

Substance Information Document

Decanal

1. Substance identity

Name	Decanal
Synonyms	1-Decanal; 1-Decyl aldehyde; Capric aldehyde; Decanaldehyde; N-Decanal
IUPAC Name	decanal
CAS	112-31-2

2. Toxicological information

AMES tests performed on decanal revealed that decanal is non-mutagenic. Furthermore, ECHA experts considered that based on in vitro studies (MLA, gene mutation, chromosome aberration) generated on structural analogues (nonanal, Undec-10-enal and 2-methylundecanal) and in vivo studies (mouse micronucleus) on analogue (Undec-10-enal), decanal should be considered as non-mutagenic and non-genotoxic.

One carcinogenicity study on mice exposed to decanal did not reveal an increased lung tumor incidence compared to T2097 control.

According to ECHA expert panel, decanal was shown to be irritating to both skin and eyes in rabbits and was found to be non-sensitising in a Human Repeat Insult Patch Test (HRIFT). Other studies from 3-week fixed dose, Draize test, and guinea pig maximization test (GPMT) support this finding.

Studies in laboratory animals suggest that decanal is of moderate-low acute oral toxicity and repeated-dose toxicity (LD50 rats > 3730 mg/kg bw, NOAEL 7 mg/kg bw/day 90-days in rats). Limited information is available on the acute- and repeated-dose toxicity of decanal after inhalation exposure.

No developmental and reproductive toxicity studies were available on decanal. Studies on structural analogues indicate that decanal is not expected to be a reprotoxicant.

JECFA	906. Saturated aliphatic acyclic linear primary alcohols, aldehydes and acids (WHO Food Additives Series 40) (inchem.org)
FEMA	3. GRAS Substances(2001-3124) .0.pdf (femaflavor.org)
EFSA	-
ECHA – REACH dossier	Registration Dossier - ECHA (europa.eu)
PUBCHEM	Decanal C10H20O - PubChem (nih.gov)
CIR	-

OSHA	-
------	---

3. Addictiveness and attractiveness

No substance-specific data were identified.

SCENIHR	-
EMA	-
PUBMED	-