

# Purewhite™

- Purpose for whitening agent -

Applicable products of Purewhite™

Cosmetics ; skin, lotion, cream, mask pack, essence, massage cream, eye cream, etc

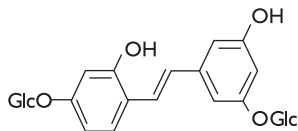


## What is Purewhite™ ?

Purewhite™ is a *Morus alba* extract which carries big amounts of Mulberroside A, as a skin whitening, brightening, shining, lightening, and anti-dark circle agent.

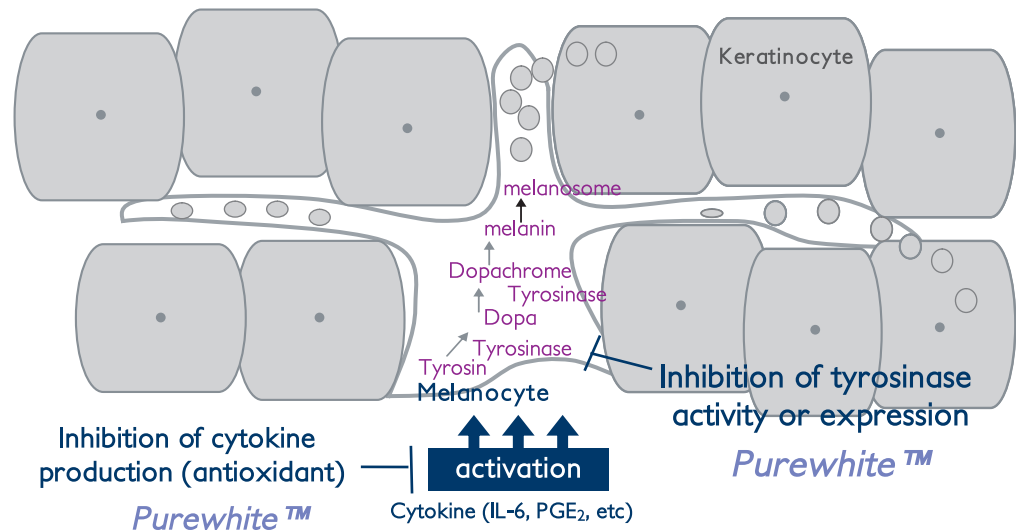
### Main Ingredients

- Mulberroside A



Mulberries have been adapted to a very wide variety of local conditions in the world. Korea has about 40 different Types. Not all types of the tree contain have not the mulberroside A but some types have rich of the active ingredient. Its depends on the region where they grow as well as the climate and the soil.

Proposed intracellular signaling pathways for the whitening effect action of Purewhite™ in melanocyte



### SPECIFICATION

INCI Name	Water / Butylene glycol /Morus Alba Root Extract
Colour	Light yellow Liquid
Dry residue (110 °C)	> 1 %
Mulberroside A contents	Above 1000ppm
Water	less than 40 %
Butylene Glycol	60 %
Preservative	Non-added
Packaging unit	5kg / 10kg / 20kg
Shelf life	2 years properly stored
Dosage	0.5~2 %

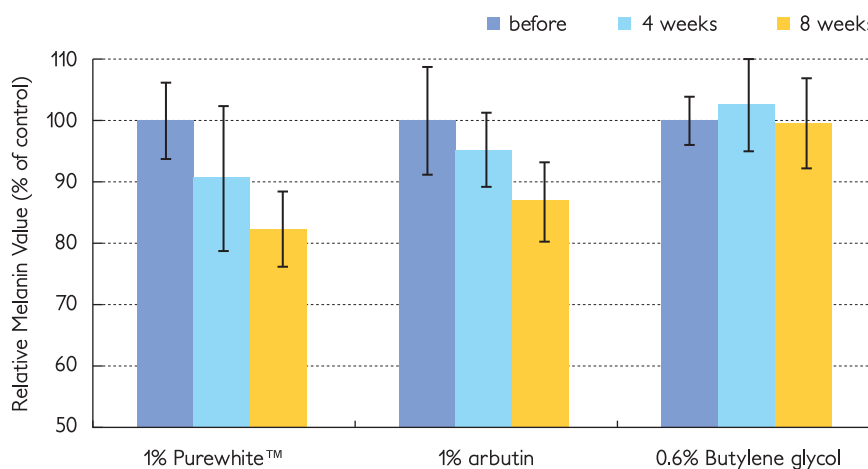
# Main Biological Effects for Cosmetics

## ● Tyrosinase & Melanogenesis inhibition activity

	Concentration (%)	Inhibition effect (% of control)	IC <sub>50</sub> (%)
Tyrosinase inhibition activity	0.005	53.0 ± 2.6	0.00397
	0.01	75.0 ± 0.2	
	0.02	84.0 ± 1.3	
Melanogenesis inhibition activity	0.005	8.83 ± 2.3	0.0184
	0.01	21.3 ± 4.3	
	0.02	56.4 ± 1.4	

Morus alba extract shows dose-dependent inhibitory effects on mushroom tyrosinase activity and melanin production. Also we identified Morus alba extract has not cytotoxicity in these range concentration between 0.005~0.02%.

## ● Whitening effect (In vivo test)



Purewhite™ have a promising potential for use as an effective skin-whitening agent more than arbutin