

Guangdong Luckerkong Biotech Co.,Ltd.

Introduction to β -Arbutin

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Skin Whitening Ingredient

β -Arbutin

β -Arbutin is often referred to as Arbutin. It can be extracted from bearberry or synthesized by chemical method. It is a green, safe and effective skin whitening ingredient.

Basic Information

INCI Name: Arbutin

Application: Skin whitening cosmetics

Appearance: White crystalline powder

CAS No.: 497-76-7

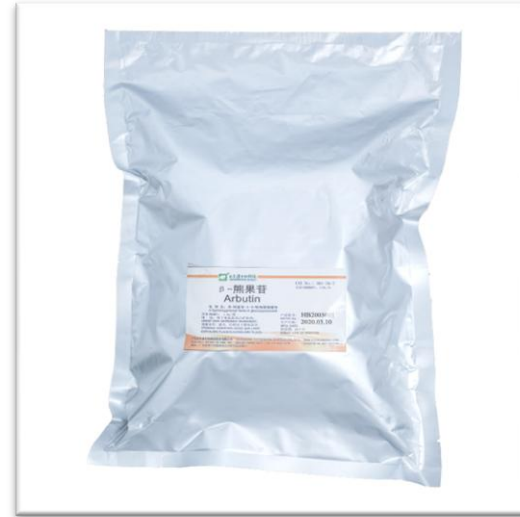
Chemical Formula: $C_{12}H_{16}O_7$

Molecular Weight: 272.25

Recommended Dosage: 2%~7%

Specification: 25kg/drum

Storage and Expire date : Keep sealed in a shaded and cool place between 5 and 25 degree. If strictly following the storage instruction, it can be stored well for 2 years.



β -Arbutin Specification

Item	Company Standard	QB/T4953-2016 Industry Standard
Assay %	≥ 99.5	≥ 99.5
Hydroquinone ppm	≤ 10	≤ 20
Appearance	White crystalline	White crystalline
Melting point $^{\circ}\text{C}$	199.0~201 \pm 0.5	199.0-201.0
Specific rotation	(a) ²⁰ _D = -66° \pm 2°	-64°~-66°
Clarity of water solution	Transparent, colorless, none suspended matters	
Infrared peak value	1515cm ⁻¹ 1220cm ⁻¹ 1050cm ⁻¹ \pm (5~8) cm ⁻¹	
Chloride %	≤ 0.036	
Arsenic ppm	≤ 2	≤ 10
pH (1% aqueous)	5.0-7.0	5.0-7.0
Loss on drying %	≤ 0.5	≤ 0.5
Heavy metal ppm	≤ 10	≤ 40
Ignition residue %	≤ 0.5	

**Luckerkong company standard is higher than industry standard.
Blank items are not regulated by industry standard.**

Bearberry Plant



Skin Whitening Mechanism of β -Arbutin



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Six steps for skin whitening

- 1、Prevention: Do not expose to the UV directly.
- 2、Protection: Anti-free radical and inflammation.
- 3、Melanin's activation: reduce Melanin cell generation and action.
- 4、Melanin 's generation: inhibit the enzymes activity that promotes the melanin generation.
- 5、Existing Melanin: reduce existing Melanin and spots.
- 6、Others: Promote skin metabolism, and accelerate the melanin's decomposition.

How β -Arbutin works



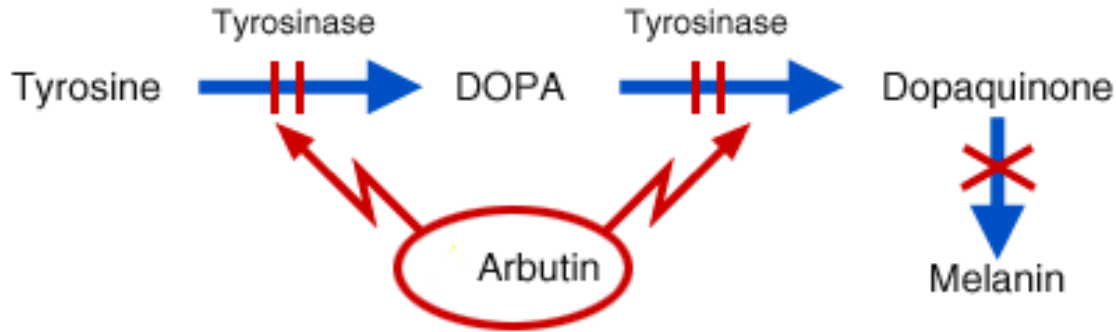
β -Arbutin Working Mechanism



Hyperpigmentation in the epidermis is caused by excessive melanin synthesis due to UV irradiation, wound or stress. Tyrosinase is one of the key enzymes involved in melanin synthesis. The enzyme catalyses the first two steps in melanin synthesis: the hydroxylation of tyrosine to DOPA and the oxidation of DOPA to dopaquinone.

Arbutin has a direct inhibitory function against tyrosinase, which leads to the prevention of melanin formation and a whitening effect on the skin. Arbutin can reduce the accumulation of pigment by inhibiting the production of melanin, which accumulates on the skin when tyrosine is oxidized.

β -Arbutin Working Mechanism



Application of β -Arbutin in Cosmetics

Arbutin is an active skin whitening ingredient extracted from bearberry, it is green, safe, reliable and effective. It is also one of the most competitive skin whitening ingredient which is very popular abroad now.

Korean Hot-selling Cosmetics Applying Luckerkong Beta-Arbutin



**Missha
Perfect M Cover BB Cream**



**Missha
M Gold Perfect Cover BB Cream**



**Teradia
Rapid Response Tone Up BB Cream**

Korean Hot-selling Cosmetics Applying Luckerkong Beta-Arbutin



Sidmool
MIN Perfect B.B for Man



L.O.C.K. Color
L.O.C.K. IT Good Boundation



Societte
365 Perfect Cover Cushion Stick

Products with β -Arbutin

HomeFacial Pro
Beauty Creates



Home Facial Pro Arbutin Skin Lightening Mask

成分	概略特性	粉刺	刺激	安心度
Rosa Damascena Flower Water 突厥蔷薇花水				1
Propylene Glycol 丙二醇, 丙二醇, 1, 2-丙二醇	溶剂, 黏度控制, 保湿	0	0	2-3
Licorice 光果甘草, 甘草, 甘草精	镇静消炎, 美白			1
Arbutin 熊果素, 熊果苷, 熊果素	美白			1
Sodium Hyaluronate 玻尿酸钠, 透明质酸钠, 玻璃酸钠	保湿	0	0	1
Triethanoamine 三乙醇胺	酸碱调节	2	0	2-5
Xanthan Gum 黄原胶, 三仙胶, 山羊胶, 汉生胶	黏度控制			1
Hydroxyethylcellulose 羟乙基纤维素	黏度控制			1

Products with β -Arbutin



SULWHASOO Evenfair Perfecting Cushion

棕榈酸乙基酯	1	!	柔润剂 溶剂
棕榈酸异丙酯	1	!	柔润剂 抗静电
聚甘油-3 聚蓖麻醇酸酯	1		乳化剂
熊果苷	1	♥	美白祛斑 抗氧化剂 皮肤调理剂
月桂基 PEG-9 聚二甲基硅氧乙基聚二甲基硅氧烷	3		柔润剂 乳化剂
CI 77492	1		着色剂

Products with β -Arbutin



Innisfree Soybean Energy Essence

成分名称	安全风险	活性成分	致痘风险	使用目的
水	1			溶剂
1,3-丙二醇	1			保湿剂 增稠剂 溶剂
芽孢杆菌/大豆发酵产物提取物	1	♥		抗氧化剂
熊果苷	1	♥		美白祛斑 抗氧化剂 皮肤调理剂
聚乙二醇-75	3			粘合剂 溶剂
日本扁柏(CHAMAECYPARIS OBTUSA) 水	1	♥		抗炎剂 抗氧化剂 皮肤调理剂

Products with β -Arbutin



SET TYAN Ha Hi-Moisturizing Mask

山梨(糖)醇	1		保湿剂 皮肤调理剂
氯化钠	1		黏度控制 pH调节剂
橄榄油 PEG-7 酯类	3		柔润剂
熊果苷	1	♥	美白祛斑 抗氧化剂 皮肤调理剂
羟苯甲酯	4		防腐剂
(日用)香精	8		香精香料
乙二胺四乙酸	1		螯合剂

Products with β -Arbutin

it's skin Prestige Creme D'escargot



甘油聚醚-26	1		保湿剂
鲸蜡硬脂醇	1		乳化剂 柔润剂 增稠剂
牛油果树 (BUTYROSPERMUM PARKII) 果脂	1	♥	柔润剂 皮肤调理剂
熊果苷	1	♥	美白祛斑 抗氧化剂 皮肤调理剂
灰树花 (GRIFOLA FRONDOSA) 菌丝体发酵产物滤液提取物	1	♥	抗氧化剂 皮肤调理剂
氢化聚异丁烯	1		成膜剂 黏度控制
鲸蜡硬脂基葡糖苷	1		乳化剂 保湿剂

Experimental Data



Batch No. : HC20180914A

Data shows that Arbutin with dosage over 7% may result in photosensitivity. Therefore, Arbutin with dosage over 7% is not recommended in application.

The active ingredient of Arbutin can go through the basal layer of the skin and have effective effect on reducing chloasma, specks, erythema and pigments caused by allergy.

However, Arbutin with low dosage may damage the durability of its effect. Therefore, Arbutin with 5% dosage is the safest and most effective. Arbutin with 5% dosage will not irritate the skin and it is more effective and stable than Vitamin C in reducing dark spots and pigments.

Scientific Committee on Consumer Safety (SCCS) Opinion on Beta-Arbutin

*“The SCCS considers the use of β -arbutin to be safe for consumers in cosmetic products in a concentration **up to 7%** in face creams provided that the contamination of hydroquinone in the cosmetic formulations remain below 1 ppm.”*

Scientific Committee on Consumer Safety

SCCS

OPINION ON

β -arbutin

Product Strength of Luckerkong β -Arbutin



1. High purity and quality, no hydroquinone remained.
2. More safer and reliable without organic solvent.
3. GMPC manufacturing line offers best stability.