

## Substance Information Document

### Lovage oil

#### 1. Substance identity

Name	Lovage oil
Synonyms	Levisticum officinale koch root oil
IUPAC Name	N/A*
CAS	8016-31-7

\*Non answered, IUPAC Name was not found.

#### 2. Toxicological information

Lovage has been grown for its aromatic fragrances, ornamental aspects and medicinal properties for a long time and its use can be traced back to ancient Rome.

Not much toxicological data can be found for lovage oil. The CAS no. 8016-31-7 has three entries in FEMA, i.e., FEMA 2649, 2650, and 2651. And all three numbers are included in GRAS report.

The CAS no. 8016-31-7 is not registered under REACH in EU. But Classification & Labelling (C&L) notification indicates that lovage oil might be sensitizing to skin.

Lovage contains approximately 2% of a volatile oil responsible for its characteristic flavor and odor. This oil is composed primarily of phthalide lactones (70%) (e.g., 3-butylphthalide [32%], cis- and trans-butylidenephthalide, cis- and trans-ligustilide [24%], sen-kyunolide, angeolide). Limited amounts of certain compounds, such as terpenoids, volatile acids, and furocoumarins, also contribute to the flavor of the extract. Both 3-butylphthalide and butylidenephthalide belong to the alicyclic, alicyclic-fused and aromatic-fused ring lactones group which has been evaluated by EFSA (FGE.80rev1, EFSA). No tox data are available on those two chemicals but based on the data from other members in the group, EFSA concluded that this group is not mutagenic *in vitro* in the Ames or DNA repair assays. And there is no safety concern for both 3-butylphthalide and butylidenephthalide at estimated level of intake as flavoring agents. Ligustilide does not have much toxicological data either, but Classification & Labelling (C&L) notification under EU REACH indicated that this chemical is classified as H301, oral acute toxic, category 3. Not much toxicological data can be identified for other constituents.

JECFA	-
FEMA	<a href="#">3. GRAS Substances(2001-3124)_0.pdf (femaflavor.org)</a>
EFSA	-
ECHA – REACH dossier	-
PUBCHEM	
CIR	-

OSHA	-
------	---

### 3. Addictiveness and attractiveness

No substance specific data were identified.

SCENIHR	-
EMA	-
PUBMED	-

### Reference

- Flavouring Group Evaluation 80rev1, EFSA. [Flavouring Group Evaluation 80, Revision 1 \(FGE.80Rev1\): Consideration of alicyclic, alicyclic-fused and aromatic-fused ring lactones evaluated by JECFA \(61st meeting\) structurally related to a aromatic lactone evaluated by EFSA in FGE.27 \(2008\) - - 2009 - EFSA Journal - Wiley Online Library](#)