

## *Phlomis caucasica*   *Salvia sahendica*

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### Evaluation of the antibacterial activity of *Salvia sahendica* and *Phlomis caucasica* extracts

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**Objective:** *Salvia* and *Phlomis* species are traditionally used in different infectious conditions. In the present study the antibacterial activities of *Salvia sahendica* and *Phlomis caucasica* (Iran endemic taxa) were evaluated against a range of gram positive and negative bacterial strains. **Methods:** n-Hexane, dichloromethane and methanol extracts of aerial parts of *Salvia sahendica* and *Phlomis caucasica* were prepared and their antibacterial activity against gram negative bacterial strains including *Escherichia coli*, *Pseudomonas aeruginosa*, *Salmonella paratyphi* and *Serratia marcescens* as well as gram positive bacterial strains namely *Staphylococcus aureus*, *Micrococcus luteus*, *Staphylococcus epidermidis*, *Streptococcus pneumonia* and *Bacillus cereus* were investigated using paper-disk agar diffusion method. SPE method was used for fractionation of methanol extract and activity of the fraction was monitored. **Results:** n-Hexane and dichloromethane extracts of both plants had no antibacterial effect against none of the examined strains but methanol extracts had a moderate activity on some bacteria especially within the gram positive group. Fractions of methanol extracts showed a remarkable antibacterial activity. Among the tested bacteria, *Staphylococcus epidermidis* was the most sensitive strain to fraction 40% of *Salvia methanolic* extract. The sensitivity of the tested bacteria against *Phlomis caucasica* were lower in comparison with *Salvia sahendica*, and the most significant effect related to 60% fraction when examined against *Bacillus cereus*. **Conclusion:** The results indicate that polar fractions of methanol extract of both plants have significant antibacterial activity on the examined gram positive bacterial strains and the effect of *Salvia sahendica* is more potent.

**Key words:** Antibacterial activity, *Salvia sahendica* and *Phlomis caucasica*.

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(GF<sub>254</sub> ; 0.25mm)

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) Salvia sahendica .( )  
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Sep-Pack (C18) .( )

(TbzMed-FPh-144) Salvia sahendica

Salvia scalarea

(TbzMed-FPh-147) Phlomis caucasica

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Salvia jaminana

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Salvia tumentosa

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Salvia cryptantha Salvia multicaulis

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