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INHIBITORY ACTIVITY OF ESSENTIAL OILS ON *STAPHYLOCOCCUS AUREUS*

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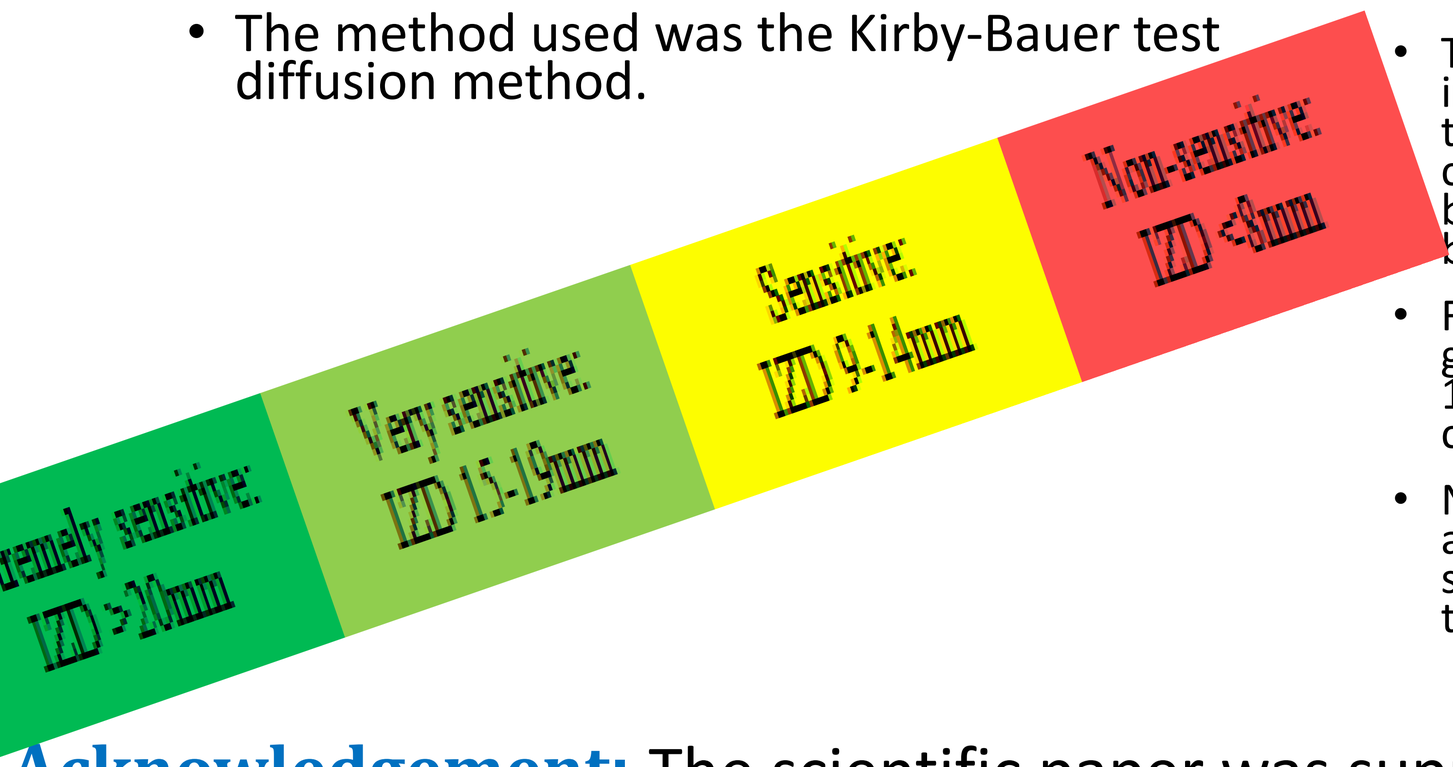
Abstract: *The purpose of this paper is to show the inhibitory property of 19 essential oils against S. aureus: oregano, garden thyme, wild thyme, lavender, peppermint, basil, rosemary, fennel, cumin, black cumin, dill, garden sage, grapefruit, bay laurel, patchouli, and tea tree.*

- **Introduction**: The genus *Staphylococcus* comprises about 50 species, of which *S. aureus*, also known as the "queen of resistant bacteria" (BUHNER, 2014);
- **Material and method**:
- The bacteria tested for sensitivity to these essential oils is *Staphylococcusaureus* Rosenbach 1884, obtained from the "Horia Cernescu" Research Laboratory Complex at the Banat University of Agricultural Sciences and Veterinary Medicine "King Mihai I of Romania" in Timisoara.
- Essential oils are oils purchased commercially from various manufacturing companies.
- The method used was the Kirby-Bauer test diffusion method.



- **Results and discussions**
- Thus, according to our classification, *S. aureus* was characterized as highly sensitive to garden thyme (47 mm), wild thyme (30 mm), and vervain (21 mm) oils, as highly sensitive to bay laurel (19 mm) oil, as sensitive to basil (11 mm), dill (10 mm), rosemary (10 mm), garden sage (10 mm), rose geranium (10 mm), and cumin (10 mm) oils, and non-sensitive to fennel (8 mm), black cumin (8 mm), and grapefruit (8 mm) oils

- **Conclusions**
- The results obtained point to good inhibitory effects in the case of essential oils of garden thyme, wild thyme, oregano, clove, and vervain, classified in the category Extremely Sensitive. Compared to the oils of bay laurel, tea tree, patchouli, and peppermint, the bacteria turned out to be Very Sensitive
- For oils of basil, dill, rosemary, garden sage, rose geranium, cumin, and lavender, IZDs between 9 and 14 mm were measured and ranged in the Sensitive category.
- No effect or with small IZDs were fennel, black cumin, and grapefruit; for these, it cannot be said that the species have no antibacterial effect at all, but only that the oils used had no significant inhibitory effect.

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