

8. CAS 140-67-0

Substance name Estragole

Toxicity

Estragole is listed as a carcinogen for the state of California.¹ Estragole has been shown to cause liver cancer and organ toxicity in rodents.^{1,2} In its determinations, California also considered that estragole was genotoxic in several short-term tests, caused DNA adduct formation *in vivo* and *in vitro*, was structurally similar to recognized carcinogens, and had a well characterized carcinogenic mode of action that is expected to occur in humans.¹

Exposure

Estragole occurs naturally in many culinary herbs such as anise and basil. It is used as an additive, fragrance, and flavoring agent in cosmetics, cleaning products, and food.^{1,2} In a survey by the Danish EPA, essential oils and fragrances reported estragole on their Material Safety Data Sheets (MSDS) at over 50% estragole in basil oil, and at lower amounts in anise seed star oil, and fennel oil.³

References

1. California EPA, Office of Environmental Health Hazard Assessment (OEHHA) Reproductive and Cancer Hazard Assessment Section. Evidence on the Carcinogenicity of Estragole. 1999. <http://oehha.ca.gov/Prop65/pdf/estragf.pdf>
2. Bristol, D (2011). NTP 3-month toxicity studies of estragole administered by gavage to rats and mice. *National Toxicology Program Toxicity Report Series* Jan(82):1-112.
3. Danish Ministry of the Environment, Environmental Protection Agency. Surveys on Chemicals in consumer products. Report 92, 2008 http://www.mst.dk/English/Chemicals/Consumer_Products/Surveys-on-chemicals-in-consumer-products.htm.