3 and 4-(4-Hydroxy-4-methylpentyl)-3-cyclohexene-1-carboxaldehyde (HMPCC)

CAS Nº: 31906-04-4
51414-25-6

Empirical formula: $C_{13}H_{22}O_2$

Synonyms: 3-Cyclohexen-1-carboxaldehyde, 4-(4-hydroxy-4-methylpentyl)-
3-Cyclohexen-1-carboxaldehyde, 3-(4-hydroxy-4-methylpentyl)-
Hydroxyisohexyl 3-cyclohexene carboxaldehyde (INCI)
4-(4-Hydroxy-4-methylpenyl) cyclohex-3-enecarbaldehyde
3-(4-Hydroxy-4-methylpentyl) cyclohex-3-ene-1-carbaldehyde
Lyral, Kovanol, Mugonal, Landolal, Cyclohexal (trade names)

History: Initial reviews: April 2003, July 2008

Current revision date: 2009

Implementation date: for new submissions*: August 7, 2009

for existing fragrance compounds*: August 7, 2011

Next review date: 2014

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

Standard: RESTRICTED

RESTRICTIONS:

Limits in the finished product:
For a description of the categories, refer to the QRA Information Booklet.

Category 1 - See Note box (1)	0.02 %	Category 7	0.02 %
Category 2	0.02 %	Category 8	0.2 %
Category 3	0.2 %	Category 9	0.2 %
Category 4	0.2 %	Category 10	0.2 %
Category 5	0.2 %	Category 11	See Note box (2)
Category 6 - See Note box (1)	0.2 %		

Note box:

(1) IFRA would recommend that any material used to impart perfume or flavour in products intended for human ingestion should consist of ingredients that are in compliance with appropriate regulations for foods and food flavourings in the countries of planned distribution and, where these are lacking, with the recommendations laid down in the Code of Practice of IOFI (International Organisation of the Flavor Industry - www.iofiorg.org)

(2) Category 11 includes all non-skin contact or incidental skin contact products. Due to negligible skin contact the concentration of a fragrance ingredient should not exceed the usual concentration of the fragrance compound in the finished product.

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The restrictions as given for the individual categories are NOT based on the QRA but solely represent a pragmatic approach to address the specific situation for HMPCC. These pragmatic measures will be reviewed over time in view of the development of sensitization rates (clinical data) to the material.

Fragrance material specification: N/A

Contribution from other sources: None to consider (see also the note on contributions from other sources in the **Introduction to the IFRA Standards**)

Critical effect: **Sensitization**

RIFM Summaries:

See note box

REXPAN Rationale / Conclusion:

The RIFM Expert Panel approved the pragmatic approach proposed by IFRA.