

# Chemical profile - Menthol

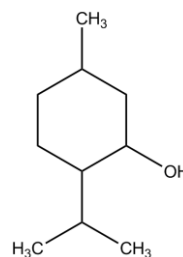
## Basic information

**IUPAC name:** 2-isopropyl-5-methylcyclohexanol

**Other names:** Menthol

**Molecular formula:** C<sub>10</sub>H<sub>20</sub>O

**Molecular weight:** 156.27 g mol<sup>-1</sup>



## Physical properties

**Appearance:** White solid

**Relative density:** 0.89 g cm<sup>-3</sup>

**Melting point:** 34 – 36 °C

**Boiling point:** 216 °C

**Flash point:** 93.4 °C



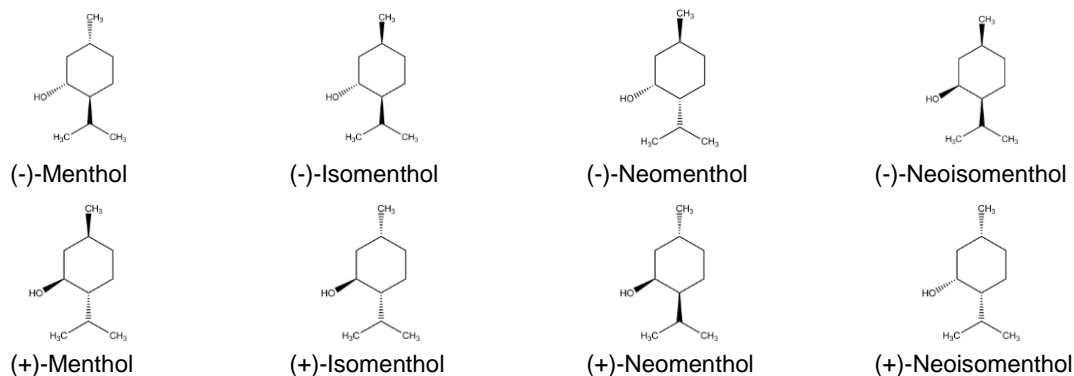
## Occurrence and uses

Menthol occurs naturally in the oil of the peppermint plant 'Mentha Piperita'. It is used as a flavouring agent in toothpaste, mouth freshener, chewing gum and cigarettes, due to its minty taste and the sensation of cooling which it provides evoking the sensation of freshness. Menthol is also antibacterial so it increases the shelf life of products it is included in.<sup>1</sup>

1. See Learn Chemistry 'Substances: Menthol'

## Links to curriculum

**Stereoisomers:** Menthol has 3 chiral centres so 8 different stereoisomers:



**Use in practical experiments:** Learn Chemistry resource 'Observing the lowering of a melting point'



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