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**Physicochemical characteristics and antimicrobial activities of *Ferula asafoetida* leaves and gum**

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The traditional phytomedicine *asafoetida* is used in different countries for various purposes. The chemical and antioxidant properties and antimicrobial activities of hydro-alcoholic extracts obtained from *Ferula asafoetida* leaves and gum in Iran (Razavi Khorasan, Iran) were investigated. Gum and leaves of plant were collected and air dried at ambient temperature in the shade. Table-1 showed some properties of fresh gum and dried leaves. Results also showed the Total Phenolic Compounds (TPC) and DPPH antioxidant activity in the hydro-alcoholic (80:20) extract of leaves were noticeably greater than gum. There are significant difference between flavonoids compounds of leaves and gum. Antimicrobial effect of hydro-ethanolic extracts against *Escherichia coli*, *Staphylococcus aureus*, *Saccharomyces cerevisiae* and *Aspergillus niger* were evaluated. Results showed that different concentration of hydro-ethanolic extract of *Ferula asofoetida* gum and leaves had desired inhibition zone diameter in comparable with gentamicin. It might be due to high sulfur content which determined by Inductively Coupled Plasma (ICP).

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