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Department: Nursing

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Assignment

① Name the functional groups present in each of the following:

① $C_4H_2 = C(OH)HCHO$ functional group - aldehyde
= alcohol
- alkene

② $C_6H_5CH(NH_2)COCH_3$ functional group - (i) amides
(ii) ketones

③ $CH_3C=CHCH(OH)CHO$ functional group
Ⓐ Alkene
Ⓑ Alcohol
Ⓒ Aldehydes

② A 0.856g sample of pure (2R,3R)-tartaric acid was diluted to 100cm³ with water and placed in a 1.0dm polarimeter tube. The observed rotation at 20°C was +1.0°. Calculate the specific rotation of (2R,3R)-tartaric acid.

Answer

observed rotation = 1.0°, length of sample cell = 1.0dm

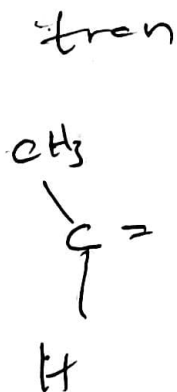
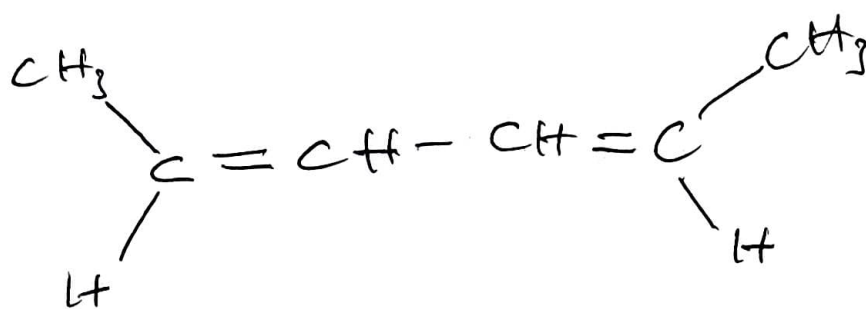
Concentration = $\frac{0.856g}{100cm^3} = 0.00856g/cm^3$

∴ specific rotation = $\frac{\text{observed rotation}}{\text{Concentration} \times \text{length of sample}} = \frac{1}{0.00856 \times 1}$

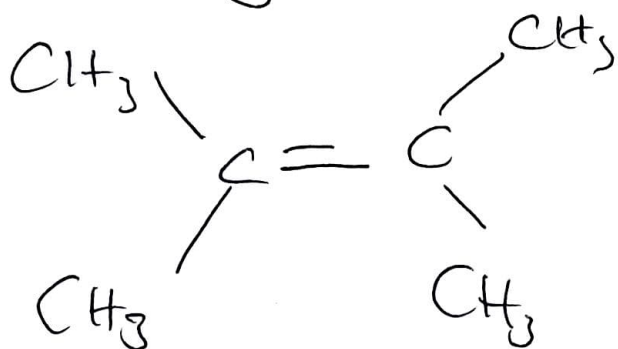
= 1168° g⁻¹ cm³ dm⁻¹

3) Draw the possible geometric isomers

(i) Hexa-2,4-diene - cis



(ii) 2,3-Dimethylbut-2-ene



Geometric isomer is not possible here.