Substance Information Document

3-Hexen-1-ol

1. Substance identity

Name	3-Hexen-1-ol
Synonyms	cis-hex-3-en-1-ol; cis-3-hezenol
IUPAC Name	(Z)-hex-3-en-1-ol
CAS	928-96-1

2. Toxicological information

RIFM (Research Institute for Fragrance Materials) concluded that, based on the existing data, 3-Hexen-1-ol does not present concern for genotoxicity. REACH dossier defines a NOAEL for reproductive/developmental toxicity of 1000 mg/kg based on OECD 422 study. It was reported no treatment-related effects on mating, fertility, or gestation length, or on the viability, appearance, growth, or development of the offspring. No information was identified on the carcinogenicity.

Studies in laboratory animals suggest that cis-3-hexen-1-ol is a low acute systemic toxicity following oral or dermal exposure. No data related to acute toxicity by inhalation were identified. A repeat dose toxicity test via the oral route (comparable to OECD 408) defined a NOEL of 120- 150 mg/kg/day.

No skin irritant was observed in a 48-hour closed-patch test at 4% and in undiluted cis-3-hexen-1-ol applied to skin of rabbits for 24 hours animal tests. No substance-specific respiratory, eye irritation and respiratory tract sensitization data were identified. No skin sensitization reactions were observed in human and in mouse (LLNA test).

JECFA	942. Linear and branched-chain aliphatic unsaturated.... (WHO Food Additives Series 42) (inchem.org)
FEMA	3. GRAS Substances(2001-3124)_0.pdf (femaflavor.org)
EFSA	Scientific Opinion on Flavouring Group Evaluation 5, Revision 3 (FGE.05Rev3): Branched- and straight-chain unsaturated aldehydes, dienals, unsaturated and saturated carboxylic acids and related esters with saturated and unsaturated aliphatic alcohols and a phenylacetic acid related ester from chemical groups 1, 2, 3, 5 and 15 (wiley.com) Scientific Opinion on Flavouring Group Evaluation 06, Revision 4 (FGE.06Rev4): Straight- and branched-chain aliphatic unsaturated primary alcohols, aldehydes, carboxylic acids and esters from chemical groups 1, 3 and 4 (wiley.com)

ECHA – REACH dossier	Registration Dossier - ECHA (europa.eu)
PUBCHEM	cis-3-Hexen-1-ol | C6H12O - PubChem (nih.gov)
CIR	-
OSHA	-

3. Addictiveness and attractiveness

A study on male mice exposed by inhalation to *cis*-3-hexen-1-ol reported no effect on locomotor activity but there was a reduction in anxiety.

In an investigation into the most common flavoring ingredients added to e-liquids on the Dutch market, *cis*-3-hexen-1-ol was identified in 18% of e-liquid samples. The investigators noted that such flavorings increase e-cigarette attractiveness and use and thereby exposure to potentially toxic ingredients.

SCENIHR	-
EMA	-
PUBMED	Effects of (Z)-3-hexenol, a major component of green odor, on anxiety-related behavior of the mouse in an elevated plus-maze test and biogenic amines and their metabolites in the brain - 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)