

TECHNICAL DATASHEET

Cosphaderm® Magnolia Extract 98

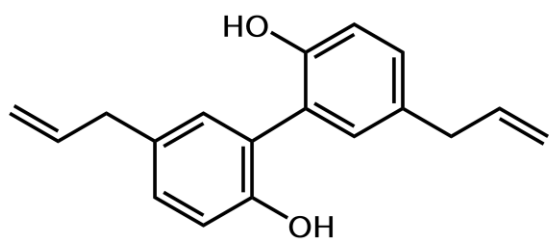
1.1 General information

Trade name:	Cosphaderm® Magnolia Extract 98
Item no.:	01-008-xxxx
Supplier	Cosphatec GmbH Hopfenmarkt 33 20457 Hamburg Germany
Chemical name:	Reaction mass of 5,5'-Diallyl-2,2'-Dihydroxybiphenyl (Magnolol) and 3,5'-Diallyl-4,2'-Dihydroxybiphenyl (Honokiol)
Other names:	Magnolia Bark Dry Extract
INCI name:	Magnolia Officinalis Bark Extract
CAS No.:	947686-05-7
EINECS/ EC No.:	943-705-7
IECIC:	Magnolia Officinalis Bark Extract

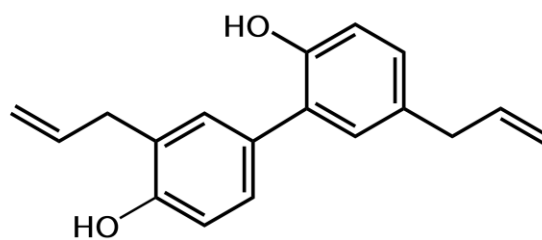
1.2 Product composition

INCI name	CAS No.
Magnolia Officinalis Bark Extract	947686-05-7

1.3 Chemical structure



Magnolol



Honokiol

1.4 Product short description


Cosphaderm® Magnolia Extract 98 is a pure powdered extract of the bark of *Magnolia Officinalis* with a minimal content of 98 % magnolol and honokiol in a ratio of approx. 1 to 1. It inhibits the growth of bacteria and fungi as well as viral infection pH independently (Table 1). It has a very strong effect against caries and periodontitis, acts anti-inflammatory and is a highly effective anti-aging agent and a strong antioxidant (Table 2).

Table 1: MIC Data of *Magnolia Officinalis* Bark Extract

Species	Category	MIC (mg/ml)
<i>Epidermophyton floccosum</i>	Dermatophyte	0.025-0.1
<i>Microsporum</i>	Dermatophyte	0.025-0.1
<i>Trichophyton mentagrophytes</i>	Dermatophyte	0.025-0.1
<i>Aspergillus niger</i>	Mould	0.025-0.1
<i>Cryptococcus neoformans</i>	Mould	0.025-0.1
<i>Candida albicans</i>	Yeast fungus	0.025-0.1
<i>Bacillus subtilis</i>	Gram positive bacterium	0.005
<i>Micrococcus luteus</i>	Gram positive bacterium	0.025
<i>Mycobacterium</i>	Gram positive bacterium	0.0075
<i>Staphylococcus aureus</i>	Gram positive bacterium	0.01
<i>Streptococcus mutans</i>	Gram positive caries bacterium	0.0098
<i>Streptococcus oralis</i>	Gram positive caries bacterium	0.0098
<i>Propionibacterium acnes</i>	Gram positive skin bacterium	0.0098
<i>Propionibacterium granulosum</i>	Gram positive skin bacterium	0.0077
<i>Staphylococcus epidermidis</i>	Gram positive skin bacterium	0.0098
<i>Bacteroides fragilis</i>	Gram negative bacterium	0.025
<i>Escherichia Coli</i>	Gram negative bacterium	0.01
<i>Actinobacillus</i>	Gram negative Parodontitis bacterium	0.025
<i>Actinomyces comitans</i>		
<i>Fusobacterium nucleatum</i>	Gram negative Parodontitis bacterium	0.031
<i>Porphyromonas gingivalis</i>	Gram negative Parodontitis bacterium	0.008

Cosphaderm® Magnolia Extract 98 can be used for alternative preservation and as an active against acne-, caries- or paradontitis bacteria. The extract is oil soluble, thus for alternative preservation the combination with Cosphaderm® Diols (synthetic: Pentiol GL or Hexiol, natural: Propanediol natural or Pentiol natural) and/or Cosphaderm® GMCY is highly recommended to push the Magnolia Extract to the water phase where germs are growing.

Table 2: Rancimat test results

Antioxidant in sunflower oil	Induction time (h)	Antioxidative Activity Index	
Pure oil	11.82		 Increasing activity
+ 0.05 % [w/v] Cosphaderm® Magnolia Extract 98	13.56	1.15	
+ 0.05 % [w/v] Cosphaderm® T-70 NON GMO	14.84	1.26	

In hair care formulations, extracts of *Magnolia Officinalis* have an anti-frizz-effect, which means the hair gets smooth and silk glossy. One further official function (CosIng database) is skin conditioning.

1.5 Application

Recommended concentration:	0.2 % (for alternative preservation, combination with Cosphaderm® GMCY and / or Cosphaderm® Diols recommended). 0.05% (as an active for anti caries or anti acne).
Conditions:	application to the oil phase or dissolved in Cosphaderm® Diols
Hints:	Cosphaderm® Magnolia Extract 98 is heat sensitive. Avoid long term heating in the oil phase (20 min at 80°C). We recommend two methods. Method 1: dissolve the extract in a little part of the oil phase and add it directly before the emulsification step to the warm rest of the oil phase. Method 2: dissolve the extract in Cosphaderm® Diols and at it at the end to the final formulation.

2.1 Specified data analyzed per batch

Appearance:	white to off-white powder (visual)
Flavour:	bitter (organoleptic)
Odour:	characteristic, pleasing, very mild (organoleptic)

Particle size:	NLT 95 % pass 80 mesh (80 mesh screen)
Loss on drying:	max 5.0 % (5 g / 105°C / 2 h)
Residue of ignition (ash):	max 3.0 % (2 g / 525°C / 5 h)
Heavy metals:	max 10 ppm (AOAC985.01, 16 th)
Heavy metals (As):	max 2 ppm (AOAC985.01, 16 th)
Heavy metals (Pb):	max 2 ppm (AOAC985.01, 16 th)
Purity:	min 98.0 % Magnolol and Honokiol (HPLC)
Total plate count:	max 1000 cfu / g (AOAC990.12, 16 th)
Yeast and Mould:	max 100 cfu / g (FDA Chapter 18, 8 th Ed)
<i>E. coli</i> :	negative (AOAC975.55, 16 th)
<i>Salmonella</i> :	negative (FDA Chapter 5, 8 th Ed)
<i>Staphylococcus</i> :	negative (AOAC)

3.1 Physical and chemical properties

Molecular formula:	C ₁₈ H ₁₈ O ₂ (for both)
Molecular weight:	266.33 g/mol
Appearance:	white to off-white powder
Odour:	characteristic
Melting point:	87°C (Honokiol), 101-102°C (Magnolol)
Flash point:	184°C (Honokiol), 185°C (Magnolol)
Solubility:	soluble in alcohol, diols, ether and chloroform

3.2 Packing and Storage conditions

Packing sizes:	1 kg bag
Storage conditions:	Keep container tightly closed and dry (low humidity) in a cool place below 25°C.
Shelf life:	At least 24 months if unopened and stored under proper conditions

4.1 Regulatory compliance

Honokiol and Magnolol (main components; CAS: 528-43-8, 35354-74-6) are included/listed in the following international inventories:

TCSI (Taiwan); IECSC (China)

4.2 Regulatory status for cosmetic application

Product complies with Regulation (EU) No. 1223/2009 in all the defined requirements.

4.3 Additives

Product contains only the specified ingredients. No other substances like preservatives, antioxidants, fragrances, colorants or other are added.

4.4 Impurities

	Not expected*	Present [#]	ppm
BSE/TSE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Dioxin	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Formaldehyde	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Gluten	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Lactose	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Pesticides	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Phthalates	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Residual solvents	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ethanol: < 5000 ppm
Heavy metals	ppm		
	total	≤ 10	
	Arsenic (As)	≤ 1	
	Lead (Pb)	≤ 1	
	Mercury (Hg)	≤ 0.5	

4.5 Allergens

Product does not contain any of the 26 allergenic flavors or fragrances listed in Regulation (EC) No. 1223/2009 Annex III.

4.6 VOC

Product does not contain any additional volatile organic compounds.

4.7 CMR

Product is not rated as CMR (category 1A, 1B and 2) and does not contain any ingredient rated as CMR according to Regulation (EC) No. 1223/2009 in association with Regulation (EC) No. 1272/2008/EC.

4.8 SVHC

Product is neither listed as SVHC substances nor contains any material with is listed as SVHC substance.

4.9 Nanomaterial

Product is not embraced by article 16 Regulation (EC) No. 1223/2009.

4.10 Animal testing

The Cosphatec has not conducted any animal testing for cosmetic purpose since March 11th 2009.

4.11 Irradiation

Product has not been irradiated in any step of the entire production process.

4.12 Origin

Substances (INCI name)	Synthetic	Vegetal	Biotechnology
Magnolia Officinalis Bark Extract	<input type="checkbox"/>	<input checked="" type="checkbox"/> Name of the plant: <i>Magnolia Officinalis</i> Plant part used: Bark	<input type="checkbox"/> Microorganism used:

		Origin: China	
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4.13 GMO

The product is not subject to labelling according to Regulations (EC) No. 1829/2003 and 1830/2003.

4.14 Certifications

COSMOS

ECOCERT

Other Information

This information and our technical application advice are given to the best of our knowledge, but they are for information purposes only and given without responsibility. The advice doesn't exempt you from doing your own testing, particularly with regard to the qualification of our products for its intended processes and purposes. Application, use and handling of our products take place out of our control and are solely your responsibility. The sale of our products occurs according to our current general sales terms and delivery conditions.

* not expected to be present due to raw materials, production process and used equipment. Not regularly analysed.

#expected to be present due to raw materials, production process and used equipment. Periodically analysed.