AC Hyalurosome

Time Release Hydration

Enhanced Penetration Hyaluronic Acid

Liposome delivery mechanism

Code Number: 26001

INCI Name: Dimethicone & Phospholipids & Polymethylsilsesquioxane & Hyaluronic Acid
INCI Status: Approved
REACH Status: Complies
CAS Number: 9006-65-9 & 8002-43-5 & 68554-70-1 & 9004-61-9
EINECS Number: N/A & 232-307-2 & N/A & 232-678-0

Origin: Botanical, Synthetic
Processing:
GMO Free
No Ethoxylation
No Irradiation
No Sulphonation
Additives:
Preservatives: None
Antioxidants: None
Other additives: None
Solvents Used: N/A
Appearance: Semi-Viscous White Liquid
Soluble/ Miscible: Dispersible
87.8% Biodegradability
Microbial Count: < 100 CFU/g, No Pathogens

Suggested Use Levels: 0.01 - 1.0%
Suggested Applications:
Time release hydration

Benefits of **AC Hyalurosome:**

- Time release Hydration
- Intense Moisturizing Benefits
- Unique Story

BACKGROUND

Some people swear that timing is everything. Although this may seem a bit dramatic, we do know that timing can certainly play a pivotal role in the success or failure of a product launch. Interestingly, consumers are now focusing more on timing, but under different circumstances. **AC Hyalurosome** was designed to deliver all of the benefits of Hyaluronic acid in a time-release package for prolonged and effective delivery.

As a result, the rise in products that claim to deliver time-release technology has increased dramatically. Our response has been to develop **AC Hyalurosome**, a unique alternative to more traditional delivery systems. In fact, **AC Hyalurosome** represents a significant advance in the development of hybrid vesicular delivery technology. Traditionally liposomes enhance the penetration of actives into the skin. However, because liposomes disassociate on the skin's surface, they do little to protect water labile or water-activated materials. **AC Hyalurosome** is based on a solid core formed from a silicone copolymer.

SCIENCE

This copolymer is porous in nature allowing it to be loaded with a variety of actives. In this case, the active is high molecular weight Hyaluronic acid as a dehydrate. When exposed to a hydrophilic environment the hyaluronic acid is able to rapidly absorb moisture, causing it to swell. In order to prevent this swelling effect from occurring in the formula instead, the silicone core is coated with a unilamellar phospholipid bilayer; effectively shielding the payload until it reaches the stratum corneum.

This bilayer exhibits a hydrophilic exterior making it suitable for modern, oil in water or silicone in water emulsions. Yet application to the skin causes the phospholipid bilayer to shear, thus activating the hyalurosomes to allow for

AC Hyalurosome

the continued release of hyaluronic acid. Once hydrated, the hyaluronic acid will effectively moisturize and plump the skin. The time release feature of this technology is a result of two factors associated with the silicone core.

The first factor is a variation in the size of the pores within the copolymer. The second is the tortuosity of the pores, or more simply how convoluted the pores are within the core matrix. To better observe the time release properties of our **AC Hyalurosome** a moisturization study was performed comparing the hydrating benefits of our product to that of hyaluronic acid over the course of a ten hour period.

BENEFITS

Including **AC Hyalurosome** is beneficial for formulations that require time released moisturization in the most technologically advanced method on the market. Capitalizing on the popularity of Alpha-Hydroxy Acids, **AC Hyalurosome** is a must have for top of the line cosmetics that require a scientific backbone.

EFFICACY DATA

As seen in Figure 1, **AC Hyalurosome** is able to deliver time sensitive moisturization for a period that far exceeds that of traditional Hyaluronic acid. This time delayed release has led to **AC Hyalurosome** to being one of the most potent and effective moisturizing agents on the market.

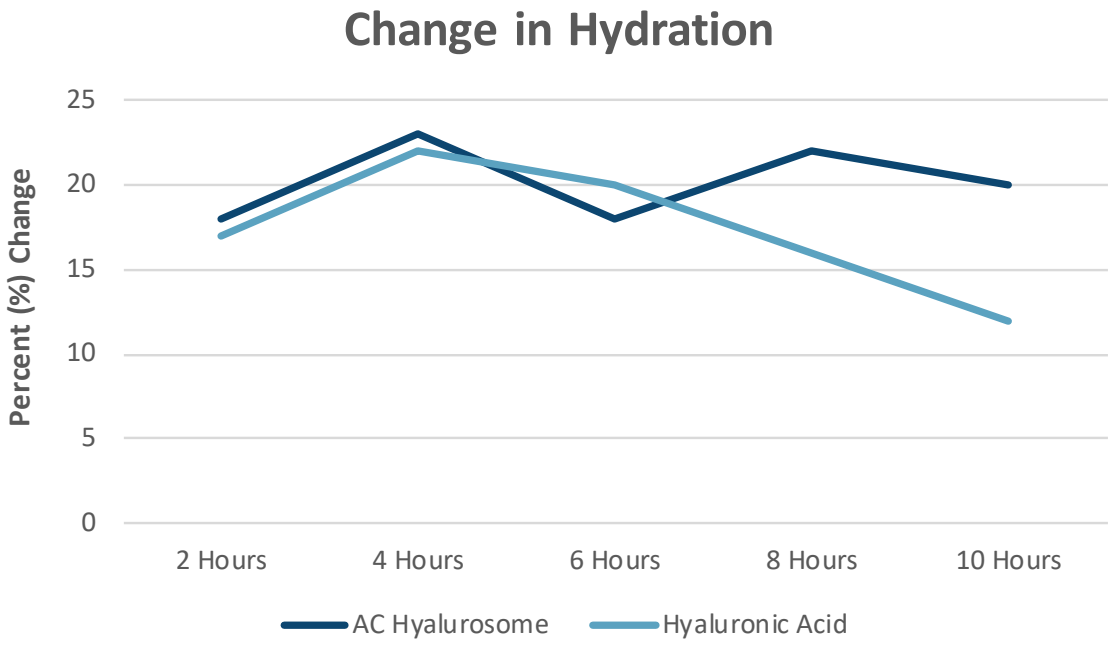

Figure 1. Moisturization over time.

References

1) Sidwell, R. et al. 2004. Clinical and Experimental Dermatology. Localized granulomatous reaction to a semi-permanent hyaluronic acid and acrylic hydrogel cosmetic filler. 29(6): 630-632.
2) Barnes, L. et al. 2013. Journal of Investigative Dermatology. Inhibition of Putative Hyalurosome Platform in Keratinocytes as a Mechanism for Corticosteroid-Induced Epidermal Atrophy. 133: 1017-1026.
3) Manca, M. et al. 2015. Biomaterials. Development of curcumin loaded sodium hyaluronate immobilized vesicles (hyalurosomes) and their potential on skin inflammation and wound restoring. 71: 100-109.

Active Concepts, LLC
Lincolnton, NC. USA
www. activeconceptsllc.com
Office: +1 (704) 276 7100
info@activeconceptsllc.com

Active Concepts S.r.l.
Milano ITALY
www.activeconcepts.it
Tel +39 02 90360719
info@activeconcepts.it

Active Concepts LLC, Asia
Kaohsiung, Taiwan
www.activeconceptsllc.com
Tel + 886 73599900
info@activeconceptsllc.com.tw

Active Concepts Japan
Tokyo, Japan
www.activeconceptsllc.com
Tel + 813 62311022
info-tokyo@activeconceptsllc.com