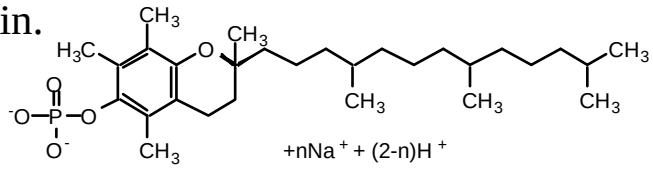
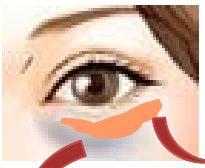
TPNa for eye care

Sodium dl-α-tocopheryl phosphate (TPNa^{TM}), is a water-soluble powdery vitamin E. The oxygen-sensitive hydroxyl group of tocopherol is chemically modified and protected with a phosphoryl group. Once absorbed in skin, TPNa^{TM} is readily converted to the active tocopherol via hydrolysis catalyzed by phosphatase, a ubiquitous enzyme in skin.

Trade Name: TPNa
INCI: Sodium Tocopheryl Phosphate



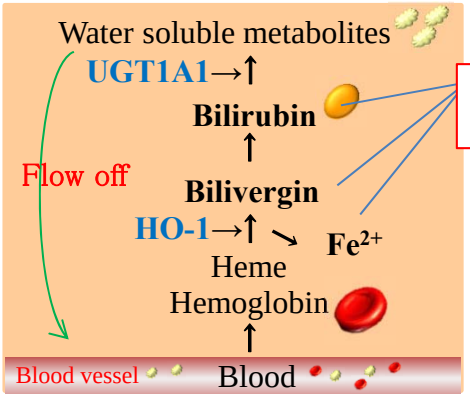
Dark Circles around Eyes



Eye puffiness
・Inflammation

Blue brown dark circles

- Low microcirculations
- Accumulate blood origin pigments
  (Bilirubin, Bivergin, Fe^{2+})



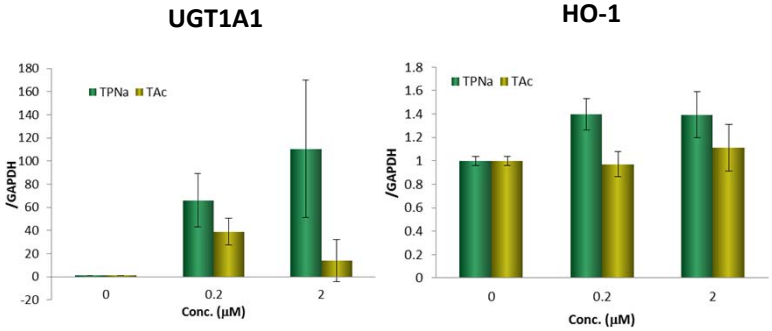
Cause of blue brown dark circle

Digest and remove pigments like bilirubin by enzymes makes your eyes brighter.

Efficacies

Eliminate Effect on Blood Origin Pigments

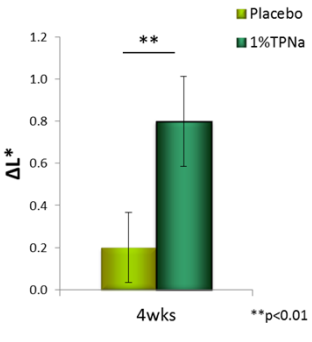
Gene Expression in Human Dermal Fibroblasts



TPNa^{TM} elevates the enzyme expression for eliminating blood origin pigments.

Clinical study

Tested on 21 Caucasian female subjects (31– 49 y).



The L* parameter was improved in 82% of subjects after TPNa^{TM} application.

TPNa^{TM} improves dark circles around eyes effectively.

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