Oakmoss Extracts

CAS N°: 90028-68-5 = Evernia prunastri extract
9000-50-4 = oils, Oakmoss resinoid
68917-10-2 =oils, Oakmoss

Empirical formula: N/A

Synonyms: Oakmoss absolute
Evernia absolute
Evernia prunastri, ext.
Mousse de Chêne absolute
Oakmoss absolute (*Evernia prunastri*)
Evernia prunastri (Oakmoss) extract

History:

Initial reviews:	April 1991, July 2001	
Current revision date:	2008	
Implementation date:	For new submissions*:	January 16, 2009
	For existing fragrance compounds*:	January 16, 2011
Next review date:	2013	

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

Standard: RESTRICTED / SPECIFICATION

RESTRICTIONS:

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

Category 1: See Note box (1)	0.02 %	Category 7:	0.1 %
Category 2:	0.03 %	Category 8:	0.1 %
Category 3:	0.1 %	Category 9:	0.1 %
Category 4:	0.1 %	Category 10:	0.1 %
Category 5:	0.1 %	Category 11: Not Restricted (2)	
Category 6: See Note box (1)	0.5 %		

Note box:
For this material, for pragmatic reasons, restrictive levels allowed by the QRA for certain categories but actually being higher than those already in place before applying the QRA, will temporarily not be implemented until the end of a 5 year monitoring phase. At the end of the 5 years the position will be reevaluated again.

In the presence of tree moss extracts, the level of oak moss 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 compound is intended for more than one IFRA QRA category, then the most restrictive limitation (based on foreseen use concentrations and maximum permitted level) will apply.

(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)

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http://www.iofiorg.org/.

(2) Category 11 includes all non-skin contact or incidental skin contact products. Due to the negligible skin contact from these types of products there is no justification for a restriction of the concentration of this fragrance ingredient in the finished product.

Fragrance material specification: Oak moss extracts used in fragrance compounds must not contain added tree moss, which is a source of resin acids.
Traces of resin acids may be carried over to commercial qualities of oak moss in the manufacturing process. These traces must not exceed 0.1% (1000 ppm) dehydroabietic acid (DHA) in the extract.
The concentration of resin acids in oak moss can be measured with an HPLC Reverse Phase – spectrofluorometry method.

Further, levels of atranol and chloroatranol should each be below **100 ppm** in oak moss extracts.

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:

LLNA weighted mean **EC3** values ($\mu g/cm^2$)	**Potency Classification** Based on Animal Data[1]	**Human Data**			**WoE NESIL[3]** ($\mu g/cm^2$)
		NOEL – HRIPT (induction) ($\mu g/cm^2$)	**NOEL – HMT** (induction) ($\mu g/cm^2$)	**LOEL[2]** (induction) ($\mu g/cm^2$)	
970	Moderate	700[4]	1724[4]	1417	700

NOEL = No observed effect level; HRIPT = Human Repeat Insult Patch Test; HMT = Human Maximization Test;

LOEL = lowest observed effect level; NA = Not Available

[1] Based on animal data using classification defined in ECETOC, Technical Report No. 87, 2003

[2] Data derived from HRIPT or HMT

[3] WoE NESIL limited to three significant figures

[4] MT-NOEL = Maximum Tested No Effect Level. No sensitization was observed in human predictive studies. Doses reported reflect the highest concentration tested, not necessarily the highest achievable NOEL

REXPAN Rationale / Conclusion:

The RIFM Expert Panel reviewed the critical effect data for Oakmoss extracts and, based on the weight of evidence, established the No Expected Sensitization Induction Level (NESIL) as 700 µg/cm². They recommend the limits for the 11 different product categories, which are the acceptable use levels of Oakmoss extracts in the various product categories. These were derived from the application of the exposure-based quantitative risk assessment approach for fragrance ingredients, which is detailed in the QRA Expert Group Technical Dossier of June 22, 2006.

References:

RIFM (Research Institute for Fragrance Materials, Inc.), 1973. Human Maximization Test. RIFM report number 1802, October 9a (RIFM, Woodcliff Lake, NJ, USA)

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Research Institute for Fragrance materials, Inc. (1989). Human repeated insult patch test of oakmoss absolute. RIFM report number 12360, 31 October.

Research Institute for Fragrance Materials, Inc. (1989). Human repeated insult patch test of oakmoss absolute. RIFM report number 12361, 31 October.

Research Institute for Fragrance Materials, Inc. (1990). Human repeated insult patch test of oakmoss absolute. RIFM report number 12380, 1 March.

Research Institute for Fragrance Materials, Inc. (1990). Human repeated insult patch test on oakmoss absolute. RIFM report number 14118, 26 November.

RIFM (Research Institute for Fragrance Materials, Inc.), 2005. Local Lymph Node Assay. RIFM report number 50881, June 30 (RIFM, Woodcliff Lake, NJ, USA).