cis-and trans-Asarone

CAS-No.:	494-40-6 2883-98-9 5273-86-9 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 these fragrance ingredients should be considered in scope as well.
Synonyms:	494-40-6: Benzene, 1,2,4-trimethoxy-5-(1-propen-1-yl)- (unspecified isomer) (E)-and (Z)-2,4,5-Trimethoxypropen-1-yl benzene 2883-98-9: α-Asarone trans-Asarone Benzene, 1,2,4-trimethoxy-5-(1-propenyl)-, (E)- trans-Isoasarone 5273-86-9: ß-Asarone cis-ß-Asarone Benzene, 1,2,4-trimethoxy-5-(1-propenyl)-, (Z)- cis-Isoasarone

History:	Publication date:	2006 (Amendment 40)	Previous Publications:	1991

Implementation dates:	For new creation*:	Not applicable.
	For existing creation*:	December 1991
	*These dates apply to the supply of fragrance mixtures (formulas) only, not to the finished consumer products in the marketplace.	

RECOMMENDATION:	**PROHIBITION / RESTRICTION**

FRAGRANCE INGREDIENT PROHIBITION:	cis- and trans-Asarone as such should not be used as fragrance ingredients. The natural extracts containing cis- and trans-Asarone should not be used as substitutes for this substance.

MAXIMUM ACCEPTABLE CONCENTRATIONS IN THE FINISHED PRODUCT (%):			
Category 1	See notebox	Category 7A	See notebox

cis-and trans-Asarone

Category 2	See notebox	Category 7B	See notebox
Category 3	See notebox	Category 8	See notebox
Category 4	See notebox	Category 9	See notebox
Category 5A	See notebox	Category 10A	See notebox
Category 5B	See notebox	Category 10B	See notebox
Category 5C	See notebox	Category 11A	See notebox
Category 5D	See notebox	Category 11B	See notebox
Category 6	See notebox	Category 12	See notebox

Fragrance ingredient restriction - Note box
On the basis of established maximum concentration levels of this substance in commercially available natural sources (like essential oils, extracts and absolutes), exposure to this substance from the use of these oils and extracts (e.g. Calamus oils) is regarded acceptable as long as the level of cis- and trans-Asarone in the finished consumer product does not exceed 100ppm (0.01 %).

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:	**SEE ANNEX ON CONTRIBUTIONS FROM OTHER SOURCES**

The natural contribution of cis-and trans-Asarone is determined by the sum of the natural contributions of each of its isomers.

INTRINSIC PROPERTY DRIVING RISK MANAGEMENT:	**CARCINOGENICITY**

EXPERT PANEL FOR FRAGRANCE SAFETY RATIONALE / CONCLUSION:

The Expert Panel for Fragrance Safety reviewed all the available data for cis-and trans-Asarone and recommends not to use cis-and trans-Asarone as or in fragrance ingredients in any finished product application.
However, the presence of cis-and trans-Asarone in natural extracts used as ingredients in finished consumer products is tolerated only according to the upper concentration level mentioned in the Notebox if the natural extracts are not being used to provide an alternative, indirect source of the banned substance.

cis-and trans-Asarone

REFERENCES:

The IFRA Standard on cis-and trans-Asarone is based on at least one of the following publications:

• The RIFM Safety Assessment on cis-and trans-Asarone is available at the RIFM Safety Assessment Sheet Database: http://fragrancematerialsafetyresource.elsevier.com/.

• Api A.M., Belsito D., Bruze M., Cadby P., Calow P., Dagli M. L., Dekant W., Dent M., Ellis G., Fryer A. D., Fukayama M., Griem P., Hickey C., Kromidas L., Lalko J., Liebler D.C., Miyachi Y., Politano V.T., Renskers K., Ritacco G., Salvito D., Schultz T.W., Sipes I. G., Smith B., Vitale D., Wilcox D.K. (2015). Criteria for the Research Institute for Fragrance Materials, Inc. (RIFM) safety evaluation process for fragrance ingredients. Food Chem Toxicol. 2015 Aug;82 Suppl:S1-S19 (doi: 10.1016/j.fct.2014.11.014) (http://fragrancematerialsafetyresource.elsevier.com/sites/default/files/Criteria_Document_Final.pdf).

• IDEA project (International Dialogue for the Evaluation of Allergens) Final Report on the QRA2: Skin Sensitisation Quantitative Risk Assessment for Fragrance Ingredients, September 30, 2016 (http://www.ideaproject.info/uploads/Modules/Documents/qra2-dossier-final--september-2016.pdf).

• Salvito D.T., Senna R. J., Federle T.W. (2002). A framework for prioritizing fragrance materials for aquatic risk assessment. Environ Toxicol Chem. 2002;21:1301-1308 (https://www.ncbi.nlm.nih.gov/pubmed/12069318).

• R.W. Wiseman, E.C. Miller et al. (1987), Cancer Res. 47,2275-2283.

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.