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عنوان :

بررسی سمیت حاد و تحت مزمن اسانس  
گیاه *Trachyspermum ammi* در رت

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## **Abstract**

**Introduction:** *Trachyspermum ammi* known as ajowan is one of the plant in Apiaceae family. In traditional medicine of the east ajowan has a lot of medicinal properties such as improvement of stomach disease, digestive disorder, diarrhea, hemoroied, bladder stones, respiratory diseases and etc(1,2). Certain therapeutic effects of this plant can be mentioned to Antibacterial and Antifungal Activities, Analgesic and Antinociceptive Effects, Insecticidal Assessment, Antiplatelet Activity, Antitussive and Bronchodilatory Effects, Antihyperlipidemic Properties, Digestive Stimulant Activity and etc(3).

Now a days medicinal plants toxicity is one of the important reason of toxicity in children and the elderly because of that Evaluation of the toxic effects of a plant is important.

**Method and materials:** Initially, we extracted essential oil from the plant with distillation in water. Then for studies the acute toxicity of ajowan's essential oil we gavage different doses of essential oil to rats and monitiur behavior and mortality rate of of rats for 24 and 48 hours. For subchoronic toxicity studies, the essential oil of ajowan with 1000 mg/kg concentration gavage too rats for 23 and 45 days. After 23 and 45 days the bloods of rats were collected for hematology and biochemistry examination and the tissues of spleen, kidney, liver and lung of rats were isolated for histopathologic examination.

**Results:** According to acute studies result LD<sub>50</sub> of ajowan essential oil is about 2294 mg/kg. subchoronic result of this studies show that there is no statistical different between weight and need for food and water in control group and rats were received the essential oil of ajowan. In tissue examination results were not showed seriously hurts to any tissue that were examined.

**Conclusion:** Finally according to results of this study *Trachyspermum ammi* classified as slightly toxic because of the results of LD<sub>50</sub>.

**Keywords:** acute toxicity, subchronic toxicity, essential oil, ajowan, *Trachyspermum ammi*



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