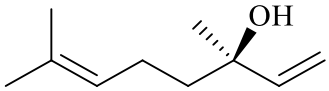
Marks 4

- The structure of (–)-linalool, a commonly occurring natural product, is shown below.



What is the molecular formula of (–)-linalool?

$C_{10}H_{18}O$

Which of the following best describes (–)-linalool?
achiral compound, racemic mixture,
(*R*)-enantiomer, or (*S*)-enantiomer

(*R*)-enantiomer

What functional groups are present in (–)-linalool?

Tertiary alcohol and alkene

Is it possible to obtain (*Z*) and (*E*) isomers of (–)-linalool? Give a reason for your answer.

No. One end of each double bond has two identical groups (methyl or hydrogen) attached to it.