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## Physicochemical characteristics and antimicrobial activities of *ferula assafoetida* leaves and gum

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The traditional phytomedicine assafoetida is used in different countries for various purposes. The chemical and antioxidant properties and antimicrobial activities of hydro-alcoholic extracts obtained from *ferula assafoetida* 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 assafoetida* 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).

### Biography

Razieh Niazmand has completed her PhD at the age of 28 years from Ferdowsi University of Mashhad, Iran in Food Chemistry and Science. She is the assistant professor of Research Institute of Food Science and Technology in Mashhad, Iran. She has published more than 30 papers in national and international journals and has been supervising more than 15 MSc. And PhD students.

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