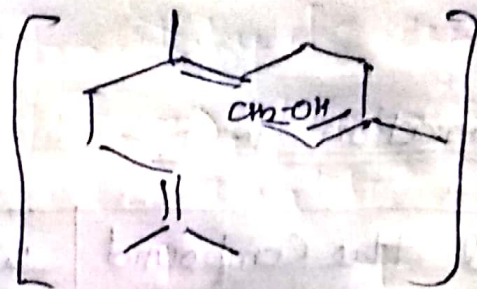


Terpenoids cont'd.

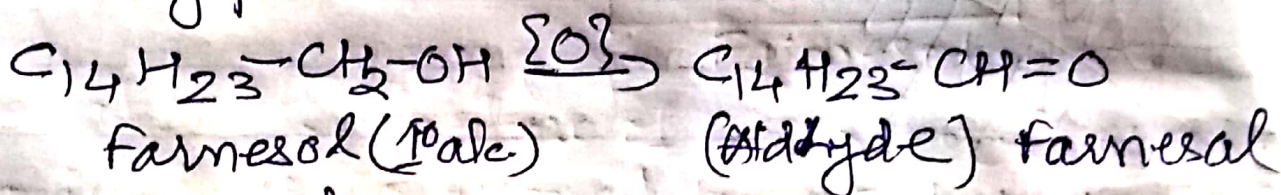
farnesol



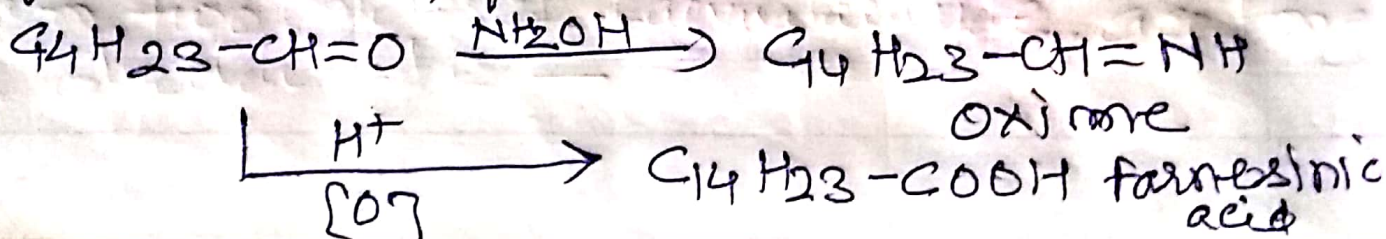
Its natural sources are, oil of rose, Citronella, lime flowers & orange oil.

Constitution: The following facts are as elucidated by Kerschbaum study,

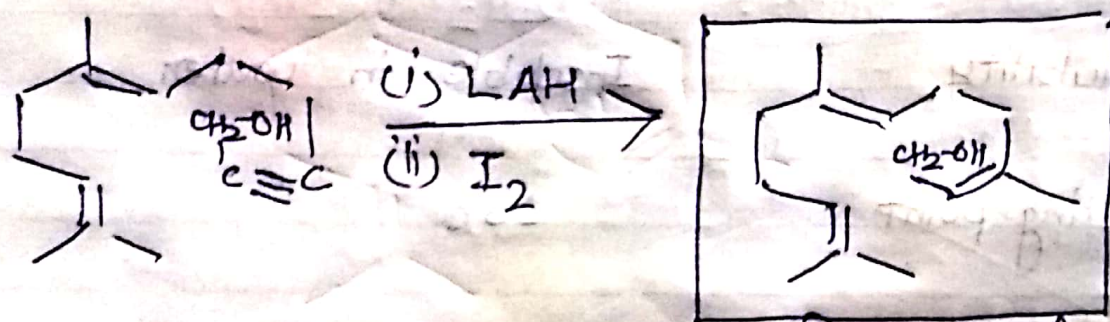
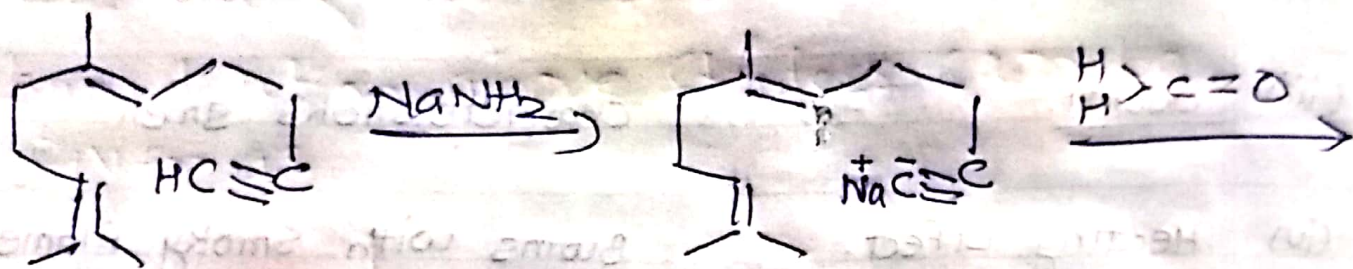
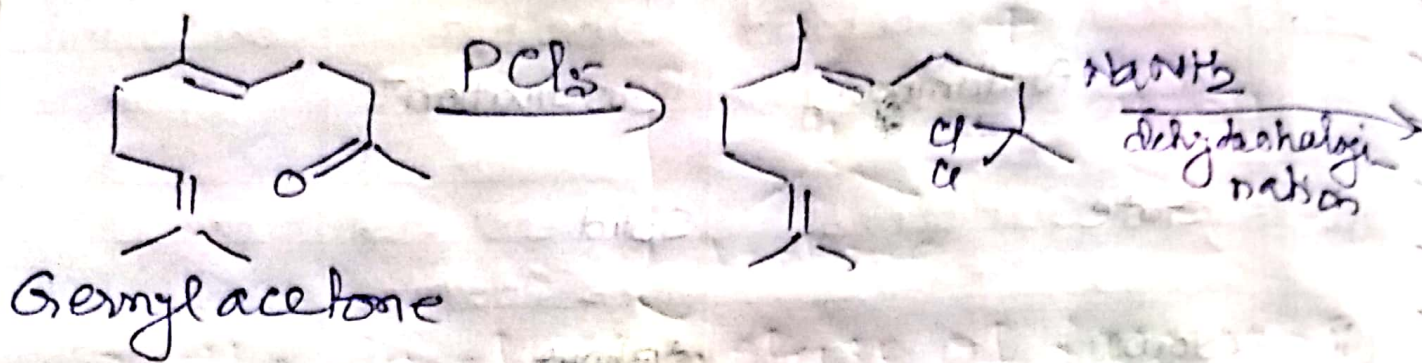
- (i) The elemental analysis & mol. wt. determination proved its mol. formula is $C_{15}H_{26}O$.
- (ii) It absorbs 3 moles of H_2 , which prove that it has three $C=C$ & form hexahydro derivative.
$$C_{15}H_{26}O \xrightarrow{3H_2} C_{15}H_{32}O$$
- (iii) It on oxidⁿ form a aldehydic compound $C_{14}H_{24}O$, which indicate that it contain 1° alc. grp.



- (iv) The formation of farnesal is evidenced that it give gen. reactⁿ of a $-CH=O$ grp. (form oxime, farnesinic acid etc.)

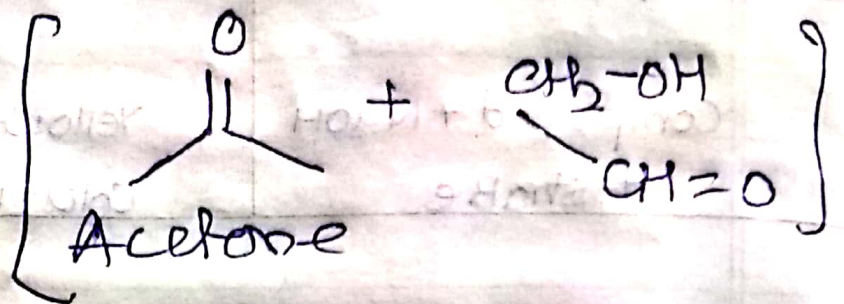
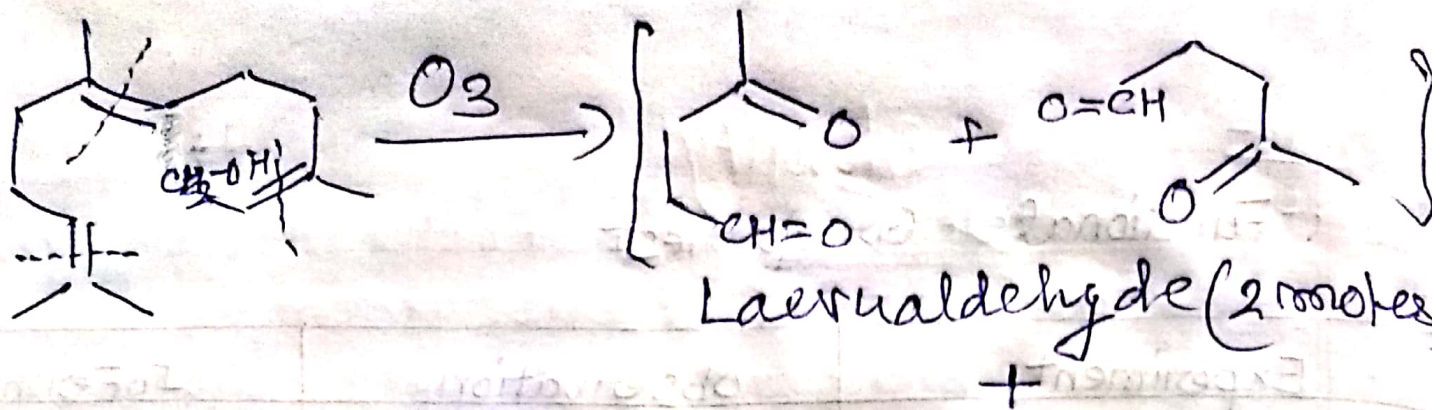


(1) The presence of three $C=C$ & 1° alc. grp. is finally confirmed by its synthesis, given by Corey (1967), from Germyl acetone,



Farnesol

The above structure of farnesol as the product is confirmed by its b.p. 120°C & experimentally its ozonolysis at $>C=C<$. The ozonide on decomposition by Zn/H_2O forms two moles of laevuldehyde, acetone & Glycoldehyde —



So, the final structure of farnesol based upon above studies can be given as

