

Section II

Baby Products

Aloe Baby Lotion

A gentle moisturizing lotion containing Liponate TDTM to provide a cushioning effect and extended slip with various natural oils to moisturize the skin.

<u>Sequence:</u>	<u>Raw Material/INCI Name:</u>	<u>Wt%</u>
1	Deionized Water	76.50
1	Aloe Vera Gel/Aloe Barbadensis Gel	1.75
1	Uniphen P-23	0.65
1	Liponic EG-1/Glycereth-26	1.00
1	Hampene Na3T/Trisodium EDTA	0.05
2	Carbopol 2984(2%)/Carbomer	12.50
3	Lipo Stearic Acid	1.25
3	Liponate NPGC-2	1.75
3	Lipovol CO/Castor Oil	0.25
3	Lipomulse 165/Glyceryl Stearate (and) PEG-100 Stearate	1.50
3	Lipocol C/Cetyl Alcohol	0.60
3	Liponate TDTM/Tridecyl Trimellitate	0.25
3	Lipowax P/Emulsifying Wax, NF	0.25
3	Lipovol SAF/Safflower Oil	0.60
3	Lipovol MAC/Macademia Ternifolia Nut Oil	0.25
3	Shea Butter	0.25
3	Vitamin E Acetate/Tocopheryl Acetate	0.05
4	Sodium Hydroxide (18%)	0.50
5	Gorgonium Extract*/Sea Whip Extract	0.05
	*Patent #4,849,410 (and) 4,745,104	

Procedure:

1. Heat Sequence #1 to 76C on overhead mixer at medium/high speed.
2. Heat Sequence #2 to 60C and add to Sequence #1 with medium/high speed on overhead mixer with holding batch temperature at 76C.
3. Heat premixed Sequence #3 to 78C until clear and add to batch with medium/high speed on overhead mixer.
4. Add Sequence #4 to batch with medium/high speed. Cool to 40C.
5. At 40C, add Sequence #5. Cool to room temperature.

Specifications:

pH: 6.10+-0.2

Viscosity: LVT #4 @ 12 rpm: 20,000 cps+-10%

SOURCE: Lipo Chemicals Inc.: Formula No. 998

Baby Bath

Starting formula for high quality baby bath.

Ingredients:

	<u>Wt%</u>
Water	to 100
PEG-80 glyceryl cocoate	10.00
Chembetaine C	8.40
Sulfochem TD-3	15.00
Disodium Cocoamphodiacetate	1.80
PEG-150 distearate	1.75
Glycerin	1.80
Laureth-13 carboxylate	0.25
Preservatives, colors, fragrance	q.s.

Blending Procedure:

Mix ingredients in order listed, heating to 60-65C to dissolve PEG-150 distearate. Adjust pH with citric acid to desired pH.

Formulation No. F1013

Baby Shampoo

Starting formula for high quality baby shampoo

Ingredients:

	<u>Wt%</u>
Water	to 100
PEG-80 sorbitan laurate	8.70
Chembetaine C	8.40
Sulfochem TD-3	8.00
Cocoamphocarboxyglycinate	2.00
Sodium chloride	q.s.
PEG-150 distearate	2.00
Laureth-13 carboxylate	0.25

Blending Procedure:

Mix ingredients in order listed, heating to 60-65C to dissolve PEG-150 distearate. Add NaCl to desired viscosity, if necessary. Adjust pH with citric acid to desired pH.

Formulation No. F1011

SOURCE: Chemron Corp.: Suggested Formulations

Baby Lotion with Vitamin E and Aloe

A smooth, nongreasy lotion which rubs in easily.

<u>Ingredient/Trade Name:</u>	<u>Wt%</u>
A: Propylene Glycol Dicaprylate/Dicaprate/Myritol PC	5.00
Mineral Oil/Drakeol 7	9.00
Petrolatum/Snow Petrolatum	4.00
Emulsifying Wax/Polawax	4.20
Aloe Extract/Aloe Vera Lipo-Quinone Extract	0.10
Tocopheryl Acetate/Vitamin E Acetate	0.10
Cetyl Alcohol	0.25
Stearyl Alcohol	0.25
Propylparaben	0.15
B: Deionized Water	75.70
Propylene Glycol	1.00
Methylparaben	0.10
C: Diazolidinyl Urea/Germall II	0.15
Fragrance	q.s.

Procedure:

Heat part A to 80C while gently mixing. Heat part B to 75C with stirring. Add part A to B with stirring and continue mixing with unforced cooling. At 40C add part C. Continue stirring to 30C.

Diaper Rash Cream with Aloe

This water-in-oil cream has an ointment-like consistency. High levels of petrolatum and mineral oil create an excellent moisture barrier.

<u>Ingredient/Trade Name:</u>	<u>Wt%</u>
A: Petrolatum/Ultima Petrolatum	19.00
Mineral Oil/Drakeol 9	7.50
Sorbitan Sesquioleate/Arlacel 83	3.50
Isostearyl Isostearate/Prisorine 2039	2.00
Aloe Extract/Activera 106 Lipo M	2.00
B: Deionized Water	55.50
Glycerin	1.50
Magnesium Sulfate	0.50
C: Zinc Oxide	7.50
D: Propylene Glycol (and) Diazolidinyl Urea (and)	
Methylparaben (and) Propylparaben/Germaben II-E	1.00
Fragrance	q.s.

Procedure:

Heat part A to 80C with stirring. Heat part B to 80C with stirring. Add part B to A with vigorous stirring. Slowly sift Part C into rapidly stirred mixture. Allow the blend to cool with stirring. At 40C, add part D. Continue stirring to 30C.

SOURCE: Penreco: Suggested Formulations

Babymilk
fragrance-free

<u>Recipe:</u>	<u>Wt%</u>
A Hostacerin DGL/Polyglyceryl-2 PEG-10 Laurate	1.00
Hostacerin DGSB/Polyglyceryl-2 PEG-4 Stearate	3.00
Mineral oil, high viscosity	10.00
Calendula oil	1.00
Cetiol SN/Cetearyl Isononanoate	8.00
Chamomile oil	0.50
Antioxidant	q.s.
B Carbopol 980/Carbomer	0.20
C Allantoin	0.20
Aquamollin BC pdr.h.c./Ethylenediamine Tetraacetic Acid Sodium Salt	0.10
Citric acid (10% in water)	0.25
Extrapon witch hazel	2.00
Caustic soda solution (10%)	0.80
Water	72.95
Preservative	q.s.

Procedure:

1. Melt A at approx. 70C, then add B.
2. Heat C to approx. 70C.
3. Stir 2 into 1 and stir until cool.
4. Homogenize the emulsion.

Baby Cream

<u>Recipe:</u>	<u>Wt%</u>
A Hostacerin WO/Polyglyceryl-2 Sesquiosostearate, Cera Alba (Beeswax), Cera Microcrystallina (Microcrystalline Wax), Mineral Oil, Magnesium Stearate, Aluminum Stearate	8.00
Permulgin 4200/Cera Microcrystallina (Microcrystalline Wax)	2.00
Amerlate W/Isopropyl Lanolate	2.00
Vaseline	10.00
Mineral oil, high viscosity	15.00
Isopropyl palmitate	5.00
Calendula oil	2.00
Antioxidant	q.s.
B Zinc oxide	10.00
Talc	5.00
C Allantoin	0.20
Aquamollin BC pdr.h.c./Ethylenediamine Tetraacetic Acid Sodium Salt	0.10
Citric acid (10%)	0.25
D-Panthenol	0.60
Water	39.65
Preservative	q.s.
D Fragrance	0.20

Procedure:

1. Melt A at approx. 80C, then add B.
2. Heat C to approx. 80C.
3. Stir 2 into 1 and stir until cool.
4. At approx. 35C add D to 3.

SOURCE: Hoechst Aktiengesellschaft: Formula A VI/5200&A VI/5804

Baby Shampoo

<u>Raw Materials:</u>	<u>Wt%</u>
Mackadet BSC (Baby Shampoo Concentrate)	20.0
Sodium Chloride	2.0
Mackstat DM (DMDM Hydantoin)	qs
Water, Dye, Fragrance	qs to 100.0

Procedure:

1. Add Mackadet BSC to water with slow agitation.
2. Heat to 40C.
3. Add Mackstat DM.
4. Adjust pH to 6.5-7.0 with Citric Acid.
5. Adjust viscosity to 2000 cps with Sodium Chloride.
6. Add Dye and Fragrance.
7. Cool to room temperature.

Baby Wipes

<u>Raw Materials:</u>	<u>Wt%</u>
Propylene Glycol	4.0
Mackam 2C (Disodium Cocoamphodiacetate)	2.0
Paragon (Propylene Glycol (and) DMDM Hydantoin (and) Methylparaben)	qs
Water, Fragrance	qs to 100.0

Procedure:

1. Blend components until clear.
2. Adjust pH to 6.0 with Citric Acid.

Note: The solution is to be combined with baby wipe tissues. It is very mild to the skin and eyes.

SOURCE: McIntyre Group Ltd.: Personal Care Formulary: Formulas

Baby Shampoo with Olive Oil

<u>Raw Materials:</u>	<u>Wt%</u>
A. Marlinat CM100 (Laureth-11 Carboxylic Acid)	15
Ampholyt JB130 (Cocamidopropylbetaine)	15
Softigen 767 (PEG-6 Caprylic/Capric Glycerides)	5
Imwitor 375	3
Olive Oil	1
Antil 141 liquid (thickener based on POE-Dioleate)	4
Water ad	100
Antioxidant	q.s.
Preservative	q.s.
B. Fragrance	0.3

Preparation:

All ingredients are put together, heated up to about 60C and stirred homogeneously. Then cool down to 30C and add fragrance.

Baby Care Cream

<u>Raw Materials:</u>	<u>Wt%</u>
A. Imwitor 960 flakes (Glyceryl Stearate SE)	17
Miglyol 812 (Caprylic/Capric Triglyceride)	5
Softigen 701 (Glyceryl Ricinoleate)	2
Softisan 645	3
Avocado Oil	2
Mineral Oil	3
Antioxidant	0.02
B. Glycerol	4
D-Panthenol	3
Preservative	q.s.
Water ad	100
C. Fragrance	q.s.

Preparation:

A and B are heated to about 75C by stirring until homogeneous. Then B is emulsified into A. C is added at ca. 30C.

SOURCE: Huls Aktiengesellschaft: Suggested Formulations

Baby Shampoo III

Starting formula for high quality baby shampoo

Ingredients:

	<u>Wt%</u>
Water	to 100
PEG-80 sorbitan laurate	8.50
Chembetaine CL	8.40
Sulfochem TD-3	8.30
Sodium lauroamphoacetate	1.80
Polyquaternium-10	0.10
PEG-150 distearate	1.75
Glycerin	1.80
Laureth-13 carboxylate	0.25
Preservatives, colors, fragrance	q.s.

Blending Procedure:

Mix ingredients in order listed, heating to 60-65C to dissolve PEG-150 Distearate. pH with citric acid to desired pH.

Typical Physical Properties:

pH: 6.58
 Viscosity, cps: 920
 Formulation No. F1002

Baby Shampoo

Starting formulation for a baby shampoo from a pre-blended concentrate.

Ingredients:

	<u>Wt%</u>
Sulfochem SBS	35.00
Water, soft	64.90
Fragrance	0.10
NaCl	q.s.
Preservatives	q.s.

Blending Procedure:

Charge mixing vessel with water and Sulfochem SBS, and mix until dissolved. Adjust pH with citric acid to 6.25-6.75. Add preservatives, color, and fragrance. Adjust viscosity to 1,000-1,500 cps with sodium chloride.

Typical Physical Properties:

Viscosity: 1,000-1,500 cps
 pH: 6.25-6.75
 Formulation E3144

SOURCE: Chemron Corp.: Suggested Formulations

Diaper Rash Cream

This unique vitamin A&D fortified diaper rash cream is an emulsion based on Lubrasil DS and petrolatum. The Lubrasil DS lends a soft velvety feel as well as aiding in the water repellency. This formulation has a much lighter feel than the essentially 100% petrolatum based salves.

<u>Material:</u>	<u>Wt%</u>
A Deionized Water	53.27
B Propylene Glycol	1.00
C Methylparaben	0.18
D Propylparaben	0.05
E Petrolatum	15.00
F Cetiol LC (Coco-caprylate/caprates)	5.00
G Glycerol Monoisostearate	3.00
H Paraffin Wax 160/165	4.00
I Arlacel 83 (Sorbitan sesquioleate)	3.00
J Vitamin A/D3	0.50
K Lubrasil DS	15.00

Procedure:

1. Prepare the preservative blend by dissolving the methylparaben and propylparaben in the propylene glycol with a small amount of heat.
2. Place the water in a suitable mixing vessel and heat to 80C. Label this Phase I.
3. In a separate vessel, prepare Phase II by mixing components E, F, G, H and I and heating to 80C.
4. Using high shear mixing, slowly add Phase II to Phase I. Remove from heat.
5. Upon natural cooling to below 60C, using low shear mixing, add the preservative blend followed by the Vitamin A/D3 and Lubrasil DS. Allow the cream to mix well after each addition.
6. Packaging may be done warm.

SOURCE: Guardian Laboratories: Formulation #963031-AG

Sun Protection Baby Cream

A mild moisturizing cream with sunscreen to protect the skin and TDTM to add cushion and softness.

<u>Sequence:</u>	<u>Raw Material/INCI Name:</u>	<u>Wt%</u>
1	Deionized Water	57.35
1	Aloe Vera Gel/Aloe Barbadensis Gel	1.75
1	Uniphen P-23	0.50
1	Liponic EG-1/Glycereth-26	1.00
1	Hampene Na3T/Trisodium EDTA	0.05
2	Carbopol 2984(2%)/Carbomer	20.00
3	Lipo Stearic Acid	1.50
3	Liponate NPGC-2	1.75
3	Lipovol CO/Castor Oil	0.25
3	Lipomulse 165	1.50
3	Octyl Methoxycinnamate	6.00
3	Benzophenone-3	3.50
3	Lipocol C/Cetyl Alcohol	0.75
3	Liponate TDTM/Tridecyl Trimellitate	0.25
3	Lipowax P/Emulsifying Wax, NF	0.25
3	Lipovol SAF/Safflower Oil	0.75
3	Lipovol MAC/Macademia Ternifolia Nut Oil	0.25
3	Shea Butter	0.25
3	Vitamin E Acetate/Tocopheryl Acetate	0.05
4	Sodium Hydroxide (18%)	0.80
5	Gorgonian Extract*/Sea Whip Extract	0.25
6	Deionized Water	1.00
6	Unicide U-13/Imidazolidinyl Urea	0.25

*Patent #4,849,410 (and) 4,745,104

Procedure:

1. Heat Sequence #1 to 76C on overhead mixer at medium/high speed.
2. Heat Sequence #2 to 60C and add to Sequence #1 with medium/high speed on overhead mixer while holding batch temperature at 76C.
3. Heat premixed Sequence #3 to 78C until clear and add to batch with medium/high speed on overhead mixer.
4. Add Sequence #4 to batch with medium/high speed. Cool to 40C.
5. At 40C, add Sequence #5. Cool to 35C.
6. At 35C, add premixed Sequence #6. Cool batch to room temperature.

Specifications:

pH: 5.80+-0.2

Viscosity: LVT #3 @ 3 rpm=31,000 cps.+-10%

SOURCE: Lipo Chemicals Inc.: Formula No. 1027

Tear Free Baby Bath

<u>Raw Materials:</u>	<u>Wt%</u>
Mackam 2C (Cocoamphodiacetate)	35.0
Mackol 70NS (Sodium Laureth Sulfate-70%)	5.5
Mackam 35HP (Cocamidopropyl Betaine)	6.0
Mackanate DC-30 (Disodium Dimethicone Copolyol Sulfosuccinate)	4.0
Mackam CET (Cetyl Betaine)	1.5
Paragon (Propylene Glycol (and) DMDM Hydantoin (and) Methylparaben)	0.7
Water	qs to 100.0

pH: 5.0-5.5

Viscosity (cps, 25C): 500

Procedure:

1. Add components to water.
2. Heat to 50C.
3. Blend until clear.
4. Adjust pH to 5.0-5.5 with Citric Acid.

Formulation BN-127C

Mild Children's Bubble Bath

<u>Raw Materials:</u>	<u>Wt%</u>
Mackanate EL (Disodium Laureth Sulfosuccinate)	10.0
Mackanate CP (Disodium Cocamido MIPA Sulfosuccinate)	10.0
Sodium Laureth Sulfate (30%)	9.0
Natrosol 250 HHR	1.0
Mackstat DM (DMDM Hydantoin)	qs
Water, Dye, Fragrance	qs to 100.0

Procedure:

1. Disperse Natrosol 250 HHR in cold water.
2. Blend until completely dispersed.
3. Heat to 40C.
4. Add remaining components.
5. Blend until clear.
6. Cool to room temperature.

Baby Wash

<u>Raw Materials:</u>	<u>Wt%</u>
Mackadet BSC (Baby Shampoo Concentrate)	15.0
Mackstat DM (DMDM Hydantoin)	qs
Water, Dye, Fragrance	qs to 100.0

Procedure:

1. Add components to water.
2. Blend until clear.

SOURCE: McIntyre Group Ltd.: Personal Care Formulary: Formulas