

## smartCrystal<sup>®</sup> Resveratrol MB

### Description

smartCrystal<sup>®</sup> are crystalline cosmetic actives with a size in the submicron range, typically 0.2 to 0.5 µm mean diameter. These "submicron crystals" are a novel, patent-protected formulation to enhance the performance and hence bioactivity of active ingredients used in cosmetical, dermatological and pharmaceutical applications. With this innovative technology the solubility of actives can be optimized, and their penetration can be improved, leading to an enhanced bioavailability in the skin. The smartCrystal<sup>®</sup> can be easily incorporated into regular cream or gel formulations.

smartCrystal<sup>®</sup> Resveratrol MB is an innovative cosmetic ingredient with enhanced performance and hence bioactivity of the active component resveratrol, that nowadays represents one of the most popular ingredients in high quality cosmetic formulations, mainly due to its proven ability to penetrate the skin barrier and its significant impacts on skin aging. Formulations containing resveratrol can stimulate the proliferation of fibroblasts, contributing to the increase in the concentration of collagen III. Resveratrol has an affinity for the estrogen protein receptors (both ERα and ERβ), thereby contributing to the stimulation of collagen types I and II production. With its antioxidative properties, it also helps to protect the skin from environmental damages by reducing the expression of AP-1 and NF-kB factors. Resveratrol hence helps, to maintain skin youth and prevents photoaging. Resveratrol has a number of scientifically proven health promoting properties associated with a positive effect on the cardiovascular system, lowering the concentration of low-density lipoprotein, and the ability to inhibit the cyclooxygenases activity. It shows antiangiogenic, anti-inflammatory, antioxidant, and antimicrobial properties.

### Efficacy

- acts as an antioxidant
- helps to maintain skin youth
- prevents photoaging
- protects the skin from environmental damages
- increases cell proliferation
- stimulates collagen synthesis
- reduces inflammations
- acts antimicrobial

### Appearance

white fluid dispersion

### INCI

Aqua, Resveratrol, Glycerin, Decyl Glucoside

### Registration

CAS-No.:

Aqua.....	7732-18-5
Resveratrol.....	501-36-0
Glycerin.....	56-81-5
Pentylene Glycol.....	5343-92-0
Decyl Glucoside.....	54549-25-6

Nature needs no cosmetics,  
but cosmetics need nature

## smartCrystal<sup>®</sup> Resveratrol MB

EC-No.:

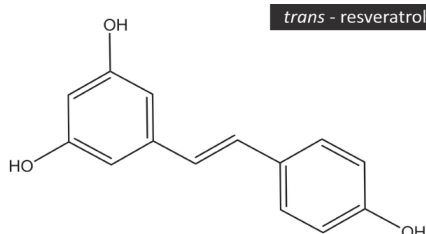
Aqua.....	231-791-2
Resveratrol.....	610-504-8
Glycerin.....	200-289-5
Pentylene Glycol.....	226-285-3
Decyl Glucoside.....	259-218-1

### Preservatives / Stabilizers

preservative.....	none
stabilizer Pentylene Glycol.....	2 %

### Characteristics

resveratrol content.....	5 %
mean particle size.....	< 1 µm
polydispersity index (PDI).....	< 0.5
pH-value.....	7.5 - 9.5



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molecular weight resveratrol.....	>= 228.2 g/mol
molecular formula resveratrol.....	C <sub>14</sub> H <sub>12</sub> O <sub>3</sub>
synonyms.....	(E)-5-(2-(4-Hydroxyphenyl)ethenyl)-1,3-benzenediol

### Application

daily cosmetic products  
creams and lotions  
face masks  
gels and ampoules  
body care

### Application concentration

skin care formulations.....	0.4 - 2 %
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### Incorporation

smartCrystal<sup>®</sup> Resveratrol MB is unsolvable. Instead, it is dispersible. It is incompatible with oxidizing agents. Avoid extended exposure to high heat.

### Toxicology

non hazardous in normal use concentration  
pure raw material can cause serious eye irritation

### Storage & Shelf life

smartCrystal<sup>®</sup> Resveratrol MB should be stored in original sealed containers in a dry and well-ventilated, cool place at temperatures between 2 – 8°C. Brief exposure up to 40°C possible.

Shake before use!

In closed original containers the shelf life is 12 months.