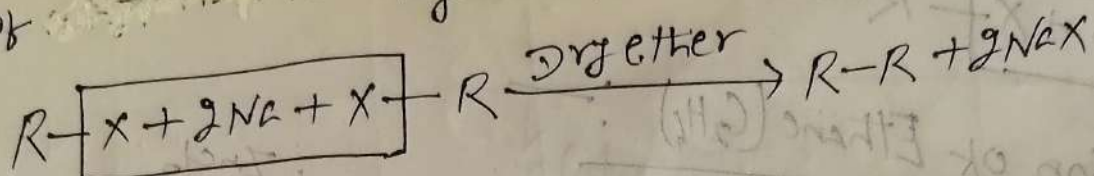


③

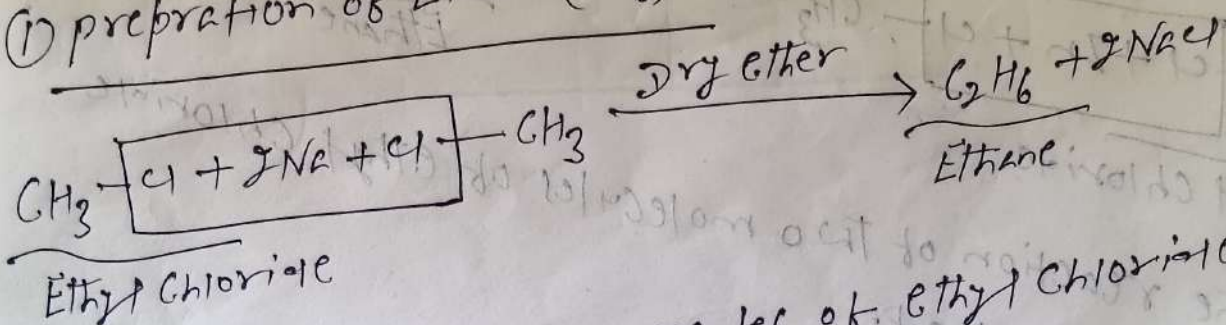
preparation of Alkane

Woultz Reaction

By the reaction of alkyl halide with sodium in the presence of dry ether, alkane is obtained:

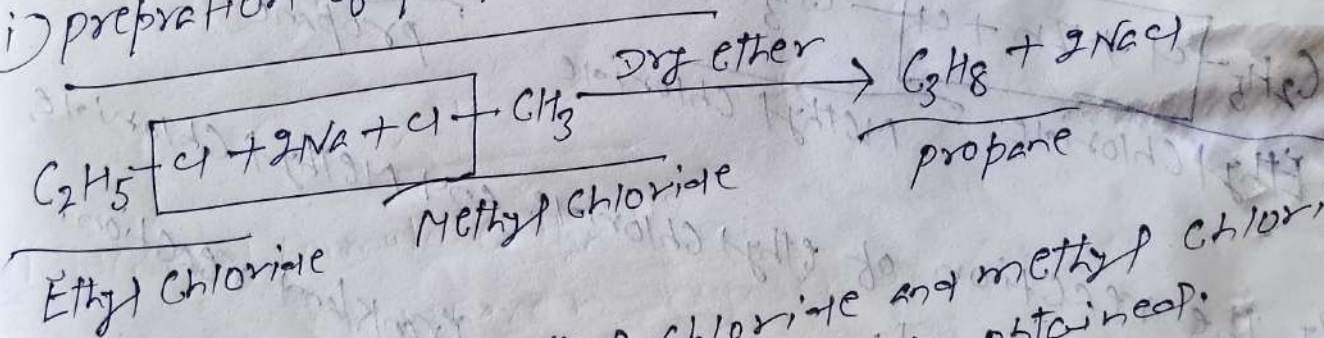


(i) preparation of Ethane (C_2H_6):—



By the reaction of two molecules of ethyl chloride in the presence of dry ether, Ethane is obtained.

(ii) preparation of propane (C_3H_8):—



By the reaction of ethyl chloride and methyl chloride in the presence of dry ether, propane is obtained.

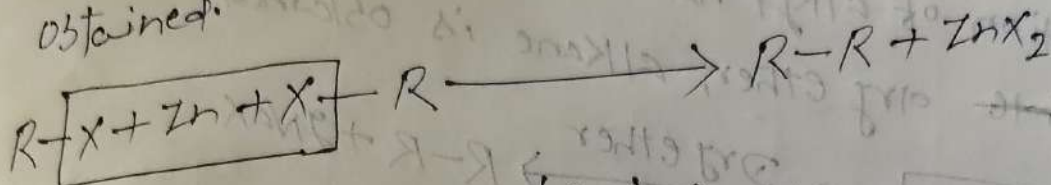
Limitation

- (i) Methane can not prepared by Woultz reaction.
- (ii) The reaction fails with tert. Halo Alkane.
- (iii) The reaction suitable for symmetrical Alkane.

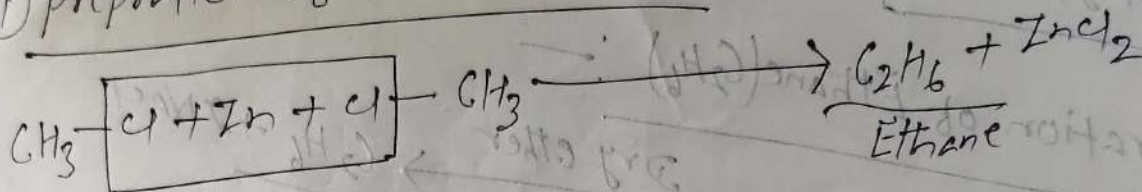
(4)

Frankland Reaction

By the reaction of alkyl halide with Zinc, alkane is obtained.



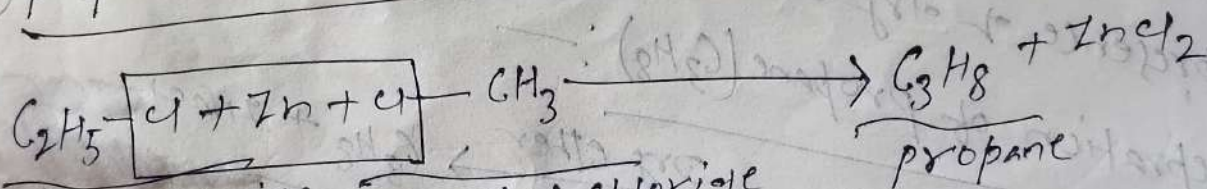
(i) preparation of Ethane (C_2H_6) :-



Ethyl Chloride

By the reaction of two molecules of ethyl chloride, Ethane is obtained.

(ii) preparation of propane (C_3H_8) :-



Ethyl Chloride

Methyl Chloride

By the reaction of ethyl chloride and methyl chloride, propane is obtained.

Note :- Methane Can not prepared by Frankland reaction.