

## Acute dermal irritation and sensitization tests on dermal application of *Anethum graveolens* L. oil-based Dill(Marham-e-Shevid).

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### Abstract:

**Background:** Inflammation is a one of common medical problems. Inflammation is a part of the complex biological response of vascular tissues to harmful stimulants, such as pathogens, damaged cells, or irritants. Nonsteroidal anti-inflammatory drugs (NSAIDs) and corticosteroids are the main medications used to reduce pain and inflammation in damaged tissue, but they have a lot of side effects. Traditional medicine schools can be considered as a source of many new therapeutic methods and medicines. Furthermore, now today there are a large number of traditional pharmaceutical products used in the world for treatment of diseases. Extraction of *Anethum Graveolens* L. (Marham-e-Shevid) is used as a local application to reduce inflammation, however, profile of such drug are not fully understood. One of important test for dermal application is skin irritation and sensitization test. This study was designed to examine this test.

**Material and Method:** In this study, extraction of *Anethum Graveolens* L. (Marham-e-Shevid) was investigated in animals following standard procedures for irritation and sensitization tests.

**Results:** The skin irritation test on rabbits showed that this product is not irritant. Furthermore sensitization test on mice by the Mouse Ear Swelling Test (MEST) method revealed that Marham-e-Shevid to be non-sensitizer.

**Discussion:** Given the proven anti-inflammatory effects of this drug in the previous study and based on the results from this study suggest that this drug does not have dermatotoxicity side effects; Therefore, this drug can be used as a topical anti-inflammatory product.

**Keywords:** inflammation, Traditional Iranian Medicine, *Anethum graveolens* L.

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