



## TECHNICAL DATA SHEET

Product: **PANTENOLO-D USP**

SHELF LIFE 36 months

TEST	METHOD	min - max	u.m.
Aspetto		liquido limpido, viscoso	
Identificazione IR		conforme allo standard	
Indice di rifrazione	USP	1,495 - 1,502	°
Rotazione ottica specifica	USP	29,0 - 31,5	°
Acqua	USP	<=1,00	%
Ceneri solforiche	USP	<= 0,1 %	%
Impurezze organiche volatili (O.V.I.)	USP	conforme USP	
Aminopropanolo	USP	<=1,00	%
Titolo		98,00 - 102,00	%
Rev.		0	
Approval Date		24/11/2009	



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### Product: **PANTENOLO-D USP**

Panthenol is an active ingredient for sophisticated cosmetic skin care and hair care products. It improves the appearance of skin, hair and nails.

D-Panthenol is the provitamin of D-Pantothenic acid (Vitamin B5). D-Pantothenic acid plays a key role in the human intermediary metabolism. It is a part of the

Coenzym A. Deficiency of Vitamin B5 results in many dermatological disorders.

Coenzym A is important for:

- structure and function of living tissue
- resistance of the mucous membrane
- growth and pigmentation of hair

Role in the skin:

- deep penetrating moisturizer
- stimulates epithelisation
- has wound healing effect
- has an anti-inflammatory effect

Role in the hair:

- long lasting moisturizer
- prevents hair damage
- thickens hair
- improves luster and sheen

Role in nail care:

- improves hydration
- imparts flexibility

Only the D-Panthenol is the provitamin of D-Pantothenic acid (Vitamin B5), not the L-Panthenol.

The human body converts D-Panthenol to Vitamin B5, which is D-Pantothenic acid. DL-Panthenol is a racemic mixture of D-Panthenol and L-Panthenol.

Due to the fact that only D-Panthenol is converted to Vitamin B5 and not L-Panthenol, the racemic DL-Panthenol has only half of the physiological activity of the D-Panthenol. These include stimulation of epithelisation, wound healing effect and anti-inflammatory effect. But for all the non-physiological activities like moisturizer effect, improvement of hair structure, giving luster and sheen to the hair D- and DL-Panthenol are equally active.

The D-Panthenol USP is also applied in the pharmaceutical industry.

The main areas of pharmaceutical application are syrups, drops, ampoules, creams, gels and capsules. In liquid multi-vitamin and Vitamin B complex

preparations D-Panthenol is nearly always preferred to the D-Pantothenates because it is usually considerably more stable at the pH values below 5 usually employed in these preparations.

#### DECLARATIONS:

The product is:

- free of BSE/TSE
- free of GMO
- free of phthalates
- free of CMR substances
- free of gluten
- Heavy metals < 10 ppm



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Product: **PANTENOLO-D USP**

free of allergens , according to 7th amendment 2003/15/EC (cosmetic allergens)

### LATEX DECLARATION

As to the actual knowledge of the production process, raw material and equipment used, we do not expect any natural latex and have no indication for any natural latex contained in the product.

### RESIDUAL SOLVENTS

Meets the "residual solvent" requirements of Ph. Eur., Chapter 5.4 and USP <467>