

# Chemical profile – S-(+)-Carvone

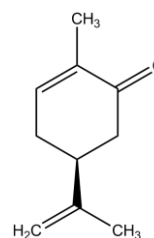
## Basic information

**IUPAC name:** (S)-5-isopropenyl-2-methyl-2-cyclohexenone

**Other names:** (S)-(+)-p-mentha-6,8-dien-2-one, D-carvone

**Molecular formula:** C<sub>10</sub>H<sub>14</sub>O

**Molecular weight:** 150.22 g mol<sup>-1</sup>



## Physical Properties

**Appearance:** Light yellow liquid

**Relative density:** 0.960 g cm<sup>-3</sup>

**Melting point:** Not available

**Boiling point:** 227 - 230 °C

**Flash point:** 98 °C – closed cup



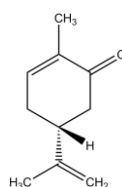
## Occurrence and uses

S-(+)-carvone is found in caraway seeds (*Carum carvi*) and dill (*Anethum graveolens*). It is used as an additive in the food and fragrance industries, and as a stomachic and carminative in a number of pharmaceutical formulations. S-(+)-carvone is also a good potato sprouting inhibitor, and so is used to aid their long term storage. Carvone (R and S enantiomers) is antimicrobial and is used in aromatherapy massage treatment for several skin disorders and nervous tensions,<sup>1</sup>

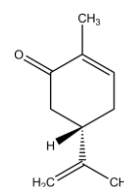
1. See Learn Chemistry Wiki 'Substance: Carvone'

## Links to curriculum

### Stereoisomers



R-(-)-carvone



S-(+)-carvone

**Functional groups:** Carbonyl, alkenes

**Use in practical experiments:** Learn Chemistry resource 'Properties of the carvones'



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