

عنوان مقاله:

Antibacterial Activity of Some Iranian Plant Essential Oils as Disinfectant Agents on Surfaces Contaminated with *Staphylococcus Aureus* and *Pseudomonas Aeruginosa*

محل انتشار:

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خلاصه مقاله:

Background & Objectives: Different essential oils (EOs) with antibacterial activities are promising natural sources for providing novel disinfectant agents for hospital surfaces. **Materials & Methods:** The component and antibacterial effects of six EOs, including *Cuminum cyminum* (CCEO), *Artemisia sieberi* (ASEO), *Laurus nobilis* (LNEO), *Ferula gummosa* (FGEO), *Lippia citriodora* (LCEO), and *Cymbopogon citratus* (CIEO) were assessed by GC-MS and ۹۶-well micro-plates (IC₅₀), against *Staphylococcus aureus* and *Pseudomonas aeruginosa*. Then, the antibacterial effects of FGEO, the most effective EO, were evaluated on the trolley surface in a hospital for ۱, ۳, ۵ and ۱۰ min intervals. **Results:** While CCEO, ASEO, and FGEO have the highest effects on the growth of *S. aureus*, CIEO and LNEO showed the best outcomes on *P. aeruginosa*. In addition, our finding showed that FGEO relatively decreases the growth of *S. aureus* and *P. aeruginosa* on the trolley surface ($P < 0.05$). **Conclusion:** The studied EOs could be novel encouraging agents to develop further green antimicrobial agents against different infections. In addition, FGEO, one of the best disinfectant agents in the present study, showed relatively strong antibacterial effects on the surface of the trolley.

کلمات کلیدی:

Essential oil, Antibacterial activity, Microdilution, Disinfectant

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