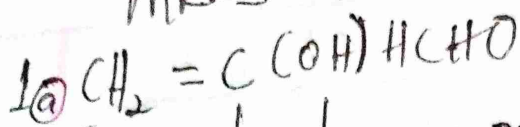
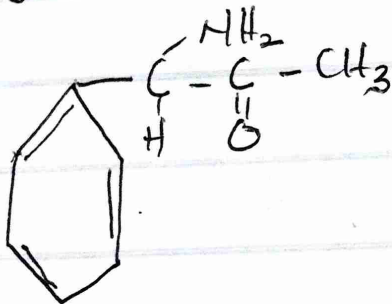
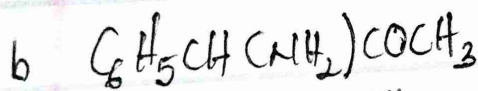


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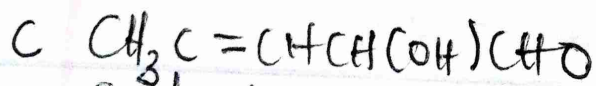


- The functional group present :-
- i Double bond chain [Alkene]
  - ii OH [hydroxyl group]
  - $\begin{array}{c} \text{C}=\text{O} \\ | \\ \text{H} \end{array}$  [Alkanol]



- functional group present:

- i Phenol group with double bonds
- ii Amine [ $\text{NH}_2$ ]
- iii Alkanone (ketone  $\begin{array}{c} \text{C}=\text{O} \\ | \\ \text{R} \end{array}$ )



functional group present:-

- Double bond ( $\text{C}=\text{C}$ ),  $\begin{array}{c} \text{C}=\text{O} \\ | \\ \text{H} \end{array}$  Alkanol, OH - Hydroxyl group

2 Mass of tartaric acid = 0.856g  
 Volume of water diluted in = 100 cm<sup>3</sup>  
 recall,

$$\text{Mass conc.} = \frac{\text{mass}}{\text{volume}} = \frac{0.856\text{g}}{100\text{cm}^3} = 0.00856\text{g/cm}^3$$

Volume of polarimeter tube = 1 dm<sup>3</sup>

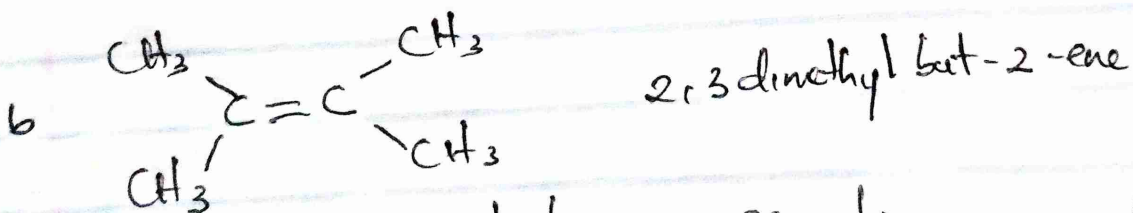
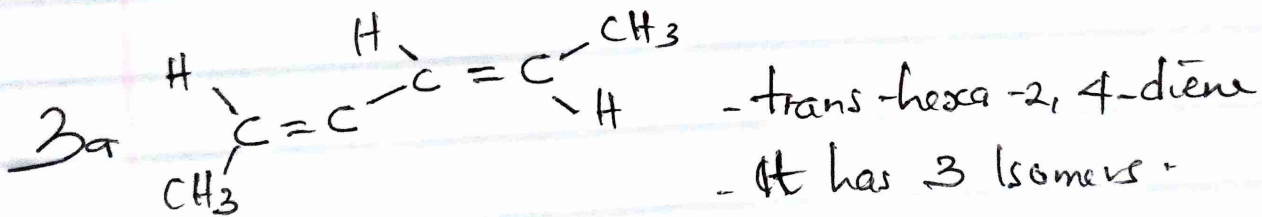
∴ length of tube = 1 dm

Observed rotation ( $\alpha$ ) = +1.0° at 20°C

Specific rotation  $[\alpha] = ?$

$$[\alpha] = \frac{\alpha}{c \cdot l} = \frac{+1.0^\circ}{0.00856\text{g/cm}^3 \times 1\text{dm}}$$

$$[\alpha] = \frac{+1}{0.00856} = +11.6822^\circ$$



Note:- It does not have a geometric isomers because there are two identical groups attached to the same carbon of the double bond.