



Suprapein™

All Natural Preservative for Multiple Personal Care & Cosmetic Applications, Crèmes, Shampoos, Soaps, Lotions, Etc.

A proprietary synergistic blend of botanical extracts, which have the ability to inhibit a wide range of microorganisms.

Appearance: *liquid*

Color: *amber yellow*

Aroma: *characteristic, aromatic*

Efficacy: *anti-bacterial and anti-fungal*

Recommended use level: 0.45%

Recommended temperature range: 20° - 30°C (68° - 80°F)

Method of Manufacturing: *extraction of the proprietary mixture of herbs by *Bio-Chelation® & blending*

Additives: *none*

Solubility: *soluble in oils, fats and in non-polar solvents*

Recommended storage: *store in a cool dry place, away from excessive heat or freezing temperatures*

Shelf Life: *24 months unopened*

INCI Name:

Origanum Vulgare (Oregano) Leaf Extract	CAS No: 84012-24-8
Thymus Vulgaris (Thyme) Extract	CAS No: 84929-51-1
Cinnamomum Zeylancum (Cinnamon) Bark Extract	CAS No: 84649-98-9
Olea Europaea (Olive) Leaf Extract	CAS No: 8060-29-5
Rosmarinus Officinalis (Rosemary) Leaf Extract	CAS No: 84604-14-8
Mentha Piperita (Peppermint) Leaf Extract	CAS No: 84082-70-2
Lavandula Angustifolia (Lavender) Flower Extract	CAS No: 90063-37-9
Hydrastis Canadensis (Goldenseal) Root Extract	CAS No: 84603-60-1
Citrus Medica Limonum (Lemon) Peel extract	CAS No: 8008-56-8

Specifications:

RESIDUE: <10.0% (16 hrs. @ 105°C)

REFRACTIVE INDEX: 1.4200-1.6100 (USPXXIV <841> @ 25°C)

SPECIFIC GRAVITY: 0.9100-0.9990 (USPXXIV <841> @ 25°C)

*Bio-Chelation® is a registered trademark of Bio-Botanica®, Inc.
Bio-Chelation® is a proprietary cold extraction process





Suprapein™

Safety Study

Test Sample:

Suprapein™ 2.25% in MCT Oil
(Five times the Recommended Effective Concentration)

1. Evaluation for irritancy potential utilizing the HET-CAM test, as modified by Kemper and Luepke*. The Chorioallantoic Membrane (CAM) of the hen's egg is more sensitive to liquid irritants than is the rabbit's eye.

Controls: Johnson's Baby Shampoo (Moderately irritating) and Head & Shoulders Shampoo (Severely irritating)

Results: The sponsor-submitted samples of Suprapein™ would have practically no ocular irritation potential in vivo.

2. 48 Hour Patch Test to determine by epidermal contact the primary irritation potential of a test material.

Results: The Number of healthy subjects used in the study = 53.
Ages 16 – 79 years human males and females.
Mean score after 48 hours = 0
Mean score after 72 hours = 0

Evaluation 0 = No visible reaction.

Key: + = Barely perceptible or Spotty Erythema.

1 = Mild Erythema covering most of the site.

2 = Moderate Erythema, possible presence of mild Edema.

3 = Marked Erythema, possible Edema.

4 = Severe Erythema, possible Edema, Vesiculation, Bullae and/or Ulceration.

Conclusion: Under the conditions of this study, the sponsor-submitted samples of Suprapein™ did not show any potential of dermal irritation. It is concluded that Suprapein® had no eye irritation potential at 5 times the effective concentration.

*Kemper, F.H. & Luepke, N.P. (1986). The HET-CAM test : An Alternative to the Draize test, FD Chem. Toxic. 24, pp495-496.

