

CARAWAY SEEDS (*CARUM CARVI*) – SOURCE OF BIOLOGICAL ACTIVE COMPOUNDS

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Since ancient times, plants have been used by humans in food or traditional medicine to treat various ailments. Caraway (*Carum carvi*) is a plant of the Apiaceae family, native to western Asia, currently cultivated mainly in Poland, Hungary and Morocco, which prefers dry and loamy soils, needing a lot of sun. It is recommended in states of bloating, stomach ulcers, diarrhea, abdominal cramps, food poisoning.

In the present work, different methods for extraction of volatile compounds from seeds of *Carum carvi* species, presence of monoterpenoid compounds in obtained extracts, as well as the antimicrobial properties of volatile oil obtained from the studied plant material were investigated. The vegetal extracts were obtained by hydrodistillation, followed by solvent extraction of hydrodistillate, ether extraction of volatile compounds or by extraction of volatile oil using the NeoClevenger plant.

TLC, UV-Vis and FT-IR spectroscopy, and polarimetry revealed the presence of S (+)-carvone and (+) limonene, respectively, in caraway seeds. Determination of optical activity for chloroform caraway seed extract shows that the solution has a positive rotation angle of +38.2 °C, confirming the presence in cumin of carvone and limonene dextrogyr enantiomers. Evaluation of the antimicrobial activity of volatile caraway oil revealed its antibacterial properties against *E. coli* and *S. aureus* strains.

Findings from the present study confirm the benefits of using this plant product both in food and for therapeutic purposes.

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