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PHARMACOLOGY

MEDICINE & HEALTH SCIENCES

CHM 102

19/11/2021

2 A 0.856g sample of pure (2R,3R) - tartaric acid was diluted to 10cm<sup>3</sup> with water and placed in a 1.0dm polarimeter tube. The observed rotation at 20°C was at +1.0°. Calculate the specific rotation of (2R,3R) - tartaric acid.

$$[\alpha]_D^{20} = \alpha / lc$$

$$0.856g \text{ in } 10\text{cm}^3 \text{ of solution} = 0.0856\text{gcm}^{-3}$$

$$\text{So } [\alpha]_D^{20} = +1.0 / (1.0\text{dm})(0.0856) \\ = +11.68^\circ$$

1 Name the following groups present on each of the following molecules:-

i)  $\text{CH}_2 = \text{C}(\text{OH})\text{CHO} \rightarrow$  Alkanals

ii)  $\text{C}_6\text{H}_5\text{CH}(\text{NH}_2)\text{COCH}_3 \rightarrow$  Amine.

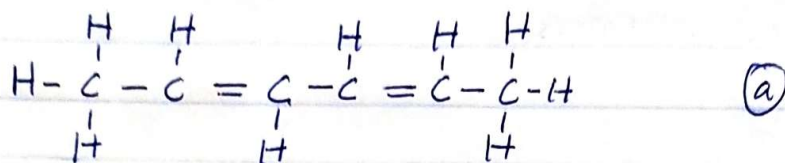
iii)  $\text{CH}_3\text{C} = \text{CHCH}(\text{OH})\text{CHO} \rightarrow$  Alkanals

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

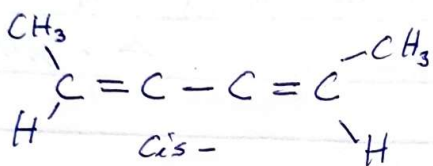
i) Hexa-2,4-diene.

ii) 2,3-Dimethylbut-2-ene.

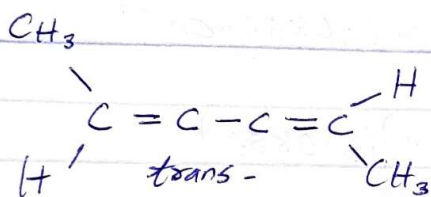
i) Hexa-2,4-diene



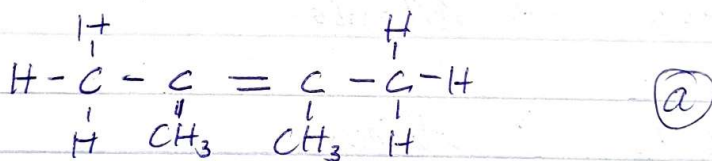
OR



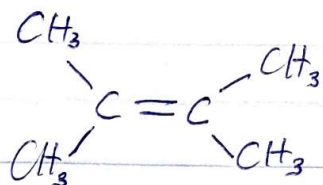
(b)



ii) 2,3-Dimethylbut-2-ene



OR



(b)