



NEW FOR 2006



Naturally Fortifying Enhancement Systems

Enhansys™ M-105

Naturally Fortifying Enhancement Systems for Personal Care Products

Overview

Enhansys™ is a new line of tailored personal care ingredients that fortify your formulations naturally and at the same time help you to achieve a number of challenging formulation goals. These naturally-derived, Patent-Pending proprietary systems give you an alternative approach to protecting your formulations from manufacturing to the shelf, while at the same time enhancing formulation performance.

Enhansys™ is a versatile and cost effective approach for fortifying and enhancing Personal Care product formulations. Use **Enhansys™** for the formulation performance functionalities of conditioning, moisturization, thickening, stabilizing and pH control, in place of traditional ingredients-*and find that traditional preservatives are not needed.* **Enhansys™** fortified formulations are self-preserving systems that enable a high level of protection against in-package biodegradation resulting from manufacturing contamination, process water, raw materials and/or environment.

Enhansys™ systems are clear liquids that function at low concentration and are fully compatible with nonionic, anionic, and cationic surfactants, emulsifiers and proteins, and are stable over wide pH and temperature ranges.

Enhansys™ systems are based on INCI listed materials that are GRAS, naturally derived, and food industry ingredients that have been tested extensively to meet Personal Care regulatory standards.

Patent-Pending **Enhansys™ M-105** is a proprietary system of functional ingredients that bring a range of benefits to Personal Care formulations:

Glycereth-2 Cocoate is an effective **Moisturizer** and **Thickener**;

Benzoic Acid is useful in **pH Control**.

Sodium PCA is an effective **Humectant and self-preserving boost against bacteria**

Typical Properties

Physical form Water White to Amber, Liquid
 pH..... 4.0 – 6.0
 Storage.....Store between 0°C(32°F) and 32°C(90°F)

Typical Use Levels/Conditions Handling Information

0.3% - 2.0%
 Optimal formulation pH ≤ 7
 Refer to the Material Safety Data Sheet (MSDS) available from Mason Chemical Company for information on the safe use, handling and disposal of this product.

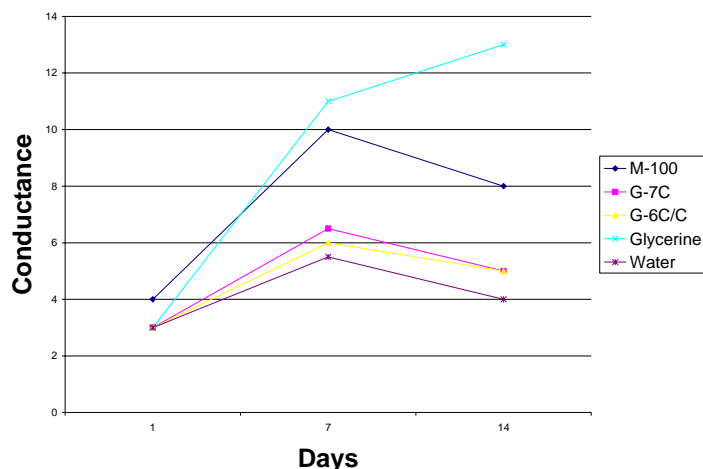
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Enhansys™ M-105

Moisturizing Effect

The moisturizing effect of glycerine and its derivatives are well known. The moisturizing ability **Enhansys™ M-105** was compared to the emollients PEG-7 Glyceryl Cocoate (G-7C) and PEG-6 Caprilic/Capric Glycerides (G-6C/C) in a simple composition containing 10% of emollient, 1.5% Polysorbate 60, 0.5% Sorbitan Monostearate in water. In this illustration glycerin was considered as positive control and water as negative control. After application on the same area 2 times a day for two weeks, conductance was measured.

Enhansys™ M-105 showed superior moisturization effectiveness compared to the other emollients.



Color/Odor/Bio-Fouling Formulation Stability Testing

Formulations	Initial			1 Month @ 35°C			3 Months @ 35°C		
	Color Change	Odor Change	Bio-fouling	Color Change	Odor Change	Bio-fouling	Color Change	Odor Change	Bio-fouling
Control Formulation/ No Enhansys	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control Formulation/ 0.8% Enhansys M-105	No	No	No	No	No	No	No	No	No

Note: Biodegradation/Bio-fouling/Spoilage of formulations can be caused from poor quality water, raw materials and/or environment.

Self Preserving Properties of Different Personal Care Formulation

Formulations	Formulations Physical Stability @ RT			
	Initial	2 weeks on Shelf	1 Month on Shelf	3 Months on Shelf
Anionic Shampoo/ No Preservative	Stable	Unstable	Unstable	Unstable
Anionic Shampoo/ 0.8% Enhansys M-105	Stable	Stable	Stable	Stable

Patent-Pending **Enhansys™ M-105** is a proprietary system of functional ingredients:

Glycereth-2 Cocoate CAS# 68201-46-7

Benzoic Acid CAS# 65-85-0, EINECS# 200-618-2

Sodium PCA CAS# 28874-51-3, EINECS#249-277-1

Refer to Material Safety Data Sheet for Handling and Safety Information and Toxicology Summary.

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