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19/ENG06/003

CHM102

1 HCOOH - Methanoic acid

$\text{HOOCCH}_2\text{CH}_2\text{CH}_2\text{COOH}$ - Butane 1,4-Dioic Acid

$\text{CH}_3\text{CH}_2\text{CH}_2\text{COOH}$ - Butanoic acid

$\text{HO}_2\text{CCO}_2\text{H}$ - Ethanedioic acid

$\text{CH}_3(\text{CH}_2)_4\text{COOH}$ - 6-oxohexanoic acid

$\text{CH}_3\text{CH}=\text{CHCH}_2\text{CH}_2\text{COOH}$ - 3-methylbutanoic acid / 4-hexenoic acid

2. Carboxylic acids have high boiling points compared to other substances of comparable molar mass.

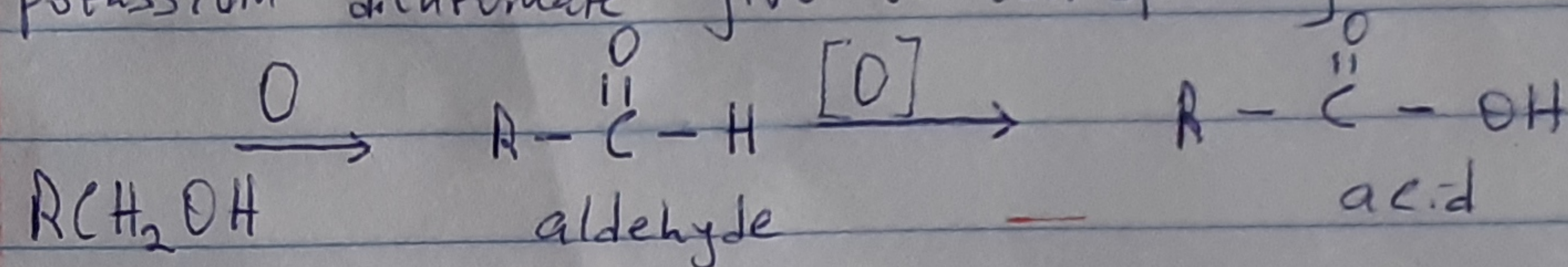
Carboxylic acids having 1-4 carbon atoms completely miscible with water. Solubility decreases with molar mass.

Carboxylic acids are colorless liquids

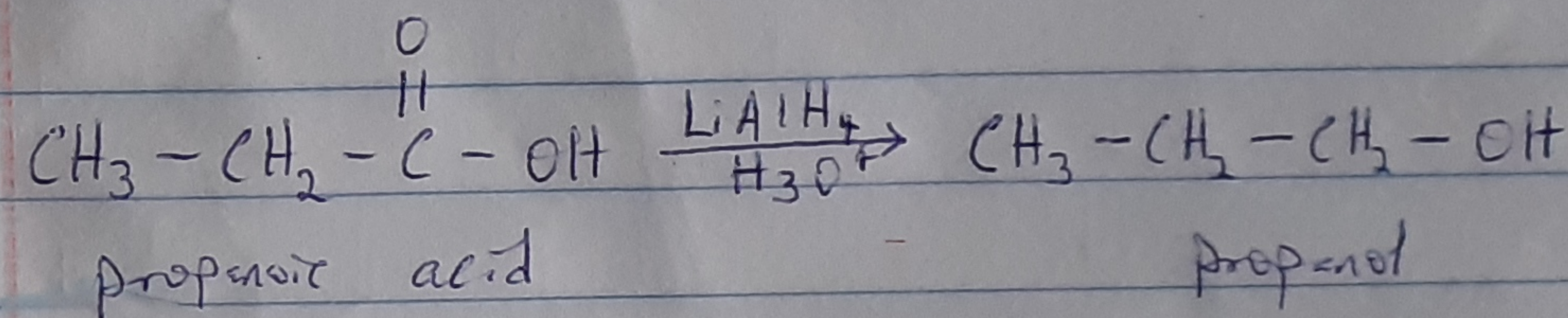
3 Acids chlorides undergo reaction with a base which leads to carboxylic acid.

Hydrolysis of acid chlorides with water produces carboxylic acids.

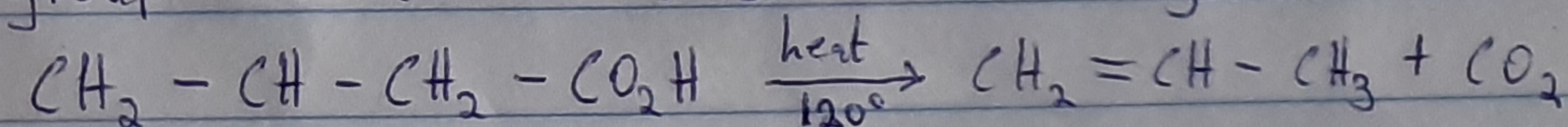
4. Primary alcohols/aldehydes on oxidation with Sodium or potassium dichromate give the corresponding carboxylic acids



5: Reduction of carboxylic acid

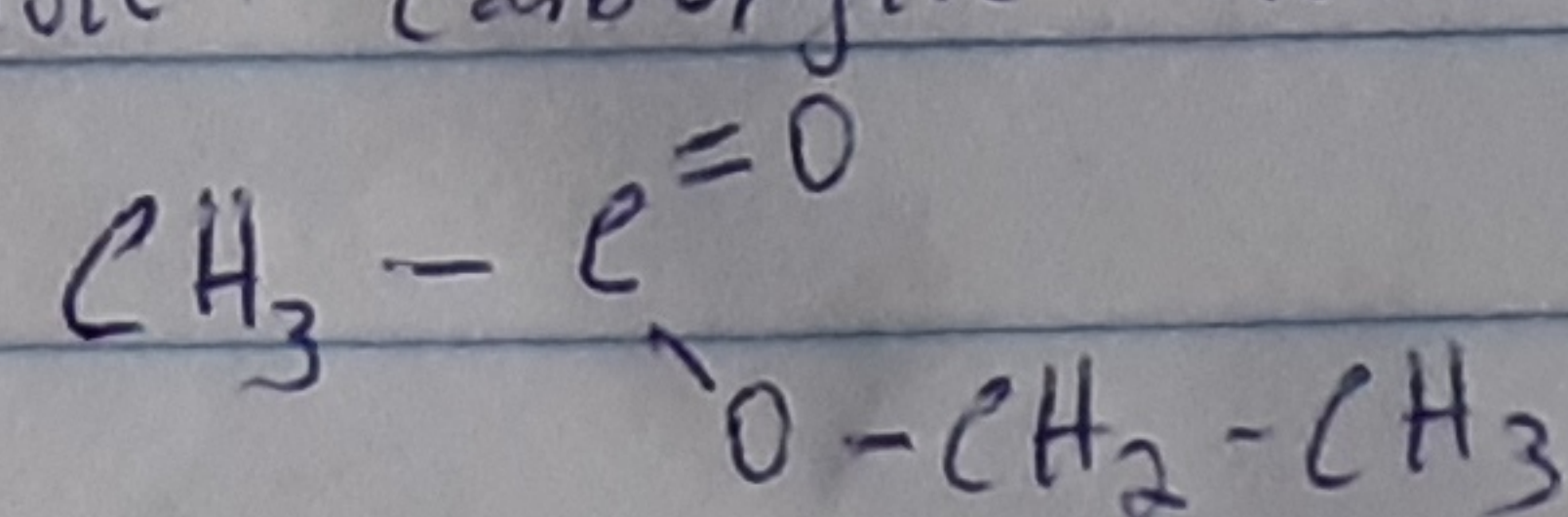


Decarboxylation is a chemical reaction that removes a carboxyl group and releases carbon dioxide. Eg

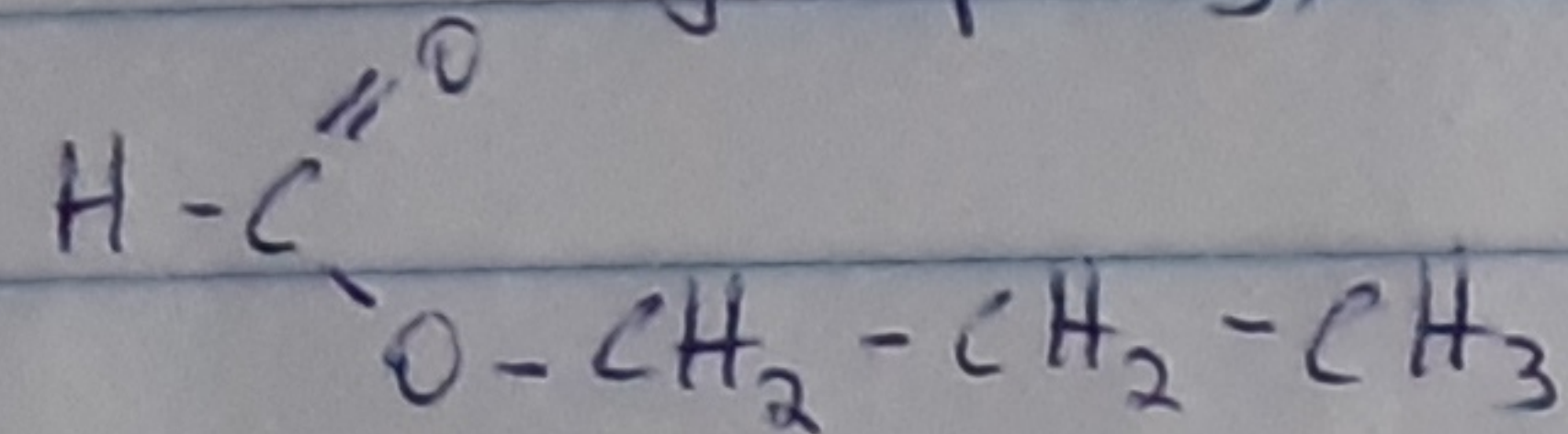


Esterification is the reaction between alcohols and carboxylic acids to make esters. Esters are derived from carboxylic acids

Note: Carboxylic acids contain COOH group. Eg,



Ethyl ethanoate



Propylmethanoate