



State of the art ingredients · fast friendly service

Product Information

Geogard® ULTRA

Multifunctional specialty additive for cosmetics and toiletries.

Description

Geogard® Ultra is accepted by ECOCERT as a preservative in certified organic cosmetics. As a unique blend of gluconolactone, sodium benzoate and calcium gluconate, it has been designed to offer broad spectrum protection in personal care and cosmetic formulations. The gluconolactone component is used in the food and cosmetic industry as moisturizer, antioxidant and chelant. Gluconolactone is not derived from genetically-modified crops. The microorganisms used in the fermentation process are not genetically modified.

Features/ Benefits

<i>Feature</i>	<i>Benefit</i>	<i>What It means for You</i>
* Global Approval (Including Japan)	Wide Applicability	Reduced Cost
* Broad Spectrum Activity	Bacterial/Fungal Control	Fewer Drums to Inventory
*Excellent Toxicity Profile	Increased Safety	Wider Safety Cushion
*No Animal Testing	No Label Warnings	End-Product Labeling
*ECOCERT Accepted	Widespread Usage	Safe Regulatory Allowances

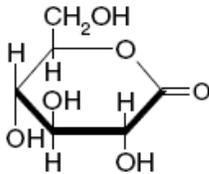
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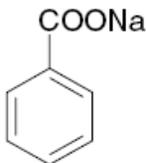
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1. Chemistry

1.0 Active matter

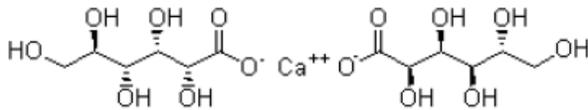


74.25% D-Glucono-1,5-Lactone – derived from corn via fermentation process



24.75% Sodium Benzoate

Flow agent (non-active material)



1.0% calcium gluconate

1.1 CAS No.:

D-Glucono-1,5-Lactone : CAS# 90-80-2
Sodium Benzoate: CAS# 532-32-1
Calcium Gluconate: 299-28-5

1.2 EINECS No.:

D-Glucono-1,5-Lactone : CAS#202-016-5
Sodium Benzoate: CAS#208-534-8
Calcium Gluconate: 206-075-8

1.3 UN No.: not applicable

1.4 INCI-Name: Gluconolactone (and) Sodium Benzoate



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2. Specifications

- 2.1 Gluconolactone,% 70% Minimum
- Sodium Benzoate,% 22% Minimum

3. Properties

- 3.1 Appearance Free flowing, white powder
- 3.2 Activity 99%
- 3.3 Odor Mild
- 3.4 Bulk Density (20°C) 0.74 g/cc
- 3.5 Flash point Not applicable
- 3.6 Freezing point Not applicable
- 3.7 Solubility Water soluble
- 3.8 Compatibility Broadly compatible with personal care ingredients

4. Registrations

North America

Geogard Ultra is acceptable for both rinse-off and leave-on applications.

Asia/Japan

Geogard Ultra ingredients are allowed in Japan according to the comprehensive licensing standards of cosmetics and the Ministry of Health & Welfare.

Europe

Sodium Benzoate is a well-established, traditional preservative and is approved for leave-on and rinse-off products up to 0.5% (benzoic acid). Geogard Ultra is accepted by ECOCERT for use in certified organic certified cosmetics.

5. Efficacy

Moisturizing Cream

<i>Raw Material</i>	<i>% W/W</i>
Water, deionized	q.s
Caprylic Triglyceride	
Sorbitan Monostearate	2
PEG Stearate	1.5
Glyceryl Stearate	2
Decaglyceryl Stearate	5
UV absorber	optional
Thickener	optional
Preservative	quantity varied
Total:	100

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Bacterial Counts (CFU/gram)

Sample #	Test Samples	Day 0	Day 7	Day 14	Day 28
1	Unpreserved Moisturizer 2 x 10 ⁶ >3 x 10 ⁶ >3.3 x 10 ⁶	2 x 10 ⁶	>3 x 10 ⁶	>3.2 x 10 ⁶	>3 x 10 ⁶
2	Moisturizer with 1.0% Geogard® Ultra	2 x 10 ⁶	< 10	< 10	< 10

Fungal Counts (CFU/gram)

Sample #	Test Samples	Day 0	Day 7	Day 14	Day 28
1	Unpreserved Moisturizer 2 x 10 ⁶ >3 x 10 ⁶ >3.3 x 10 ⁶	2.2 x 10 ⁵	2.8 x 10 ⁴	2.5 x 10 ⁵	2.3 x 10 ⁵
2	Moisturizer with 1.0% Geogard® Ultra	2.5 x 10 ⁵	8 X 10 ¹	< 10	< 10

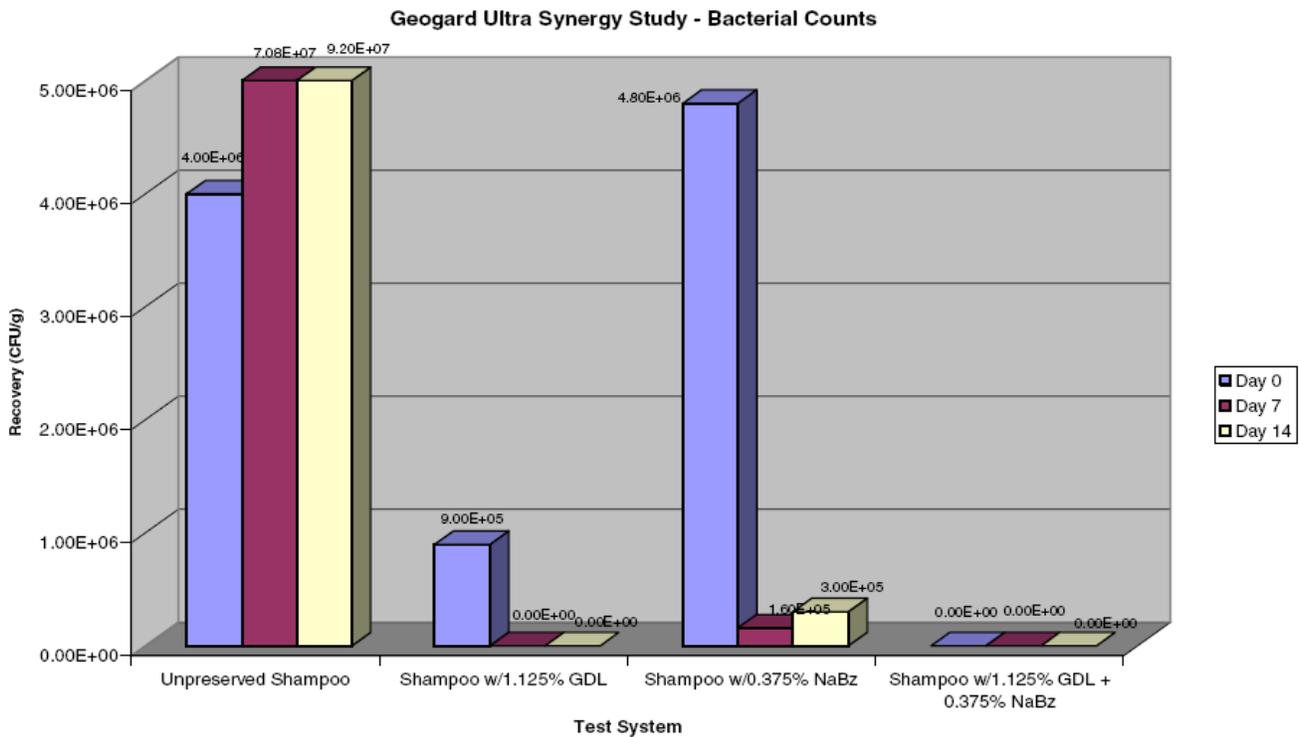
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Geogard Ultra Synergy Study

While both the Gluconolactone and the Sodium Benzoate are effective individually, the graph below demonstrates higher efficacy due to the synergy between Gluconolactone and the Sodium Benzoate contained in the Geogard Ultra



6. Other investigations

Information available upon request.

7. Use areas

Geogard Ultra is compatible in a diverse range of natural based product formulations, for example:

Hair Care
Skin Care

Sun Products
Raw Materials

Shampoos, Conditioners, Rinses
Liquid Soaps, Shower Gels, Sensitive Skin Lotions,
Moisturizers, Cold Creams
Sunscreen Lotions and Creams
Surfactants, Shampoo Blends, Conditioner Blends

Geogard Ultra is typically used at 0.75% to 2.0% in both rinse-off and leave-on product formulations.



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8. Formulating Recommendations

Geogard Ultra is compatible with a wide variety of formulation ingredients as well as most types of cationic, nonionic and anionic systems. Geogard Ultra can be used effectively over a pH range of 3 to 6 and can be added at both room and elevated temperatures. It is recommended that it's dissolved in the water phase or a portion of water prior to addition to the batch.

Solubility:

Geogard Ultra is soluble up to 4% in ambient water. It can be easily dispersed in glycols and alkyl sulfates.

Stability:

Geogard Ultra is a uniform, white powder with a three year shelf life when stored in the sealed, original packaging under normal temperature conditions. It should be stored in a sealed container, away from moisture.

pH Stability:

In some formulations, Geogard Ultra has been found to cause a pH drift downwards. In such a situation, citrate or phosphate buffers can be used to raise the pH back up.

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