



Induchem
S w i t z e r l a n d

D-PANTHENYLTRIACETATE

D-Panthenyltriacetate

Description

Oil Soluble Derivative of Pantothenic Acid
(Vitamin B5)

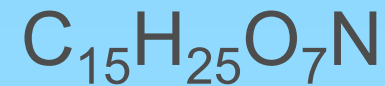
D-Panthenyltriacetate

INCI / CTFA Designation

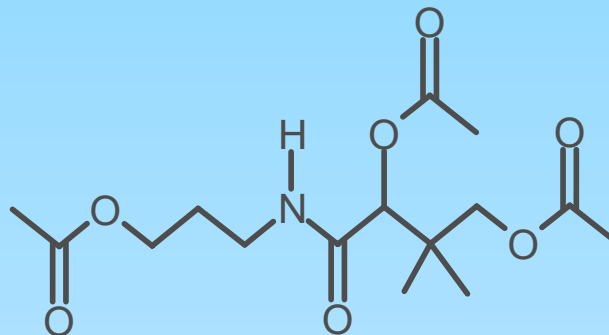
- Panthenyl Triacetate

D-Panthenyltriacetate

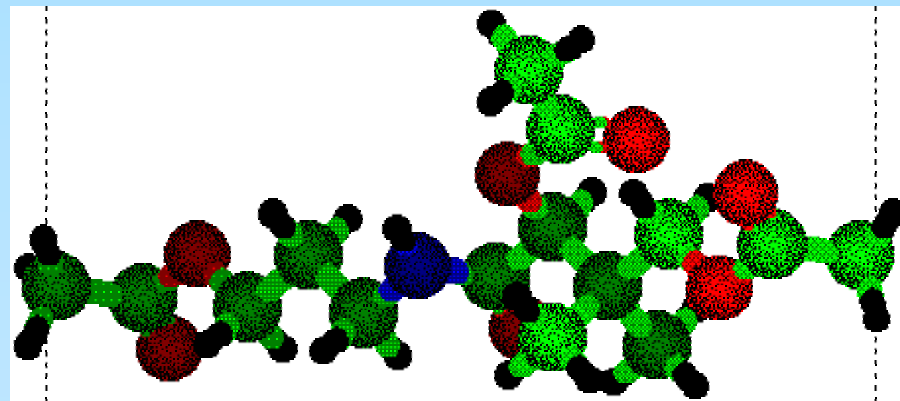
Empirical formula:



Structural formula:

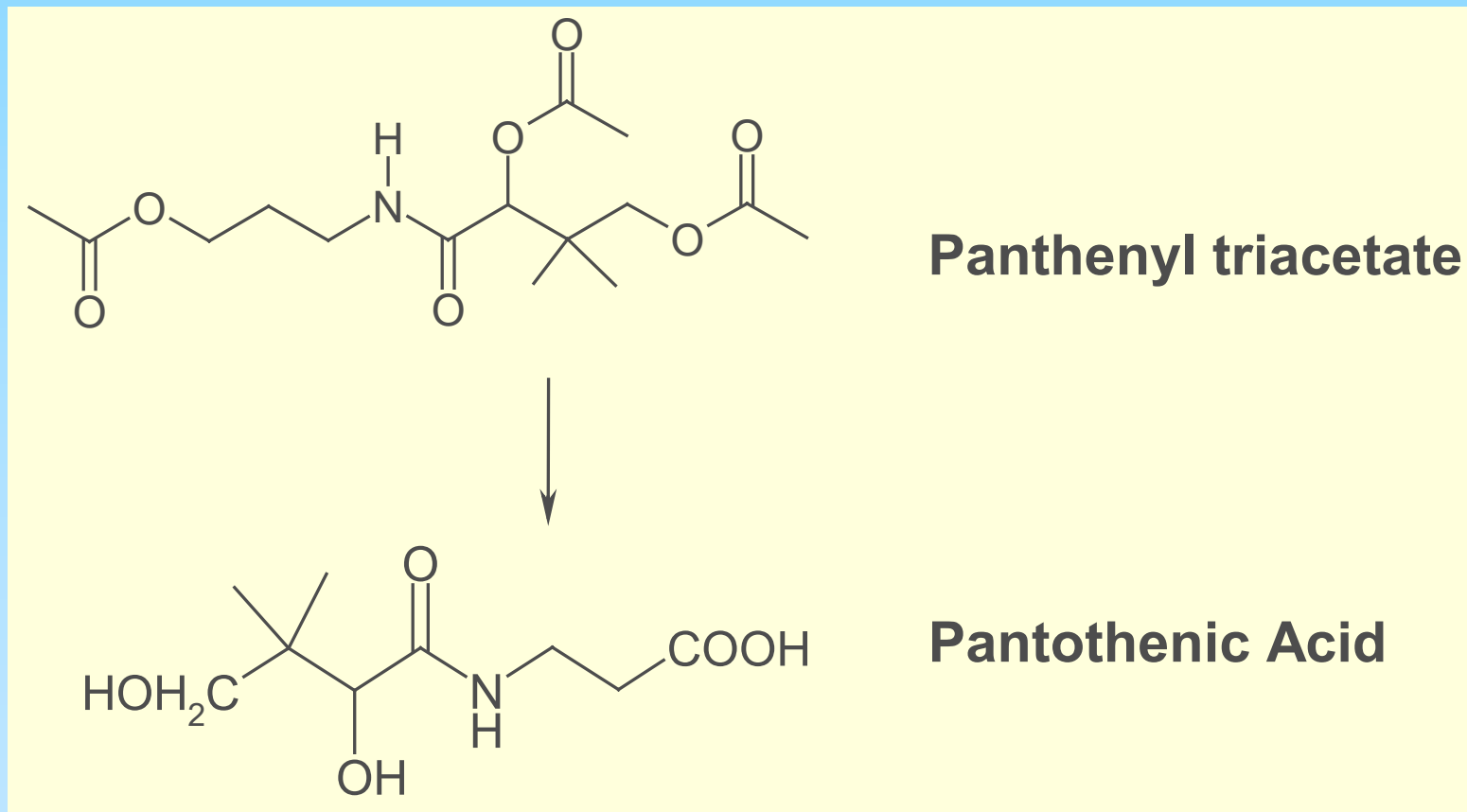


3D formula:



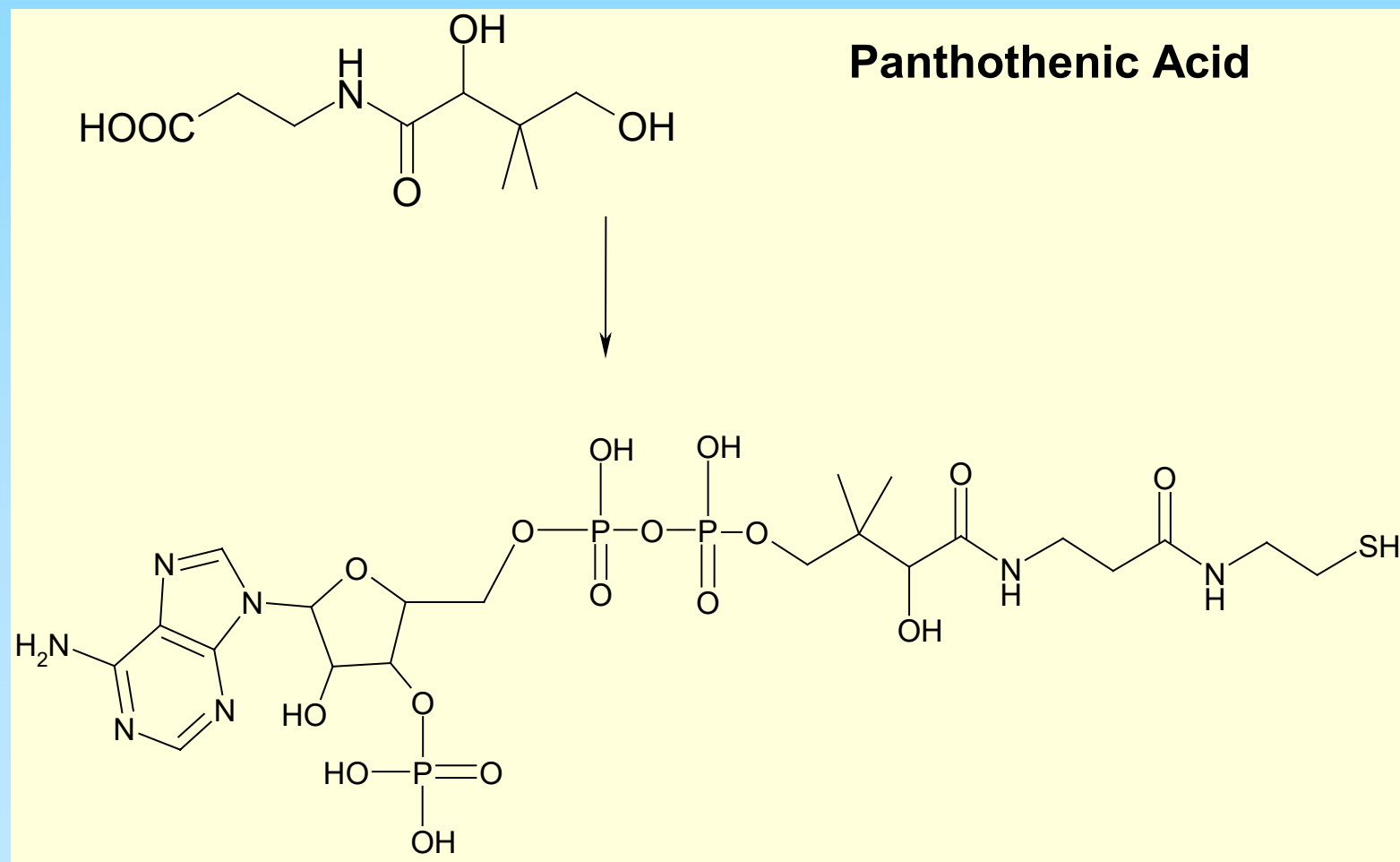
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Transformation to Pantothenic Acid



D-Panthenyltriacetate

Precursor of Coenzyme A



D-Panthenyltriacetate

Highlights

- Oil soluble
- Improved thermostability compared to Panthenol
- Prolonged vitamin activity compared to Panthenol
- Excellent bioavailability
- Excellent skin compatibility
- Excellent toxicological profile
- Excellent biodegradability

D-Panthenyltriacetate

Significance for Cosmetics

- Precursor of Vitamin B5 and Coenzyme A
- Reactivates the regeneration of the skin
- Improves the elasticity of the skin
- Improves the moisture retaining capacity
- Improves the skin smoothness
- Inhibits irritation and inflammation
- Strengthens the connecting tissue, hair and nails
- Supports wound healing

D-Panthenyltriacetate

Toxicological Profile

- Excellent skin tolerance
Closed patch test on 54 human volunteers after 24 and 48 hours / 10 % in polyethylene glycol
- Innocuous to mucous membranes
 $T_{50} > 30$ min (Skin² - test, in vitro equivalent for eye irritation)

D-Panthenyltriacetate

Physical Properties and Use

- Clear, almost colorless, low odor, viscous liquid
- Soluble in Propylene Glycol, Polyethylene Glycol, polar and non-polar esters and oils
- Slightly soluble in water
- Used as oil soluble derivative of Panthenol in non-aqueous cosmetic products: baby and massage oils, lipsticks / balms, nail / cuticle oils
- Recommended concentration for use: 1 - 5 %