AROMATIC COMPOUNDS

04-05-2020 (Lecture-11) D-II (S) ONLY

TOPIC - PREPARATION, PROPERTIES AND USES OF TOLUENE.

TOLUENE

Deg-II (Sub.) only

Chapter-4, Group-'C'

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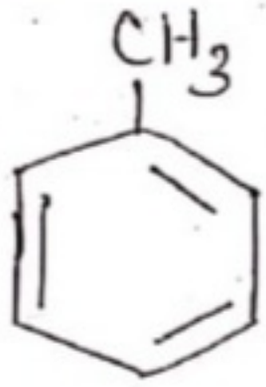
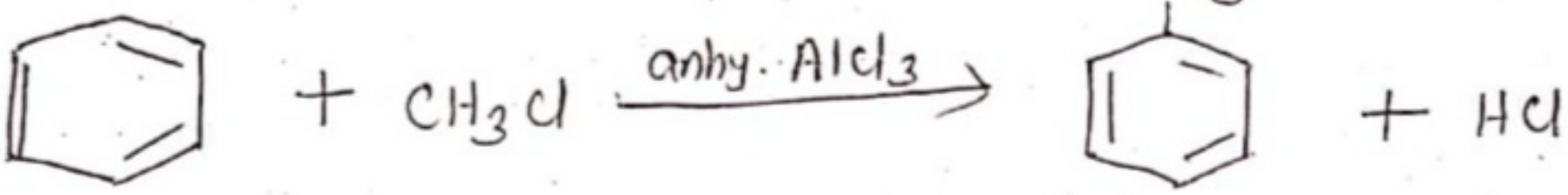


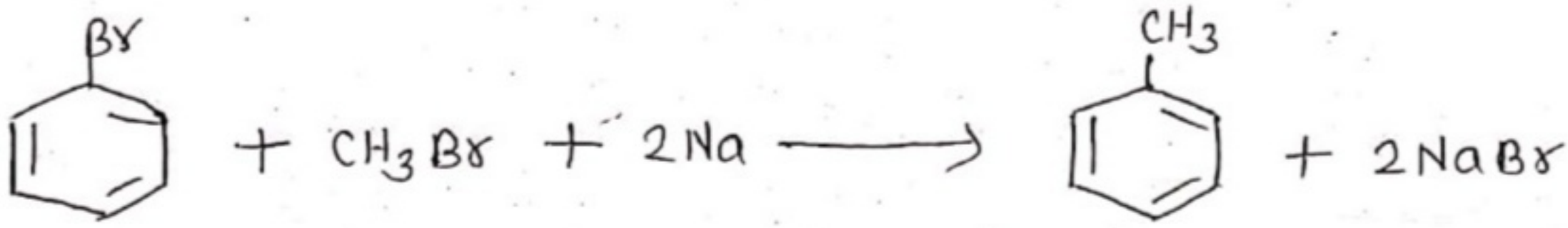
PREPARATION

1. From Benzene by Friedel craft's Alkyalation Reaction :-



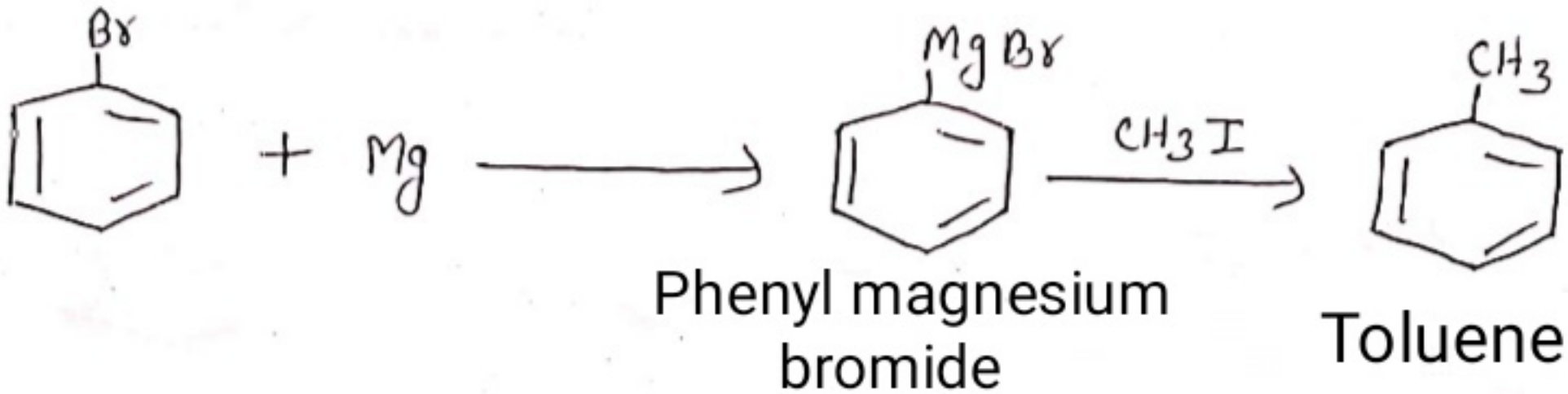
Toluene

2. By using Wurtz-Fittig Reaction



Toluene

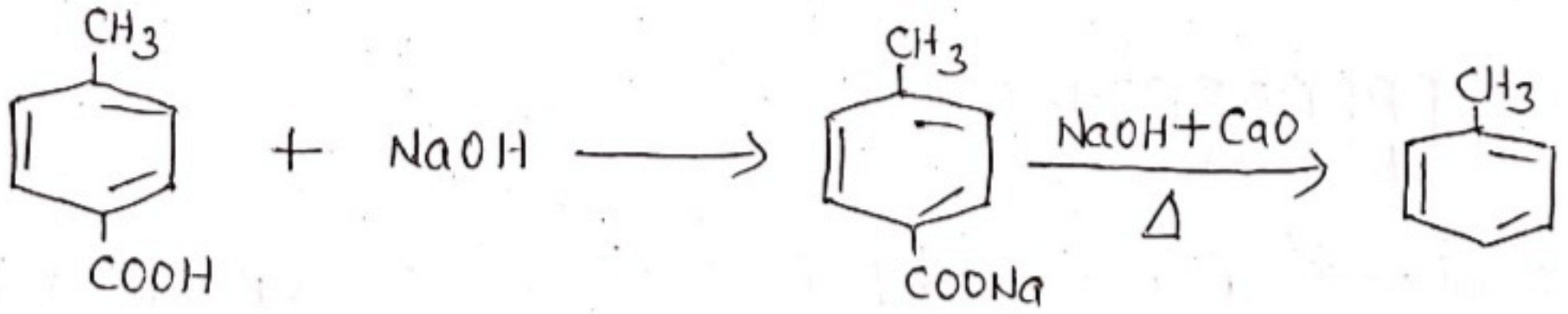
3. By using Grignard Reagents



Phenyl magnesium bromide

Toluene

4. By Decarboxylation of p-toluic (Acid)



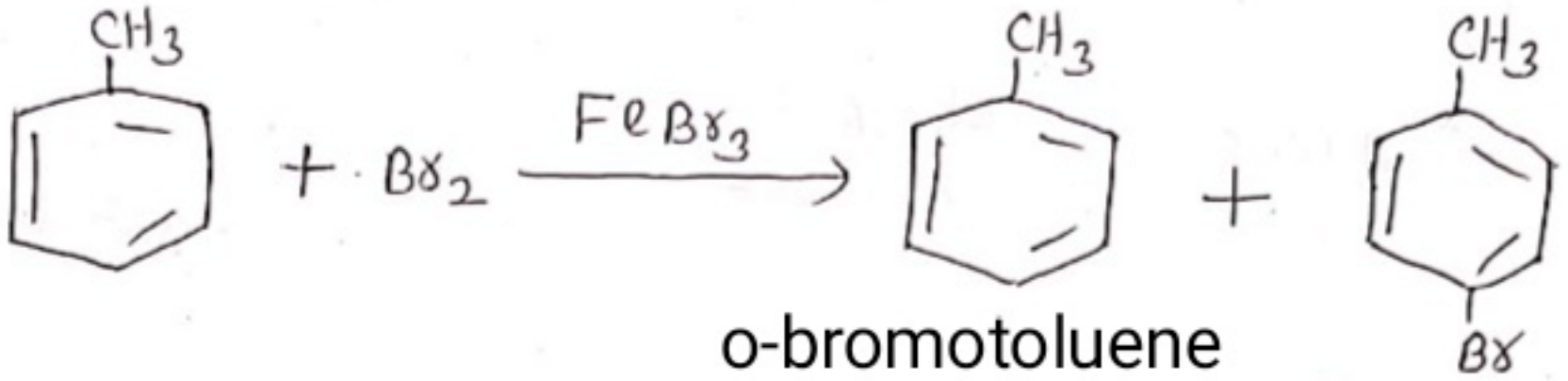
PHYSICAL PROPERTIES

It is colourless, water insoluble liquid with the smell associated with paint thinners.

CHEMICAL PROPERTIES

1. Electrophilic Substitution Reaction

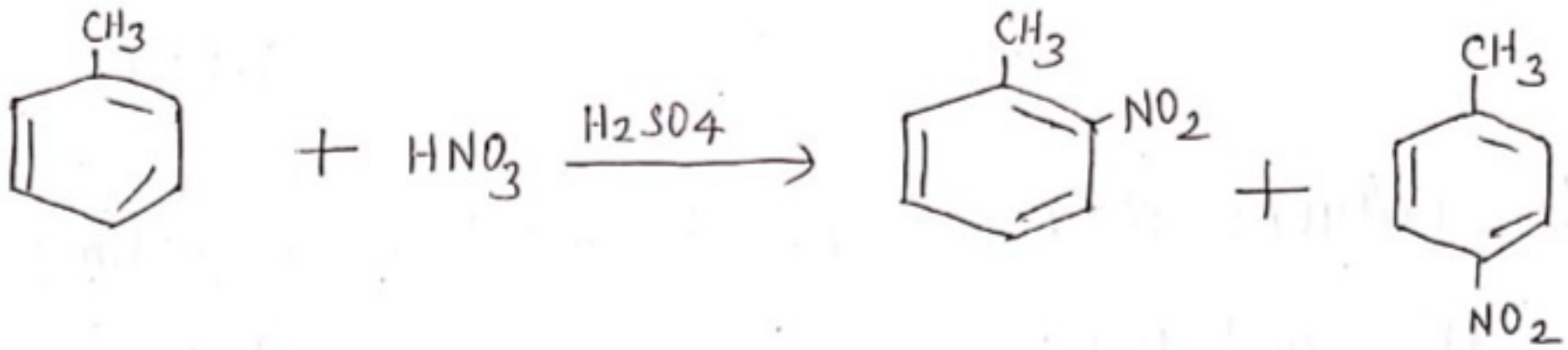
BROMINATION



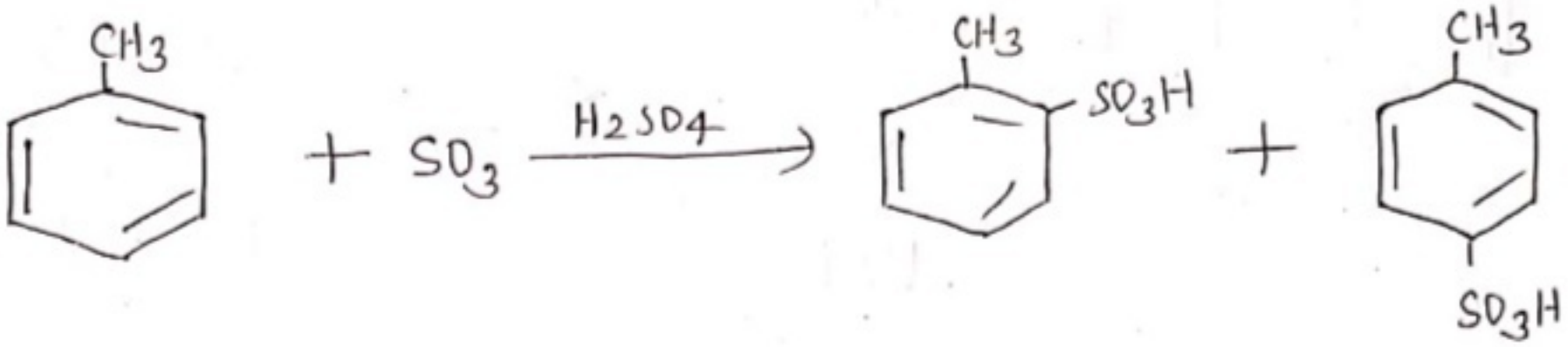
o-bromotoluene

p-bromotoluene

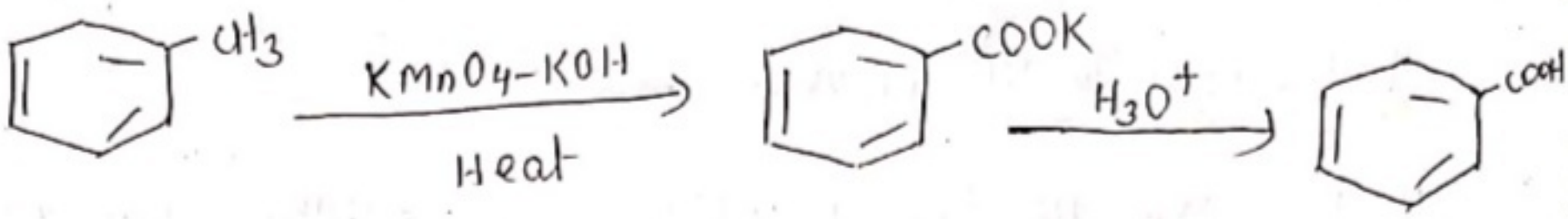
NITRATION



SULPHONATION



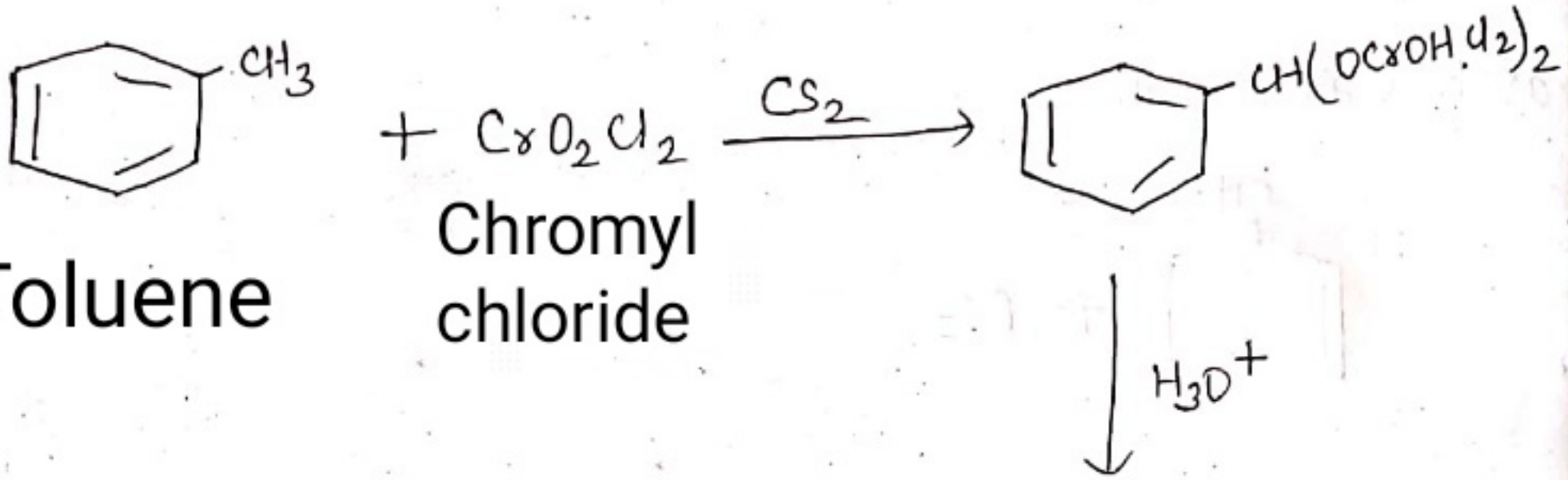
2.



Benzoic Acid

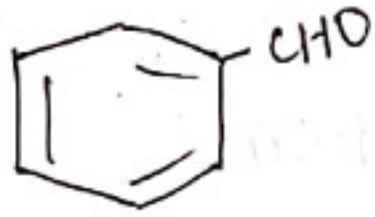
OXIDATION REACTION

3. Etard Reaction



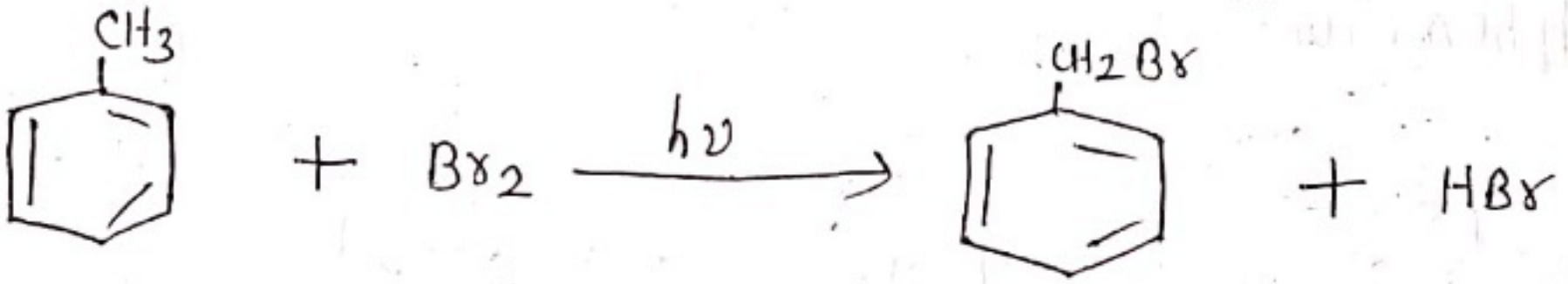
Toluene

Chromyl chloride



Benzaldehyde

4. Toluene may also be brominated by treating with HBr and H_2O_2 in the presence of light.



USES

1. Toluene is used as solvent in paints, lacquers, glue, nail polish remover etc.

2. It is used in the printing and leather tanning processe

3. It is also used as fullerence indicator.

TOLUENE COMPLETED.