



Distributed in the Interest
of Product Development

VANDERBILT

Formulary

Men's Care Formulary No. 928



**R.T. Vanderbilt Company, Inc., 30 Winfield Street, P.O. Box 5150, Norwalk, CT 06856-5150
Telephone: (203) 853-1400 - Fax: (203) 853-1452 - Web Site: www.rtvanderbilt.com**

Before using, read, understand and comply with the information and precautions in the Material Safety Data Sheets, label and other product literature. The information presented herein, while not guaranteed, was prepared by technical personnel and, to the best of our knowledge and belief, is true and accurate as of the date hereof. No warranty, representation or guarantee, express or implied, is made regarding accuracy, performance, stability, reliability or use. This information is not intended to be all-inclusive, because the manner and conditions of use, handling, storage and other factors may involve other or additional safety or performance considerations. The user is responsible for determining the suitability of any material for a specific purpose and for adopting such safety precautions as may be required. R.T. Vanderbilt Company, Inc. does not warrant the results to be obtained in using any material, and disclaims all liability with respect to the use, handling or further processing of any such material. No suggestion for use is intended as, and nothing herein shall be construed as, a recommendation to infringe any existing patent, trademark or copyright or to violate any federal, state or local law or regulation.

MEN'S CARE FORMULARY

VANATURAL® Bentonite Clay

VEEGUM® Magnesium Aluminum Silicate

VANZAN® Xanthan Gum

VANATURAL Bentonite Clay (INCI Name: Bentonite) and **VEEGUM** Magnesium Aluminum Silicate (INCI Name: Magnesium Aluminum Silicate) are natural water-washed smectite clays that reliably stabilize personal care and pharmaceutical emulsions and suspensions.

VANZAN (INCI Name: Xanthan Gum) is a natural high molecular weight, exocellular polysaccharide derived from *Xanthomonas campestris*. Because of its protective function in nature, it is more resistant than are most gums to shear, heat, bacterial, enzyme, and UV degradation. **VANZAN** products are efficient thickeners as well as emulsion and suspension stabilizers. They also provide useful synergism with **VANATURAL** and **VEEGUM** clays.

USING VANATURAL AND VEEGUM CLAYS

VANATURAL and **VEEGUM** products must be properly dispersed in water to provide their best performance. No other materials should be present in the water, because they can interfere with proper clay hydration and colloidal structure formation. The degree of clay hydration is directly proportional to the amount of energy used to disperse the product. The degree of hydration therefore increases as mixing time, mixing intensity or water temperature increase. One grade, **VEEGUM Ultra**, is relatively unaffected by changes in these mixing factors; adequate hydration can be achieved quickly, using room temperature water and a simple, slow-speed propeller mixer.

The following table provides guidelines for the minimum amounts of time for the hydration of **VANATURAL** and **VEEGUM** products. Actual hydration times, in the laboratory or in production, will depend on the particular combination of batch size, mixer shear, and water temperature used. Whichever mixing conditions are used, it is very important that they be carefully controlled to achieve reproducible results in the final formulation.

Water Temp.	Mixer Type	Mixer Speed, rpm	Minimum Suggested Mixing Time		
			VEEGUM	VANATURAL	VEEGUM <i>Ultra</i>
25°C	Propeller	800	120 min.	30 min.	15 min.
75°C	Propeller	800	45 min.	20 min.	10 min.
25°C	Homogenizer	3000	30 min.	20 min.	10 min.
75°C	Homogenizer	3000	15 min.	10 min.	10 min.

USING VANZAN XANTHAN GUM

VANZAN products are soluble in both cold and warm water. To dissolve quickly and completely, they must first be properly dispersed so that individual gum particles are surrounded by the aqueous medium. The individual particles then hydrate and dissolve. Good dispersion is promoted by high shear mixing, blending the gum particles into a water-miscible non-solvent such as a glycol or alcohol before addition to the aqueous phase, dry blending with other formula ingredients, such as co-thickeners, salts, acids, abrasives or pigments before addition to the aqueous phase.

RECOMMENDED GRADES FOR SKIN AND HAIR CARE

Smectite Clays:

VANATURAL Rapidly hydrating high purity bentonite clay for most personal care applications.

VEEGUM Ultra A unique acidic smectite clay that is especially easy to hydrate.

VEEGUM The standard grade for a wide range of applications.

Xanthan Gum:

VANZAN NF The standard grade for most personal care and pharmaceutical applications.

VANZAN NF-C Produces clear solutions; used when product clarity is essential.

GROOMING

Aerosol Shave Cream for Sensitive Skin No. 503

	wt. %	
A	VEEGUM [®] <i>Ultra</i> Magnesium Aluminum Silicate	1.5
	VANZAN [®] NF Xanthan Gum	0.3
	Deionized Water	67.2
B	Glycerin	3.0
	Butylene Glycol	3.0
C	Stearic Acid XXX	3.0
	Coconut Acid	3.0
	Safflower Oil	0.2
	Soybean Oil	0.2
	Cetyl Alcohol	1.0
	Dimethicone (DC 200 Fluid, 350 cSt ¹)	1.0
	Lanolin Alcohol	0.1
	Isosorbide Laurate (Arlamol [®] ISML ²)	1.0
Mineral Oil	3.0	
D	Sodium Cocoyl Sarcosinate, 30%	10.0
	Panthenol	0.5
	Aloe Vera	0.5
E	Triethanolamine	1.5
	Preservative	q.s.

¹Dow Corning Corporation, Midland, MI

²Uniqema, New Castle, DE

Procedure: While heating the water to 75°C, slowly add the VEEGUM *Ultra* and VANZAN NF sequentially or as a dry blend to the water agitated at maximum available shear. Mix until fully hydrated. Add the remaining water phase ingredients from Part B, mixing until uniform. Maintain the water phase at 75°C. Blend the Part C oil phase ingredients and heat to 75°C. Add the oil phase to the water phase with good agitation; mix until uniform. Cool while mixing. Add the Part D ingredients when the emulsion is <40°C. Add the Part E ingredients when the emulsion is <35°C. Adjust as necessary to pH 7.5 ± 0.5.

Men's Facial Balm No. 558

	wt. %	
A	VEEGUM [®] Magnesium Aluminum Silicate	1.00
	VANZAN [®] NF Xanthan Gum	0.50
	Water	93.05
B	Water (and) Triticum Vulgare (Wheat) Germ Extract (and) Saccharomyces Cerevisiae Extract (and) Sodium Hyaluronate (Eashave ^{TM1})	4.00
	Bisabolol ((±)-alpha-Bisabolol Synthetic ²)	0.20
	Aloe Barbadosensis Leaf Juice (Aloe Vera Gel Regular 40X-AG046 ³)	1.00
	Allantoin	0.20
	Cyclohexanecarboxamide, N-ethyl-5-methyl-2-(1-methylethyl)- (ICE 3000 Cooling Sensate Powder WS-3 ⁴)	0.05
	Preservative	q.s.

¹Pentapharm Ltd., Basel, Switzerland (Centerchem, Inc., Norwalk, CT)

²BASF Corporation, Florham Park, NJ

³Terry Laboratories, Melbourne, FL

⁴Qaroma, Baytown, TX

Procedure: Slowly add the VEEGUM and VANZAN NF sequentially or as a dry blend to the water agitated at maximum available shear. Mix until fully hydrated. Add the Part B ingredients in the order listed and mix until uniform. Add Part C and mix until uniform. Adjust as necessary to pH 6.5 ± 0.5.

Shaving Cream No. 501

	wt. %	
A	VEEGUM [®] <i>Ultra</i> Magnesium Aluminum Silicate	2.0
	VANZAN [®] NF Xanthan Gum	0.5
	Deionized Water	74.5
B	Cetyl Alcohol	0.5
	Glyceryl Stearate SE (Dermalcare [®] GMS/SE ¹)	3.0
	Caprylic/Capric Triglyceride (Neobee [®] M-5 ²)	2.0
	C ₁₂₋₁₅ Alkyl Benzoate (Finsolv [®] TN ³)	3.0
	Dimethicone (DC 200 Fluid, 350 cSt ⁴)	3.0
C	Lanolin Alcohol	1.0
	Isosorbide Laurate (Arlamol [®] ISML ⁵)	0.5
	Mineral Oil	5.0
C	Sodium Lauroyl Sarcosinate, 30%	5.0
D	Triethanolamine or Citric Acid (to pH 5.75±0.25)	q.s.
	Preservative, Fragrance	q.s.

¹Rhodia Inc., Cranbury, NJ

²Stepan Company, Northfield, IL

³Innospec Active Chemicals, Edison, NJ

⁴Dow Corning Corporation, Midland, MI

⁵Uniqema, New Castle, DE

Procedure: While heating the water to 75°C, slowly add the VEEGUM *Ultra* and VANZAN NF sequentially or as a dry blend to the water agitated at maximum available shear. Mix until fully hydrated. Blend the Part B oil phase ingredients and heat to 75°C. Add the oil phase to the water phase with good agitation; mix until uniform. Cool while mixing. Add the Part C surfactant when the emulsion is <55°C. Add the Part D ingredients when the emulsion is <35°C. Adjust as necessary to pH 5.75 ± 0.25.

Aftershave Gel No. 557

	wt. %	
A	VANZAN [®] NF-C Xanthan Gum	1.00
	Water	80.74
	Disodium EDTA	0.05
B	Bisabolol (Alpha-Bisabolol Natural ¹)	0.20
	Ethanol, 96%	15.00
	Panthenol (and) Propylene Glycol (D-Panthenol 50P ¹)	1.00
C	PEG-40 Hydrogenated Castor Oil (Cremophor [®] CO 40 ¹)	2.00
	Preservative	q.s.

¹BASF Corporation, Florham Park, NJ

Procedure: Slowly add the VANZAN NF-C to the water agitated at maximum available shear. Mix until fully dissolved. Add the disodium EDTA and mix until dissolved. Combine and mix the Part B ingredients until clear. Add Part B to Part A and mix until uniform. Add Part C and mix until uniform. Adjust as necessary to pH 6.5 ± 0.5.

Green Tea Instant Facial No. 542

	wt. %	
VEEGUM F	Magnesium Aluminum Silicate	5
	Kaolin Clay, Cosmetic Grade	67
	Zinc Oxide or Calamine, USP	20
	Polyvinylpyrrolidone (PVP K-30) ¹	5
	Allantoin ¹	2
	Green Tea Extract ²	1

¹International Specialty Products, Wayne, NJ

²Greentech USA, Yarmouth, ME

Procedure: Mix powders until uniformly blended.

Use: Mix powder with sufficient water, witch hazel or honey to make a spreadable paste.

Body Wash Cream for Sensitive Skin No. 505

		wt. %
A	VEEGUM® <i>Ultra</i> Magnesium Aluminum Silicate	2.0
	Water	63.0
B	Sodium Cocoyl Isothionate (Tauranol® I-78 ¹)	25.0
	Cocamidopropyl Hydroxysultaine (Mirataine® CBS ²)	10.0
C	Preservative	q.s.

¹Innospec Active Chemicals, Edison, NJ²Rhodia Inc., Cranbury, NJ

Procedure: While heating the water to 60-65°C, slowly add the VEEGUM *Ultra* while agitating at maximum available shear. Continue mixing until fully hydrated. Maintaining temperature, slowly add Part B ingredients in the order shown, mixing after each addition until smooth and uniform. Cool with mixing to < 45°C and then add Part C. Adjust as necessary to pH 5.5 ± 0.5.

Body Wash Spray No. 500

		wt. %
A	VEEGUM® <i>Ultra</i> Magnesium Aluminum Silicate	2.0
	Water	58.5
B	Disodium Laureth Sulfosuccinate (Stepan Mild-SL3 ¹)	13.0
	Cocamidopropyl Hydroxysultaine (Mirataine® CBS ²)	5.0
	Polysorbate 20 (Tween® 20 ³)	1.5
	Cocamidopropyl Betaine (Amphosol® CA ¹)	3.0
	Sodium Laureth Sulfate (Steol® CS-230 ¹)	14.0
	Jjoba Esters (Floraesters™-15 ⁴)	3.0
C	Preservative	q.s.

¹Stepan Company, Northfield, IL²Rhodia Inc., Cranbury, NJ³Uniqema, New Castle, DE⁴Floritech Americas, Chandler, AZ

Procedure: Slowly add the VEEGUM *Ultra* to the water while mixing at maximum available shear. Mix until fully hydrated. At reduced mixing speed, very slowly add the Part B ingredients in the order shown, mixing after each addition until uniform. Add the Part C ingredients and adjust as necessary to pH 5.5 ± 0.5.

Extra Mild Facial Cleanser No. 553

		wt. %
A	VANZAN® NF Xanthan Gum	1.0
	Water	76.2
B	C12-15 Alkyl Benzoate (Finsolv® TN ¹)	5.0
	PEG-14 dimethicone (Dow Corning® 193 ²)	1.2
C	Cocamidopropyl Betaine (Amphosol® CA ³)	10.0
	Decyl Glucoside (Plantaren® 2000N ⁴)	6.6
D	Preservative	q.s.

¹Innospec Active Chemicals, Edison, NJ²Dow Corning Corporation, Midland, MI³Stepan Company, Northfield, IL⁴Cognis Corporation, Ambler, PA

Procedure: Sift the VANZAN NF into the water agitated at maximum available shear. Mix until completely dissolved. Blend Part B ingredients, then add to Part A and mix thoroughly. Add Part C ingredients separately and mix thoroughly after each addition. Avoid air entrapment. Add the preservative and mix until uniform.

Clear Liquid Hand Soap With Tea Tree Oil No. 556

		wt. %
A	VANZAN® NF-C Xanthan Gum	1.00
	Water	72.32
	Disodium EDTA	0.05
B	Decyl Glucoside (Plantaren® 2000N ¹)	6.60
	Cocamidopropyl betaine (Amphosol® CA ²)	10.00
	Water (and) Melaleuca Oil (and) Ethoxylated	10.00
	Castor Oil (and) Polysorbate 20 (Water-Soluble Tea Tree Oil ³)	
C	Preservative	q.s.
D	Triethanolamine	0.03

¹Cognis Corporation, Ambler, PA²Stepan Company, Northfield, IL³Southern Cross Botanicals PTY Ltd, Lennox Head, NSW, Australia

Procedure: Sift the VANZAN NF-C into the water agitated at maximum available shear. Mix until completely dissolved. Add the disodium EDTA and mix until it dissolves. Add Part B ingredients separately, mixing after each until smooth while avoiding air entrapment and foaming. Add the preservative and mix until uniform. Add the triethanolamine to adjust pH to 6.5 ± 0.5.

Foot Scrub with Natural Exfoliant No. 576

		wt. %
A	VANATURAL® Bentonite Clay	3.00
	VANZAN® NF Xanthan Gum	0.75
	Water	75.75
B	Decyl Glucoside (Plantaren® 2000N ¹)	7.00
	Cocamidopropyl betaine (Amphosol® CA ²)	3.00
	Propylene Glycol (and) Water (and) Mentha Piperita (Peppermint) Leaf Extract (and) Mentha Piperita (Peppermint) Oil (Aromaphyte of Peppermint ³)	2.00
	Water (and) Melaleuca Oil (and) Ethoxylated Castor Oil (and) Polysorbate 20 (Water-Soluble Tea Tree Oil ⁴)	1.50
D	Zea Mays (Corn) Cob Powder (Processed Corn Cob (60/100)) ⁵	5.00
E	Cocamide DEA (Ninol® 40-CO ²)	2.00
F	Preservative	q.s.

¹Cognis Corporation, Ambler, PA²Stepan Company, Northfield, IL³Active Organics Inc., Lewisville, TX⁴Southern Cross Botanicals PTY Ltd, Lennox Head, NSW, Australia⁵Mt. Pulaski Products, Inc., Mt. Pulaski, IL

Procedure: Slowly add the VANATURAL and VANZAN NF sequentially or as a dry blend to the water agitated at maximum available shear. Mix until fully hydrated. Slowly add Parts B, C, D, E and F in order, mixing after each until smooth while avoiding air entrapment and foaming.

Waterless Skin Scrub with D-Limonene No. 479

		wt. %
A	VEEGUM [®] <i>Ultra</i> Magnesium Aluminum Silicate	2.0
	VANZAN [®] NF Xanthan Gum	0.6
	Deionized Water	51.7
	Oleic Acid	10.0
	Mineral Oil	10.0
	B	
	Cetyl Alcohol	1.0
	Isosorbide Laurate (Arlamol [®] ISML ¹)	1.0
	Lanolin	1.0
C	Water	2.0
	Potassium Hydroxide	0.7
D	D-Limonene	10.0
E	Polyethylene Beads (A-C 9-A ²)	10.0
F	Preservative	q.s.

¹Uniqema, New Castle, DE²Honeywell Specialty Wax & Additives, Morristown, NJ

Procedure: While heating the water to 75°C, slowly add the VEEGUM *Ultra* and VANZAN NF (sequentially or as a dry blend) while mixing at maximum available shear. Mix until fully hydrated. Maintain the water phase at 75°C. Blend the Part B oil phase ingredients and heat to 75°C. Add the oil phase to the water phase with good agitation; mix until uniform. Cool while mixing. Add the Part C solution of potassium hydroxide in water when the emulsion is 45°C. Continue to cool while mixing and add Parts D, E and F when the emulsion is <35°C.

Zinc Pyrithione Lotion Shampoo No. 364

		wt. %
A	VEEGUM [®] Magnesium Aluminum Silicate	0.5
	Water	51.1
	Hydroxypropyl Guar (Jaguar HP-60 ¹)	0.5
B	Ammonium Lauryl Sulfate (Rhodapon [®] L-22 ¹)	40.0
	PPG-5-Ceteth-10 Phosphate (Crodafos [®] SG ²)	1.8
	Lauramide DEA (Monamid [®] 716 ²)	4.0
C	Zinc Pyrithione, 48% (Zinc Omadine ³)	2.1
	Preservative	q.s.

¹Rhodia Inc., Cranbury, NJ²Croda, Inc., Edison, NJ³Arch Personal Care Products L.P., South Plainfield, NJ

Procedure: Slowly add the VEEGUM to the water agitated at maximum available shear. Mix until fully hydrated. Add the hydroxypropyl guar and mix until uniformly dispersed. With slow stirring add the Part B ingredients in order. Add the phosphate slowly, mixing until the guar gum is totally dissolved. Add the Part C ingredients in the order listed, agitating slowly. Mix until smooth and uniform. Avoid incorporation of air. Adjust as necessary to pH 7.2.

SKIN CARE**Cracked Skin Lotion No. 586**

		wt. %
A	VANATURAL [®] Bentonite Clay	2.50
	Water	73.25
	Avena Sativa (Oat) Kernel Flour (Tech-O [®] #11-070 Oat Flour ¹)	1.00
	VANZAN [®] NF Xanthan Gum	0.5
	Sucrose Stearate (Surfhope [®] SE Cosme C-1811 ²)	1.75
B	Sodium PCA (Ajidew [®] NL-50 ³)	3.00
	Glycerin, 96%	5.00
C	Glyceryl Stearate (and) PEG-100 Stearate (Arlacel [®] 165 VEG ⁴)	2.00
	Hydrogenated Polyisobutylene (Parleam [®] 5 ⁵)	4.00
	Mineral Oil (and) Lanolin Alcohol (Vilvanolin [™] L-101 ⁶)	3.00
	Cetyl Alcohol	2.00
D	Isopropyl Myristate	2.00
	Preservative	q.s.
	Citric Acid, 20%	q.s.

¹Beacon CMP Corporation., Kenilworth, NJ²Arch Personal Care Products L.P., South Plainfield, NJ³Ajinomoto USA, Inc., Fort Lee, NJ⁴Uniqema, New Castle, DE⁵Rosow Cosmetics USA, Laurel, NY⁶Lubrizol Advanced Materials, Inc., Cleveland, OH

Procedure: While heating the water to 50-55°C, sift the VANATURAL into the water agitated at maximum available shear. Once dispersed, slowly sift in the oat flour. Mix until the VANATURAL is fully hydrated and the oat flour is well dispersed. Add the VANZAN NF and mix until dissolved. Add the sucrose stearate and mix until uniform. Add Part B ingredients and mix thoroughly. Maintain the water phase at 50-55°C. Blend the Part C oil phase ingredients and heat to 50-55°C. Add the oil phase to the water phase with good agitation; mix until uniform. Avoid incorporating air. Cool with mixing; add the preservative when the emulsion is <35°C. Adjust pH to 5.5 ± 0.5 with citric acid.

Conditioning Skin Cream with Jojoba Oil No. 571

		wt. %
A	VANATURAL [®] Bentonite Clay	2.0
	Water	73.0
	Butylene Glycol	5.0
B	Bis-PEG/PPG-16/16 PEG/PPG-16/16 dimethicone; Caprylic/capric triglyceride (Abil [®] Care 85 ¹)	1.5
	Cetyl Alcohol (and) Glyceryl Stearate (and) PEG-75 stearate (and) Ceteth-20 (and) Steareth-20 (Emulium [®] Delta ²)	4.5
	Cetyl Rinoleate (Tegosoft [®] CR ¹)	2.0
	Simmondsia Chinensis (Jojoba) Seed Oil (Jojoba Oil Golden ³)	6.0
C	Cyclomethicone (Dow Corning 345 Fluid ⁴)	6.0
	Preservative, Fragrance	q.s.

¹Degussa Goldschmidt Chemical Company, Hopewell, VA²Gattefossé Corporation, Paramus, NJ³Desert Whale Jojoba Co. Inc., Tucson, AZ⁴Dow Corning Corporation, Midland, MI

Procedure: While heating the water to 75°C, slowly add the VANATURAL while mixing at maximum available shear. Mix until fully hydrated. Add the butylene glycol, mixing until uniform. Maintain the water phase at 75°C. Blend the Part B oil phase ingredients and heat to 75-80°C. Add the oil phase to the water phase with good agitation; mix until uniform. Cool with mixing; add Part C when the emulsion is <30°C.

Skin Softening Cream No. 575

	wt. %
A VANATURAL® Bentonite Clay	2.0
Water	72.2
Butylene Glycol	5.0
Glyceryl Stearate SE (Dermalcare® GMS/SE ¹)	9.0
Cetyl Alcohol (Crodacol™ C-95 NF ²)	1.2
Caprylic/Capric triglyceride (Neobee® M-5 Cosmetic ³)	1.5
B C12-15 Alkyl Benzoate (Finsolv® TN ⁴)	4.6
Decyl Oleate (Tegosoft® DO ⁵)	2.0
PEG-14 dimethicone (Abil® B 8843 ⁵)	0.5
Phenyl Trimethicone (Dow Corning 556 Cosmetic Grade Fluid ⁶)	2.0
C Preservative	q.s.

¹Rhodia Inc., Cranbury, NJ

²Croda, Inc., Edison, NJ

³Stepan Company, Northfield, IL

⁴Innospec Active Chemicals, Edison, NJ

⁵Degussa Goldschmidt Chemical Corporation, Hopewell, VA

⁶Dow Corning Corporation, Midland, MI

Procedure: While heating the water to 75°C, slowly add the **VANATURAL** while mixing at maximum available shear. Mix until fully hydrated. Add the butylene glycol, mixing until uniform. Maintain the water phase at 75°C. Blend the Part B oil phase ingredients and heat to 75-80°C. Add the oil phase to the water phase with good agitation; mix until uniform. Cool with mixing; add Part C when the emulsion is <30°C.

Vitamin-Enriched Skin Cream With Natural Moisturizers No. 545

	wt. %
A VEEGUM® Magnesium Aluminum Silicate	1.00
VANZAN® NF Xanthan Gum	0.25
Water	79.75
Butylene Glycol	5.00
B Disodium EDTA	0.20
D- Panthenol USP	0.20
Macadamia Ternifolia Nut Oil (Australian Macadamia Nut Oil – Cosmetic Grade ¹)	4.50
Polyglyceryl-3 Distearate (Cremophor® GS32 ²)	3.00
C Cetareth-25 (Cremophor A25 ²)	1.50
Cetearyl alcohol	3.00
Tocopherol Acetate (Vitamin E Acetate Oil USP, FCC ²)	0.50
D Retinyl Palmitate (Vitamin A Palmitate ²)	0.10
Hyaluronic Acid (and) Water (Lipo Hyaluronic Acid 1% solution ³)	1.00
E Preservative	q.s.

¹Southern Cross Botanical PTY Ltd, Lennox Head, NSW Australia

²BASF Corporation, Florham Park, NJ

³Lipo Chemicals, Paterson, NJ

Procedure: While heating the water to 60-65°C, slowly add the **VEEGUM** and **VANZAN NF** sequentially or as a dry blend to the water agitated at maximum available shear. Mix until fully hydrated. Add Part B and mix until uniform. Maintain the water phase at 60-65°C. Blend the Part C oil phase ingredients and heat to 60-65°C. Add Part C to Part A/B with good agitation. Cool with mixing. At 40-45°C add Part D. At 30°C add Part E. Adjust as necessary to pH 6.5 ± 0.5.

Skin Renew Cream No. 573

	wt. %
A VANATURAL® Bentonite Clay	2.5
Water	77.0
Glycerin	5.0
Cetearyl Alcohol (and) PEG-40 Castor Oil (and) Sodium Cetearyl Sulfate (Emulgade® F ¹)	5.0
B Potassium Cetyl Phosphate (Arlatone® MAP 160K ²)	0.5
Dicaprylyl Carbonate (Cetiol® CC ¹)	5.0
C12-15 Alkyl Ethylhexanoate (Finester™ EH-25 ³)	5.0
C Preservative, Fragrance	q.s.

¹Cognis Corporation, Ambler, PA

²Uniqema, New Castle, DE

³Innospec Active Chemicals, Edison, NJ

Procedure: While heating the water to 80°C, slowly add the **VANATURAL** while mixing at maximum available shear. Mix until fully hydrated. Add the glycerin, mixing until uniform. Maintain the water phase at 80°C. Blend the Part B oil phase ingredients and heat to 80°C. Add the oil phase to the water phase with good agitation; mix until uniform. Cool with mixing; add Part C when the emulsion is <30°C.

Vitamin Enriched Barrier Cream No. 490

	wt. %
A VEEGUM® Ultra Magnesium Aluminum Silicate	0.80
Carbomer (Carbopol® 934 ¹)	0.30
Water	79.00
B Glycerin	2.00
Butylene Glycol	2.00
Cetyl Alcohol	0.50
Glyceryl Monostearate SE (Dermalcare® GMS SE ²)	2.00
Caprylic/Capric Triglyceride (Neobee® M-5 ³)	2.00
C ₁₂₋₁₅ Octanoate (Finester™ EH-25 ⁴)	2.00
C Castor Oil Polyurethane (Polyderm™ PPI CO ⁵)	1.00
Phenyl Dimethicone (DC 556 Fluid ⁶)	3.00
Dimethicone (DC 200 Fluid, 350 cSt ⁶)	1.00
Bois Oil	0.50
Steareth-2 (Brij® 72 ⁷)	0.95
Steareth-21 (Brij 721 ⁷)	0.95
Panthenol	1.00
D Vitamin E Acetate	0.50
Vitamin A Palmitate	0.50
E Preservative	q.s.

¹Lubrizol Advanced Materials, Inc., Cleveland, OH

²Rhodia Inc., Cranbury, NJ

³Stepan Company, Northfield, IL

⁴Innospec Active Chemicals, Edison, NJ

⁵Alzo International Inc., Sayreville, NJ

⁶Dow Corning Corporation, Midland, MI

⁷Uniqema, New Castle, DE

Procedure: Begin heating the water to 80°C. Slowly add the **VEEGUM Ultra** and carbomer sequentially or as a dry blend to the water agitated at maximum available shear. Mix until fully hydrated. Add the remaining water phase ingredients from Part B, mixing until uniform. Maintain the water phase at 80°C. Blend the Part C oil phase ingredients and heat to 80°C. Add the oil phase to the water phase with good agitation; mix until uniform. Cool with mixing; add the Part D and Part E ingredients when the emulsion is < 35°C. Adjust as necessary to pH 5.8±0.3.

All Natural Lotion No. 589

	wt. %
A	VANATURAL [®] Bentonite Clay 2.5
	VANZAN [®] NF Xanthan Gum 0.5
	Water 78.0
B	Cetearyl Wheat Straw Glycosides (and) Cetearyl Alcohol (Xyliance ^{TM1}) 5.0
	Orbignya Oleifera Seed Oil (Cropure [®] Babassu ²) 5.0
	Simmondsia chinensis (jojoba) seed oil (Jojoba Oil Golden ³) 5.0
	Butyrospermum Parkii (Shea) Butter (Tomasia Shea Butter ⁴) 2.0
	Theobroma cacao (cocoa) seed butter (Cocoa Butter NF ⁵) 2.0
C	Preservative q.s.

¹Actives International, Allendale, NJ²Croda Inc., Edison, NJ³Desert Whale Jojoba Co., Inc., Tucson, AZ⁴Tri-K Industries, Inc., Northvale, NJ⁵RITA Corporation, Crystal Lake, IL

Procedure: While heating the water to 70-75°C, slowly add the **VANATURAL** and **VANZAN NF** sequentially or as a dry blend to the water agitated at maximum available shear. Mix until fully hydrated. Maintain the water phase at 70-75°C. Blend the Part B oil phase ingredients and heat to 70-75°C. Add the oil phase to the water phase with good agitation; mix until uniform. Cool with mixing; add the Part C ingredients when the emulsion is <30°C.

Organic Skin Lotion No. 594

	wt. %
A	VANATURAL [®] Bentonite Clay 2.50
	VANZAN [®] NF Xanthan Gum 0.50
	Water 56.0
B	Aloe Vera Gel, from Aloe Vera Whole Leaf Powder Organic Spray Dried 100X ¹ (1% powder/99% water) 20.0
	Cetearyl Wheat Straw Glycosides (and) Cetearyl Alcohol (Xyliance ^{TM2}) 5.0
C	Butyrospermum Parkii (Shea) Butter (Shea Butter-Ultra Refined TM Certified Organic ³) 3.5
	Theobroma cacao (cocoa) seed butter (Cocoa Butter-Ultra Natural TM Certified Organic ³) 3.5
	Persea Gratissima (Avocado) Oil (Avocado Oil Certified Organic ³) 6.0
	Simmondsia Chinensis (Jojoba) Seed Oil (Jojoba Oil- Natural Golden- Certified Organic ³) 3.0
	D

¹Terry Laboratories, Melbourne, FL²Actives International, Allendale, NJ³BioChemica Int'l, Inc., Melbourne, FL

Procedure: While heating the water to 75°C, slowly add the **VANATURAL** and **VANZAN NF** (sequentially or as a dry blend) while mixing at maximum available shear. Mix until fully hydrated. Prepare Part B by dissolving aloe vera powder in water then add slowly to Part A. Maintain the water phase temperature at 75°C. Combine Part C ingredients and heat to 75°C. Add Part C oil phase to Part A/B water phase and mix thoroughly. Cool with mixing; add Part D when the emulsion is <30°C.

Moisturizing Cream with Sunscreen No. 568

	wt. %
A	VEEGUM [®] Ultra Magnesium Aluminum Silicate 1.5
	Water 74.5
	Glycerin, 96% 4.0
B	Zinc Oxide (Zinc Oxide neutral H&R ¹) 2.0
	Emulsifying Wax NF (Polawax ^{TM2}) 12.0
	PPG-2 Myristyl Ether Propionate (Crodamol TM PMP ³) 4.0
C	Octyl Methoxycinnamate (Neo Heliopan [®] AV ¹) 2.0
	Preservative q.s.

¹Symrise, Teterboro, NJ²Croda Inc., Edison, NJ

Procedure: While heating the water to 75-80°C, slowly add the **VEEGUM Ultra** while mixing at maximum available shear. Mix until fully hydrated. Add the remaining water phase ingredients, mixing until the zinc oxide is uniformly dispersed. Maintain the water phase at 75-80°C. Blend the Part B oil phase ingredients and heat to 75-80°C. Add the oil phase to the water phase with good agitation; mix until uniform. Cool with mixing; add Part C when the emulsion is <30°C.

Wash-Off Resistant Sunscreen Cream No. 515

	wt. %
A	VEEGUM [®] Ultra Magnesium Aluminum Silicate 2.0
	Carbomer (Ultrez TM 10 ¹) 0.2
	Water 47.8
B	Polysorbate 20 (Tween [®] 20 ²) 1.0
	Titanium Dioxide (and) Alumina (and) Silica (and) Sodium Polyacrylate (Tiloveil TM AQ-G ²) 12.5
	Butylene Glycol 3.0
	Cetyl Alcohol 0.5
	Isorubide Laurate (Arlamol [®] ISML ²) 1.0
C	Caprylic/Capric Triglyceride (Neobee [®] M-5 ³) 5.0
	Glyceryl Monostearate SE (Dermalcare [®] GMS SE ⁴) 3.0
	C ₁₂₋₁₅ Octanoate (Finester TM EH-25 ⁵) 3.0
	Octylmethoxycinnamate (Parsol [®] MCX ⁶) 7.0
	Avobenzone (Parsol [®] 1789 ⁶) 2.0
	Octyl Salicylate (Dermoblock TM OS ⁷) 3.0
	Castor Oil Polyurethane (Polyderm TM PPI-CO ⁷) 1.0
	Phenyl Dimethicone (DC 556 Fluid ⁸) 3.0
	Dimethicone (DC 200 Fluid, 350 cSt ⁸) 1.0
	Laureth-23 (Brij [®] 35 ²) 0.5
Stearth-2 (Brij [®] 72 ²) 2.2	
Stearth-21 (Brij [®] 721 ²) 2.2	
D	Etidronic Acid 0.1
E	Triethanolamine (to pH 6.0 ± 0.5) q.s.
	Preservative q.s.

¹Lubrizol Advanced Materials, Inc., Cleveland, OH²Uniqema, New Castle, DE³Stepan Company, Northfield, IL⁴Rhodia Inc., Cranbury, NJ⁵Innospec Active Chemicals, Edison, NJ⁶Givaudan Corporation, Teaneck, NJ⁷Alzo International Inc., Sayreville, NJ⁸Dow Corning Corporation, Midland, MI

Procedure: While heating the water to 80°C, slowly add the **VEEGUM Ultra** and carbomer (sequentially or as a dry blend) while mixing at maximum available shear. Mix until fully hydrated. Add the remaining water phase ingredients from Part B, mixing until uniform. Maintain the water phase at 80°C. Blend the Part C oil phase ingredients and heat to 85°C. Add the oil phase to the water phase with good agitation; mix until uniform. Cool with mixing; add the Part D and Part E ingredients when the emulsion is <45°C. Adjust as necessary to pH 6.0±0.5.

Trademark Information:

VANATURAL, VEEGUM and VANZAN are registered trademarks of R.T. Vanderbilt Company, Inc.

Abil and Tegosoft are registered trademarks of Goldschmidt GmbH Corporation.

Ajidew is a registered trademark of Ajinomoto Company, Inc.

Amphosol, Neobee, Ninol and Steol are registered trademarks of Stepan Company.

Arlacel, Arlamol, Arlatone, Brij and Tween are registered trademarks of Uniqema Americas LLC.

Carbopol is a registered trademark of Lubrizol Advanced Materials, Inc.

Cetiol, Emulgade and Plantaren are registered trademarks of Cognis GmbH Corporation.

Cremophor is a registered trademark of BASF Aktiengesellschaft Corporation.

Crodacol, Crodafos, Crodamol and Polawax are trademarks of Croda, Inc.

Cropure is a registered trademark of Croda, Inc.

Dermalcare is a registered trademark of Rhodia, Inc.

Dermoblock is a trademark of Alzo International, Inc.

Dow Corning is a registered trademark of Dow Corning Corporation.

Eashave is a trademark of Pentapharm Ltd.

Emulium is a registered trademark of Gattefosse SAS.

Finester is a trademark of Innospec Performance Chemicals Company.

Finsolv and Tauranol are registered trademarks of Innospec Performance Chemicals Company.

Floraesters is a trademark of International Flora Technologies, Ltd.

Mirataine is a registered trademark of Rhone-Poulenc, Inc.

Monamid is a registered trademark of MONA Industries.

Neo Heliopan is a registered trademark of Haarmann & Reimer GmbH.

Parleam is a registered trademark of Etablissements B. Rossow et Cie.

Parsol is a registered trademark of Givaudan Corporation.

Polyderm is a trademark of Alzo Investments.

Ritachol is a registered trademark of RITA Corporation.

Rhodapon is a registered trademark of Rhodia, Inc.

Surfhope is a registered trademark of Mitsubishi Chemical Corporation.

Tech-O is a registered trademark of Beacon CMP Corporation.

Tegosoft is a registered trademark of Goldschmidt GmbH Corporation.

Ultra Natural and Ultra Refined are trademarks of BioChemica International, Inc.

Ultrez is a trademark of Noveon IP Holdings.

Vilvanolin is a trademark of Lubrizol Advanced Materials, Inc.

Xyliance is a trademark of Soliance.