# Substance Information Document

## Parsley oil

### 1. Substance identity

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| Name | Parsley oil |
| Synonyms | Parsley seed oil (Petroselinum savitum, Umbelliferae) |
| IUPAC Name | N/A* |
| CAS | 8000-68-8 |

*Non answered, IUPAC Name was not found.

### 2. Toxicological information

The four predominant chemicals found in parsley oils are alpha-pinene, falcarinol, myristicin and apiol.

No studies were located which evaluated the genotoxic potential of parsley oil. Myristicin was not mutagenic at concentrations up to 50 µg/plate in the Ames test using Salmonella typhimurium tester strains TA98, TA100, TA1535, and TA1538 in the presence and absence of metabolic activation with the S9 fraction of rat hepatic microsomes. Other monoterpene compounds identified in parsley oil, such as β-myrcene, terpinene and α-pinene, were similarly found to be non-mutagenic.

The ability of myristicin and apiol to form hepatic DNA adducts in vivo has been investigated as these compounds are structurally similar to the hepatocarcinogens, safrole and estragole. Although both compounds formed adducts in both mouse strains, the levels and persistence were significantly less than those adducts formed by safrole or estragole.

There are no reliable studies to determine the potential carcinogenicity of parsley oil. Myristicin and apiol were administered intraperitoneally to mice 24 hours after birth. There was no significant increase above untreated controls in the incidence of hepatomas or in the number of hepatomas per animal due to the administration of either myristicin or apiol.

Undiluted parsley seed oil applied to the skin of hairless mice and pigs was considered non-irritating; however, when applied to intact or abraded skin of guinea pigs and rabbits for 24 hours under occlusion, this oil was found to be slightly irritating. When tested in human subjects under a 48-hour closed patch test and at a concentration of 2% in petrolatum, parsley seed oil was similarly found to be a slight irritant.

A maximization test evaluating a solution of 2% parsley seed oil in petrolatum did not produce sensitization reactions in 26 volunteers. However, contact dermatitis from exposure to parsley has been reported in several case reports.

Parsley seed oil is of relatively low oral toxicity in mice and rats, with LD50 values of 1.52 and 3.96 g/kg, respectively.

Studies in laboratory animals suggest that Parsley seed oil is of moderate-low acute oral toxicity (LD50 rats 3.96 g/kg bw, LD50 mice 1.52 g/kg bw). Similar consideration for Parsley seed oil can be drawn for

dermal toxicity studies in laboratory animals (Dermal LD50 guinea pigs > 5 g/kg bw). No studies were identified which evaluated the potential subchronic toxicity of parsley oil via dermal or oral exposure. Limited information is available on the acute- and repeated-dose toxicity of Parsley seed oil after inhalation exposure.

No studies were identified which evaluated the potential teratogenic or reproductive toxicity effects of parsley oil or its major constituents.

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| JECFA | - |
| FEMA | https://www.femaflavor.org/sites/default/files/24. GRAS Substances %284430-4666%29.pdf |
| EFSA | - |
| ECHA – REACH dossier | No Registration Dossier |
| PUBCHEM | SID 349326085 - PubChem (nih.gov) |
| CIR | - |
| OSHA | - |

## 3. Addictiveness and attractiveness

No substance-specific data were identified.

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| SCENIHR | - |
| EMA | - |
| PUBMED | - |