

Substance Information Document

pepper oil, black

1. Substance identity

Name	pepper oil, black
Synonyms	Black pepper oil; Pepper, black, oil (<i>Piper nigrum</i> L.)
IUPAC Name	N/A*
CAS	8006-82-4

*Non answered, IUPAC Name was not found.

2. Toxicological information

Oil of black pepper is a pale-yellow liquid with a peppery odor. It is obtained by steam distillation of the dried fruit of *Piper nigrum*. It is mainly composed of monoterpene hydrocarbons, sesquiterpene hydrocarbons and oxygenated terpenoids. The major components were α -pinene, β -caryophyllene, limonene, β -pinene, and δ -3-carene. Oil of black pepper is considered GRAS by FDA (21 CFR § 182.20) and is widely used as a flavoring agent in foods.

Acute oral toxicity study was performed in rats using test material Black Pepper Oil. No mortality was observed at dose 5000 mg/kg bw. Hence, LD₅₀ value was considered to be greater than 5000 mg/kg bw, when rats were treated with Black Pepper Oil orally. Acute dermal toxicity study was done in rabbits using test material Black Pepper Oil. No mortality was observed at dose 5000 mg/kg bw. Hence, LD₅₀ value was considered to be greater than 5000 mg/kg bw, when rabbits were treated with Black Pepper Oil by dermal application.

Black pepper oil when applied on the back of hairless mice in undiluted form for 24 hours showed no skin reactions. Hence, Black pepper oil was considered to be not irritating to the skin of mice. Black pepper oil was applied on 25 human volunteers in the concentration 4% in petrolatum. No positive skin reaction was observed. Hence, Black pepper oil was considered not sensitizing to human skin.

Ames test was performed to determine the mutagenic nature of Black pepper oil. The spices was exposed to mammalian microsomal activation and plated on *Salmonella typhimurium*. Black pepper oil did not induce gene mutation in *Salmonella typhimurium* in the presence of mammalian microsomal activation. No specific-ingredient data are available on developmental toxicity, toxicity for reproduction and carcinogenicity.

JECFA	-
FEMA	PEPPER BLACK OIL (PIPER NIGRUM L.) FEMA (femaflavor.org)
EFSA	-
ECHA – REACH dossier	Registration Dossier - Essential Oil of Piper nigrum L. (Family: Piperaceae). Obtained by the steam distillation of dried unripe berries.
PUBCHEM	SID 176259029 - PubChem (nih.gov)
CIR	-
OSHA	-

3. Addictiveness and attractiveness

No specific-ingredient data are available.

SCENIHR	-
EMA	-
PUBMED	-