

Substance Information Document

Vanilla extract

1. Substance identity

Name	Vanilla extract
Synonyms	Vanilla Vanilla absolute Vanilla bean oil Vanilla bean oleoresin
IUPAC Name	N/A*
CAS	8024-06-4

*Non answered, IUPAC Name was not found.

2. Toxicological information

Vanilla extract contains various constituents, including vanillin. No skin irritation was observed in humans with mixtures containing vanilla extract at very low concentrations (the highest was 10%). In a HET-CAM test, slight eye irritation was seen with a mixture containing a vanilla extract at 0.08% and propylene glycol at 6.5%.

No respiratory irritation or sensitisation data and no skin sensitisation tests in laboratory animals were identified for vanilla extract. However, vanillin, the major constituent of vanilla extract was considered by US FDA as respiratory irritant. It does not appear to be a dermal irritant, but it does have ocular irritation potential. A number of human population studies have shown a low prevalence for skin sensitisation and a mouse LLNA indicates that vanillin is a weak sensitiser.

Vanilla extract were of low acute oral and dermal toxicity with LD50 values of >5000 mg/kg bw in rodents and >2000 mg/kg bw in rabbits, respectively. No inhalation data and no standard repeated-dose toxicity data were identified.

No mutagenicity was seen in bacterial (Ames) tests with various vanilla extracts and no chromosome damage in a limited mammalian cell assay. No carcinogenicity or reproductive or developmental toxicity data were identified.

JECFA	-
FEMA	3. GRAS Substances(2001-3124)_0.pdf (femaflavor.org)
EFSA	-
ECHA – REACH dossier	Registration Dossier - ECHA (europa.eu) (Vanillin CAS 121-33-5)
PUBCHEM	SID 459148203 - PubChem (nih.gov)

CIR	vanill042018slr.pdf (cir-safety.org)
OSHA	-

3. Addictiveness and attractiveness

Day-old rats that had been prenatally-exposed to vanilla crawled for a longer distance towards a vanilla odour than to other odours or than control pups.

In an investigation into the most common flavouring ingredients added to e-liquids on the Dutch market, vanilla extract was identified in 0.79% of e-liquid samples. The investigators noted that such flavourings increase e-cigarette attractiveness and use and thereby exposure to potentially toxic ingredients.

SCENIHR	-
EMA	-
PUBMED	Prenatal exposure to vanilla or alcohol induces crawling after these odors in the neonate rat: The role of mu and kappa opioid receptor systems - PubMed (nih.gov) Comprehensive overview of common e-liquid ingredients and how they can be used to predict an e-liquid's flavour category - PubMed (nih.gov)