Organic Chemistry

Major Topics

- Drawing / Naming Compounds
- Isomers
- Reactions

You Should Know...

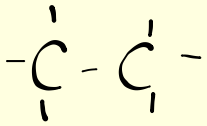
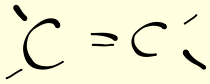
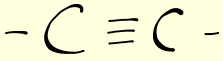
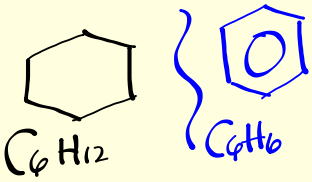
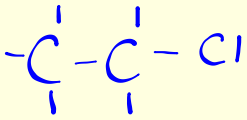
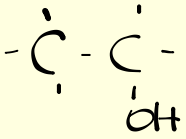
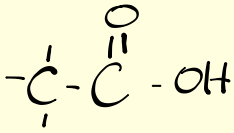
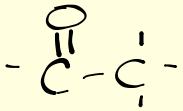
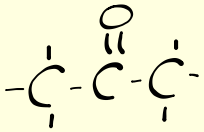
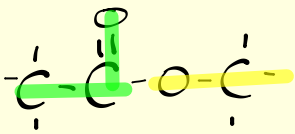
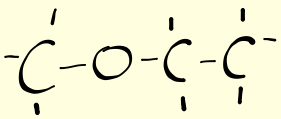
- General formulas of alkanes, alkenes, alkynes, and cyclic compounds
- Aromatic compounds
- Pi bonds
- Characteristics of organic compounds

$H_2SO_4 \longrightarrow 2H^+ + SO_4^{2-}$

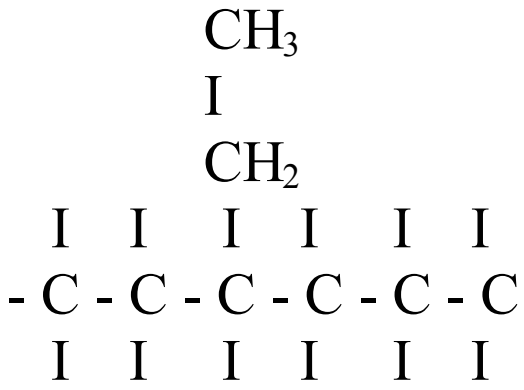
0.23 M 0.46M

pH = 0.34

Families of Organic Compounds (p.294)

Alkanes	ethane	
Alkenes	ethene	
Alkynes	ethyne	
Aromatics and Cyclic Compounds	cyclohexane	
Organic Halides	chloroethane	
Alcohols	ethanol	
Carboxylic Acids	ethanoic acid	
Aldehydes	ethanal	
Ketones	propanone	
Esters	methyl ethanoate	
Ethers	ethylmethyl ether	

Draw ethyl-2,4-dimethylpentane



Naming Hints:

- List branches alphabetically
- Location of multiple bond takes precedence over branch
- Esters - name alcohol part, then carboxylic acid part

Ex. ethanoic acid + methanol --->

Isomers

Name and draw all isomers for the following:

C_6H_{14} → C_nH_{2n+2}

↳ single bonds

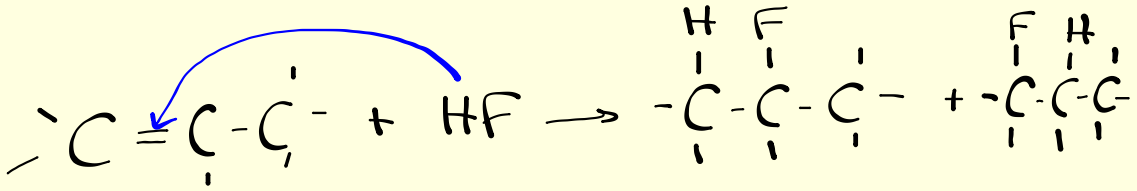
Name and draw all isomers for the following:

C_5H_{10}

Reactions

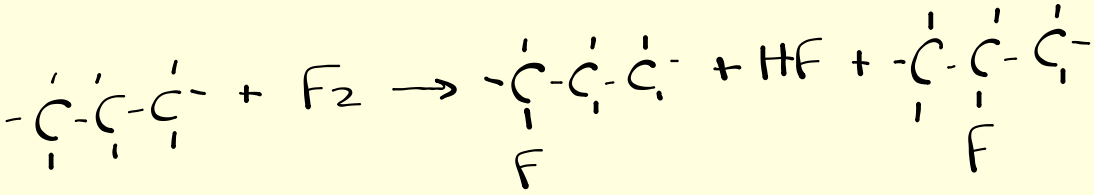
Addition

alkene/alkyne + H_2 or HX or X_2



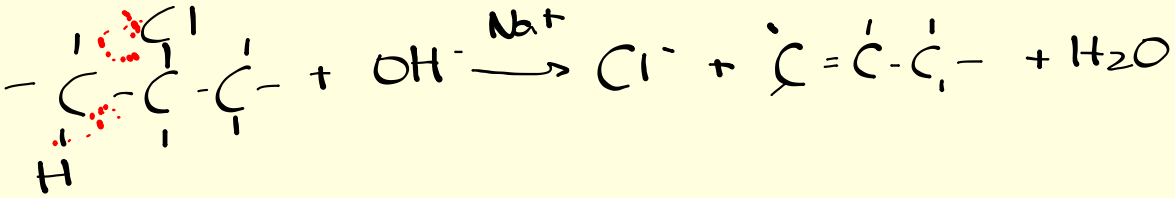
Substitution

alkane/aromatic + halogen



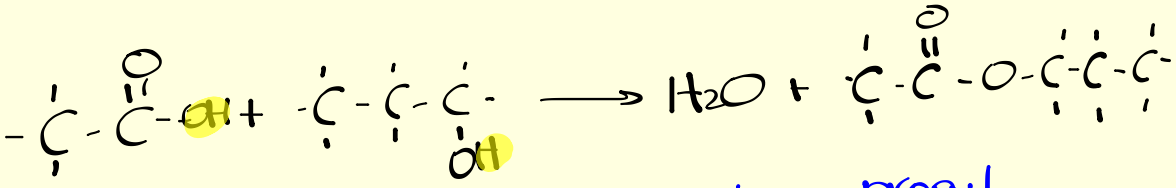
Elimination

alkyl halide + OH-
alcohol + acid



Esterification

carboxylic acid + alcohol



ethanoic acid + 1-propanol → water + propyl ethanoate

Cracking

Formation