

Linalool

CAS N°: 78-70-6
 126-90-9 (d-linalool)
 126-91-0 (l-linalool)

Empirical formula: C₁₀H₁₈O

Synonyms: Coriandrol
 2,6-Dimethyl-2,7-octadien-6-ol
 3,7-Dimethyl-1,6-octadien-3-ol
 Licareol
 Linalol
 Linalyl alcohol
 1,6-Octadien-3-ol, 3,7-dimethyl (CAS)

History: Initial reviews: New Standard
 Current revision date: November 2003
 Implementation date: For new submissions*: May 6, 2004
 For existing fragrance compounds*: May 6, 2005
 Next review date: November 2008

* This date applies to the supply of fragrance compounds (formulas) only, not to the finished products in the marketplace.

RECOMMENDATION: SPECIFICATION

RESTRICTIONS:

Limits in the finished product:

Skin contact products:

Leave-on products:	N/A	Rinse-off products:	N/A
		<i>Including household cleaning products</i>	

Non skin contact products: N/A

Note box:

Fragrance material specifications: Limit peroxide level to 20 mmol/l.

Linalool and natural products known to be rich in linalool, such as bois de rose, coriander or ho wood oil, should only be used when the level of peroxides is kept to the lowest practical level. It is recommended to add antioxidants at the time of production of the raw material. The addition of 0.1% BHT or alpha-tocopherol for example has shown great efficiency. The maximum peroxide level for products in use should be 20 mmol/l.

The (hydro) peroxide content can be determined by using the

Linalool

FMA method.

Contribution from other sources: See fragrance material specification.

Critical effect: Sensitization*

*Pure linalool is not a sensitizer while hydroperoxides and other oxidation products have shown sensitizing properties.

One of the major oxidation products of linalool was isolated and identified as 7-hydroperoxy-3,7-dimethyl-octa-1,5-diene-3-ol. In sensitization studies in guinea pigs, linalool of high purity gave no reactions, while linalool that had been oxidized for 10 weeks sensitized the animals. It was concluded that autoxidation of linalool is essential for its sensitizing potential (Skold et al., 2002).

REXPAN Rationale / Conclusion:

The GMP recommended by IFRA have been noted and approved by REXPAN, (November 17, 2003).

References:

M.Skold, A.Borje, M.Matura and A.-T.Karlberg., 2002. Studies on the autoxidation and sensitizing capacity of the fragrance chemical linalool, identifying a linalool hyperperoxide. Contact Dermatitis, 46(5), 267-272.

M.Skold, A.Borje, M.Matura and A.-T.Karlberg., 2002. Sensitization studies on the fragrance chemical linalool, with respect to auto-oxidation. Contact Dermatitis, 46 (Suppl. 4), 20.