

Edexcel IGCSE Chemistry

Topic 4: Organic chemistry Carboxylic acids

Notes









4.34 (chemistry only) know that carboxylic acids contain the functional group —COOH

4.35 (chemistry only) understand how to draw structural and displayed formulae for unbranched-chain carboxylic acids with up to four carbon atoms in the molecule, and name each compound

• First four members are: methanoic acid, ethanoic acid, propanoic acid and butanoic acid

| carboxylic acid | structural formula | displayed formula |
|-----------------|--|--------------------------------------|
| methanoic acid | НСООН | НОН |
| ethanoic acid | CH₃COOH | H H − C − C = O I I H O − H |
| propanoic acid | CH ₃ CH ₂ COOH | H H O H |
| butanoic acid | CH ₃ CH ₂ CH ₂ COOH | H H H O H-C-C-C-C H H H OH |

4.36 (chemistry only) describe the reactions of aqueous solutions of carboxylic acids with metals and metal carbonates

- Dissolve in water to produce acidic solutions
- React with metal carbonates to produce a salt + carbon dioxide(g) (bubbles are formed / effervesces)
- React with more reactive metals to produce a salt + hydrogen

4.37 (chemistry only) know that vinegar is an aqueous solution containing ethanoic acid

