

# SPECIFICA TECNICA

Prodotto **ERITRULOSIO**

NOME INCI Erythrulose  
NOME INCI USA Erythrulose  
CAS 533-50-6, 40031-31-0  
FORMULA C4 H8 O4

SPECIFICA	METODO	Lim. Inf. - Lim. Sup.	u.m.
Identificazione IR		Conforme allo standard	
Contenuto di eritrulosio (HPLC)		$\geq 76,0$	%
pH (sol 50%)		2,50 - 5,50	
Aspetto		Liquido altamente viscoso	
Colore		da giallo a arancio-marrone	
Aspetto della soluzione (10%)		Giallo	
Acqua		$\leq 24,0$	%
Azoto totale		$\leq 0,500$	%
Ceneri solforiche		$\leq 4,5$	%
Conservanti		Nessuno	
Conta batterica totale		$\leq 100$	CFU/g
Coliformi		0	CFU/g
Revisione Capitolato		0	
Data Approvazione		17/05/2012	

Gli eventuali metodi d'analisi non riportati sono metodi interni del produttore ottenibili su specifica richiesta

Le informazioni sopra riportate non Vi sollevano dall'obbligo di identificare il prodotto prima dell'impiego. La nostra società non si assume alcuna responsabilità per danni a persone o cose derivanti dall'impiego dei prodotti da noi commercializzati

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### Natural Tanning by Erythrulose

Despite the existence of the increased awareness of the dangers of ultra-violet radiation causing skin cancer on exposure during sunbathing, there is still a strong desire for a healthy and natural tanned appearance. Therefore, there has been a distinct trend to use self-tanning cosmetic products to achieve the browning effect without the risk of this exposure to UV radiation.

The natural keto-sugar Erythrulose enables new developments in modern aesthetic self-tanning products. Erythrulose is found in many plants and lichens and is produced in Germany by modern microbiological fermentation. Erythrulose is easy and safe to use and shows many distinctive advantages, compared with Dihydroxyacetone (DHA) that is applied in traditional self tanning products.

It has been known for many years that certain ketosugars, when applied to the skin react with amino acids, peptides or proteins, give a browning effect by producing colouring products (Maillard Reaction). In the past, for example, Dihydroxyacetone has been the choice in a broad range of applications although this substance has many disadvantages. It has been known for sometime that DHA may liberate fission products as well as formaldehyde and formic acid under certain circumstances, which can cause skin irritations. Furthermore these fission products may considerably reduce the effect of skin tanning.

These side effects are not known when using Erythrulose. Erythrulose is more stable and has lower reactivity with the proteins in the skin. Although this reduced reactivity is often presumed as a disadvantage, it is indeed an evident benefit. The gentle enduring reaction of Erythrulose protects the skin and leads to a reduced peeling compared with DHA. As a result the tanning of the skin by Erythrulose takes more time but lasts considerably longer.

Erythrulose tans the skin giving a natural and homogeneous brown / bronze appearance, whereas Dihydroxyacetone often produces a mottled and irregular tanning, which can be caused by not sufficiently cleaned skin, with differing pH or inhomogeneous application. The gentle enduring reaction of Erythrulose compensates for any inhomogeneous application.

Microbial contamination is an inherent problem when stabilising cosmetic products. Dihydroxyacetone itself is a known intermediate in the metabolism of many microorganisms and for this reason formulations containing DHA are in principle more affected by contamination and require special attention by using preservatives.

### In Summary:

Dihydroxyacetone has been used for many years in the market as a self tanning agent. It required manifold efforts and special finesse in formulations to solve application problems. Now, with the arrival of Erythrulose, there is a real alternative product for natural and homogeneous brown / bronze tanning. For all the above reasons, the current and often proposed practice of combining of Erythrulose with DHA should be reconsidered with the view to using Erythrulose alone.

The advantages of Erythrulose can only be fully realised when it is used solely and a product with the following advantages is desired:

- significantly lower liberation of cleavage products compared with DHA and therefore considerably less skin irritation
- gentle and homogeneous, non mottled tanning, with similar sun tanning kinetics to natural sunlight
- long lasting tan
- efficacious with reduced de-moisturising effect - compared with DHA

During manufacture of product no gene manipulated substances are used.

The substance is isolated by filtration and ion exchange.

The finished product does not contain gene manipulated substances.

During manufacture no animal originating materials are used, therefore there is no BSE/TSE risk.

Erythrulose is a natural substance produced by fermentation. The inoculum for the fermentation is a native bacteria strain.

The substance is not gamma-irradiated.

Erythrulose is not tested in animal experiments and does not contain, according the actual scientific knowledge, allergene substances or CMR-materials.

There are no residual solvents present in the product.

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