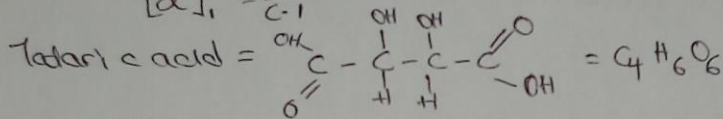


NAME: Koblow ayobami - fowoso
 MATRIC NUMBER: 19/MHJ011220
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 Department: MBBS

- i) i) formyl group [Aldehyde] group
 ii) Hydroxyl group [OH]
 iii) Alkene group [double bond]
- ii) keto group [carbonyl group]
 b) Amino group [NH₂]
 c) Aromatic group [Phenyl group]
- iii) a) Aldehyde group
 b) hydroxyl group
 c) double bond (Alkene group)

② Concentration (mol dm⁻³) = $\frac{\text{conc. (g dm}^{-3}\text{)}}{\text{molar mass (g/mol)}}$

$$[\alpha]_D^{25} = \frac{\alpha}{c \cdot l}$$



molar mass = 150 g/mol

0.856 g — 10 cm³
 21 g —> 1000 cm³

$$\frac{0.856 \times 1000}{10} = 85.6 \text{ g dm}^{-3}$$

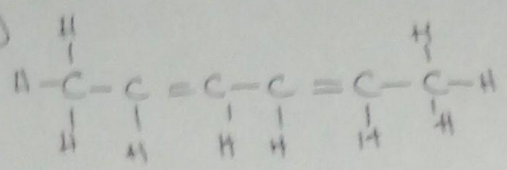
Concentration in g cm⁻³ = $\frac{\text{Concentration (g dm}^{-3}\text{)}}{1000}$

$$= \frac{85.6}{1000} = 0.0856 \text{ g cm}^{-3}$$

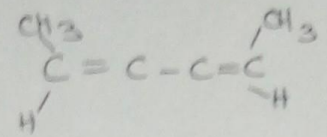
$$[\alpha]_D^{25} = \frac{\alpha}{c \cdot l} \Rightarrow \frac{+11.0}{0.0856} = \alpha = 4 \cdot 10^0, \quad c = \frac{0.856}{10} = 0.0856$$

$$= \frac{+11.0}{0.0856} = 11.68^0$$

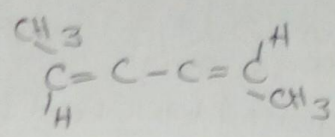
3) i)



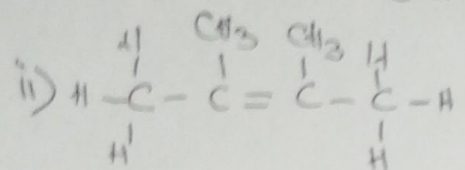
Hexa-2,4-diene



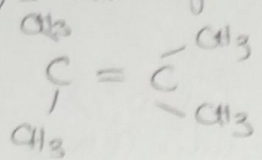
cis-



trans-



2,3-dimethylbut-2-ene



No geometric isomer.