Treemoss extracts

CAS-No.:	90028-67-4 68648-41-9 68917-40-8 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:	Treemoss absolute (Pseudevernia furfuracea) Treemoss (Usnea furfuracea) Treemoss colourless Pseudevernia furfuracea extract Cedar moss

History:	Publication date:	2020 (Amendment 49)	Previous Publications:	1991 2001 2008

Implementation dates:	For new creation*:	February 10, 2021
	For existing creation*:	February 10, 2022
	*These dates apply to the supply of fragrance mixtures (formulas) only, not to the finished consumer products in the marketplace.	

RECOMMENDATION:	**RESTRICTION / SPECIFICATION**

MAXIMUM ACCEPTABLE CONCENTRATIONS IN THE FINISHED PRODUCT (%):			
Category 1	0.020 %	Category 7A	0.10 %
Category 2	0.016 %	Category 7B	0.10 %
Category 3	0.10 %	Category 8	0.032 %
Category 4	0.10 %	Category 9	0.10 %
Category 5A	0.076 %	Category 10A	0.10 %
Category 5B	0.076 %	Category 10B	0.10 %
Category 5C	0.076 %	Category 11A	0.10 %
Category 5D	0.076 %	Category 11B	0.10 %
Category 6	0.18 %	Category 12	No Restriction

Treemoss extracts

Fragrance ingredient restriction - Note box
For Treemoss and Oakmoss extracts, the restrictions in the Standards are directly linked to the presence of Atranol and Chloroatranol in the finished products. To ensure that those remain below trace levels, the upper concentration levels have not been increased (compared its last publication in the Amendment 43 (2008)). In the presence of Oakmoss extracts, the level of Treemoss in the respective category has to be reduced accordingly, such that the total amount of both extracts does not exceed the maximum permitted level in each category as listed in the table above. If the same fragrance mixture is intended to be used in more than one IFRA Category, then the most restrictive limitation (based on foreseen use concentrations and maximum permitted level) will apply.

FRAGRANCE INGREDIENT SPECIFICATION:	Treemoss extracts shall not contain more than 0.8% of Dehydroabietic acid (DHA) as a marker of 2% of total resin acids. The concentration of DHA (about 40% of the total resin acids) in Treemoss can be measured with an High Performance Liquid Chromatography (HPLC) reverse phase - spectrofluorometry method. Further, levels of Atranol and Chloroatranol should each be below 100 ppm in Treemoss extracts.
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 BEYOND TRACES (SEE ALSO THE SECTION ON CONTRIBUTIONS FROM OTHER SOURCES IN CHAPTER 1 OF THE GUIDANCE FOR THE USE OF IFRA STANDARDS)**
INTRINSIC PROPERTY DRIVING RISK MANAGEMENT:	**DERMAL SENSITIZATION**

RIFM SUMMARIES:

Maximum acceptable concentrations are based on a comprehensive safety assessment, considering various endpoints. Depending on the outcome of the safety assessment, it might be one or more endpoint(s) that will drive the derivation of the concentration levels. If more than one endpoint is of relevance, the maximum acceptable concentrations for each product category are derived from comparing maximum permitted level per endpoint consideration (e.g. dermal sensitization and/or systemic toxicity). Such maximum acceptable concentrations correspond to the lowest level obtained per category.

Additional information is available in the RIFM safety assessment for Treemoss extracts, which can be

Treemoss extracts

downloaded from the RIFM Fragrance Material Safety Assessment Center: http://fragrancematerialsafetyresource.elsevier.com/.

EXPERT PANEL FOR FRAGRANCE SAFETY RATIONALE / CONCLUSION:

The Expert Panel for Fragrance Safety reviewed all the available data for Treemoss extracts and recommends the concentrations for the 12 different product categories, which are the maximum acceptable concentrations of Treemoss extracts in the various product categories.
In addition, they recommend to use Treemoss extracts according to the specification above mentioned.

REFERENCES:

The IFRA Standard on Treemoss extracts is based on at least one of the following publications:

• The RIFM Safety Assessment on Treemoss extracts if available at the RIFM Fragrance Material Safety Assessment Center: 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 (http://fragrancematerialsafetyresource.elsevier.com/sites/default/files/Criteria_Document_Final.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).

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.