

# RESVERAD<sup>®</sup> (Caragana Sinica Ferment Extract)

- Purpose for whitening agent -

Applicable products of RESVERAD

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



## What is RESVERAD ?

RESVERAD is derived from Biofermentation technology and Oriental medicine as a Whitening agent. RESVERAD is produced through the solid-state fermentation of the *Caragana sinica* with the microorganism, *Saccharomyces cerevisiae*

\* [Patent: KR 10-2010-0027291]

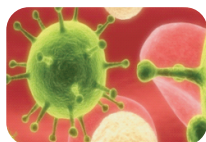
A Manufacturing Method and cosmetic composition containing the fermented extract of *Caragana sinica* Rehder

About  
"Caragana sinica  
(Buc'hoz)  
Rehder"



Common name	Chinese pea tree (骨擔草)
Latin name	<i>Caragana sinica</i> (Buc'hoz) Rehder
INCI Name	Water / Butylene glycol / Saccharomyces / Caragana Sinica Root Ferment Extract
GMO statement	To the best of our knowledge Resverad is not made from nor contains any ingredients derived from GMO sources

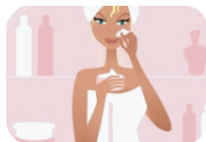
"RESVERAD is derived from Biofermentation technology and Oriental medicine as a Whitening agent"



**Biofermentation technology** : solid-state fermentation of *Caragana sinica* extract, the resveratrol contents were 1.5 times increased than original *Caragana sinica* extract. It might be related to the hydrolysis of the resveratrol glycoside



**Oriental medicine** : The *Caragana sinica* have been used in Korea as a folk medicine. We carefully selected Oriental medicine substances as a *Caragana sinica* from traditional pharmacological evidence and resveratrol derivatives data by modern science.



**Whitening agent** : Whitening effect of "RESVERAD" from strongly anti-oxidant effect and inhibition of melanogenesis activity. We estimate these effects are the synergy effect in between the active ingredient, resveratrol, and many kinds of components in the extract

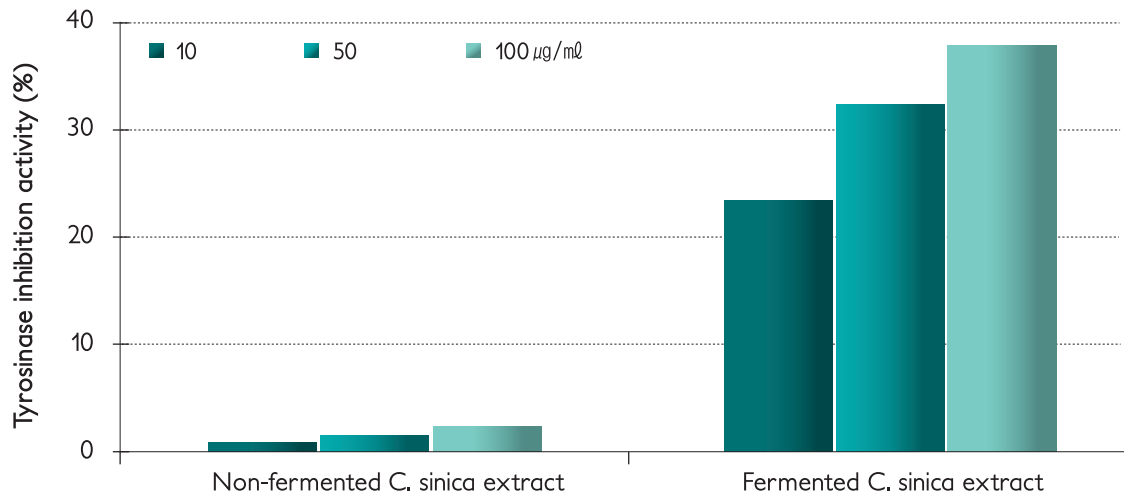
## SPECIFICATION

INCI Name  
Colour  
Water  
Butylene Glycol  
Preservative  
Packaging unit  
Shelf life  
Dosage

Water / Butylene glycol / Saccharomyces / Caragana Sinica Root Ferment Extract	
Dark yellow Liquid	
less than 40%	less than 90%
60%	10%
Non added	0.3% phenonip
5kg / 10kg / 20kg	
2 years	
2% ~ 5%	

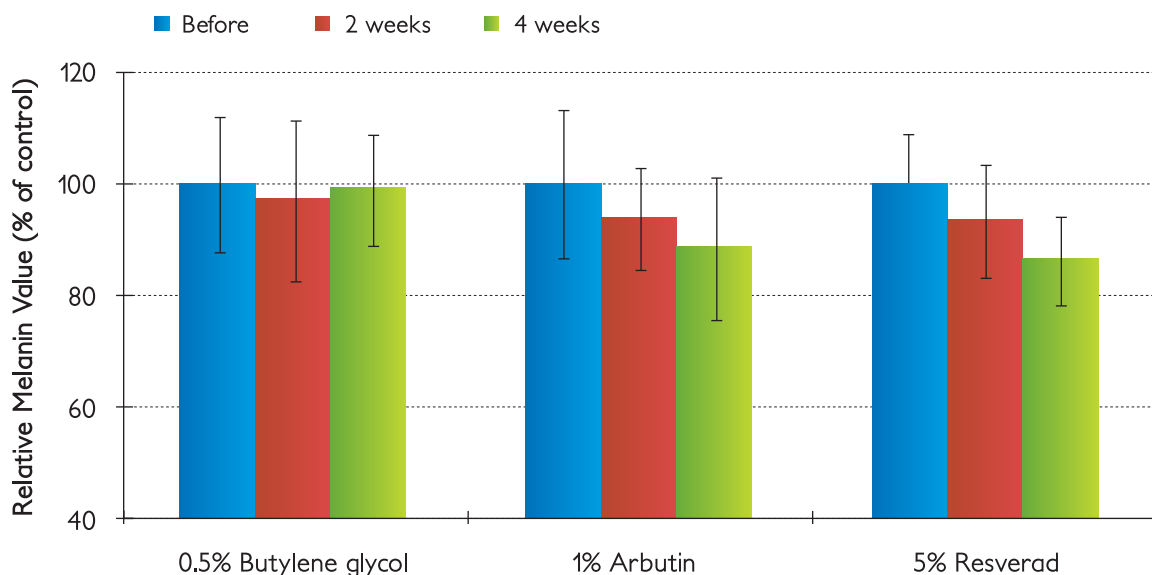
# Main Biological Effects for Cosmetics

## ● Whitening effect (in vitro test)



Inhibitory effect of fermented *C. sinica* extract and non-fermented extract on mushroom tyrosinase activity. As a result, after solid-state fermentation it showed strong inhibition effect of the Tyrosinase activity than non-fermented one.

## ● Whitening effect (in vivo test)



Measurements were made on volunteer's forearms using a MX18 MPA Mexameter. After 4 weeks, the reduction of melanin index the 5% Resverad was very significant: 13%. The 1% arbutin group, as a positive control reduction was of 11% after 4 weeks. Thus, the study suggested that the Resverad may have a promising potential for use as an effective skin-whitening agent more than arbutin