



CHEMICAL COMPOSITION AND ANTIMICROBIAL ACTIVITY OF SWEET MARJORAM (*Origanum majorana* L.) ESSENTIAL OIL

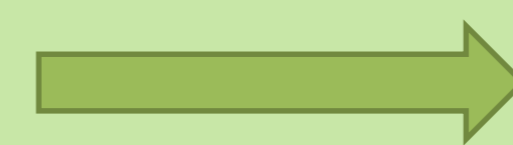
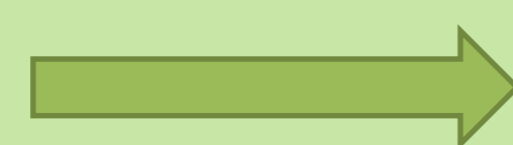


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Sweet marjoram (*Origanum majorana* L., Lamiaceae) is a perennial herbaceous plant used worldwide as a spice. It contains up to 3% of essential oil, which is used in the pharmaceutical, cosmetic, food and perfume industry.

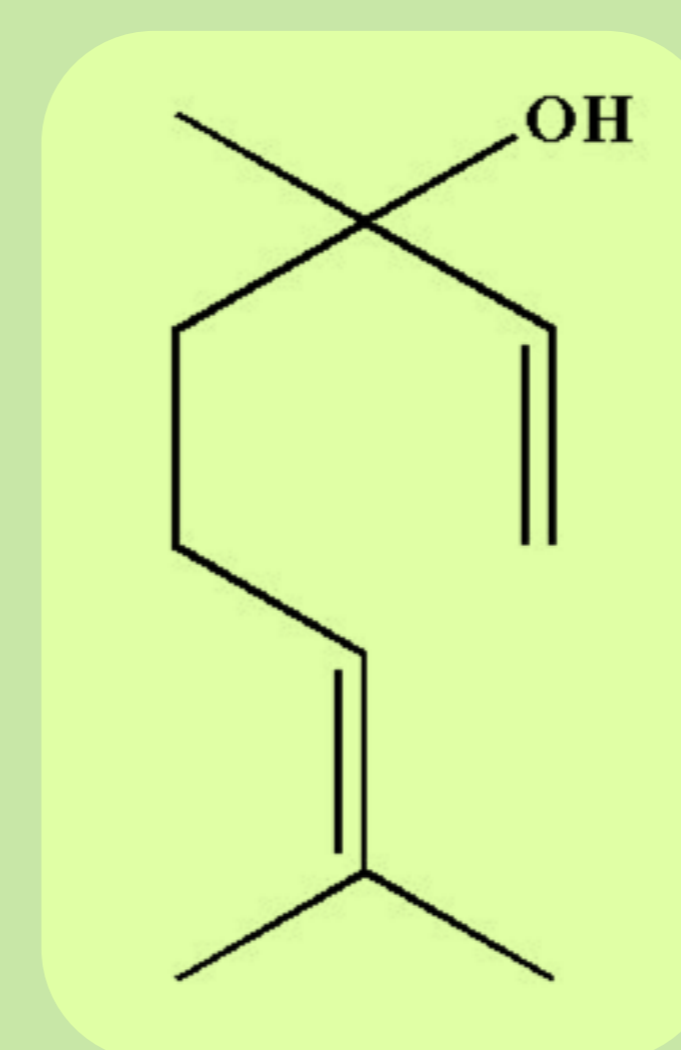
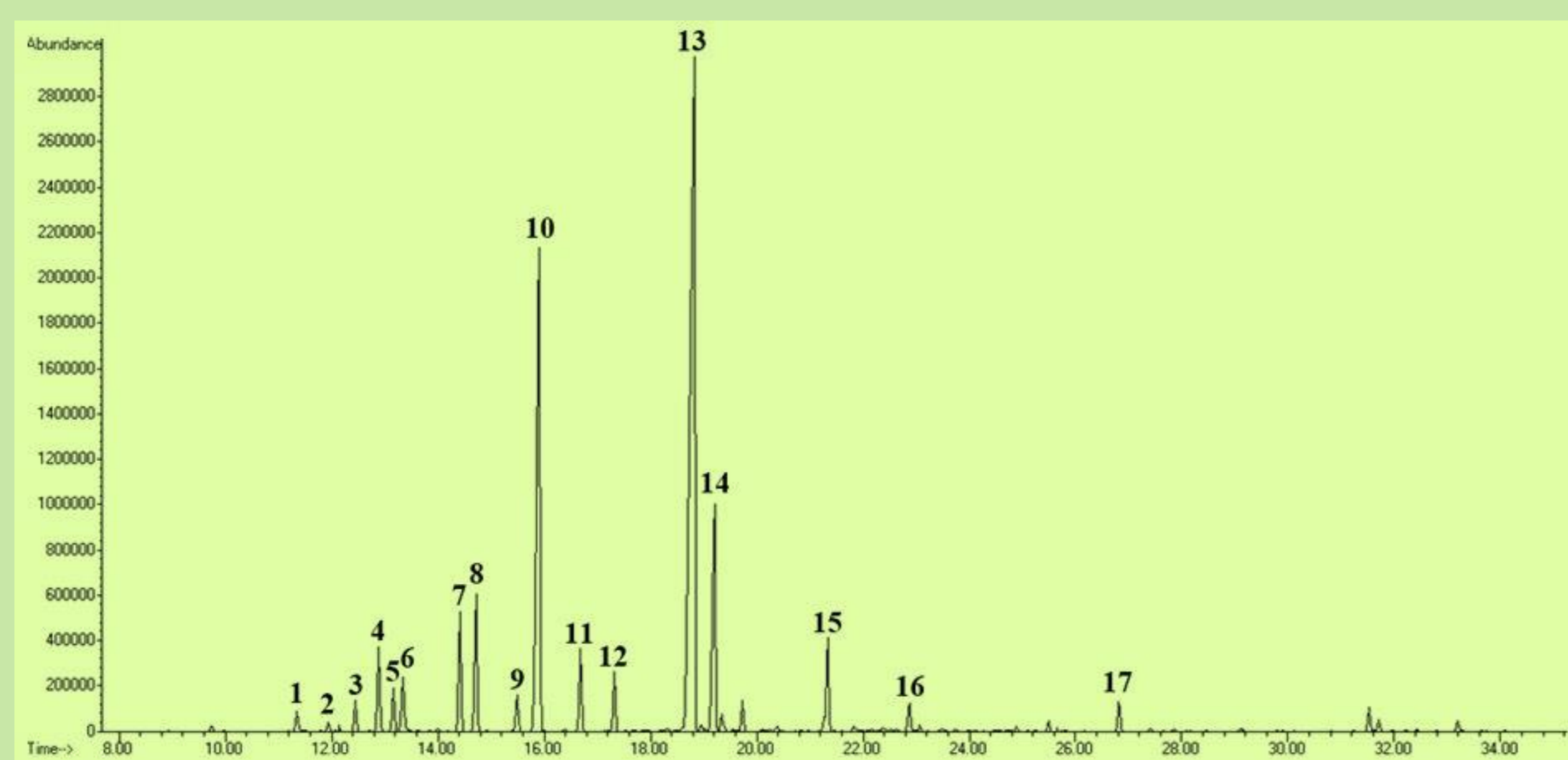
The aim of this work was to isolate the essential oil from sweet marjoram, to determine qualitative and quantitative composition of the isolated oil, as well as to examine its antimicrobial activity.



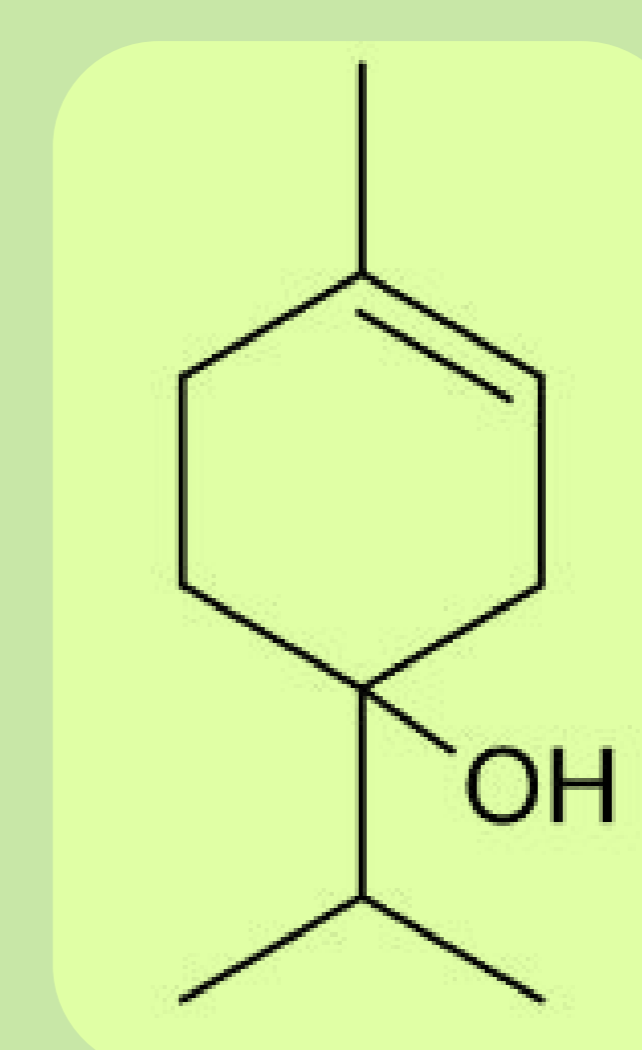
Clevenger hydrodistillation
Hydromodule: 1:10 m/v
Extraction time: 120 min



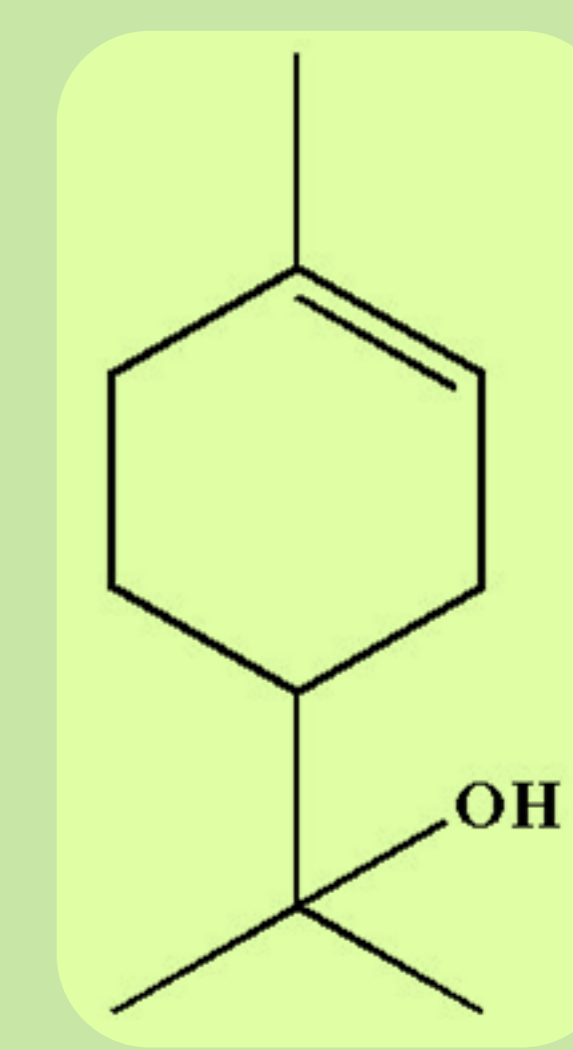
GC/MS and GC/FID analysis



10
Linalool
20.98%

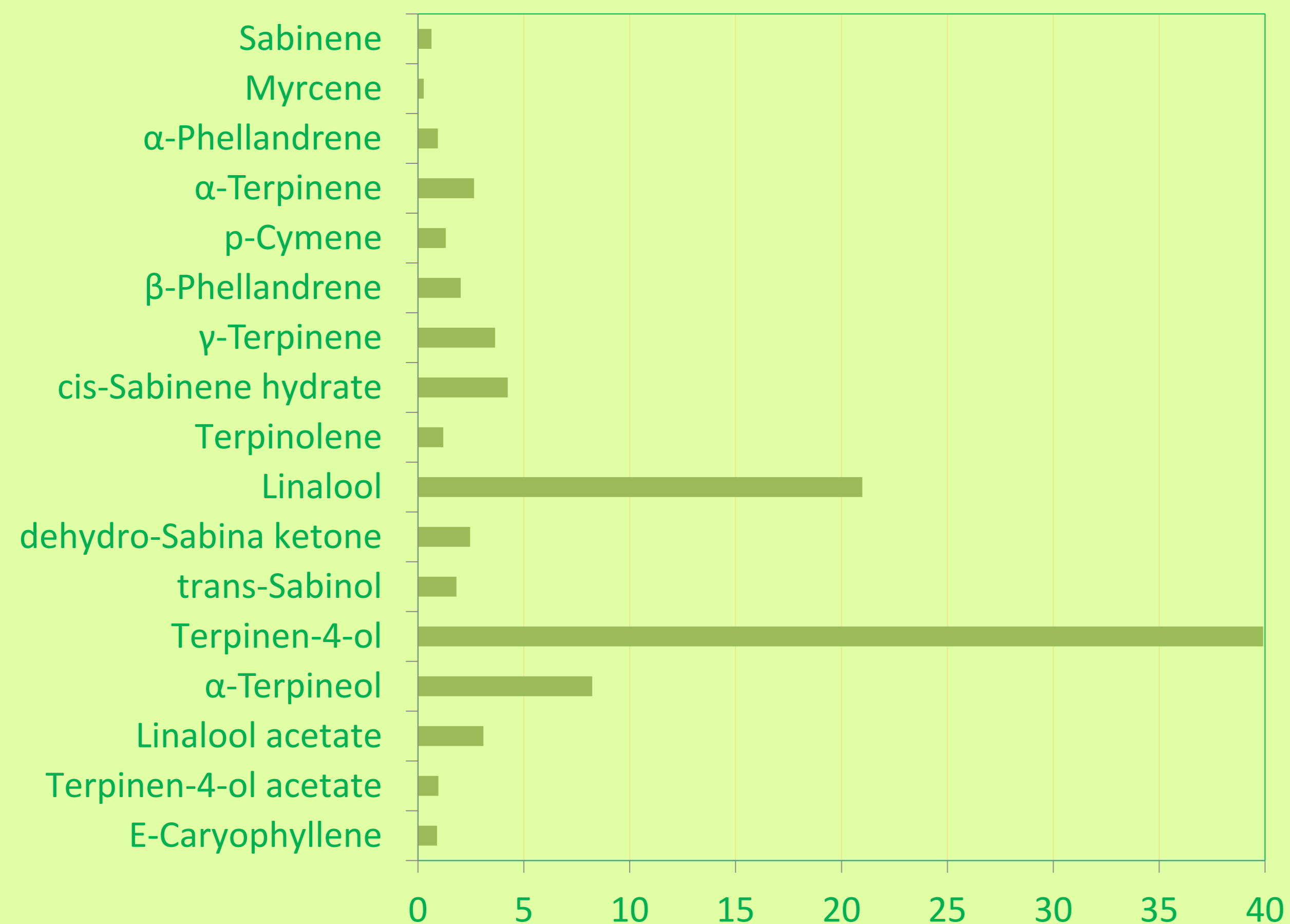


13
Terpinen-4-ol
39.91%

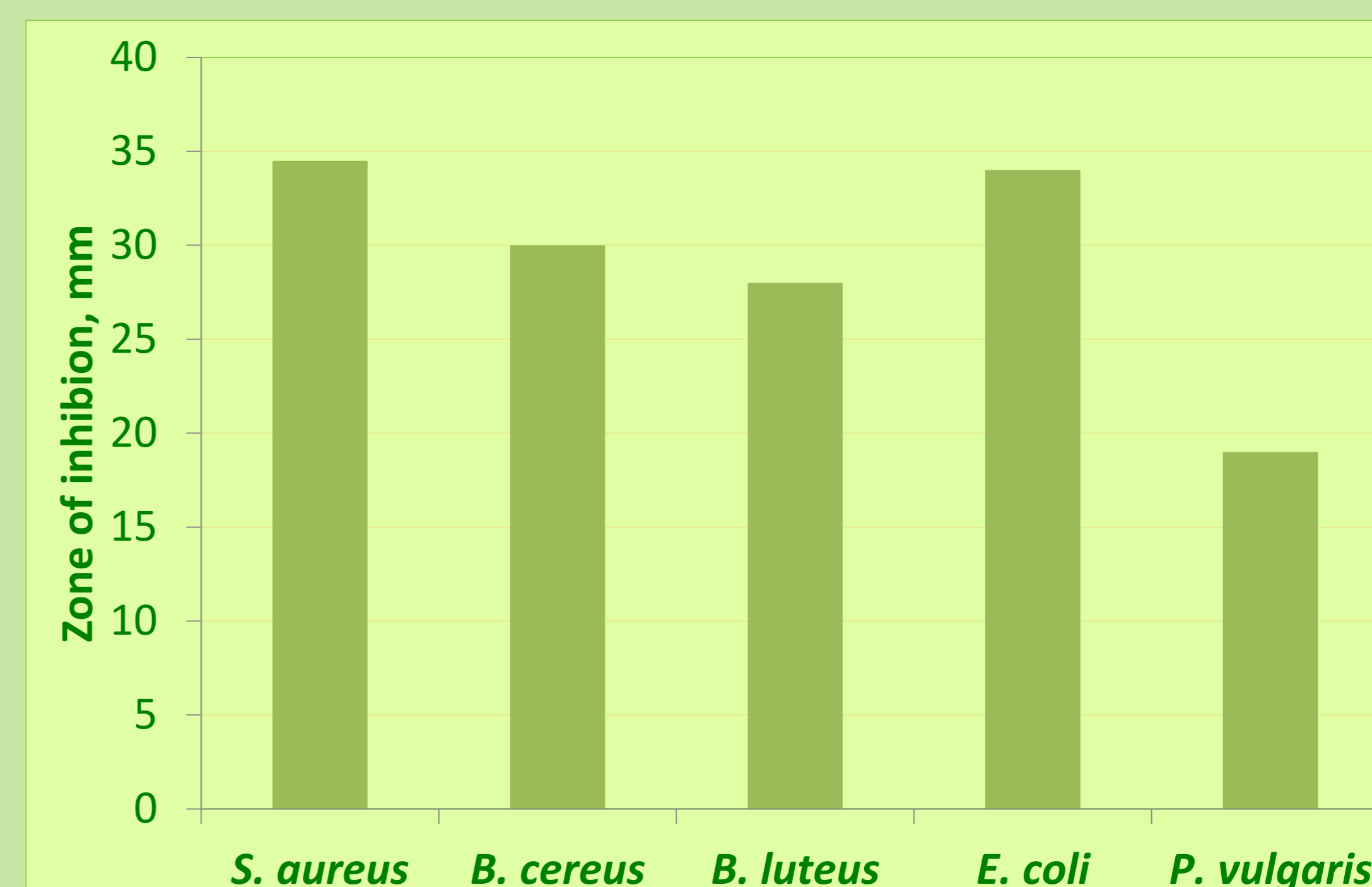


14
 α -Terpineol
8.23%

Compound content, %



Antimicrobial activity analysis



Conclusion

The obtained results show that sweet marjoram essential oil is a rich source of natural antimicrobial substances, such as cyclic and acyclic monoterpene alcohols with strong antibacterial activity on both Gram-positive and Gram-negative bacteria.

Acknowledgements: This work was supported by the Republic of Serbia - Ministry of Education, Science and Technological Development, Program for Financing Scientific Research Work, No. 451-03-9/2021-14/200133.