

Formulation

Name	THE MODERN VINTAGE COLLECTION: COLD CREAM		
No.	1349		
Description	Replaces the classic mineral oil, ceresin and paraffin wax combination with four 100% natural emollients, including a cocoa butter alternative from Stepan, WECOBEE® M. The Modern Vintage Cold Cream also made improvements to the emulsification package of the formulation. The ceresin from the classic formula is replaced by a vegetable derived alternative to traditional paraffin wax. Overall, by using naturally derived products, the bio-based content of the Modern Vintage Cold Cream was increased from the benchmark of <50% to 95%.		
Formulation	INGREDIENTS:	% by Weight	Functionality
	=== Phase 1 ===		
	Deionized Water	49.927	Solvent
	Glycerin	2.000	Humectant
	Carbomer 980 (The Lubrizol Corporation) Carbomer	0.200	Thickener
	=== Phase 2 ===		
	Entrada® EML (Advonex International Corp.) C17-26	22.300	Moisturizing Agent
	Isoalkane	12.000	Moisturizing Agent
	NEOBEE® M-5 (Caprylic/Capric Triglyceride)	4.000	Viscosity Builder
	Hallstar CO-1695 (Hallstar Company) Cetyl Alcohol NF (Cetyl Alcohol)	2.000	Moisturizing Agent
	WECOBEE® M (Hydrogenated Vegetable Oil)	5.000	Emulsifier
	Brij™ C20-SO (Croda International) Ceteth-20	1.000	Moisturizing Agent, Skin Protectant
	Entrada® GL (Advonex International Corp.) Hydrogenated Vegetable Oil, (Vegetable) Paraffin, Microcrystalline Wax	0.500	Viscosity Builder
	Entrada® Wax 68X (Advonex International Corp.) Vegetable Paraffin		
	=== Phase 3 ===		
	Microcare® PE (THOR Specialties, Inc.) Phenoxyethanol	0.750	Preservative
	Fragrance	0.250	Fragrance
	=== Phase 4 ===		
	Sodium Hydroxide	0.073	pH Adjuster
	Total	100.000	
Procedure	<ol style="list-style-type: none"> 1. Add Deionized Water, Glycerin and Carbomer 980 to the main vessel and heat to 75°C (167°F). 2. Add Entrada EML, NEOBEE M-5, Hallstar CO-1695, WECOBEE® M, Brij™ C20-SO, Entrada® GL to a separate vessel and heat to 80°C (176°F). Ensure all solids are dissolved and batch is uniform. Begin cooling batch to 75°C (167°F) for emulsification. 3. At 75°C, add to the second vessel to the main vessel with fast mixing for emulsification. Continue fast mixing until emulsion is established (Cloudy, opaque, milky in appearance). Mix for 10 minutes at 75°C (167°F). 4. Adjust batch using Sodium Hydroxide to a target pH of 6.0. 5. Begin cooling batch to 40°C (104°F) with regular mixing. 6. Add Microcare PE to the main vessel at <40°C (<104°F) with regular mixing until uniform. 		

7. For additional pH adjustment, incrementally add Sodium Hydroxide to reach target pH of 6.0.
8. Add remaining amount of Deionized Water (q.s. to 98-100% by weight).

Physical Properties	Appearance, as is pH at 25°C Viscosity at 25°C (RCTC @ 2 rpm), cps Odor	White, shiny, thick cream 5.5-6.5 100,000 Musky, floral
Storage/ Stability	4 weeks at 4°C 4 weeks at 25°C 4 weeks at 40°C Freeze/Thaw, 3 cycles	Stable Stable Stable Pass
Instructions for Use	Apply to dry skin.	
External Comment	Marketing Notes: BCI = 100. Total Biorenewable Carbon Index (BCI) was calculated only for the Stepan surfactants used in this formulation. Other ingredients were not evaluated. For further information on Stepan's BCI, visit www.stepan.com . Natural is defined as 100% bio-based. NEOBEE® M-5 and WECOBEE® M both have a BCI = 100%.	
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For Additional Assistance	For applications or product handling assistance, call our Technical Service Department at 1-800-745-7837 (U.S.) or 011-334-76-505-100 (Europe). For ordering assistance, call our Account Service Department at 1-800-457-7673.	

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Stepan Company
Northfield, Illinois 60093
Telephone (847) 446-7500

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