**Nootkatone**

**CAS-No.:** 4674-50-4

The scope of this Standard includes, but is not limited to the CAS number(s) indicated above; any other CAS number(s) used to identify this fragrance ingredient should be considered in scope as well.

**Molecular formula:** \( C_{15}H_{22}O \)

**Structure:**

5,6-Dimethyl-8-isopropenylbicyclo(4.4.0)dec-1-en-3-one

4a,5-Dimethyl-1,2,3,4,4a,5,6,7-octahydro-7-keto-3-isopropenynaphthalene

4betaH,5alpha-Eremorphila-1(10),11-dien-2-one

(4R-(4alpha,4a alpha,6beta))-4,4a,5,6,7,8-Hexahydro-4,4a-dimethyl-6-(1-methylvinyl)naphthalen-2(3H)-one

4,4a,5,6,7,8-Hexahydro-6-isopropenyl-4,4a-dimethyl-2(3H)-naphthalenone

2(3H)-Naphthalenone, 4,4a,5,6,7,8-hexahydro-4,4a-dimethyl-6-(1-methylethenyl)-, (4R,4aS,6R)-

**Synonyms:**

5,6-Dimethyl-8-isopropenylbicyclo(4.4.0)dec-1-en-3-one

4a,5-Dimethyl-1,2,3,4,4a,5,6,7-octahydro-7-keto-3-isopropenynaphthalene

4betaH,5alpha-Eremorphila-1(10),11-dien-2-one

(4R-(4alpha,4a alpha,6beta))-4,4a,5,6,7,8-Hexahydro-4,4a-dimethyl-6-(1-methylvinyl)naphthalen-2(3H)-one

4,4a,5,6,7,8-Hexahydro-6-isopropenyl-4,4a-dimethyl-2(3H)-naphthalenone

2(3H)-Naphthalenone, 4,4a,5,6,7,8-hexahydro-4,4a-dimethyl-6-(1-methylethenyl)-, (4R,4aS,6R)-

**History:**

**Publication date:** 2006 (Amendment 40)

**Previous Publications:** 1980

**Implementation dates:**

For new submissions*:

December 11, 2006

For existing fragrance compounds*:

December 11, 2007

*These dates apply to the supply of fragrance mixtures (formulas) only, not to the finished consumer products in the marketplace.

**RECOMMENDATION:**

**SPECIFICATION**

**FRAGRANCE INGREDIENT SPECIFICATION:**

Nootkatone used as a fragrance ingredient should be at least 98% pure, with a melting point of at least 32°C. Lower purity grades may not be used as a fragrance ingredient.
Nootkatone

**FLAVOR REQUIREMENTS:**
Due to the possible ingestion of small amounts of fragrance ingredients from their use in products in Categories 1 and 6, materials must not only comply with IFRA Standards but must also be recognized as safe as a flavoring ingredient as defined by the IOFI Code of Practice (www.iofi.org). For more details see chapter 1 of the Guidance for the use of IFRA Standards.

**CONTRIBUTIONS FROM OTHER SOURCES:**
NONE TO CONSIDER (SEE ALSO THE SECTION ON CONTRIBUTIONS FROM OTHER SOURCES IN CHAPTER 1 OF THE GUIDANCE FOR THE USE OF IFRA STANDARDS)

Nootkatone is found in natural extracts, but its natural contributions are not relevant for the fragrance ingredient specification mentioned above.

**INTRINSIC PROPERTY DRIVING RISK MANAGEMENT:**
DERMAL SENSITIZATION

**EXPERT PANEL FOR FRAGRANCE SAFETY RATIONALE / CONCLUSION:**
The Expert Panel for Fragrance Safety reviewed all the available data for Nootkatone. Based on their expert judgement, they recommend to use the fragrance ingredient according to its specification mentioned above.

**REFERENCES:**
The IFRA Standard on Nootkatone is based on at least one of the following publications:

- The RIFM Safety Assessment on Nootkatone is available at the RIFM Safety Assessment Sheet Database: http://fragrancematerialsafetyresource.elsevier.com/.

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Additional information on the application of IFRA Standards is available in the Guidance for the use of IFRA Standards, publicly available at www.ifrafragrance.org.