

DC HydroTrap

INCI: Glycerin, Water, Phospholipids, Beta Vulgaris (Beet) Root Extract, Algae Extract

November 9, 2010

DC2473

For Superior Hydration Performance

Without enough moisture, skin loses its elasticity and resilience resulting in wrinkles, sagging and a dull complexion. For soft, radiant, youthful skin, moisturizers (especially those containing anti-oxidants and sun protection) should be applied on a regular basis. Not only will a moisturizer reduce dryness, it will alleviate irritation and improve skin health by helping to maintain protective barrier properties and sustain normal cell function.



Introducing **DC HydroTrap**, a new water binding technology for skin care, concentrated with hydrophilic, lipophilic and amphoteric molecules from specific plant fractions for optimal moisturization and hydration:

- ◆ **Algae polysaccharides** to soothe and moisturize; provide surface cushion layers to protect against water loss
- ◆ **Soy phospholipids** to improve elasticity and restore lipid barrier function
- ◆ **Beet** extract rich in water binding *osmolytes* and naturally occurring *betaines* to bind water and provide for excellent humectancy

The result of this cocktail is a highly humectant hybrid gel which provides a comprehensive, long-lasting cascade of moisture, keeping skin hydrated for hours.

BENEFITS

- ◆ Hydrating/Moisturizing
- ◆ Long lasting
- ◆ Smooth feeling
- ◆ Film forming
- ◆ Protective
- ◆ Ultra-gentle

APPLICATIONS

- ◆ Skin and hair conditioners
- ◆ Baby care
- ◆ Moisturizers
- ◆ Daily protection
- ◆ Sun care
- ◆ Sensitive skin

TYPICAL PROPERTIES

Appearance	Yellow to brown gel
Odor	Characteristic
pH	3.0-5.0 (25% aqueous solution)
Specific Gravity	0.990 – 1.200

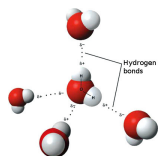
FORMULATION GUIDELINES

Recommended Use Level	5.0-10.0%
	Disperses easily in carbomer and other gels, emulsions or any composition with an external water phase


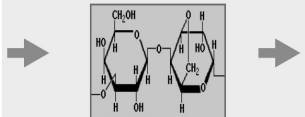

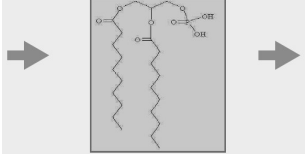

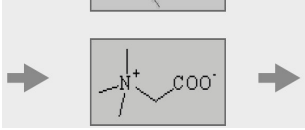
DC HydroTrap

INCI: Glycerin, Water, Phospholipids, Beta Vulgaris (Beet) Root Extract, Algae Extract

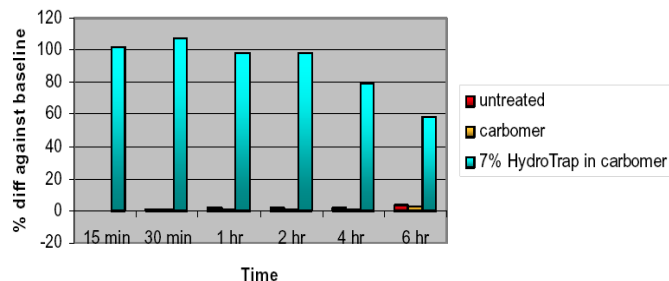
WATER BINDING CASCADE TECHNOLOGY



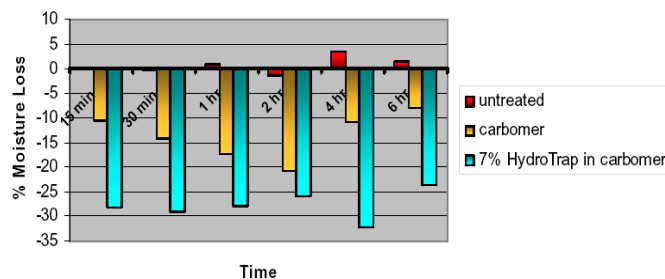
Electronegative oxygen of water creates dipoles resulting in a highly favorable attraction to DC HydroTrap. Excellent for long-lasting skin hydration.

Algae Extract			<p>Surface cushioning hydration layer forms</p> <ul style="list-style-type: none"> Water hydrogen binding to large polysaccharides
Soy Phospholipids			<p>Interaction with epidermis restores lipid barrier</p> <ul style="list-style-type: none"> Phospholipids entrap water in water-lipid bilayers
Beet Extract			<p>Deep, long lasting hydration</p> <ul style="list-style-type: none"> Dipole-ionic forces attract water to a small natural amphoteric carrier

SURFACE MOISTURIZATION STUDY (Novameter)



MOISTURIZATION STUDY (Transepidermal Water Loss)



In vivo screening has demonstrated DC HydroTrap has good performance in both surface hydration and barrier moisturizing protection.

The information contained in this technical bulletin is presented in good faith, and to the best of our knowledge believed to be true and accurate. No representations or warranties, expressed or implied is made or intended. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. No recommendation should be construed as an inducement to use a material in infringement of patents or applicable government regulations. In no event will Resources of Nature be responsible or liable for any loss of profits, lost goodwill, direct, special, indirect, incidental, or consequential damages of any nature whatsoever.

DC HydroTrap

INCI: Glycerin, Water, Phospholipids, Beta Vulgaris (Beet) Root Extract, Algae Extract

Page 3 of 3

HYDROTRAP LOTION

Formula RON3-157/3

PHASE	INGREDIENT	% BY WEIGHT	SUPPLIER
A	Water	q.s.	
A	Disodium EDTA	0.15	
B	Finsolv TN	5.00	Finetex
B	Lexol GT-865	7.50	Inolex
B	Dow Corning 200 Fluid, 350 cst	2.00	Dow Corning
B	Pemulin TR-2	0.40	Noveon
C	Water	10.00	
C	TEA, 99%	0.40	
D	DC HydroTrap	10.00	Resources of Nature
E	Gransil SiW 026	3.00	Resources of Nature
F	Seppigel 305	0.50	Seppic
G	Surcide DMDMH	0.50	Surety
		<hr/>	
		100.00	

Procedures:

Combine Phase B in a separate vessel and mix until uniformly dispersed. Add Water and EDTA into the main beaker and mix until dissolved. Combine Phase B into A with prop mixing for ~25 minutes until uniform. Premix Phase C and add to the main vessel to adjust the pH to ~5.50. Add Phase D to the main vessel and continue to mix for ~10 minutes until uniform. Add Phase E to the main vessel and continue to mix for ~10 minutes until uniform. Add Phase F to the main vessel and continue to mix for ~10 minutes until uniform. Add Phase G to the main vessel and continue to mix for ~10 minutes until uniform. Finishing Step (If Desired): Homogenize for ~ 10 minutes

HYDROTRAP CREAM

Formula RON3-175/2

PHASE	INGREDIENT	% BY WEIGHT	SUPPLIER
A	Water	q.s.	
A	Butylene Glycol	4.00	
A	Xanthan Gum	0.20	
A	Glycerine	2.00	
B	Amisol Soft	5.00	Resources of Nature
B	Cetyl Alcohol	4.00	
B	Glyceryl Stearate	1.50	
B	BHT	0.05	
B	Phenonip	1.00	Clariant
B	Parsol MCX	5.00	Roche
B	Dow Corning 345 Fluid	6.00	Dow Corning
B	Finsolv TN	4.00	Finetex
B	Bisabolol	0.5	
C	DC HydroTrap	7.00	Resources of Nature
C	Heliogel	1.00	Resources of Nature
D	Water	12.00	
D	Tetrasodium EDTA	0.20	
		<hr/>	
		100.00	

Procedures:

Combine Phase A (Premix Glycol/Xanthan gum/Glycerin prior to combining with water) in a separate vessel and mix until uniform. Heat Phase A to ~75 to 80 Degrees C while mixing. Combine Phase B into a separate beaker and heat to ~ 80 Degrees C, mixing until uniform. Add Phase B to Phase A with high-speed prop-mixing and mix at ~80 Degrees C for ~15 minutes. Begin cooling batch and add Phase C to the main vessel at ~50 Degrees C. Premix Phase D and add to the main vessel at ~ 45 Degrees C and cool to R/T. Finishing Step (If Desired): Homogenize for ~ 10 minutes while cooling to R/T.