



Menthol

Can be extracted from mint plants, corn and synthetically made.

White crystalline structure

IUPAC name:
5-methy-2-Propan-2-yl cyclohexan-1-ol.

Registered with FDA when used with other chemicals

Molecular Mass:
156.269 g/mol

The Determination of Menthol in Peppermint Oil

PURPOSE
Determine the quality of menthol between 2 different brands, using Gas Chromatography

CONCLUSIONS
The solubility of the two brands were very different. Brand one dissolved in majority of the solvents. Brand two dissolved mostly in alcohol solvents. Since there was a small peak that appeared after 11 minutes, I could assume that it was menthol; however, without data I can not be sure. Due to the COVID-19 pandemic I was unable to complete the experiment.

The peppermint plant is a hybrid between watermint and spearmint.

Peppermint was brought to the US in the late 1700's.

Peppermint is known for its cooling sensation, and minty taste.

NOW (BRAND 1)	
Not Soluble	Soluble
Water	Isopropyl, Tetra-Butanol,
Hexane	Ethanol, Toluene
	Methanol,
	Ethyl alcohol,
	Cyclohexane,

AURA CAICA (BRAND 2)	
Not Soluble	Soluble
Water	Isopropyl
Hexane	Ethanol
Cyclohexane	Tetra- butanol
Methanol	Ethyl alcohol
Toluene	

METHANOL	
Not Soluble	Soluble
Water	Isopropyl
Tetra- Butanol	Hexane
	Ethanol
	Methanol
	Toluene

REFERENCES

- S. Yilmaz, S. Ekin, and B. Yilmaz. 2013. December. 07. DETERMINATION OF BIOACTIVE COMPOUNDS OF EQUSETUM ARVENSE BY GAS CHROMATOGRAPHY-MASS SPECTRA METHOD. <https://www.researchgate.net/publication/271111111>
- Al-Rubaye, A. Hameed, I., Kadhim, M. 2011. 02.01.01. Uses of Gas Chromatography-Mass Spectrometry (GC-MS) Technique for Analysis of Bioactive Natural Compounds of Some Plants. (2017).