

JAMES ONYIAKACHI NATHANIEL

① $CH_2 = C(OH)HCHO$: Alkene (=), Alcohol (OH), Alkanal (-CHO)

② $C_6H_5NH_2$: Amines (RNH_2), Alkanones ($RCOR'$)

$CH_3 = CHCH(OH)CHO$: Alkene (=), Alcohol (OH), Alkanal (CHO)

② Mass = 0.856g Temperature = 20°C

Volume = 10 cm³

l = 1 dm

Observed rotation $\alpha = +1.0$ (a Dextrorotary)

Specific rotation = ?

But,

$$\text{Specific rotation } (\alpha_{\lambda}^T) = \frac{\text{Observed rotation}^\circ}{\text{concentration (g cm}^{-3} \cdot \text{path length dm)}}$$

$$\alpha_{\lambda}^T = \frac{\alpha}{c \cdot l}$$

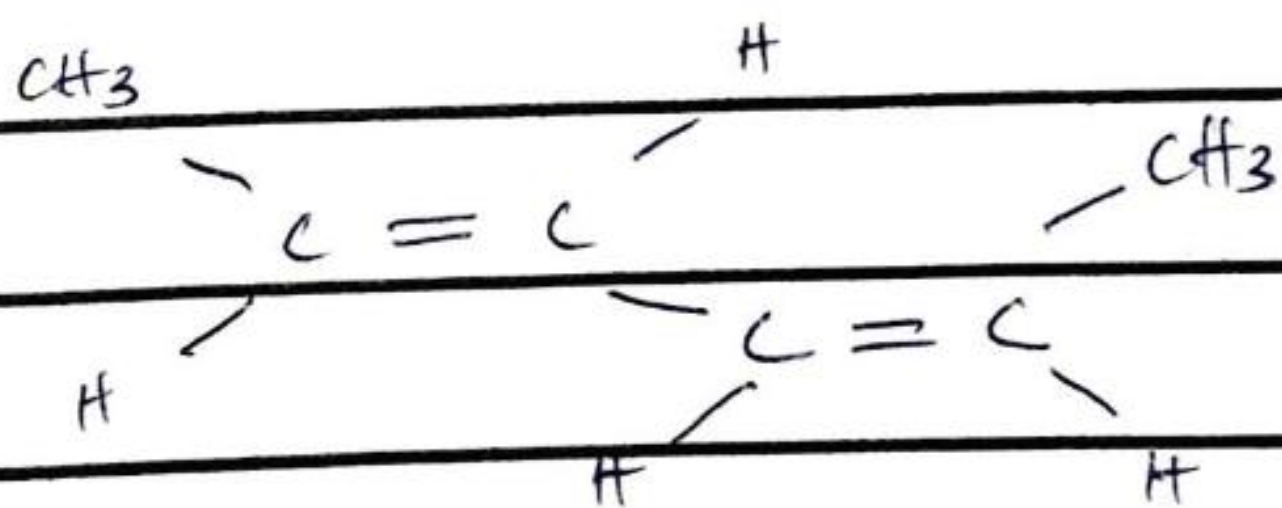
$$\text{concentration} = \frac{\text{mass}}{\text{volume}}$$

$$= \frac{0.856}{10} = 0.0856 \text{ g/cm}^3$$

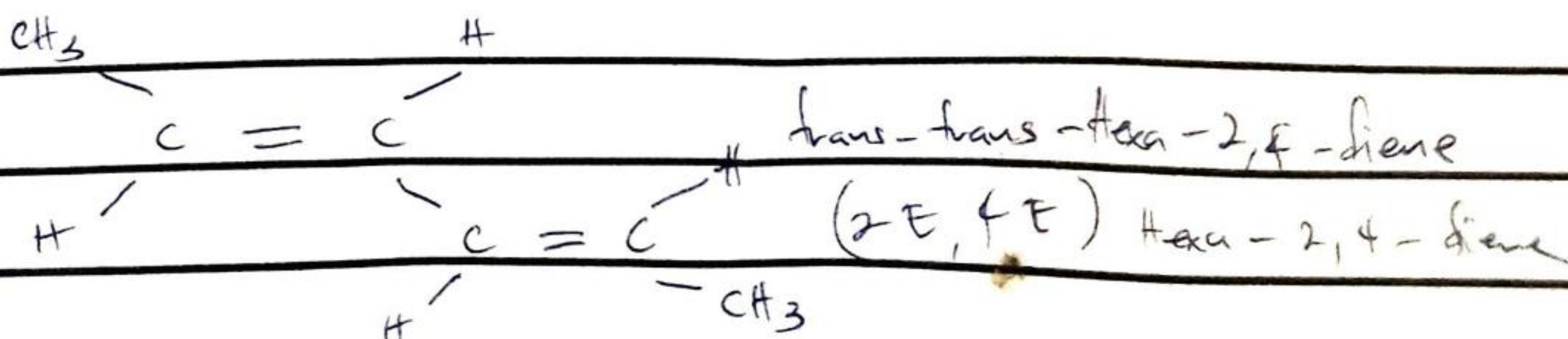
$$\alpha_{\lambda}^T = \frac{+1.0}{0.0856 \times 1}$$

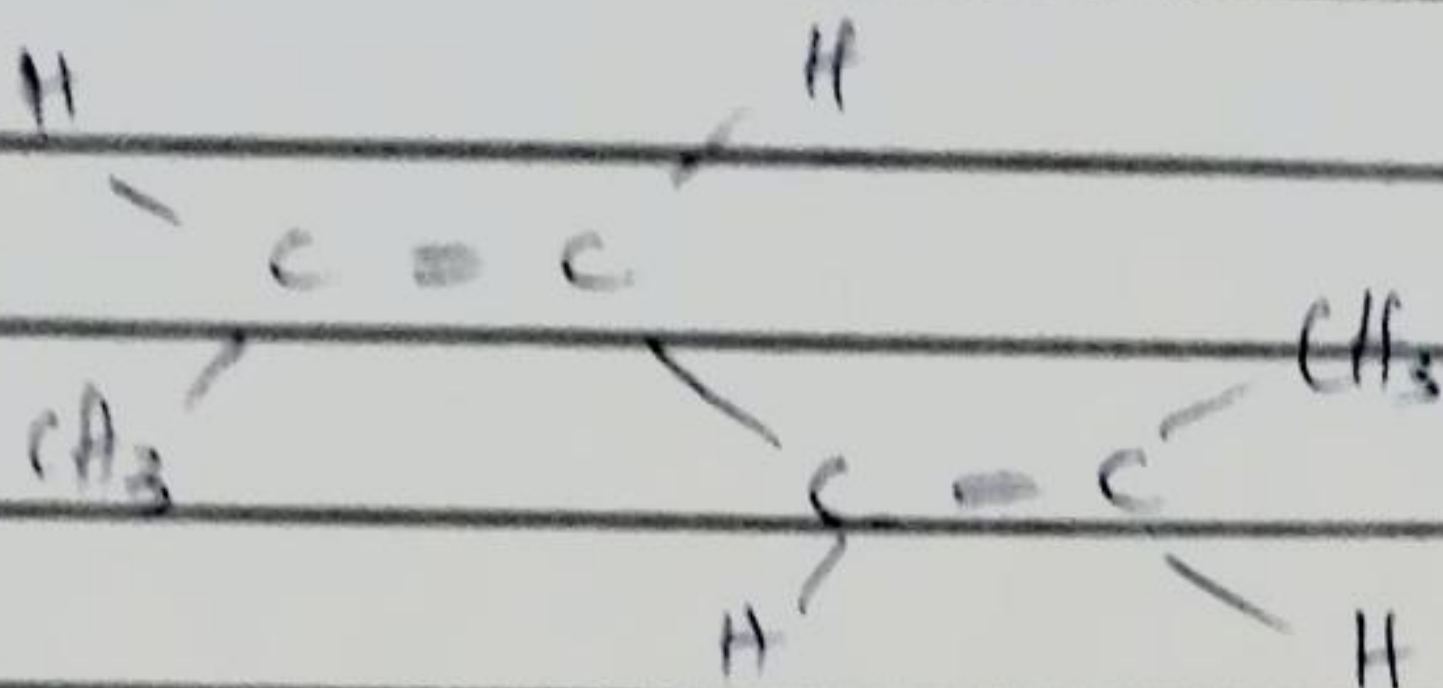
$$\alpha_{\lambda}^T = 11.68^\circ \text{ g}^{-1} \text{ cm}^3 \text{ dm}^{-1}$$

③ ① Hexa-2,4-diene



trans, cis - Hexa-2,4-diene (2E, 4Z) - Hexa-2,4-diene





cis, cis Hexa-2,4-diene

(2Z, 4Z) - Hexa-2,4-diene

(10) 2,2-Dimethyl but-2-ene

