Saved Photos

Specific rotation of the Sample = $\frac{1}{\frac{0.856}{1}} \times \frac{1}{1}$

$= \frac{1}{0.0856} \times 1$

$= 11.68\ ^{\circ} g^{-1}\ cm^{3}\ dm^{-1}$

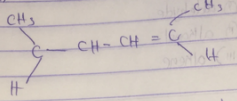
3) Draw the possible geometric isomers (where possible) for each of the following compounds

i) Hexa-2,4-diene

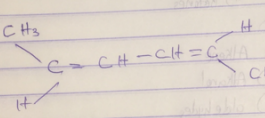
ii) 2,3-Dimethyl but-2-ene

Answers

i) Hexa-2,4-diene

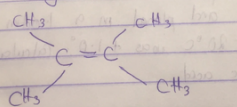


Cis Hexa-2,4-diene



trans Hexa-2,4-diene.

ii) 2,3-Dimethyl but-2-ene



Geometric isomers is not possible for 2,3-Dimethyl but-2-ene

Name: Ikyal Favour Terhas
Matric no: 19/MHS08/065
Department: Nursing
Course Code: Chem 102

Q. Name the functional groups present in each of the following molecules

i) $CH_2=C(OH)HCHO$

ii) $C_6H_5CH(NH_2)COCH_3$

iii) $CH_3C=CHCH(OH)CHO$

Answers

i) $CH_2=C(OH)HCHO$

Functional group: (I) aldehyde
(II) alkenol
III) alkene

ii) $C_6H_5CH(NH_2)COCH_3$

Functional group: (I) amides
II) Ketones

iii) $CH_3C=CHCH(OH)CHO$

Functional Group (I) Alkene
II) Alkanol
III) aldehydes

i) A 0.856g sample of pure (2R, 3R) - tartaric acid was dilute to $1cm^3$ 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°

Conc. = $\frac{0.856}{1.0} = 0.856 gcm^3$

Length of Sample cell (polarimeter) = 1.0dm

∴ Specific rotation = $\frac{\text{observed rotation (degrees)}}{\text{Concentration (g/cm}^3\text{)} \times \text{path length of sample cell in dm}}$