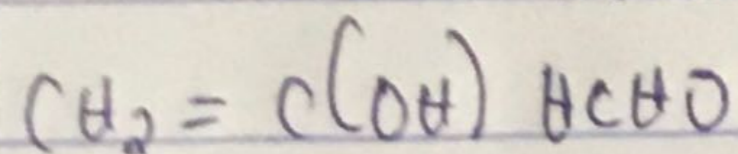


Name: Anchar Jennifer Uguwara

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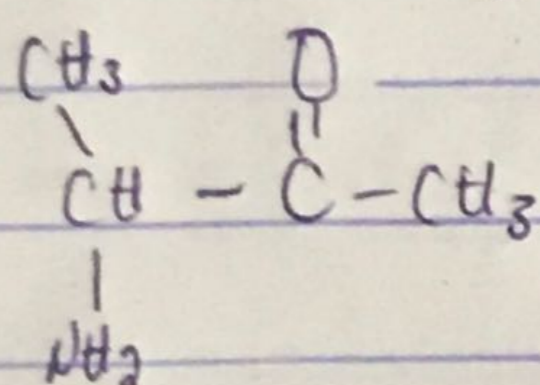
Matric no: 19/MHS11/029

CHEM 102 Assignment



2-hydroxypropen-2-ol

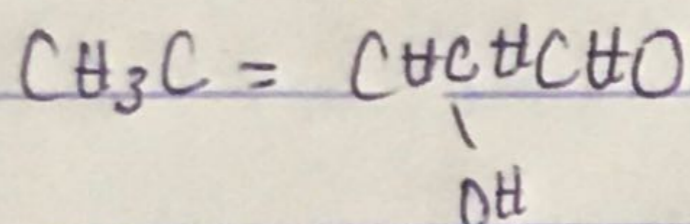
The functional group here is Carbonyl



1-amino-1-phenylacetone

The amino group here acts as a substituent

The functional group here is Carbonyl (C=O)



2-hydroxypenten-3-ol

The functional group here is Carbonyl (C=O)

2) Specific rotation (2R, 3R) - tartaric acid

$$[\alpha]_D^{25} = \frac{A}{C \times l}$$

where A = observed optical rotation = +1.0

C = concentration (g/ml) = $\frac{0.856\text{g}}{10\text{ml}} = 0.0856\text{g/ml}$

l = path length (1dm or 10cm) 10cm

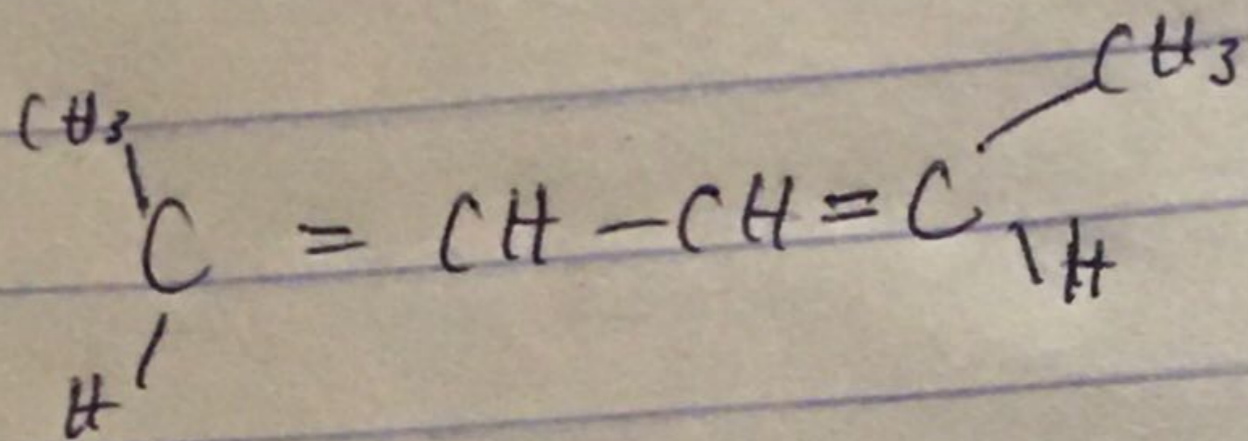
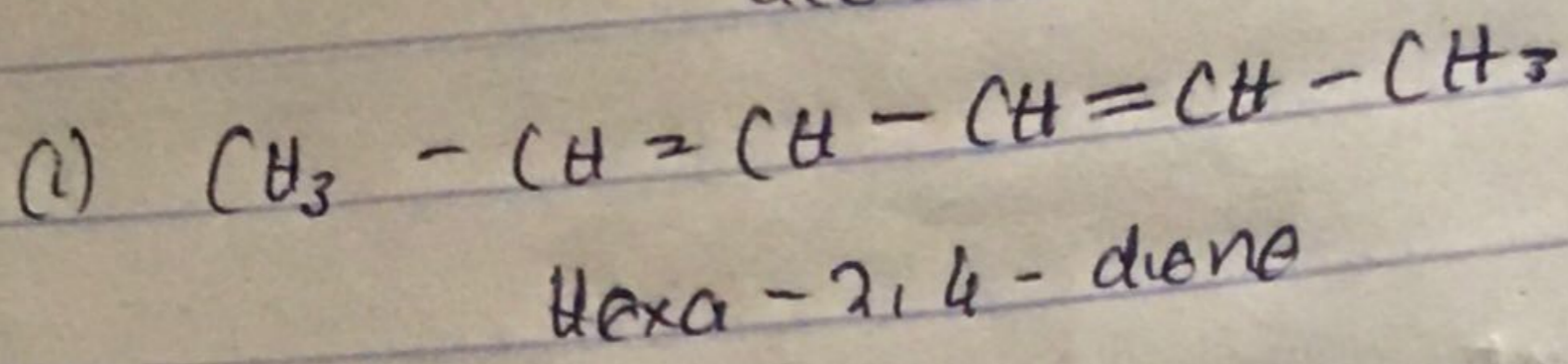
T = temperature = 20°C

λ = wavelength of light used in the experiment

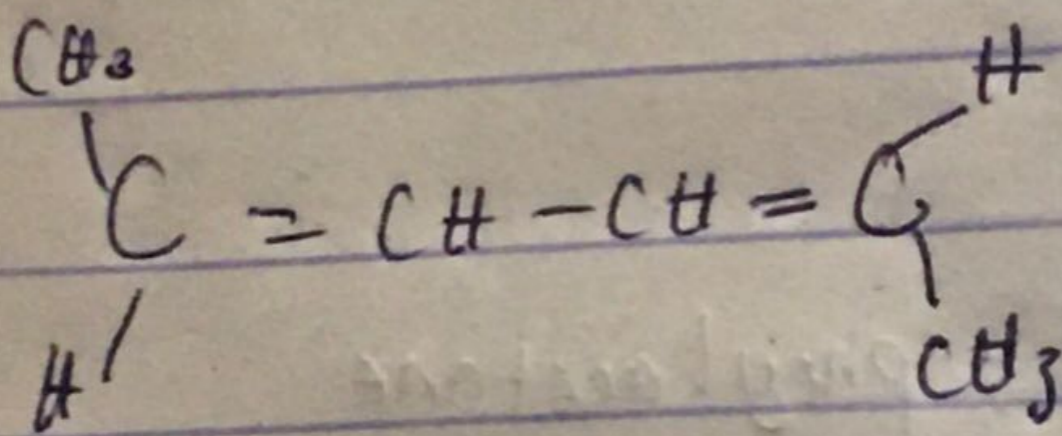
$$\begin{aligned} \therefore [\alpha]_D^{25} &= \frac{+1.0}{0.0856\text{g/ml} \times 1\text{dm}} \\ &= +11.68^\circ \end{aligned}$$

The specific rotation $(\alpha)_D^{25}$ of (2R, 3R) - tartaric acid is +11.68

3 Geometric isomers of Hexa-2,4-diene



cis - Hexa-2,4-diene



trans - Hexa-2,4-diene