

Distinctive® Rehmannia Glutinosa 10A

INCI: Maltodextrin (and) Rehmannia Glutinosa Root Extract

February 3, 2014 rev.

DC3953

Potent Acid-Stable Antioxidant

Everyone wants smooth, healthy skin. Incorporating the right antioxidant into your diet and skin care routine can have positive effects on your skin. Antioxidants are essential in helping prevent and repair damage to your body's tissue by slowing and preventing the effect of free radicals such as reactive oxygen species (ROS). ROS start oxidation, a process that causes damage from oxygen and can lead to cell damage and dysfunction. ROS-induced oxidative stress has been implicated in more than 100 diseases and aging.



Distinctive® Rehmannia Glutinosa 10A comes from the root of Rehmannia Glutinosa Libosch, a perennial plant native to China, Korea and Japan. Rehmannia is widely cultivated for use in Chinese medicine, as extract from the root of this plant, known as Di Huang, is widely used as hemostatic, anti-inflammatory agent, and for promoting blood coagulation. Extract from the root of *R. glutinosa* is also known to have hypoglycemic, immuno-antitumor and antibacterial properties.

Chemical analysis of "hairy root" cultures of *R. glutinosa* has identified several key compounds likely responsible for its biological activity and therapeutic effects; iridoid glycosides such as catalpol, catalposide, loganin and aucubin as well as acetoside and isoverbascoside. Recent studies have revealed that acetoside, a glycoside antioxidant with well-recognized antimicrobial activity and anti-inflammation properties, is also highly effective in humans as cellular protectant with great potential as a nutritional supplement and for topical skincare applications.

BENEFITS

- ◆ Inhibitory action on *P. acnes* bacteria
- ◆ Anti-inflammatory properties
- ◆ Broad spectrum antioxidant activity
- ◆ Protective

APPLICATIONS

- ◆ Serums
- ◆ Acne Care
- ◆ Cosmetic and OTC formulations
- ◆ Creams & Lotions
- ◆ Anti-aging
- ◆ Sun protection

TYPICAL PROPERTIES

Appearance	Light to Medium Beige Powder
Acetoside Content	9.0 – 11.0 %
Solubility in Water	Soluble

FORMULATION GUIDELINES

- ◆ Recommended Use Level: 0.50 – 1.00%
- ◆ Introduce during the cooling phase
- ◆ Compatible with alpha hydroxyl acids and beta hydroxyl acids, including salicylic acid
- ◆ Optimum pH: ≤ 4.50

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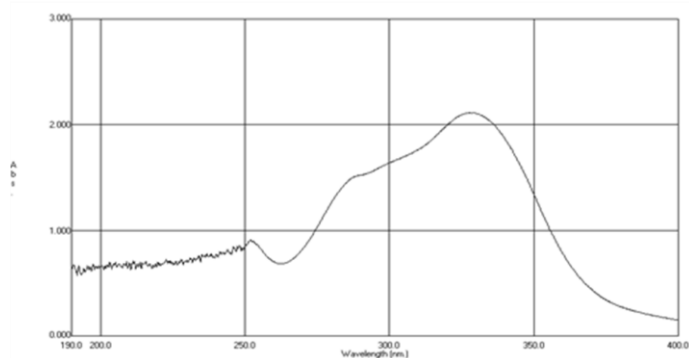
ANTI-OXIDANT POTENTIAL- As measured by ORAC Assay

The oxygen radical absorbance capacity (ORAC) assay quantifies the oxidative activity of peroxy radicals. Some of the most common ROS found in the body are noted as toxic inducers of cancer, neurodegenerative and other inflammatory diseases.

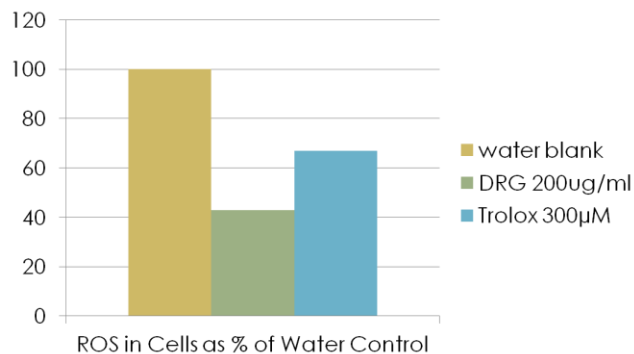
Test Material	ORAC Value
Distinctive® Rehmannia Glutinosa 10A	1789 μ moles TE/g
Acai fruit (freeze-dried OptiAcai)	1027 μ moles TE/g
Acai fruit (fresh)	185 μ moles TE/g
Cranberry	95 μ moles TE/g
Blueberry (low bush)	93 μ moles TE/g
Plums (black)	73 μ moles TE/g
Plums	62 μ moles TE/g
Blueberry (cultivated)	62 μ moles TE/g

Results suggest Distinctive® Rehmannia Glutinosa 10A provides strong anti-oxidant activity.

UV-SPECTRUM- Natural UV Filter



ANTIOXIDANT CELL PROTECTION- UV induced intracellular free radicals (ROS)



REFERENCES

- E.Piatczak, A.Kro'licka, M.Wielanek, H.Wysokin'ska: Hairy root cultures of Rehmannia glutinosa and production of iridoid and phenylethanoid glycosides, Acta Physiol Plant, DOI 10.1007/s11738-012-1022-y
- Korkina LG, Mikhal'chik E, Suprun MV, Pastore S, Dal Toso R.: Molecular mechanisms underlying wound healing and anti-inflammatory properties of naturally occurring biotechnologically produced phenylpropanoid glycosides, Cell Mol Biol (Noisy-le-grand). 2007 May 30;53(5):84-91.
- Yuh-Hwa Liu, Yeh-Lin Lu, Chuan-Hsiao Han, Wen-Chi Hou, Inhibitory activities of acteoside, isoacteoside, and its structural constituents against protein glycation in vitro, Botanical Studies 2013, 54:6 (19 August 2013)

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