



- Certified Organic
- Natural Liquid Preservative
- Broad Spectrum Activity
- Safe Toxicity Profile
- Anti Oxidant Properties
- Exclusive Cultivated Fields
- Patent Pending
- Dermatologically Tested
- Steam Distilled

LINATURAL™ CO-NLP-1

Certified Organic Natural Liquid Preservative



Based on Organic Orange, Lemongrass, Sunflower Oils

Linatural™ is the new line of all natural ingredients that bring value added to personal care, pharmaceutical and household products.

Linatural™ CO-NLP-1 is a patent pending natural preservative consisting of certified organic oils.

Linatural™ CO-NLP-1 has excellent broad spectrum activity against gram positive and gram negative bacteria and mold and yeast. Orange, Lemon Grass and Sunflower oils are Certified Organic and globally acceptance and have excellent toxicity profiles.

Typical Properties	Appearance @ 25°C.....	Clear Liquid
	Color	Pale Yellow to Orange
	Specific Gravity.....	0.88± 0.01
	INCI Name:	Citrus Aurantium (Orange Oil) Cymbopogon Citratus (Lemon Grass Oil) Helianthus Annuus (Sunflower Oil)
		Processing Aid - Organic Ethyl alcohol Denatured with Organic Lavender Oil

Typical Use Levels/ pH range	0.75% - 2.0% Formulation pH range 3 – 7
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Package Size	440 lb drum, 40 lb. pail
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Benefits	» Certified Organic	» Natural Liquid Preservative
	» Broad Spectrum Activity	» Safe Toxicity Profile
	» Anti Oxidant Properties	» Global Approval
	» Heat Stability up to 60°C	» Effective at a wide pH range

Linatural™ CO-NLP-1

EFFICACY DATA – PRESERVATIVE CHALLENGE TEST

Shampoo w/addition of Linatural™ CO- NLP-1	Challenge Data – Colony Forming Units per Gram (cfu/g) Mixed Bacteria (<i>P. aeruginosa</i> , <i>E. coli</i> and <i>S. Aureus</i>)				
	Day 0	Day 7	Day 14	Day 21	Day 28
1.0 % Linatural CO-NLP-1	1-3x10 ⁶	<10	<10	<10	<10
Unpreserved Shampoo –pH 5	1-3x10 ⁶	1-3x10 ⁶	1-3x10 ⁶	1-3x10 ⁶	1-3x10 ⁶

Shampoo w/addition of Linatural™ CO- NLP-1	Challenge Data – Colony Forming Units per Gram (cfu/g) Mixed Fungi (<i>A. niger</i> & <i>C. albicans</i>)				
	Day 0	Day 7	Day 14	Day 21	Day 28
1.0% Linatural CO-NLP-1	1-5x10 ⁵	<10	<10	<10	<10
Unpreserved Shampoo – pH 5	1-5x10 ⁵	1-5x10 ⁵	1-5x10 ⁵	1-5x10 ⁵	1-5x10 ⁵

Cream w/addition of Linatural™ CO- NLP-1	Challenge Data – Colony Forming Units per Gram (cfu/g) Mixed Bacteria (<i>P. aeruginosa</i> , <i>E. coli</i> and <i>S. Aureus</i>)				
	Day 0	Day 7	Day 14	Day 21	Day 28
2.00% Linatural CO-NLP-1	1-3x10 ⁶	<10	<10	<10	<10
Unpreserved Cream – pH 6	1-3x10 ⁶	1-3x10 ⁶	1-3x10 ⁶	1-3x10 ⁶	1-3x10 ⁶

Cream w/addition of Linatural™ CO- NLP-1	Challenge Data – Colony Forming Units per Gram (cfu/g) Mixed Fungi (<i>A. niger</i> & <i>C. albicans</i>)				
	Day 0	Day 7	Day 14	Day 21	Day 28
2.00% Linatural CO-NLP-1	1-5x10 ⁵	<10	<10	<10	<10
Unpreserved Cream – pH 6	1-5x10 ⁵	1-5x10 ⁵	1-5x10 ⁵	1-5x10 ⁵	1-5x10 ⁵

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