

## Interpolymer offers several suggested formulations for Syntran<sup>®</sup> PC 5100.

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### HAIR CARE

- 55% VOC Hair Spray—Softer Hold F-18-55
- Sulfate-free Texturizing Shampoo with Detangling F-18-75 \*\*
- Texturizing Shampoo with Detangling F-18-76
- Wash ‘n Style Shampoo F-24-11 \*\*
- Medium Hold Styling Lotion F-24-14
- Firm Hold Styling Lotion F-24-15 \*\*
- Medium Hold Volumizing Mousse F-24-16 \*\*
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- 55% VOC Pump Hair Spray—Medium Hold F-24-18
- 55% VOC Pump Hair Spray—Firm Hold F-24-19 \*\*
- 55% VOC Aerosol Hair Spray—Firm Hold F-24-20
- Clear, Styling Shampoo F-24-35

### SKIN CARE

- Skin-Firming Moisturizing Crème F-24-41 \*\*
- Super Intensive Moisturizing Crème F-24-49 \*\*
- Skin-Firming Serum F-24-55 \*\*
- Skin-Firming Moisturizing Crème F-24-99 \*\*
- Intensive Moisturizing Crème F-24-102 \*\*
- Fast Drying Skin-Firming Serum F-24-115

\*\* Samples readily available

## 55% VOC HAIR SPRAY—SOFTER HOLD

### Formulation F-18-55-01.100

Quick drying 55% VOC formulation with soft hold. Excellent style support, yet easily washes out of hair. Combs out without flaking.

	<u>INCI Designation</u>	<u>Weight %</u>
<b>Phase A</b>		
Distilled Water		25.90
AMP-95 (Dow/Angus)	Amino Methyl Propanol	0.50
SDA-40B 200 proof	SD Alcohol 40-B	55.00
Ritapan DL (RITA)	Panthenol	0.80
Crovol PK-70 (Croda)	PEG-45 Palm Kernel Glycerides	0.60
Meadowsol 75:75 (Fancor)	PEG-75 Meadowfoam Seed Oil	0.70
Fancorsil LIM-1 (Fancor)	Dimethicone PEG-8 Meadowfoamate	1.00
Lexaine C (Inolex)	Cocamidopropyl Betaine	0.50
<b>Phase B</b>		
<b>SYNTRAN PC 5100</b>	<b>Polyacrylate 21 (and) Acrylates/ Dimethylaminoethyl Methacrylates Copolymer</b>	15.00
AMP-95 (Dow/Angus)	Amino Methyl Propanol	Q.S.
	YIELD:	100.00%

### Procedure

Add ingredients to appropriate vessel as listed. Stir between each addition until batch is clear and homogenous. Adjust pH to 8.6-8.9 with AMP-95 at end until product is clear and homogenous.

Appearance:.. Clear, aqueous solution.

Final pH = 8.6 – 8.9.

9/2004

**SULFATE-FREE TEXTURIZING SHAMPOO WITH DETANGLING**
**Formulation F-18-75**

This mild “sulfate-free” conditioning shampoo with rich, luxurious lather not only gently cleanses “fragile” chemically processed hair but protects the hair from color “wash-out”. Unique combination of Olefin/Graft and Conditioning polymers create a complex on the hair surface to lock color and shine into the hair. Keep that first day color longer. Extend the time between color treatments.

	<u>INCI Designation</u>	<u>Weight %</u>
<b>Phase A—Heat to 75°C</b>		
Distilled Water	Water	43.00
Dissolvine Na2S (Akzo Nobel)	Disodium EDTA	0.10
Stepan Mild LSB (Stepanl)	Sodium Lauryl Sulfoacetate, Disodium Laureth Sulfosuccinate	30.00
Capmul S12L(Abitec)	Sodium Lauroyl Lactylate	2.00
Amphosol HCG (Stepan)	Cocamidopropyl Betaine	6.00
Tauranol I-78 C (Finetex)	Sodium Cocoyl Isethionate	5.00
Mackamide CMA (McIntyre)	Cocamide MEA	1.00
Crothix (Croda)	PEG-150 Pentaerythrityl Tetrastearate	0.35
Glycol Stearate	Glycol Stearate	0.50
<b>Phase B—Add at 60°C</b>		
<b>Syntran PC 5208</b>	<b>Polyacrylate-15</b>	6.00
<b>Syntran PC 5100</b>	<b>Polyacrylate 21 (and) Acrylates/ Dimethylaminoethyl Methacrylate Copolymer</b>	1.50
Ritapan D,L (RITA)	Panthenol	0.50
<b>Syntran PC 5320</b>	<b>Polyquaternium-37</b>	2.00
Fancorsil LIM-1 (Fancor)	Dimethicone PEG-8 Meadowfoamate	1.00
<b>Phase C—Add at 40°C</b>		
Germall Plus (ISP)	Diazolidinyl Urea, IPBC	0.35
Fragrance	Fragrance	0.30
TEA 99%, N.F. (Dow)	Triethanolamine	0.40
		Adjust pH to 6.10
	YIELD:	100.00

**Procedure**

Heat Phase A ingredients to 75-80°C with moderate agitation. Stir at 75-80°C until homogeneous. Cool slowly with moderate agitation to avoid aeration to 55°C. At 55°C, individually add each Phase B ingredient to main batch with continuous agitation until a homogenous mixture is obtained. Cool slowly with moderate agitation to avoid aeration to 40-45°C, individually add Phase C ingredients to batch, stir between each addition until homogenous. Adjust pH of batch between 6.0-6.3.

Appearance: White, creamy, medium viscosity shampoo.

## TEXTURIZING SHAMPOO

### Formulation F-18-76

This shampoo with rich, thick lather not only cleanses hair but volumizes and texturizes fine limp hair. Unique combination of Olefin/Graft and Bimodal polymers surround and support each strand to give root-lift, manageability and excellent shine to lifeless hair. This texturizing shampoo formula adds style-support and texture while leaving hair with a clean, natural feel.

	<u>INCI Designation</u>	<u>Weight %</u>
<b>Phase A—Heat to 75°C</b>		
Distilled Water	Water	43.17
Dissolvine Na2-S (Akzo Nobel)	Disodium EDTA	0.10
Steol CS-230 (Stepan)	Sodium Laureth Sulfate	16.00
Stepanol AM (Stepan)	Ammonium Lauryl Sulfate	14.00
Amphosol HCG (Stepan)	Cocamidopropyl Betaine	8.00
Tauranol I-78 C (Finetex)	Sodium Cocoyl Isethionate	5.00
Mackamide CMA (McIntyre)	Cocamide MEA	1.00
Crothix (Croda)	PEG-150 Pentaerythrityl Tetrastearate	0.25
Glycol Stearate	Glycol Stearate	0.50
<b>Phase B—add at 60°C</b>		
<b>SYNTRAN PC 5208</b>	<b>Polyacrylate-15</b>	6.00
<b>SYNTRAN PC 5100</b>	<b>Polyacrylate 21 (and) Acrylates/ Dimethylaminoethyl Methacrylate Copolymer</b>	1.50
Ritapan DL (RITA)	Panthenol	0.75
<b>SYNTRAN PC 5320</b>	<b>Polyquaternium-37</b>	2.00
Fancorsil LIM-1 (Fancor)	Dimethicone PEG-8 Meadowfoamate	1.00
<b>Phase C—add at 40°C</b>		
Germall Plus (ISP)	Diazolidinyl Urea and IPBC	0.35
Fragrance	Fragrance	0.30
Citric Acid	Citric Acid	0.08
	<b>YIELD:</b>	<b>100.00%</b>

### Procedure

Heat Phase A ingredients to 75-80°C with moderate agitation. Stir at 75-80°C until homogeneous. Cool slowly with moderate agitation to avoid aeration to 55°C. At 55°C, individually add each Phase B ingredient to main batch with continuous agitation until a homogenous mixture is obtained. Cool slowly with moderate agitation to avoid aeration to 40-45°C, individually add Phase C ingredients to batch, stir between each addition until homogenous. Adjust pH of batch between 5.5-6.5.

## WASH 'N STYLE SHAMPOO

### Formulation F-24-11

This great lathering shampoo not only cleanses hair but volumizes and texturizes fine, limp hair. Unique combination of Olefin/Graft and Bimodal polymers surround and support each strand to give root-lift, manageability and excellent shine to lifeless hair. This texturizing shampoo formula adds style-support and texture while leaving hair with a clean, soft, natural feel. No build-up.

	<u>INCI Designation</u>	<u>Weight %</u>
<b>Phase A</b>		
Purified Water	Water	48.08
Dissolvine Na2-S (Akzo Nobel)	Disodium EDTA	0.10
Steol CS-230 (Stepan)	Sodium Laureth Sulfate	16.00
Stepanol AM (Stepan)	Ammonium Lauryl Sulfate	14.00
Amphosol HCG (Stepan)	Cocamidopropyl Betaine	8.00
Tauranol WS-conc (Finetex)	Sodium Cocoyl Taurate	3.00
Mackamide CMA (McIntyre)	Cocamide MEA	1.00
Crothix (Croda)	PEG-150 Pentaerythrityl Tetrastearate	0.25
Glycol Stearate	Glycol Stearate	0.50
<b>Phase B</b>		
<b>SYNTRAN<sup>®</sup> PC 5208</b>	<b>Polyacrylate-15</b>	6.00
<b>SYNTRAN<sup>®</sup> PC 5100</b>	<b>Polyacrylate-21 (and) Acrylates/ Dimethylaminoethyl Methacrylate Copolymer</b>	1.50
Ritapan DL (RITA)	Panthenol	0.75
<b>Phase C</b>		
Liquid Glydant Plus (Lonza)	DMDM Hydantoin and IPBC	0.35
Fragrance	Fragrance	0.40
Citric Acid	Citric Acid	0.07
<b>YIELD:</b>		<b>100.00%</b>

### Procedure

Heat Phase A ingredients to 75°C with moderate agitation. Stir at 75°C until homogeneous. Cool slowly with moderate agitation to avoid aeration to 60°C. At 60°C, individually add each Phase B ingredient to main batch with continuous agitation until a homogenous mixture is obtained. Cool slowly with moderate agitation to avoid aeration to 40-45°C, individually add Phase C ingredients to batch, stir between each addition until homogenous. Adjust pH of batch between 6.1-6.5.

Stability: In progress

**MEDIUM HOLD STYLING LOTION**
**Formulation F-24-14**

	<u>INCI Designation</u>	<u>Weight %</u>
<b>Phase A</b>		
Distilled Water	Water	78.68
<b>Phase B</b>		
Ritapan DL (RITA)	Panthenol	0.10
Amphosol HCG (Stepan)	Cocamidopropyl Betaine	0.30
Promois WG-SIG (RITA)	Hydrolyzed Wheat Protein	0.05
	PG Propyl Methylsilanediol	
Promois WG (RITA)	Hydrolyzed Wheat Protein	0.05
Glydant Plus Liquid (Lonza)	DMDM Hydantoin, IPBC	0.40
<b>Phase C</b>		
Brij 98 VEG (Uniqema)	Oleth-20	0.35
Fragrance	Fragrance	0.07
<b>Phase D</b>		
<b>SYNTRAN<sup>®</sup> PC 5400</b>	<b>Ammonium Acrylates Copolymer</b>	10.00
<b>SYNTRAN<sup>®</sup> PC 5100</b>	<b>Polyacrylate-21 (and) Acrylates/ Dimethylaminoethyl Methacrylate Copolymer</b>	10.00
	YIELD:	100.00%

pH = 7.6-7.8

**Procedure**

Add water to vessel and heat to 45°C. Add each Phase B ingredient. Stir between each addition until homogenous solution. Premix Brij 98 and fragrance and heat to 40-45°C. Add Phase C to Phase A/B. Stir until clear and homogeneous. Add **SYNTRAN<sup>®</sup> PC 5400** and **SYNTRAN<sup>®</sup> PC 5100**. Stir until homogeneous solution results. Appearance: Semi-translucent liquid.

**FIRM HOLD STYLING LOTION**
**Formulation F-24-15**

	<u>INCI Designation</u>	<u>Weight %</u>
Phase A		
Distilled Water	Water	73.23
Phase B		
Ritapan DL (RITA)	Panthenol	0.10
Amphosol HCG (Stepan)	Cocamidopropyl Betaine	0.30
Promois WG-SIG (RITA)	Hydrolyzed Wheat Protein	0.30
	PG Propyl Methylsilanediol	
Promois WG (RITA)	Hydrolyzed Wheat Protein	0.30
Glydant Plus Liquid (Lonza)	DMDM Hydantoin, IPBC	0.35
Phase C		
Brij 98 VEG (Uniqema)	Oleth-20	0.35
Fragrance	Fragrance	0.07
Phase D		
<b>SYNTRAN<sup>®</sup> PC 5400</b>	<b>Ammonium Acrylates Copolymer</b>	10.00
<b>SYNTRAN<sup>®</sup> PC 5100</b>	<b>Polyacrylate-21 (and) Acrylates/ Dimethylaminoethyl Methacrylate Copolymer</b>	15.00
	YIELD:	100.00%

pH = 7.5-7.7

**Procedure**

Add water to vessel and heat to 45°C. Add each Phase B ingredient. Stir between each addition until homogenous solution. Premix Brij 98 and fragrance and heat to 40-45°C. Add Phase C to Phase A/B. Stir until clear and homogeneous. Add **SYNTRAN<sup>®</sup> PC 5400** and **SYNTRAN<sup>®</sup> PC 5100**. Stir until homogeneous solution results. Appearance: Semi-translucent liquid.

## MEDIUM-HOLD VOLUMIZING MOUSSE

### Formulation F-24-16

Pump-up volume without sacrificing manageability and shine. Unique high-tech polymers surrounds and supports each strand to give root-lift and bulk to fine hair. This medium-hold formula adds extreme gloss, style-support and texture.

	<u>INCI Designation</u>	<u>Weight %</u>
<b>Phase A</b>		
Purified Water	Water	71.80
Dissolvine Na2S (Akzo Nobel)	Disodium EDTA	0.05
<b>Phase B</b>		
Brij 98 VEG (Uniquema)	Oleth-20	0.50
Fragrance	Fragrance	0.10
<b>Phase C</b>		
Ritapan DL (Rita)	Panthenol	0.20
Amphosol HCG (Stepan)	Cocamidopropyl Betaine	1.50
Glydant Plus Liquid (Lonza)	DMDM Hydantoin, IPBC	0.35
AquaPro II RP (MGP)	Hydrolyzed Rice Protein	0.50
<b>Phase D</b>		
<b>SYNTRAN® PC 5400</b>	<b>Ammonium Acrylates Copolymer</b>	10.00
<b>SYNTRAN® PC 5100</b>	<b>Polyacrylate-21 (and) Acrylates/ Dimethylaminoethyl Methacrylate Copolymer</b>	15.00
	YIELD:	100.00

### Procedure

Warm water to 35-40° C with moderate stirring. Add Phase A ingredients. In a separate vessel melt Brij 98 (temperature not to exceed 45° C), add fragrance to melted Brij, stir until homogenous. Add Phase B to Phase A and stir until clear, homogenous mixture obtained. Individually add Phase C ingredients to batch, stir between each addition until clear and homogenous. Individually add Phase D ingredients, stir until homogenous. Cool to room temperature. pH 7.4-7.8

**Fill into Airspray Foamer or prepare 6% VOC aerosol mousse using 94% base above and 6% A-46 propellant.**

<b>Final Formula:</b>	<u>INCI Designation</u>	<u>Weight %</u>
Formula F- 24-16	Bulk concentrate	94.00
Propellant A-46	Propane (19.1%), Isobutane (80.9%)	6.00
	YIELD:	100.00

**FIRM-HOLD VOLUMIZING MOUSSE**
**Formulation F-24-17**

Pump-up volume without sacrificing manageability and shine. Unique high-tech polymers surrounds and supports each strand to give root-lift and bulk to fine hair. This firm hold formula adds extreme gloss, style-support and texture.

	<u>INCI Designation</u>	<u>Weight %</u>
<b>Phase A</b>		
Purified Water	Water	77.90
Dissolvine Na2S (Akzo Nobel)	Disodium EDTA	0.05
<b>Phase B</b>		
Brij 98 VEG (Uniquema)	Oleth-20	0.50
Fragrance	Fragrance	0.10
<b>Phase C</b>		
Ritapan DL (Rita)	Panthenol	0.10
Amphosol HCG (Stepan)	Cocamidopropyl Betaine	1.00
Glydant Plus Liquid (Lonza)	DMDM Hydantoin, IPBC	0.35
<b>Phase D</b>		
<b>SYNTRAN<sup>®</sup> PC 5400</b>	<b>Ammonium Acrylates Copolymer</b>	10.00
<b>SYNTRAN<sup>®</sup> PC 5100</b>	<b>Polyacrylate-21 (and) Acrylates/ Dimethylaminoethyl Methacrylate Copolymer</b>	10.00
	YIELD:	100.00

**Procedure**

Warm water to 35-40° C with moderate stirring. Add Phase A ingredients. In a separate vessel melt Brij 98 (temperature not to exceed 45° C), add fragrance to melted Brij, stir until homogenous. Add Phase B to Phase A and stir until clear, homogenous mixture obtained. Individually add Phase C ingredients to batch, stir between each addition until clear and homogenous. Individually add Phase D ingredients, stir until homogenous. Cool to room temperature. pH 7.5-7.9

**Fill into Airspray Foamer or prepare 6% VOC aerosol mousse using 94% base above and 6% A-46 propellant.**

<b>Final Formula:</b>	<u>INCI Designation</u>	<u>Weight %</u>
Formula F- 24-17	Bulk concentrate	94.00
Propellant A-46	Propane (19.1%), Isobutane (80.9%)	6.00
	YIELD:	100.00

## 55% VOC PUMP HAIR SPRAY—MEDIUM HOLD

### Formulation F-24-18

Quick drying 55% VOC formulation with medium hold and high gloss. Excellent style support yet easily washes out of hair. Deposits flexible film with good adhesion to hair surface, combs out without flaking. Great humidity resistance.

	<u>INCI Designation</u>	<u>Weight %</u>
<b>Phase A</b>		
SDA-40B 200Proof	Alcohol Denatured	54.95
Distilled Water	Water	19.50
AMP-95 (Angus)	Aminomethyl Propanol	0.40
Dow Corning 193 Fluid (Dow Corning)	PEG-12 Dimethicone	0.10
Crovol PK-70 (Croda)	PEG-45 Palm Kernel Glycerides	0.05
<b>Phase B</b>		
<b>SYNTRAN® PC 5400</b>	<b>Ammonion Acrylates Copolymer</b>	15.00
<b>SYNTRAN® PC 5100</b>	<b>Polyacrylate-21 (and) Acrylates/ Dimethylaminoethyl Methacrylate Copolymer</b>	10.00
AMP-95 (Angus)		Adjust to pH 8.7-8.8
	YIELD:	100.00

### Procedure

Add ingredients to appropriate vessel as listed. Stir between each addition until batch is clear and homogenous.

Adjust pH at end with AMP-95 to 8.7 – 8.8.

Appearance: Product is a clear and homogenous solution.

**55% VOC PUMP HAIR SPRAY—FIRM HOLD**
**Formulation F-24-19**

Quick drying 55% VOC formulation with firm hold and high gloss. Excellent style support yet easily washes out of hair. Deposits flexible film with good adhesion to hair surface, combs out without flaking. Great humidity resistance.

	<u>INCI Designation</u>	<u>Weight %</u>
<b>Phase A</b>		
SDA-40B 200Proof	Alcohol Denatured	54.95
Distilled Water	Water	14.50
AMP-95 (Angus)	Aminomethyl Propanol	0.40
Dow Corning 193 Fluid (Dow Corning)	PEG-12 Dimethicone	0.10
Crovol PK-70 (Croda)	PEG-45 Palm Kernel Glycerides	0.05
<b>Phase B</b>		
<b>SYNTRAN® PC 5400</b>	<b>Ammonium Acrylates Copolymer</b>	15.00
<b>SYNTRAN® PC 5100</b>	<b>Polyacrylate-21 (and) Acrylates/ Dimethylaminoethyl Methacrylate Copolymer</b>	15.00
AMP-95 (Angus)		Adjust to pH 8.7-8.9
	<b>YIELD:</b>	<b>100.00</b>

**Procedure**

Add ingredients to appropriate vessel as listed. Stir between each addition until batch is clear and homogenous.

Adjust pH at end with AMP-95 to 8.7 – 8.9.

Appearance: Product is a clear and homogenous solution.

**55% VOC AEROSOL HAIR SPRAY—FIRM HOLD**
**Formulation F-24-20**

Next generation 55% VOC aerosol formulation with firm hold and great gloss. Quick drying and high humidity resistant film provides excellent style support, yet easily washes out of hair. Combs out without flaking.

<u>Bulk Concentrate</u>	<u>INCI Designation</u>	<u>Weight %</u>
<b>Phase A</b>		
SDA-40B 200 Proof	Alcohol Denatured	70.00
AMP-95 (Angus)	Aminomethyl Propanol	0.50
Dow Corning 193 Fluid (Dow Corning)	PEG-12, Dimethicone	0.10
Crovol PK-70 (Croda)	PEG-45 Palm Kernel Glycerides	0.05
<b>Phase B</b>		
<b>SYNTRAN® PC 5400</b>	<b>Acrylates Copolymer</b>	10.00
<b>SYNTRAN® PC 5100</b>	<b>Polyacrylate-21 (and) Acrylates/ Dimethylaminoethyl Methacrylate Copolymer</b>	19.35
	YIELD:	100.00

**Procedure**

Add ingredients to appropriate vessel as listed. Stir between each addition until batch is clear and homogenous. Adjust pH to 8.7 – 8.9 with AMP-95 at end, stir until homogenous. Product is a slightly turbid solution.

**Final Formula:**

		<u>Weight %</u>
Bulk concentrate	Bulk concentrate	63.00
Propellant	Dimethyl Ether	10.50
Propellant	Hydrofluorocarbon 152A	26.50
	YIELD:	100.00

**Precision-Valve Specifications:**

020 MB Concave Kosmos  
 013 S90  
 Buna N S90  
 013 X 013 S90  
 Alum, Epon T/B, Cut Gasket

## CLEAR, STYLING SHAMPOO WITH SYNTRAN® PC5100

### Formulation F-24-35

High lathering, clear shampoo base which styles, volumizes and imparts root-lift for fine, limp hair. Unique Bimodal polymer combination surround and support each strand to give style-support, manageability and shine to lifeless or thinning hair. This styling shampoo formula leaves hair with a clean, soft, natural feel. No build-up.

	<u>INCI Designation</u>	<u>Weight %</u>
<b>Phase A</b>		
Purified Water	Water	50.18
Dissolvine Na2-S (Akzo Nobel)	Disodium EDTA	0.10
Steol CS-230 (Stepan)	Sodium Laureth Sulfate	13.00
Stepanol AM (Stepan)	Ammonium Lauryl Sulfate	17.00
Amphosol HCG (Stepan)	Cocamidopropyl Betaine	8.00
Tauranol WS-conc (Finetex)	Sodium Cocoyl Taurate	3.00
Mackamide CMA (McIntyre)	Cocamide MEA	1.00
Crothix (Croda)	PEG-150 Pentaerythrityl Tetrastearate	0.25
<b>Phase B</b>		
<b>SYNTRAN® PC 5100</b>	<b>Polyacrylate-21 (and) Acrylates/ Dimethylaminoethyl Methacrylate Copolymer</b>	6.00
Ritapan DL (RITA)	Panthenol	0.75
<b>Phase C</b>		
Liquid Glydant Plus (Lonza)	DMDM Hydantoin and IPBC	0.35
Fragrance	Fragrance	0.30
Citric Acid	Citric Acid	<u>0.07</u>
YIELD:		100.00%

### Procedure

Heat Phase A ingredients to 75° C with moderate agitation. Stir at 75° C until homogeneous. Cool slowly with moderate agitation to avoid aeration to 60° C. At 60° C, individually add each Phase B ingredient to main batch with continuous agitation until a homogenous mixture is obtained. Cool slowly with moderate agitation to avoid aeration to 40-45° C, individually add Phase C ingredients to batch, stir between each addition until homogenous. Adjust pH of batch between 6.3-6.7.

**SKIN-FIRMING MOISTURIZING CRÈME WITH SYNTRAN® PC 5100**

Rich textured moisturizing crème provides elegant skin feel and lubricity. Non-greasy formula with no residual tackiness. Instantly makes dry skin more supple and hydrated. Unique film-forming properties of patented Bimodal polymer technology provided by **SYNTRAN® PC 5100** actually acts like shrink-wrap for the skin. Tightening and firming skin surface.

**Formulation F-24-41**

	<u>INCI Designation</u>	<u>Weight %</u>
<b>Phase A-1 —Heat to 75°C</b>		
Distilled Water	Water	64.55
Dissolvine Na2S (Akzo Nobel)	Disodium EDTA	0.05
Butylene Glycol	Butylene Glycol	3.00
<b>Phase A-2 – Add at 75°C</b>		
Phenoxytol (Clariant)	Phenoxyethanol	1.00
<b>SYNTRAN® PC 5100</b>	<b>Polyacrylate-21, Acrylates/ Dimethylaminoethyl Methacrylate Copolymer</b>	8.00
<b>Phase B—Add at 75°C</b>		
Prolipid 141 (ISP)	Glyceryl Stearate, Behenyl Alcohol, Palmitic Acid	4.00
	Stearic Acid , Lecithin, Lauryl Alcohol	
	Myristyl Alcohol, Cetyl Alcohol	
Cetyl Alcohol (Protameen)	Cetyl Alcohol	1.00
Protachem CTG (Protameen)	Caprylic/Capric Triglyceride	2.00
Protachem ISP (Protameen)	Isostearyl Palmitate	3.00
Ceraphyl SLK (ISP)	Isodecyl Neopentanoate	3.00
Protachem SMO (Protameen)	Sorbitan Oleate	0.20
Lipovol A (LIPO)	Persea Gratissima (Avocado) Oil	1.00
Structure XL (National Starch)	Hydroxypropyl Starch Phosphate	2.00
<b>Phase C—Add at 55°C</b>		
DC 245 Fluid (Dow Corning)	Cyclopentasiloxane	6.00
DC 200 Fluid 100 cst (Dow Corning)	Dimethicone	1.00
<b>Phase D—Add at 45°C</b>		
Fragrance	Fragrance	0.20
10% Citric Acid	Citric Acid	Q.S.
	<b>YIELD:</b>	<b>100.00</b>

**Procedure**

Combine Phase A-1 ingredients and begin heating to 45° C. Premix Phase A-2 and add to A-1 at 45°C. Batch will thicken, adjust stirring to avoid aeration. Continue heating to main vessel to 75°C. At 75°C individually add Phase A-3 ingredients. Stir until smooth and homogeneous. In a separate vessel add all Phase B ingredients and heat to 75°C until melted. Add Phase B to Phase A @ 75°C. Cool batch to 55°C, add Phase C ingredients. Homomix batch until uniform. Cool batch to 45°C add Phase D. Adjust pH to 6.5 +/- 0.5

**SUPER INTENSIVE MOISTURIZING CRÈME WITH SYNTRAN® PC 5100**

“Cold Cream” like texture moisturizing crème provides quick rub-in, elegant skin feel and lubricity. Non-greasy formula with no residual tackiness. Instantly makes dry skin more supple and hydrated. Unique film-forming properties of patented Bimodal polymer technology provided by **SYNTRAN® PC 5100** actually acts like shrink-wrap for the skin. Tightening and firming skin surface while holding actives and emollients to skin.

**Formulation F-24-49**

	<u>INCI Designation</u>	<u>Weight %</u>
<b>Phase A-1 —Heat to 75°C</b>		
Distilled Water	Water	61.60
Dissolvine Na2S (Akzo Nobel)	Disodium EDTA	0.10
Glycerin	Glycerin	4.00
<b>Phase A-2 – Add at 75°C</b>		
Phenoxtol (Clariant)	Phenoxyethanol	1.00
Structure 3001 (National Starch)	Acrylates/Ceteth-20 Itaconate Copolymer	2.00
<b>SYNTRAN® PC 5100</b>	<b>Polyacrylate-21, Acrylates/ Dimethylaminoethyl Methacrylate copolymer</b>	8.00
<b>Phase B—Add at 75°C</b>		
Lipomulse 165 (LIPO)	Glyceryl Stearate, PEG-100 Stearate	3.00
Petrolaum Snow White (Penreco)	Petrolatum	4.00
Cetyl Alcohol (Protameen)	Cetyl Alcohol	2.00
Finsolv G-2 (Finetex)	C15-17 Alkyl Benzoate	1.00
Protachem ISP (Protameen)	Isostearyl Palmitate	1.00
Ceraphyl 368 (ISP)	Ethylhexyl Palmitate	3.00
Protachem SMO (Protameen)	Sorbitan Oleate	0.20
Lipovol A (LIPO)	Persea Gratissima (Avocado) Oil	1.00
Super Steol Liquid (Croda)	C10-30 Cholesterol/Lanosterol Esters	1.00
Procetyl AWS (Croda)	PPG-5-Ceteth-20	0.60
TEA 99%	Triethanolamine	0.30
<b>Phase C—Add at 55°C</b>		
DC 245 Fluid (Dow Corning)	Cyclopentasiloxane	3.00
DC 200 Fluid 200 cst (Dow Corning)	Dimethicone	3.00
<b>Phase D—Add at 45°C</b>		
Fragrance	Fragrance	0.20
	<b>YIELD:</b>	<b>100.00</b>

Procedure

Combine Phase A-1 ingredients and begin heating to 75° C. At 75°C individually add each Phase A-2 ingredient. Stir until homogeneous. In a separate vessel add all Phase B ingredients and heat to 75°C. Add Phase B to Phase A @ 75°C. Cool batch to 55°C, add Phase C ingredients. Homomix batch until uniform. Cool batch to 45°C add Phase D. Adjust pH to 7.0 - 7.5.

## SKIN-FIRMING SERUM WITH SYNTRAN® PC 5100

Unique film-forming properties of patented Bimodal polymer technology provided by **SYNTRAN® PC 5100** actually acts like shrink-wrap for the skin. Tightening and firming skin surface.

### Formulation F-24-55

	<u>INCI Designation</u>	<u>Weight %</u>
<b>Phase A-1 —Heat to 45°C</b>		
Distilled Water	Water	72.40
Butylene Glycol	Butylene Glycol	2.00
Structure XL (National Starch)	Hydroxypropyl Starch Phosphate	5.00
<b>Phase A-2 – Add at 45°C</b>		
<b>SYNTRAN® PC 5100</b>	<b>Polyacrylate-21, Acrylates/ Dimethylaminoethyl Methacrylate copolymer</b>	20.00
<b>Phase B—Add at 40°C</b>		
Mackstat DM	DMDM Hydantoin	0.40
0.10% Ext. Violet No. 2	Ext. Violet 2	0.20
	YIELD:	<u>100.00</u>

### Procedure

Combine Phase A-1 ingredients and begin heating to 45° C. Batch will thicken, adjust stirring to avoid aeration. Continue stirring until Structure XL is completely hydrated and a smooth, homogeneous mixture is obtained. Add **SYNTRAN® PC 5100** and stir until smooth and homogeneous. Cool batch to 40°C, add Phase B ingredients and stir until smooth and homogeneous.

Final pH to 7.5 +/- 0.5

## SKIN-FIRMING MOISTURIZING CRÈME

Smooth textured moisturizing crème provides elegant skin feel and lubricity. Non-greasy formula with no residual tackiness. Instantly makes dry skin more supple and hydrated. Unique film-forming properties of patented Bimodal polymer technology provided by **SYNTRAN® PC 5100**. Tightens and firms skin surface.

### Formulation F-24-99

	<u>INCI Designation</u>	<u>Weight %</u>
<b>Phase A-1 —Heat to 75°C</b>		
Distilled Water	Water	65.05
Dissolvine Na2S (Akzo Nobel)	Disodium EDTA	0.05
<b>Phase A-2 – Add at 75°C</b>		
Butylene Glycol	Butylene Glycol	3.00
Ticaxan Xanthan NF (TIC Gum)	Xanthan Gum	0.20
<b>Phase A-3</b>		
Optiphen (ISP)	Phenoxyethanol, Caprylyl Glycol	1.00
<b>SYNTRAN® PC 5100</b>	<b>Polyacrylate-21, Acrylates/ Dimethylaminoethyl Methacrylate Copolymer</b>	8.00
<b>Phase B—Add at 75°C</b>		
Prolipid 141 (ISP)	Glyceryl Stearate, Behenyl Alcohol, Palmitic Acid Stearic Acid , Lecithin, Lauryl Alcohol Myristyl Alcohol, Cetyl Alcohol	4.00
Cetyl Alcohol (Protameen)	Cetyl Alcohol	1.00
Protachem CTG (Protameen)	Caprylic/Capric Triglyceride	2.00
Protachem ISP (Protameen)	Isostearyl Palmitate	3.00
Ceraphyl SLK (ISP)	Isodecyl Neopentanoate	3.00
Procetyl AWS (Croda)	PPG-5-Ceteth-20	0.50
Lipovol A (LIPO)	Persea Gratissima (Avocado) Oil	1.00
Structure XL (National Starch)	Hydroxypropyl Starch Phosphate	1.00
<b>Phase C—Add at 55°C</b>		
DC 245 Fluid (Dow Corning)	Cyclopentasiloxane	6.00
DC 200 Fluid 200 cst (Dow Corning)	Dimethicone	1.00
<b>Phase D—Add at 45°C</b>		
Fragrance	Fragrance	0.20
	<b>YIELD:</b>	<b>100.00</b>

### Procedure

Combine Phase A-1 ingredients and begin heating to 45°C. Premix Phase A-2 and add to A-1 at 45°C. Batch will thicken, adjust stirring to avoid aeration. Continue heating main vessel to 75°C. At 75°C individually add Phase A-3 ingredients. Stir until smooth and homogeneous. In a separate vessel add all Phase B ingredients and heat to 75°C until melted. Add Phase B to Phase A @ 75°C. Cool batch to 55°C, add Phase C ingredients. Homomix batch until uniform. Cool batch to 45°C add Phase D. Adjust pH to 6.5 +/- 0.5

1/07

**INTENSIVE MOISTURIZING CRÈME**
**Formulation F-24-102**

Intensive moisturizing crème provides quick rub-in, elegant skin feel and lubricity. Non-greasy formula with no residual tackiness. Instantly makes dry skin more supple and hydrated. Unique film-forming properties of patented Bimodal polymer technology provided by **SYNTRAN® PC 5100**. Tightens and firms skin surface while holding actives and emollients to skin.

	<u>INCI Designation</u>	<u>Weight %</u>
<b>Phase A-1 —Heat to 75°C</b>		
Distilled Water	Water	63.00
Dissolvine Na2S (Akzo Nobel)	Disodium EDTA	0.10
Ultrez 21 (Noveon)	Acrylates/C10-30 Alkyl Acrylates Crosspolymer	0.40
<b>Phase A-2</b>		
Glycerin 99.7%	Glycerin	4.00
Ticaxan Xanthan NF (TIC Gum)	Xanthan Gum	0.25
<b>Phase A-3</b>		
Optiphen (ISP)	Phenoxyethanol, Caprylyl Glycol	1.00
<b>Phase B—Add at 75°C</b>		
Lipomulse 165 (LIPO)	Glyceryl Stearate, PEG-100 Stearate	3.00
Petrolaum Snow White (Penreco)	Petrolatum	3.00
Cetyl Alcohol (Protameen)	Cetyl Alcohol	3.00
Finsolv G-2 (Finetex)	C15-17 Alkyl Benzoate	1.00
Protachem ISP (Protameen)	Isostearyl Palmitate	1.00
Ceraphyl 368 (ISP)	Ethylhexyl Palmitate	3.00
Lipovol A (LIPO)	Persea Gratissima (Avocado) Oil	1.00
Super Steol Liquid (Croda)	C10-30 Cholesterol/Lanosterol Esters	1.00
Procetyl AWS (Croda)	PPG-5-Ceteth-20	0.60
<b>Phase C—Add at 55-60°C</b>		
DC 245 Fluid (Dow Corning)	Cyclopentasiloxane	3.00
DC 200 Fluid 200 cst (Dow Corning)	Dimethicone	3.00
<b>Phase D—Add at 55-60°C</b>		
TEA 99%	Triethanolamine	0.45
<b>SYNTRAN® PC 5100</b>	<b>Polyacrylate-21, Acrylates/ Dimethylaminoethyl Methacrylate Copolymer</b>	8.00
<b>Phase E—Add at 45°C</b>		
Fragrance	Fragrance	0.20
	<b>YIELD:</b>	<b>100.00</b>

**Procedure**

Combine Phase A-1 ingredients and begin heating to 75°C. Stir until Ultrez is hydrated. Premix Phase A-2 and add to A-1. Batch will thicken, adjust stirring to avoid aeration. At 75°C add Phase A-3. In a separate vessel add all ingredients in Phase B, heat to 75°C until melted. Add Phase B to Phase A @ 75°C. Cool to 55-60°C. Individually add Phase C ingredients at 55-60°C. Homomix. Individually add Phase D and stir until batch thickens and is homogeneous. Cool slowly to 45°C, add Phase E. Adjust pH to 5.5-6.0 with TEA, if necessary.

1/07

## FAST DRYING SKIN-FIRMING SERUM

The fast drying and skin firming attributes of this formula are achieved via a unique and patented film-forming bimodal polymer technology. During formula evaporation the polymer ionically bonds forming an interpenetrating network which imparts a shrink-wrap like effect, tightening and firming the skin.

### Formulation F-24-115

	<u>INCI Designation</u>	<u>Weight %</u>
<b>Phase A-1 —Heat to 35°C</b>		
Distilled Water	Water	64.30
SDA 40B (190 proof)	Alcohol Denatured	10.00
Structure XL (National Starch)	Hydroxypropyl Starch Phosphate	5.00
<b>Phase A-2 – Add at 35°C</b>		
<b>SYNTRAN® PC 5100</b>	<b>Polyacrylate-21, Acrylates/ Dimethylaminoethyl Methacrylate copolymer</b>	20.00
<b>Phase B—Add at 30°C</b>		
Mackstat DM	DMDM Hydantoin	0.40
0.10% Ext. Green #5	Green 5	0.20
Fragrance	Fragrance	0.10
	<b>YIELD:</b>	<u>100.00</u>

### Procedure

Combine Phase A-1 ingredients and begin heating to 35° C. Batch will thicken, adjust stirring to avoid aeration. Continue stirring until Structure XL is completely hydrated and a smooth, homogeneous mixture is obtained. Add **SYNTRAN® PC 5100** and stir until smooth and homogeneous. Cool batch to 30°C, add Phase B ingredients and stir until smooth and homogeneous.

Final pH to 7.5 +/- 0.5