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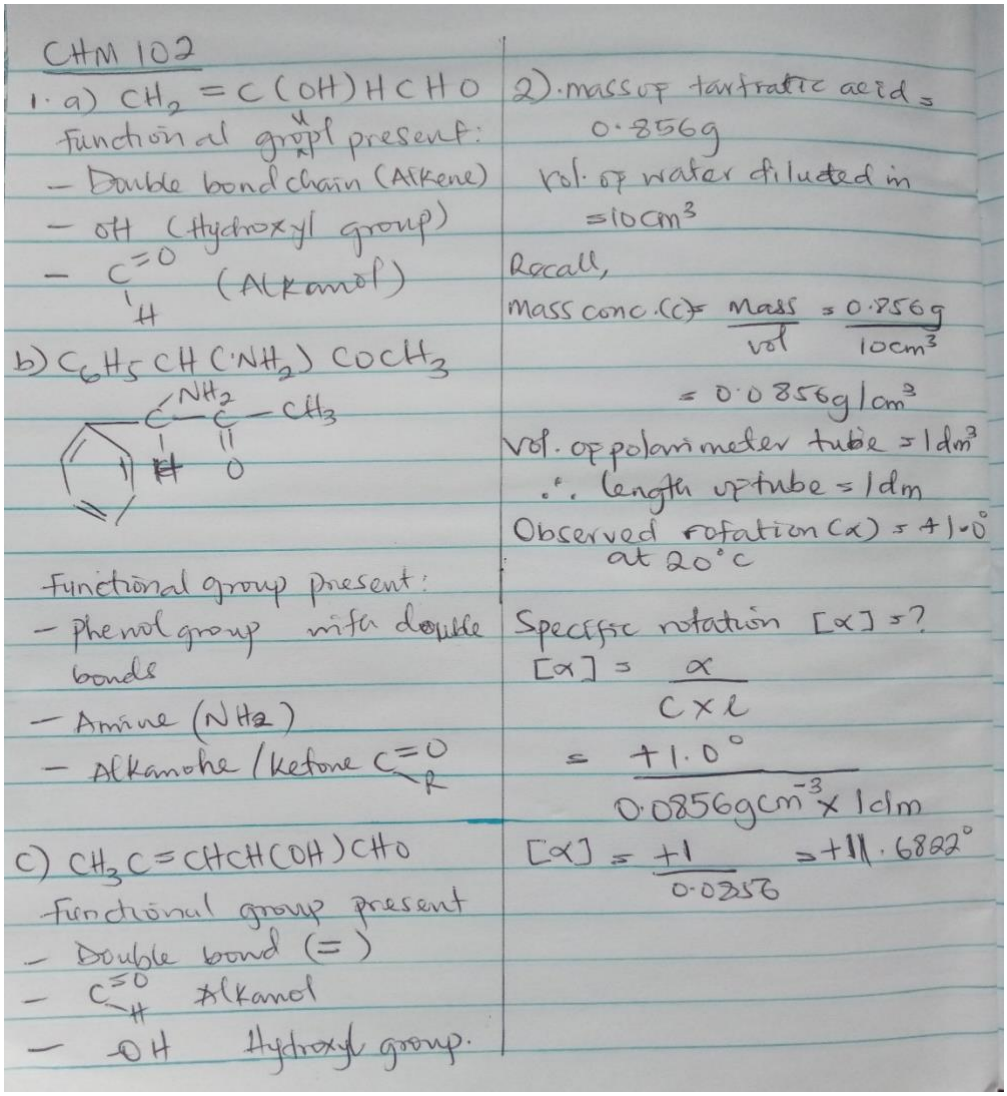
Matric:19/mhs01/280

Medicine and surgery



CHM 102

1. a) $CH_2=C(OH)HCHO$

Functional group present:

- Double bond chain (Alkene)
- OH (Hydroxyl group)
- $C(=O)H$ (Alkanol)

b) $C_6H_5CH(NH_2)COCH_3$

Functional group present:

- phenol group with double bonds
- Amine (NH_2)
- Alkanone / ketone $C(=O)R$

c) $CH_3C=CHCH(OH)CHO$

Functional group present

- Double bond (=)
- $C(=O)H$ Alkanol
- OH Hydroxyl group.

2). mass of tartaric acid = 0.856g

Vol. of water diluted in = $10cm^3$

Recall,

Mass conc. (C) = $\frac{\text{Mass}}{\text{vol}} = \frac{0.856g}{10cm^3}$

$= 0.0856g/cm^3$

Vol. of polarimeter tube = $1dm^3$

∴ Length of tube = 1dm

Observed rotation (α) = $+1.0^\circ$ at $20^\circ C$

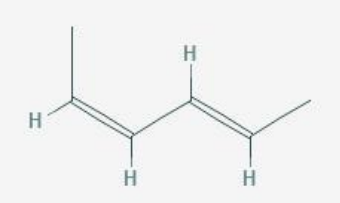
Specific rotation $[\alpha]$ = ?

$[\alpha] = \frac{\alpha}{C \times l}$

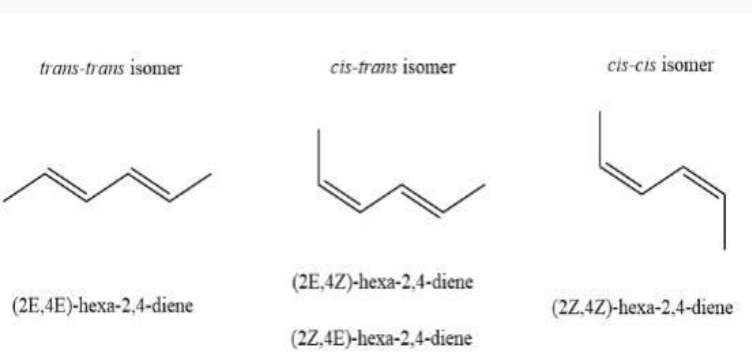
$= \frac{+1.0^\circ}{0.0856gcm^{-3} \times 1dm}$

$[\alpha] = \frac{+1}{0.0856} = +11.6822^\circ$

3. Hexa-2,4-diene – has only 3 isomers



Isomers



B. 2,3 dimethy but-2-ene. - does not have geometric isomers because there are two identical groups attached to the same carbon of the double bond.