



HUMCO Compounding Bases

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Our Guiding Principles

- We Can Be Counted On
- We Get The Job Done
- We Take Responsibility
- We Find A Better Way
- We Succeed As A Team

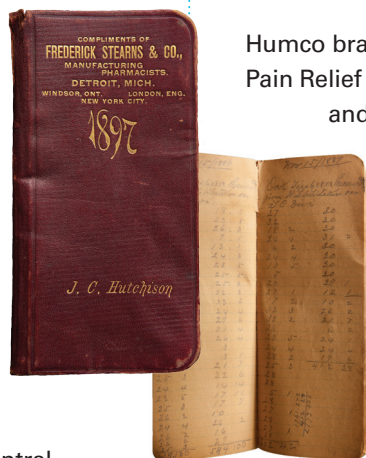
About Humco

At Humco, our long-standing purpose is reflected in the knowledge that “We Help People Feel Better.”

Humco is an over-the-counter drug manufacturer and marketer supplying high quality products to pharmacists, retailers and directly to consumers nationwide.

A privately held corporation, Humco makes its home in Texarkana, Texas, a site that offers national product distribution from a central U.S. location. Company headquarters includes corporate offices, product research and development lab, and an FDA-registered manufacturing facility plus warehouse and distribution space.

Humco Holding Group, Inc., began operations in 1872 as Hutchison Medicine Company,



and generations of Americans have come to know us as HUMCO, the name to trust for quality, traditional health care products.

Humco brands include Castiva™ Arthritis Pain Relief lotions, Miranel™, Ivy Wash and Chigg-Away®.

Humco is proud of its long relationship with pharmacies across America. Our products can be found in almost every community pharmacy throughout the country.

Our wholesale customers include McKesson

Healthcare Solutions, Cardinal Health, and AmerisourceBergen, along with most regional wholesalers. In addition, Humco supplies products to Walgreens, CVS, Rite Aid and WalMart.

Humco Compounding

Humco Compounding is built on a proud history of more than 140 years manufacturing quality products for the pharmaceutical industry.

Through our innovative spirit and continued investment in research and development, we have established a reputation for creating, developing, and manufacturing a diversified line of non-sterile topical and oral pharmaceutical compounding bases. Our compounding products range from ready-to-use topical creams and gels to oral syrups and suspensions. Our products are designed to provide the optimal delivery system for a specific formulation based on the desired route of administration and therapeutic intent.

Our compounding bases are tailored to meet your non-sterile compounding needs while reducing the compounding preparation time and our goal is to help improve the therapeutic outcome for your patients.



In addition to our innovation, we take pride in our exceptional customer service and our product quality. Our products are developed and manufactured

adhering to the highest product quality standards. Humco is an FDA-registered establishment, in compliance with current Good Manufacturing Practices (cGMP).

We are committed to research and development, leading the way in Beyond-Use-Date (BUD) testing, absorption, and transdermal penetration studies. We are continually conducting

scientific testing and studies, providing a valuable resource to our compounding pharmacists.

We stand on a foundation of specialized resources and exceptional customer service. We are proud to offer our compounding pharmacists a free Compounding Resource Center staffed by certified pharmacy technicians to provide formulation and technical assistance.



Your partner since 1872.



“Humco was founded as the Hutchison Medicine Company in 1872 by a man who traveled through East Texas in a covered wagon hawking homemade remedies.”

The New York Times

Humco Compounding Featured in *The New York Times*

The New York Times :: Sunday, October 4, 2009

Sugary Mix is Just What the Flu Doctor Ordered

By ANDREW POLLACK

Parents usually try to steer their children away from ingredients like sugar and artificial cherry flavoring. But this fall, those pedestrian food additives might help treat some children stricken with the flu.

With the liquid children’s version of the anti-influenza drug Tamiflu in short supply, pharmacists are making their own children’s version by mixing cherry syrup with the contents of the Tamiflu capsules.

But not just any cherry syrup. The prescribing information for Tamiflu lists cherry syrup made by Humco Holding Group – a mixture of sugar, purified water, artificial cherry flavoring and some other common ingredients – as one of the approved liquids to mix with the medicine.

Humco has been scrambling to keep up with demand.

“Our volume has exploded,” said Greg Pulido, the chief executive of Humco, based in Texarkana, Tex. “About 30 days ago we got a phone call. We got another phone call. Then we started getting calls from all over the world.”

The company typically sells about 50,000 pint-size bottles of the syrup each year. But

with the spread of pandemic H1N1 influenza, also known as swine flu, Humco shipped 100,000 bottles in September alone. In October it is planning to make 400,000 bottles.

The company has had to have some ingredients shipped to its factory by air in order to meet the surge of orders, Mr. Pulido said. Last week the factory worked seven days instead of the usual four. But he said that contrary to rumors, there was no shortage of the syrup, and that he was confident there would not be.



The liquid version of Tamiflu is scarce because Roche, the manufacturer of the drug, is concentrating on making the capsules used by adults and older children, which it says is a quicker way to increase world supplies. The same production capacity needed to produce a liquid treatment for one person can be used

to make capsules for more than 10 people, Roche says.

But Tamiflu’s label has instructions for pharmacists to make a liquid version themselves.

This practice, known as compounding, evokes “the origins of pharmacy,” said Leanne Trela, director of retail clinical services at Walgreens, the big pharmacy chain. But with mass-manufactured pills now the norm, she said, compounding is used mainly for special needs like adapting adult medicines for children.

A spokesman for Walgreens, Jim Cohn, said the shortages of liquid Tamiflu were sporadic and mainly in the South. The company’s pharmacists are compounding when necessary.

As a temporary fix, pharmacists make Tamiflu palatable.

Besides Humco’s cherry syrup, the Tamiflu label says that Ora-Sweet SF, a sugar-free syrup, can be used. Other compounding syrups could conceivably be used as well, but the label notes the others have not been studied.

Paddock Laboratories of Minneapolis, the manufacturer of Ora-Sweet, has also experienced a surge in demand. The company, which typically sells 50,000 bottles a year, has had orders for about 200,000 in the last two months, said Paddock’s president, Michael Graves.

But he said the company could easily meet demand by shifting production away from other products. “We can go from 50,000 bottles a year to 50,000 bottles a week,” Mr. Graves said.

Syrups used for compounding are considered foods by the Food and Drug Administration. Approval is not needed from the agency before such products are marketed. But certain manufacturing processes must be followed, and factories are subject to inspection.

Humco was founded as the Hutchison Medicine Company in 1872 by a man who traveled through East Texas in a covered wagon hawking homemade remedies. The company makes various liquids and creams

for use in compounding. It also sells the over-the-counter medicines Castiva, for arthritis pain relief, and Miranel, to treat toenail fungus.

Mr. Pulido declined to identify the company’s owners, other than himself, or to disclose its revenue. The company has about 150 employees, he said.

He said Humco had not raised the wholesale price of its cherry syrup – about \$8 a bottle – because it did not want to take advantage of the shortage of Tamiflu for children. Even so, the surge in orders will certainly help the company’s bottom line.

“Humco will benefit from the spike,” he said. But, he added, “You hate to build your business around the spike.”

That might be wise, because it is unclear how long the demand will last. To alleviate the shortages, the federal government has begun shipping 300,000 treatment courses of the pediatric Tamiflu from its stockpile to state health agencies.

Cherry syrups like Humco’s could also have a potent competitor. The label for Tamiflu says that parents, if directed by a physician, can make single doses of liquid Tamiflu at home. The sweet liquid the label uses as an example for parents is chocolate syrup.

“Our volume has exploded,” said Greg Pulido, the chief executive of Humco, based in Texarkana, Texas. “About 30 days ago we got a phone call. We got another phone call. Then we started getting calls from all over the world.”



Pre-Made Bases

Our compounding bases and vehicles are **ready-made with the wetting agents already incorporated into the base.** Most formulations will not require any additional wetting or milling; greatly reducing the compounding preparation time.

TOPICAL COMPOUNDING BASES AND VEHICLES

ORAL COMPOUNDING BASES & VEHICLES

Anhydrous Base TRANSDERMAL	Item No.	Size	Price
	9918-1	1 lb	\$100.00

HRT Botanical TRANSDERMAL & VAGINAL	Item No.	Size	Price
	9910-1	1 lb	\$38.00
	9910-10	10 lb	\$240.00
	9910-40	40 lb	\$660.00

HRT Heavy TRANSDERMAL & VAGINAL	Item No.	Size	Price
	9911-1	1 lb	\$38.00
	9911-10	10 lb	\$240.00
	9911-40	40 lb	\$660.00

LipoBase Regular TRANSDERMAL	Item No.	Size	Price
	9912-1	1 lb	\$50.00
	9912-10	10 lb	\$365.00
	9912-40	40 lb	\$1310.00

LipoBase Heavy TRANSDERMAL	Item No.	Size	Price
	9913-1	1 lb	\$50.00
	9913-10	10 lb	\$365.00
	9913-40	40 lb	\$1310.00

MultiBase™ TRANSDERMAL & VAGINAL	Item No.	Size	Price
	9919-1	1 lb	\$45.00
	9919-10	10 lb	\$380.00
	9919-40	40 lb	\$1400.00

PENCream™ TRANSDERMAL	Item No.	Size	Price
	9917-1	1 lb	\$50.00
	9917-10	10 lb	\$250.00
	9917-40	40 lb	\$1000.00

PLO20™ TRANSDERMAL	Item No.	Size	Price
	9914-1	1 lb	\$50.00
	9914-10	10 lb	\$365.00
	9914-40	40 lb	\$1310.00

PLO20 Flowable™ TRANSDERMAL	Item No.	Size	Price
	9915-1	1 lb	\$65.00

SaltStable LO™ TRANSDERMAL	Item No.	Size	Price
	9916-1	1 lb	\$70.00
	9916-10	10 lb	\$450.00
	9916-40	40 lb	\$1600.00

SaltStable LS Advanced™ TRANSDERMAL	For product information and pricing contact (800) 878-2822		
			NEW

Universal Water Gel TOPICAL	Item No.	Size	Price
	9920-1	1 lb	\$21.00
	9920-10	10 lb	\$165.00
	9920-40	40 lb	\$600.00

Emulsion Concentrate EMULSIFIER/THICKENING AGENT	Item No.	Size	Price
	9921-4	4 oz	\$35.00
	9921-8	8 oz	\$57.00

Buffer Cream PROTON PUMP INHIBITOR	Item No.	Size	Price
	9934-1	1 lb	\$28.60

Cherry Syrup SYRUP	Item No.	Size	Price
	9929-16	16 oz	\$9.30
	9929-128	1 gal	\$56.00

Flavor Blend™ SUSPENDING BLEND	Item No.	Size	Price
	9922-16	16 oz	\$9.55
	9922-128	1 gal	\$62.00

Flavor Plus™ FLAVOR-FREE SUSPENSION	Item No.	Size	Price
	9925-16	16 oz	\$9.55
	9925-128	1 gal	\$62.00

Flavor Sweet™ SYRUP	Item No.	Size	Price
	9923-16	16 oz	\$9.55
	9923-128	1 gal	\$62.00

Flavor Sweet SF™ SUGAR-FREE SYRUP	Item No.	Size	Price
	9924-16	16 oz	\$9.55
	9924-128	1 gal	\$62.00

Raspberry Syrup SYRUP	Item No.	Size	Price
	9935-16	16 oz	\$9.83

Simple Syrup SYRUP	Item No.	Size	Price
	9928-16	16 oz	\$8.42
	9928-128	1 gal	\$42.50

Sorbitol Solution 70% USP SYRUP	Item No.	Size	Price
	9933-16	16 oz	\$4.96

Syrpalta (Red) SYRUP	Item No.	Size	Price
	9930-16	16 oz	\$12.04

Syrpalta (Without Color) SYRUP	Item No.	Size	Price
	9931-16	16 oz	\$12.64

Versa Free™ FLAVOR-FREE, SUGAR-FREE, DYE-FREE SYRUP	Item No.	Size	Price
	9927-16	16 oz	\$10.47
	9927-128	1 gal	\$75.00

Versa Plus™ FLAVOR-FREE, SUGAR-FREE, DYE-FREE SUSPENSION	Item No.	Size	Price
	9926-16	16 oz	\$10.47
	9926-128	1 gal	\$75.00

* Prices are current at time of printing—April 2014—however, pricing and specifications are subject to change without notice. Please contact the Compounding Resource Center or the website for updated pricing.

USP Guidelines

It is the responsibility of the pharmacists to follow USP Guidelines on proper compounding procedures and techniques. Compounders should know and keep current on USP Chapters <795> and <1075>, which relate to non-sterile compounding. Its purpose is to help define good compounding practice and provide general information to enhance the compounder's ability to compound preparations that are of acceptable strength, quality and purity.

Easy to Use

- Two-year shelf life
- Temperature stable
- No wetting of actives required in most formulations, and milling is not required after unguation

Mixing Methods

- Recommended for all Bases:
- Primarily use a mortar and pestle
 - Dissolution or levigation
 - Unguator low to medium shear

- No Membership Fees
- Contact Us for Pricing on Bulk Quantities
- Compounding Resource Center

Validated Potency/Stability Studies

The Beyond-Use-Date study evaluates the potency and stability of a formula over a course of time, from 30 days to 180 days. Below is an alphabetical listing of the APIs (Active Pharmaceutical Ingredients) studied for stability with correlating bases used for the compounded preparations.

TOPICAL BASES – BEYOND-USE-DATE (BUD)

Active Ingredient	Anhydrous	HRT Botanical	HRT Heavy	LipoBase Regular	LipoBase Heavy	Multi-Base	PEN-Cream	PL020	PL020 Flowable	Salt Stable LO	SSLS Advanced	Universal Water Gel
Aluminum Acetate	180					30						
Amitriptyline	180									90	82	
Anthralin	180											
Azelaic Acid	180					30						
Baclofen	180										56	
Benzocaine	180									90		
Bupivacaine	180										90	
Buspirone	180			30								
Camphor	180											
Cantharadine	180											
Capsaicin	180				30	90						
Chloramphenicol	180											
Cholestyramine	180											
Clomipramine	180						90			90		
Coal Tar	180											
Cyclobenzaprine	180									90	60	
Dehydroepiandrosterone	180			90								
Dexamethasone	180				90							
Diclofenac	180				90						90	30
Diltiazem	180				90			90				30
Diphenhydramine	180									90		
DMSA	180				30							
Estradiol	180	90	180	60		90						
Estriol	180	120	180	30		90						
Estrone	180	150	180			90						
Fluoxetine	180						90			90		
Flurbiprofen	180										90	
Gabapentin	180			90	90		90	90		90	75	30
Glutathione	180				30							
Glycolic Acid	180				30							30
Haloperidol	180				90				90			
Hexachlorophene	180					30						
Hydrocortisone	180											
Hydroquinone	180				90							
Ibuprofen	180						90	60	90		90	30

Disclaimer: The (this) data is provided for informational purposes only, representing the results of a study of the product stability with various active pharmaceutical ingredients. It does not serve, and may not be construed, as a representation or guarantee of product performance. In all cases the practitioner is advised to consult recognized pharmaceutical compendia and other recognized sources for product formulation and other product characteristics, including stability. Humco makes no warranties or representations with regard to the functioning or appropriateness of this product in any compounded formulation which use is solely at the discretion and liability of the practitioner.

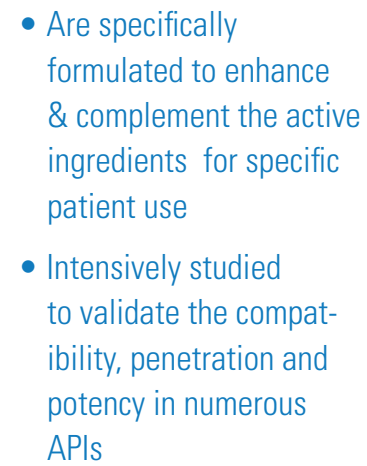


Humco Compounding:

Leading the way in Beyond-Use-Date (BUD) testing, absorption and penetration studies.

Active Ingredient	Anhydrous	HRT Botanical	HRT Heavy	LipoBase Regular	LipoBase Heavy	Multi-Base	PEN-Cream	PL020	PL020 Flowable	Salt Stable LO	SSLS Advanced	Universal Water Gel
Ivermectin	180											
Ketamine	180										90	
Ketoprofen	180						90	90	90	90	90	30
Lactic Acid	180					90						
Lidocaine	180					90	90			90	90	
Lorazepam	180				30							
Malathion	180											
Medroxyprogesterone	180	30				90						
Menthol	180				30	90						
Methimazole	180			90			90	90	90	90		
Methyl Salicylate	180					90						
Metoclopramide	180						90					
Metronidazole	180		90			90	90			90		
Morphine	180				30							
Mupirocin	180											
Mycophenolate	180											
Pentoxifylline	180										90	
Phenytoin	180					90						
Piroxicam	180				90			60	60			30
Podophyllum	180											
Prednisolone	180	90						90				
Prednisone	180							90	90			
Progesterone	180	180	180	90		90						
Promethazine	180				90		90	90		90		
Reglan	180											
Retinoic Acid	180					30						
Salicylic Acid	180											
Strattera	180				30							
Tamoxifen Citrate	180					30						
Testosterone	180	180	180			180						
Tetracaine	180						90			90		
Thorazine	180				30							
Verapamil	180										90	
Vitamins	180				30							

* We are continually conducting scientific stability studies to ensure potency along with formulation compatibility. Please check the Humco Compounding website for the most current Beyond-Use-Dates and for more information about the actual testing and results.



Active Ingredient	Flavor Blend	Flavor Sweet/SF	Flavor Plus	Versa Free	Versa Plus	All Syrups	Sorbitol	Syrpalta
Acetazolamide	•	•	•	•	•			
Allopurinol	•	•	•	•	•			
Alprazolam	•	•	•	•	•			
Amiodarone	•	•	•	•	•			
Amlodipine	•	•	•	•	•	•	•	•
Amphetamine	•	•	•	•	•			
Atenolol	•	•	•	•	•			
Azathioprine	•	•	•	•	•			
Captopril	•	•	•	•	•			
Chloroquine	•	•	•	•	•	•	•	•
Cisapride	•	•	•	•	•			
Clonazepam	•	•	•	•	•			
Dapsone	•	•	•	•	•			
Diltiazem	•	•	•	•	•	•	•	•
Dipyridamole	•	•	•	•	•			
Enalapril	•	•	•	•	•	•	•	•
Flecainide	•	•	•	•	•	•	•	•
Flucytosine	•	•	•	•	•			
Hydralazine	•	•	•	•	•	•	•	•
Ketoconazole	•	•	•	•	•			
Labetalol	•	•	•	•	•	•	•	•
Lamotrigine	•	•	•	•	•			
Metolazone	•	•	•	•	•			
Metoprolol	•	•	•	•	•	•	•	•
Metronidazole	•	•	•	•	•			
Nifedipine	•	•	•	•	•			
Procainamide	•	•	•	•	•			
Pyrazinamide	•	•	•	•	•			
Quinidine	•	•	•	•	•	•	•	•
Rifampin	•	•	•	•	•			
Sildenafil	•	•	•	•	•			
Spironolactone	•	•	•	•	•			
Tetracycline						•	•	•
Verapamil	•	•	•	•	•	•	•	•





Item No.	NDC No.	Size	Price
9921-4	0395-6016-94	4 oz	\$35.00
9921-8	0395-6016-98	8 oz	\$57.00

Ingredients: Proprietary blend of acrylates, polysorbate and starch.

Different viscosities are achieved by varying the amount of Emulsion Concentrate:
3% for lotions
5% for creams

Emulsion Concentrate

OUTSTANDING COMPOUNDING ENHANCER

Emulsion Concentrate is a pH and salt-tolerant emulsifier/hydrocolloid blend that greatly increases emulsification, stability and thickness of broken emulsions, separated and thin formulations. It quickly forms emulsions that are fresh, elegant, fast-absorbing and non-greasy.

Emulsion Concentrate Benefits:

- Ready-to-use polymer in fluid form
- API compatibility – virtually all APIs
- Elegant sensory profile
- Low & high temperature resistant (-5° C – 80° C)
- Ingredient compatibility
- Broad range of applications

EMULSION CONCENTRATE PROPERTIES	
pH	pH – 4.5 - 6.5
Viscosity	75,000 cps
Physical Format	Viscous Gel
Color	Opaque
Intended Use	<ul style="list-style-type: none">• Emulsify all types of oily phases• Stabilize mineral additives• Thicken in adverse conditions – very acidic or very alkaline, oxidizing• Develop fresh formulas that melt on contact with the skin
API Compatibility	Virtually all APIs
pH Compatibility	pH 2.0 - pH 12.0
Salt Tolerance	Salt Forms – 35%
Solvent Compatibility	Polar & Non-Polar
Temperature Stability	Low & High Temperatures
Applications	Solvents, Ethanol, Propylene Glycol, Butylene Glycol, Glycerin, Hexylene Glycol, Methylpropane Diol, Acetone, Vegetable Oils, Silicone Oils, Mineral Oils, Esters & Sun Filters

{ *Compares to Emulsifix* }

Universal Water Gel

VERSATILE TOPICAL GEL BASE

Universal Water Gel is an oil and salt tolerant blend using hydrophobic-inclusive cyclodextrins and electrolyte-tolerant polymers that greatly increases the water solubility and stability of incompatible drugs. Ideal for formulas containing higher levels of oils, botanical ingredients or poorly soluble actives. It provides improvements in solubility, increase in speed of dissolution, together with physical and chemical stability.

Universal Water Gel Benefits:

- API compatibility – hydrophilic & lipophilic
- Excellent electrolyte tolerance
- Bioavailability enhancement
- Improves active stabilization & compatibility
- Highly stable across a broad pH range
- Masks the odor of unpleasant actives
- Cosmetically elegant
- Natural preservatives

UNIVERSAL WATER GEL PROPERTIES	
pH	pH – 7.0
Specific Gravity	0.95 g/ml
Viscosity	750,000 cps
Physical Format	Gel
Color	Translucent
Transdermal Penetration	10%
API Compatibility	Hydrophilic & Lipophilic – Total API less than 10%
Physical Stability	pH 4.0 – pH 10.0 1% Salt
Speed of Dissolution	100% in 5 minutes
Typical Applications	<ul style="list-style-type: none">• Dermatology• Pain Management• Diabetes & Wound Care

When do you need Universal Water Gel?

- When you want to solubilize drugs & stabilize drugs.
- When you want rapid wetting, efficient thickening, enhanced clarity & excellent electrolyte tolerance.



Item No.	NDC No.	Size	Price
9920-1	0395-6017-01	1 lb	\$21.00
9920-10	0395-6017-79	10 lb	\$165.00
9920-40	0395-6017-81	40 lb	\$600.00

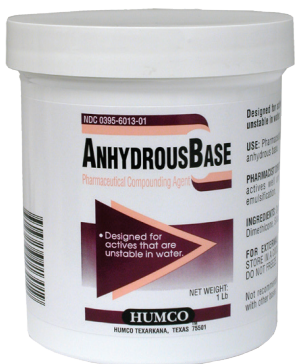
Ingredients: Alcohol, carbomer, cyclodextrin and purified water.



PUBLISHED STABILITY/POTENCY STUDIES – BEYOND-USE-DATE (BUD)

ACTIVE INGREDIENT	BUD
Diclofenac – 4%	30 Days
Diltiazem – 2%	30 Days
Gabapentin – 6%	30 Days
Glycolic Acid – 5%	30 Days
Ibuprofen – 10% – (piroxicam)	30 Days
Ketoprofen – 10% – (piroxicam)	30 Days
Piroxicam – 1% – (ibuprofen, ketoprofen)	30 Days

{ *Compares to VersaBase Gel* }



Item No. 9918-1 NDC No. 0395-6013-01 Size 1 lb Price \$100.00

Ingredients: Cyclomethicone, dimethicone, and silic other proprietary ingredients.

Anhydrous Base

READY-TO-USE BASE FOR ACTIVES UNSTABLE IN WATER

Humco's Anhydrous Base is designed for low-load hydrophilic and high-load lipophilic actives that are unstable in water. Intense studies validate its compatibility with numerous drugs across a broad range of applications. It is cosmetically elegant with an exceptional sensory evaluation profile over other anhydrous bases, providing a smooth, light, and silky feel.

Anhydrous Base Benefits:

- Contains absolutely no water
- Non-greasy & noncomedogenic
- Validated & proven drug compatibility
- Cosmetically elegant – smooth, light, silky feel
- Preservative-free & petroleum-free
- Easy to use – actives can be directly incorporated without wetting
- APIs – 180-day BUD
- Fragrance-free & dye-free
- Natural preservatives

Validated Transdermal Penetration
See Pages 22-23 for More Study Details

ANHYDROUS BASE PROPERTIES	
Specific Gravity	0.95g/ml
Viscosity	30,000 cps
Physical Format	Gel
Color	Light Beige
Transdermal Penetration	50%
API Compatibility	Hydrophilic 10% & Lipophilic 30% – Total API Load – 40%
Typical Applications	<div>• Dermatology • HRT • Immunotherapy • Pain Management</div> <div>• Sports Medicine • Veterinary Medicine • Wound Care</div>

SAMPLE FORMULAS:

- **Glutathione 20% Topical**
Glutathione (L) Reduced 20 g
Humco Anhydrous Base 80 g
Recommended Penetration Enhancer
50% Lecithin in Isopropyl Palmitate

- **Methimazole 5% Topical**
Methimazole 5 g
Humco Anhydrous Base 95 g
Recommended Wetting Agent
Emu Oil

{ *Compares to Anhydrous Lipoderm* }

Beyond-Use-Date:
180 Days

Humco's Anhydrous Base is a nonaqueous semisolid formulation: The **maximum USP recommended** Beyond-Use-Dates for non-sterile compounded drug preparations should be no later than 6 months.

Published Stability/Potency Studies – Beyond-Use-Date (BUD)

ACTIVE INGREDIENT	BUD	ACTIVE INGREDIENT	BUD
Anthralin - 1%	180 Days	Malathion - 0.5%	180 Days
Camphor - 0.3%	180 Days	Medroxyprogesterone - 0.6%	180 Days
Cantharadine - 0.7%	180 Days	Menthol - 10% - (capsaicin)	180 Days
Capsaicin - 0.3% - (menthol)	180 Days	Methimazole - 5%	180 Days
Chloramphenicol - 1%	180 Days	Morphine - 0.1%	180 Days
Cholestyramine - 6.5%	180 Days	Mupirocin - 1%	180 Days
Coal Tar - 1%	180 Days	Mycophenolate - 2%	180 Days
Dehydroepiandrosterone - 1.25%	180 Days	Piroxicam - 0.5%	180 Days
Dexamethasone - 1.5%	180 Days	Podophyllum - 10% - (salicylic acid)	180 Days
DMSA - 10%	180 Days	Prednisolone - 5%	180 Days
Estradiol - 1% - (estriol)	180 Days	Prednisone - 5%	180 Days
Estriol - 0.2% - (estradiol)	180 Days	Progesterone - 10%	180 Days
Estrone - 0.01%	180 Days	Reglan - 2%	180 Days
Glutathione - 20%	180 Days	Salicylic Acid - 6% - (podophyllum)	180 Days
Hydrocortisone - 1%	180 Days	Strattera - 5%	180 Days
Ibuprofen - 20% - (piroxicam)	180 Days	Testosterone - 2%	180 Days
Ivermectin - 1%	180 Days	Thorazine - 5%	180 Days
Ketoprofen - 20% - (piroxicam)	180 Days	Vitamins - 0.1%	180 Days
Lorazepam - 0.1%	180 Days		



Sensory Evaluation Profile of Humco's Anhydrous Base compared to other (standard) anhydrous bases. **Humco's base is superior in all areas:** wetness, absorbency, gloss, & silkiness.

180-Day BUD Lorazepam Study

When do you need Humco's Anhydrous Base?

- When an active ingredient is unstable in water.
- When you want 180 day beyond-use-dating.
- When you want a cosmetically elegant & noncomedogenic product.

Mixing Tips

- Mixing Speed –1000 rpm for 2 to 5 Minutes
- If Dispensing in a Pump – Airless Pump Dispensers Recommend

Ready To Use • No Wetting • Actives Can Be Directly Incorporated

Ready To Use • No Wetting • Actives Can Be Directly Incorporated



Item No.	NDC No.	Size	Price
9919-1	0395-6015-01	1 lb	\$45.00
9919-10	0395-6015-79	10 lb	\$380.00
9919-40	0395-6015-81	40 lb	\$1400.00



Ingredients: Purified water, ethylhexyl stearate, cetearyl alcohol, polysorbate-60, aloe leaf juice, vitamin E, EDTA, sorbitol, cyclome-thicone and isothiazolinone.

MultiBase™

HIGHLY VERSATILE OIL-IN-WATER CREAM BASE

A versatile, oil-in-water natural vanishing cream that uses oleosomic emulsifiers and penetration enhancers. It is a great oil-free moisturizing base that provides natural skin penetration. MultiBase™ is designed for both hydrophilic and lipophilic actives and exhibits superior stability in the presence of low and high pH, high salt, high ethanol and high polar compounds, allowing for flexible compounding and formulation options.

MultiBase™ Important Benefits:

- Oil-free, gluten-free & propylene glycol-free
- Noncomedogenic
- Enhanced drug absorption & penetration
- Ideal for vaginal preparations
- Stable over a broad range pH
- API compatibility – hydrophilic & lipophilic
- Natural ingredients – moisturizers derived from berries, grapes, plums & pears; emulsifiers derived from vegetable fatty acids & palm oil; thickening agents derived from coconut oil



MULTIBASE PROPERTIES	
pH	pH - 7.0
Specific Gravity	0.90 g/ml
Viscosity	250,000 cps
Physical Format	Heavy Cream
Color	White
Transdermal Penetration	40%
API Compatibility	Hydrophilic 10% & Lipophilic 10% – Total API Load – 20%
pH Compatibility	pH 3.0 - pH 11.0
Salt Tolerance	Salt Forms – 10%
Solvent Compatibility	Polar & Non-Polar
Typical Applications	<ul style="list-style-type: none">• Hormone Replacement (topical & vaginal)• Dermatology• Pain Management• Sports Medicine

SAMPLE FORMULAS:

- **HRT Cream**
Progesterone 20 g
Glycerin 10 g
MultiBase™ qs 100 g
- **Analgesic Cream**
Capsicum Oleoresin 0.6 g
Methyl Salicylate 10 g
Menthol 4 g
MultiBase™ qs 100 g
- **Anti-Wrinkle Cream**
Retinoic Acid 0.05 g
Glycerin 10 g
MultiBase™ qs 100 g

{ *Compares to VersaBase Cream* }

Humco's MultiBase™

Provides **natural penetration into the skin**, works with low & high pH levels, high salt, high ethanol & high polar oil compounds.

Published Stability/Potency Studies – Beyond-Use-Date (BUD)

ACTIVE INGREDIENT	BUD
Aluminum Acetate – 0.1%	30 Days
Azelaic Acid – 10%	30 Days
Capsaicin – 1.2% – (menthol, methyl salicylate)	90 Days
Estradiol – 1% – (estriol)	90 Days
Estriol – 0.2% – (estradiol)	90 Days
Estrone – 0.02%	90 Days
Hexachlorophene – 10%	30 Days
Lactic Acid – 8.5%	90 Days
Lidocaine – 8% – (metronidazole, phenytoin)	90 Days
Medroxyprogesterone – 0.1%	90 Days
Menthol – 8% – (capsaicin, methyl salicylate)	90 Days
Methyl Salicylate – 20% – (capsaicin, menthol)	90 Days
Metronidazole – 8% – (lidocaine, phenytoin)	90 Days
Phenytoin – 8% – (lidocaine, metronidazole)	90 Days
Progesterone – 10%	90 Days
Retinoic Acid – 0.05%	30 Days
Tamoxifen Citrate – 0.2%	30 Days
Testosterone - 2%	180 Days



When do you need MultiBase™?

- When you want more efficacious active drug absorption than with traditional vanishing bases.
- When you want to incorporate both oil & water soluble ingredients.
- When you want a noncomedogenic moisturizing cream that is oil-free.

MULTIBASE VS TRADITIONAL VANISHING CREAM

	MultiBase™	Traditional
PENETRATING ABILITY	40%	20%
PH COMPATIBILITY	pH 3.0 - pH 11.0	pH 5.0 - pH 9.0
SALT COMPOUNDS	10% salt	5% salt
ETHANOL COMPOUNDS	10% ethanol	5% ethanol
POLAR OIL COMPOUNDS	10% polar oil	5% polar oil



Item No.	NDC No.	Size	Price
9910-1	0395-6001-01	1 lb	\$38.00
9910-10	0395-6001-79	10 lb	\$240.00
9910-40	0395-6001-81	40 lb	\$660.00

HRT Botanical

ALL NATURAL HRT BASE

HRT Botanical is an oil-in-water, light cream hypoallergenic base, with all natural ingredients and antioxidants. It has a lotion consistency and provides sustained skin penetration. Ideal for high lipophilic API concentrations.

HRT Botanical Base Benefits:

- Sustained skin penetration
- Paraben-free & fragrance-free
- Natural ingredients & natural preservatives
- Added antioxidants, botanicals & herbal extracts
- Hypoallergenic
- Cosmetically elegant
- Ideal for vaginal preparations

Validated Transdermal Penetration

See Pages 22-23 for More Study Details

HRT BOTANICAL PROPERTIES	
pH	pH – 6.5
Specific Gravity	1.00 g/ml
Viscosity	60,000 cps
Physical Format	Light Cream
Color	Light Beige
Natural Preservatives	Yes
Natural Ingredients	Yes
Transdermal Penetration	40%
API Compatibility	Lipophilic – 30%
Typical Applications	Hormone Replacement

Published Stability/Potency Studies – Beyond-Use-Date (BUD)

ACTIVE INGREDIENT	BUD
Estradiol – 1% – (estriol, estrone)	90 Days
Estriol – 1% – (estradiol, estrone)	120 Days
Estrone – 0.5% – (estradiol, estriol)	150 Days
Medroxyprogesterone – 0.06%	30 Days
Prednisolone 5%	90 Days
Progesterone – 20%	180 Days
Testosterone – 5%	180 Days

Ingredients: Aloe barbadensis, cetyl alcohol, ethylhexylglycerin, evening primrose oil, glycerin, glyceryl stearate, grape seed oil, hydroxylated soybean lecithin, magnesium aluminum silicate, oleic acid, olive oil, PEG-100 stearate, phenoxyethanol, purified water, stearic acid, tolamine NF, vitamin E acetate, wheat germ oil, and xanthan gum.

{ Compares to Cosmetic HRT Base }

HRT Heavy

HRT HEAVY CREAM BASE (FOR WOMEN & MEN)

HRT Heavy is a heavier cream base than HRT Botanical; it is non-oily and provides deeper skin penetration. It is specifically designed for male and female hormone restoration formulations and has a low to moderate API carrying capacity.

HRT Heavy Base Benefits:

- Sustained skin penetration
- Non-oily
- Cosmetically elegant
- Ideal for intravaginal preparations
- Validated stability/potency of 180 days for all hormone APIs

HRT HEAVY PROPERTIES	
pH	pH – 7.5
Specific Gravity	1.04 g/ml
Viscosity	165,000 cps
Physical Format	Cream
Color	White
Natural Preservatives	Yes
Natural Ingredients	Yes
Transdermal Penetration	50%
API Compatibility	Lipophilic – 20%
Typical Applications	Male & Female Hormone Replacement

Published Stability/Potency Studies—Beyond-Use-Date (BUD)

ACTIVE INGREDIENT	BUD
Estradiol – 1% – (estriol, estrone)	180 Days
Estriol – 1% – (estradiol, estrone)	180 Days
Estrone – 0.5% – (estradiol, estriol)	180 Days
Progesterone – 20%	180 Days
Testosterone – 5%	180 Days

Ingredients: C12 - 15 alkyl benzoate, caprylic/capric triglycerides, cetyl alcohol, ethylhexylglycerin, glycerin USP, glyceryl stearate, hydroxyethyl acrylate/sodium acryloyldimethyl taurate copolymer, oleic acid, olive oil, PEG-100 stearate, phenoxyethanol, polymethylsiloxane, purified water, stearic acid, tolamine NF and vitamin E acetate.

{ Compares to Cosmetic HRT Base }

#1 Base for Compounding **Testosterone** Preparations!

Validated Transdermal Penetration
See Pages 22-23 for More Study Details



Item No.	NDC No.	Size	Price
9911-1	0395-6002-01	1 lb	\$38.00
9911-10	0395-6002-79	10 lb	\$240.00
9911-40	0395-6002-81	40 lb	\$660.00

180-Day BUD Study for BOTH Progesterone & Testosterone



Progesterone Transdermal Study

Humco's PENCream, Anhydrous Base, HRT Heavy & HRT Botanical are Validated Transdermal Vehicles

5%
Progesterone
Transdermal Study

Humco's
PENCream, Anhydrous Base, HRT Botanical & HRT Heavy
Proven to transport progesterone into and through human skin, performing **significantly more effectively** than our competitor's base.

Transdermal Drug Absorption:

- Avoids hepatic first pass effect, reducing adverse reactions to certain drugs
- Reduces minor gastro-intestinal tract irritation and systemic toxicity
- Helps avoid possible drug interactions with food and intestinal flora
- Can be applied to different parts of the body (site rotation)

STUDY

Evaluation of the Percutaneous Absorption of Progesterone, In Vitro, Using the Epiderm Skin Model

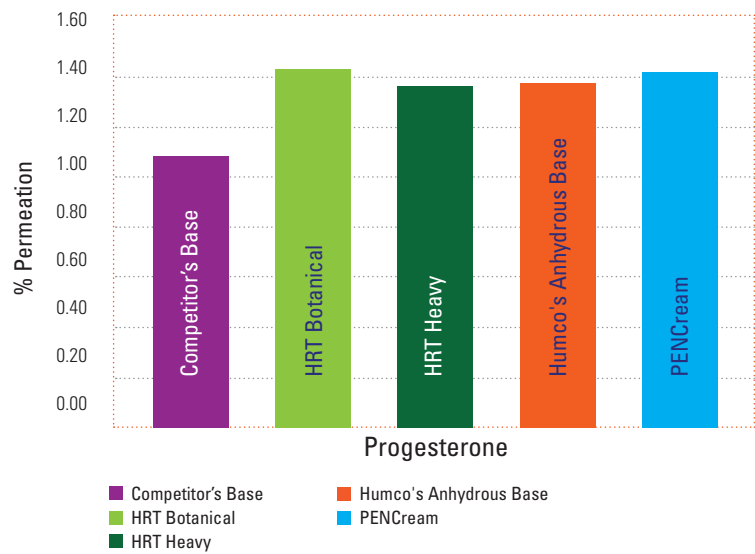
The progesterone study evaluated the percutaneous absorption pharmacokinetics of progesterone in the following Humco bases: HRT Botanical, HRT Heavy, Anhydrous Base and PENCream. Absorption was measured in human epidermal cultures, in vitro, using the finite dose technique and Franz Diffusion Cells.

Formulas were tested on standardized sections for the percutaneous absorption of progesterone over a 12-hour dose period. At pre-selected times after dose application, the dermal receptor solution was completely removed and replaced with fresh receptor solutions; and an aliquot was saved for subsequent analysis. Samples were analyzed for progesterone content by High Performance Liquid Chromatography (HPLC).

The in vitro human Epiderm skin model is a proven tool, valuable for the study of percutaneous absorption and determination of pharmacokinetics of topically applied drugs. The model uses human epidermal skin mounted in specially designed diffusion cells that allow the skin to be maintained at a temperature and humidity that match typical in vitro conditions. A finite dose of formulation is applied to the outer skin surface, and drug absorption is measured by monitoring the rate of appearance in the receptor solution bathing the inner surface of the skin. Data defining total absorption, as well as rate of absorption, can be accurately determined in this model.

Humco Invests in Scientific Studies
To Ensure Our Transdermal Bases Deliver the Formula Efficaciously to the Patient!

% Progesterone Permeation Through the Stratum Corneum

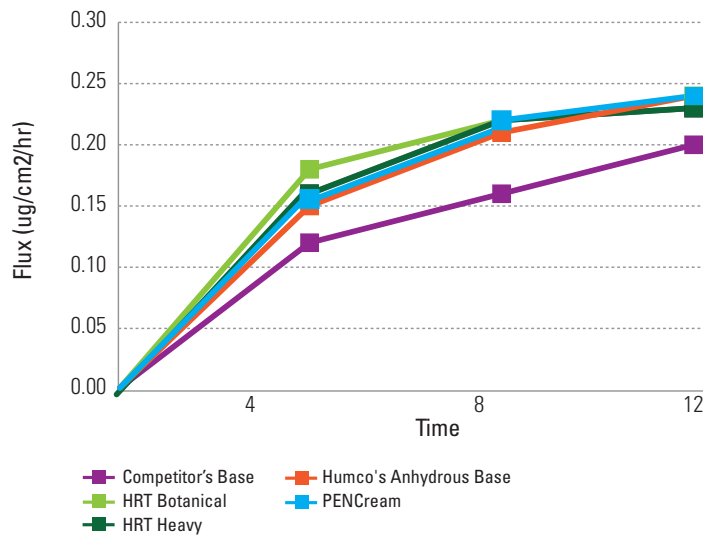


RESULTS

The data did indicate that progesterone penetrated into and through human epidermal cultures, in vitro, from the test formulations provided. The absorption profiles indicate a steady penetration to a peak flux occurring at approximately 12 hours after dose application. HRT Botanical, HRT Heavy, Anhydrous Base and PENCream delivered more progesterone than our competitor's base.

The total percent of applied dose that penetrated past the stratum corneum with our competitor's base is 20% less than Humco's HRT Botanical, HRT Heavy, Anhydrous Base and PENCream.

Progesterone Flux Time



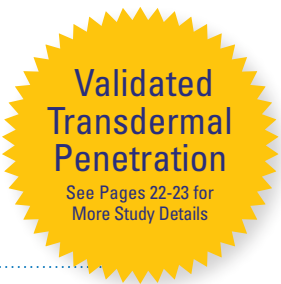
Humco's
Products—
Proven to
Out-Perform
Competitor's
Base by
20%!

For Additional Study or Product Information Contact our
Compounding Resource Center at 855.925.4736



Item No.	NDC No.	Size	Price
9917-1	0395-6010-01	1 lb	\$50.00
9917-10	0395-6010-79	10 lb	\$250.00
9917-40	0395-6010-81	40 lb	\$1000.00

PENCream™



TRANSDERMAL OIL-IN-WATER VANISHING BASE

PENCream™ is an elegant oil-in-water vanishing cream formulated for enhanced transdermal penetration. This elegant alternative to PLO, with added emollients, provides a better rub-in and longer-lasting moisturization without irritation. PENCream™ is highly compatible with a diverse range of hydrophilic and lipophilic actives, has a high API load capacity and is ideal for hybrid formulations.

PENCream™ Important Benefits:

- Free of BHT, EDTA, parabens & urea
- Enhanced penetration capability – efficacious API absorption
- Hydrophilic & lipophilic compatibility – high loads
- Validated transdermal penetration & beyond-use-dates (BUD)
- Natural ingredients – less irritation than PLO
- Cosmetically elegant – lasting moisturizing effect
- Applies easily – no sticky residue
- Validated API compatibility

PENCREAM PROPERTIES	
pH	pH – 7.0
Specific Gravity	0.96 g/ml
Viscosity	300,000 cps
Physical Format	Heavy Cream
Color	White
Natural Preservatives	Yes
Transdermal Penetration	70%
Typical Applications	• Pain Management • Veterinary Medicine • Immunotherapy
API Compatibility	Hydrophilic & Lipophilic – Total API Load – 30%

When do you need PENCream™?

- When you want more efficacious active drug absorption than with traditional vanishing bases.
- When you want to incorporate both water & oil-soluble ingredients.
- When you want a creamier base than a PLO that is more cosmetically elegant, less sticky and has less odor.
- When you want a vanishing & penetrating cream that is BHT, EDTA, fragrance, paraben and urea free.
- When you want a cosmetically elegant & noncomedogenic product.

{ Compares to Pentravan Base and Vanpen Base }

Ingredients: Purified water, isopropyl palmitate, caprylic/capric triglyceride, propylene glycol, ceteareth 20, cetearyl alcohol, glyceryl stearate, PEG-100 stearate, dimethicone, octyldodecanol, lecithin, ethylhexylglycerin, and phenoxyethanol.

Humco's PENCream™

Provides **more penetration into the skin**, works with higher levels of lipophilic/hydrophilic agents, and provides **longer-lasting moisturization** without irritation than with traditional bases.

Published Stability/Potency Studies – Beyond-Use-Date (BUD)

ACTIVE INGREDIENT	BUD
Clomipramine – 7.5%	90 Days
Fluoxetine – 7.5%	90 Days
Gabapentin – 6% – (ketoprofen, lidocaine)	90 Days
Ibuprofen – 10%	90 Days
Ketoprofen - 10% - (gabapentin, lidocaine)	90 Days
Lidocaine – 15% – (gabapentin, ketoprofen)	90 Days
Methimazole – 7.5%	90 Days
Metoclopramide – 2%	90 Days
Metronidazole – 3%	90 Days
Promethazine – 5%	90 Days
Tetracaine – 2%	90 Days

PENCREAM VS COMPETITOR'S BASE

	PENCREAM	COMPETITOR
Penetrating Ability	70%	70%
API Capacity	30%	20%
Emollients	8%	6%
Irritants	0.0%	5%



Mixing Tips

Water soluble powders – levigate with alcohol, dimethyl sulfoxide (DMSO), glycerin, polyethylene glycol (PEG) 300 or 400 or purified water.

Oil-soluble powders – can be directly incorporated.



Formula Questions?

Contact our Resource Center to Speak with a Formulation Expert!



Item No.	NDC No.	Size	Price
9912-1	0395-6003-01	1 lb	\$50.00
9912-10	0395-6003-79	10 lb	\$365.00
9912-40	0395-6003-81	40 lb	\$1310.00

LipoBase Regular

TRANSDERMAL LIPOSOMAL BASE

Lipo Regular and Lipo Heavy are cosmetically elegant, non-oily liposomal transdermal bases with excellent skin penetration and moisturizing capabilities. They are formulated to incorporate lipophilic and hydrophilic actives and penetrate deeper and faster than HRT bases.

Lipo Regular & Lipo Heavy Important Benefits:

- Cosmetically elegant – excellent moisturizing effect
- Faster absorption & deeper penetration than HRT bases
- API compatibility – virtually all actives
- Natural ingredients & natural preservatives
- Water & oil-soluble
- Ideal for cosmetic facial applications

BASE PROPERTIES	LIPO REGULAR	LIPO HEAVY
pH	pH – 7.5	pH – 6.0
Specific Gravity	1.00 g/ml	1.00 g/ml
Viscosity	120,000 cps	165,000 cps
Format	Light Cream	Heavy Cream
Color	Light Beige	White
Transdermal Penetration	60%	70%
API Compatibility	<ul style="list-style-type: none">• Hydrophilic – 5%• Lipophilic – 5%• Total API Load – 10%	<ul style="list-style-type: none">• Hydrophilic – 10%• Lipophilic – 10%• Total API Load – 20%
Applications	<ul style="list-style-type: none">• Dermatology• Pain Management• Hormone Therapy• Veterinary Medicine	<ul style="list-style-type: none">• Dermatology• Pain Management• Immunotherapy• Sports Medicine
Recommended Use	<ul style="list-style-type: none">• Lower API Loads• Cosmetic Preparations	<ul style="list-style-type: none">• Higher API Loads• Dry/Dehydrated Skin• Chemical Peels• Pigmentation Treatments

Ingredients: Alcohol USP, caprylic/capric triglycerides, ceteareth 20, cetearyl alcohol, cetyl alcohol, ethylhexylglycerin, glycerin USP, hydroxyethyl acrylate/sodium acryloyldimethyl taurate copolymer, isopropyl palmitate, magnesium, aluminum silicate, oleic acid, phenoxyethanol, polymethylsiloxane, purified water, soy lecithin, stearyl alcohol and xanthan gum.

{ Compares to Lipoderm }

Not Sure Which Base to Use? Let Us Guide You. Call Us at **(800) 878-2822**



Item No.	NDC No.	Size	Price
9913-1	0395-6004-01	1 lb	\$50.00
9913-10	0395-6004-79	10 lb	\$365.00
9913-40	0395-6004-81	40 lb	\$1310.00

LipoBase Heavy

HIGHLY MOISTURIZING TRANSDERMAL LIPOSOMAL BASE

LipoBase Heavy uses the same formulation as LipoBase Regular but with additional emulsifiers to allow for higher API loads and solvent concentrations to be incorporated. Added emollients provide excellent moisturization—an ideal choice for dry and/or dehydrated skin.

Published Stability/Potency Studies – Beyond-Use-Date (BUD)

ACTIVE INGREDIENT	Lipo Regular BUD	Lipo Heavy BUD
Buspirone – 2.5%	30 Days	—
Capsaicin – 0.3% – (menthol)	—	30 Days
Dehydroepiandrosterone – 1.25%	90 Days	—
Dexamethasone – 1.5% – (haloperidol, lorazepam)	—	90 Days
Diclofenac – 4%	—	90 Days
Diltiazem – 2%	—	90 Days
DMSA – 10%	—	30 Days
Estradiol – 0.5% – (estriol)	60 Days	—
Estriol – 0.1% – (estradiol)	30 Days	—
Gabapentin – 6%	—	90 Days
Gabapentin – 12.5%	90 Days	—
Glutathione – 20%	—	30 Days
Glycolic Acid – 5% – (hydroquinone)	—	30 Days
Haloperidol – 0.1% – (dexamethasone, lorazepam)	—	90 Days
Hydroquinone – 5% – (glycolic acid)	—	90 Days
Lorazepam – 0.1% – (dexamethasone, haloperidol)	—	30 Days
Menthol – 10% – (capsaicin)	—	30 Days
Methimazole – 5%	90 Days	—
Morphine – 0.1%	—	30 Days
Piroxicam – 0.5%	—	90 Days
Progesterone – 5%	90 Days	—
Promethazine – 5%	—	90 Days
Strattera – 5%	—	30 Days
Thorazine – 5%	—	30 Days
Vitamins – 0.1%	—	30 Days

{ Compares to Liposomic Base for Dehydrated Skin }

LipoBase Heavy is **Ideal for Cosmetic Facial** Applications!



Ingredients: Caprylic / capric triglycerides, cetearyl alcohol, ceteareth-20, cetyl esters, wax, dimethicone 350 NF, ethyl alcohol, ethylhexylglycerin, glyceryl stearate, hydroxyethyl acrylate, hydroxypropyl starch phosphate, lecithin, octyl-dodecanol, PEG-100 stearate, phenoxyethanol, poloxamer 407, polyoxyethylene (2) stearyl ether, polyoxyethylene (21) stearyl ether, polysorbate 60, propylene glycol, purified bentonite, purified water, sodium acryloyldimethyl taurate copolymer, sorbitol, squalene and stearyl alcohol.



Item No.	NDC No.	Size	Price
9916-1	0395-6009-01	1 lb	\$70.00
9916-10	0395-6009-79	10 lb	\$450.00
9916-40	0395-6009-81	40 lb	\$1600.00



Published Stability/Potency Studies – Beyond-Use-Date (BUD)

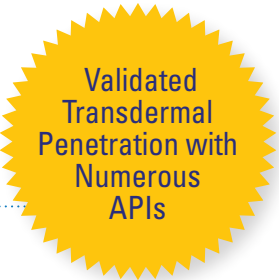
ACTIVE INGREDIENT	BUD
Amitriptyline – 2% – (lidocaine)	90 Days
Benzocaine – 20% – (lidocaine, tetracaine)	90 Days
Clomipramine – 5%	90 Days
Cyclobenzaprine – 2%	90 Days
Diphenhydramine – 10%	90 Days
Fluoxetine – 5%	90 Days
Gabapentin – 6%	90 Days
Lidocaine – 10% – (benzocaine, tetracaine)	90 Days
Methimazole – 5%	90 Days
Metronidazole – 2%	90 Days
Promethazine – 5%	90 Days
Tetracaine – 4% – (benzocaine, lidocaine)	90 Days

Ingredients: Isopropyl palmitate, lecithin and proprietary ingredients.

{ Compares to Lipoderm ActiveMax Base }

Ready To Use • No Wetting • Actives Can Be Directly Incorporated

SaltStable LO™



READY-TO-USE TRANSDERMAL BASE

SaltStable LO™ is a ready-to-use transdermal cream base providing an elegant alternative to traditional PLOs. It's uniquely designed for long shelf, temperature and physical stability; it will not separate in the presence of high levels of ionic substances or when refrigerated. It uses emulsifiers and hydrocolloids that provide a chemical penetration enhancer (CPE) value superior to a PLO. SaltStable LO™ is cosmetically elegant and compatible with both hydrophilic and lipophilic APIs allowing for compounding flexibility.

SaltStable LO™ Benefits:

- Efficacious active drug absorption
- Validated in vitro transdermal penetration & API compatibility
- Temperature stable & two-year shelf stable
- Hydrophilic compatibility – high levels of ionic powders can be directly incorporated
- Lipophilic compatibility – moderate levels of oil-soluble powders can be levigated with glycerin, propylene glycol, polyethylene glycol (PEG) 300 or 400, or alcohol
- Cosmetically elegant – not tacky or sticky
- Natural ingredients – resulting in less irritation

SALTSTABLE LO PROPERTIES	
pH	pH – 7.0
Specific Gravity	1.00 g/ml
Viscosity	300,000 cps
Physical Format	Heavy Cream
Color	Light Beige
Transdermal Penetration	80%
Typical Applications	• Pain Management • Sports Medicine • Veterinary Medicine
API Compatibility	Hydrophilic 30% & Lipophilic 10% – Total API Load 35%
Salt Tolerance	Excellent

When do you need SaltStable LO?

- When you want a more efficacious active drug absorption than with PLO.
- When you want to incorporate high levels of ionic substances.
- When you want a creamier, more cosmetically elegant and less sticky base than with a PLO.
- When you want a penetrating cream that can be refrigerated.
- When you want 180-day beyond-use-dating.

NEW

SaltStable LS Advanced™

PROVEN & VALIDATED AS A TRUE STATE-OF-THE-ART PRODUCT!

SaltStable LS Advanced™ is an extension and enhancement of SaltStable LO™. SaltStable LS Advanced™ is a scientifically advanced, extremely durable, robust and versatile transdermal cream base formulated with a silogel that provides a smooth, silky dry feel. Designed for all actives and is non-specific to salt, it exhibits superior API carrying capacity (high loads) of multiple actives in one formulation. SaltStable LS Advanced™ demonstrates excellent stability without the need to add emulsifiers. The only product of its kind on the market today!

SaltStable LS Advanced™ Important Features:

- Increased stability with a high percent of APIs & multiple actives
- Validated in vitro transdermal vehicle up to 8 APIs in one formulation
- Less sticky & less tacky because of silogel (silicone-based organogel)
- Off-white, cosmetically elegant cream
- API compatibility – compatible with all actives, non-specific to salt
- Time saving – ready-to-use base, no need for wetting or adding thickening agents
- Ideal for formulations with multiple actives & high API loads

SALTSTABLE LS ADVANCED PROPERTIES	
pH	7.1 – 7.5
Specific Gravity	0.90 g/ml
Viscosity	1,200,000 cps
Physical Format	Heavy Cream
Color	Off White
Transdermal Penetration	70%
API Compatibility	All APIs – Hydrophilic and Lipophilic – Extremely High Loads
pH Compatibility	Broad Range
Salt Tolerance	Non-Specific to Salts
Polar Compounds	Compatible with Most Compounds

{ Compares to Lipoderm ActiveMax Base }

We Believe the Most **Scientifically Advanced Product** on the Market Today!
For Additional Information or to Request a Sample
Contact our Compounding Resource Center at **855.925.4736**

Ready To Use • No Wetting • Actives Can Be Directly Incorporated



Item No.
9936-500
9936-4.5
9936-18

For product information and pricing:
(800) 878-2822





New
SaltStable
LS Advanced™
Transdermal Study

Study
Just Completed
**SaltStable LS
Advanced™** Proven
to Deliver **8 Drugs**
Simultaneously*!
Contact Us for Details



Breakthrough Study:
SaltStable LS Advanced™ Proven to
Deliver Four Drugs Simultaneously
Through Human Skin In Vitro!

** New 8 Active Study Just Completed. Contact Us for Full Test Results!*

STUDY

Evaluation of the Percutaneous Absorption of Ketamine HCl + Gabapentin + Clonidine HCl + Baclofen, In SaltStable LS Advanced™, Into Human Skin, In Vitro, Using the Franz Skin Finite Dose Model

Using Humco's SaltStable LS Advanced™ the study was designed to evaluate the percutaneous absorption pharmacokinetics of ketamine HCl, gabapentin, clonidine HCl and baclofen. Absorption was measured in human epidermal cultures, in vitro, using the finite dose technique and Franz Diffusion Cells. The four drugs were selected due to their frequent use in compounding topical pain formulations along with compounding multiple actives in one formulation.

TESTED FORMULA

Ketamine HCl	5%
Gabapentin	10%
Clonidine HCl	0.2%
Baclofen	2%
SaltStable LS Advanced™	qs 100%

The formula was tested on standardized sections with two different transdermal compounding bases, for the percutaneous absorption of ketamine HCl, gabapentin, clonidine HCl and baclofen over a 48-hour dose period. At pre-selected times after dose application, the dermal receptor solution was removed in its entirety, replaced with fresh receptor solution, and an aliquot saved for subsequent analysis. High Performance Liquid Chromatography (HPLC) analyzed the samples for ketamine HCl, gabapentin, clonidine HCl and baclofen content.

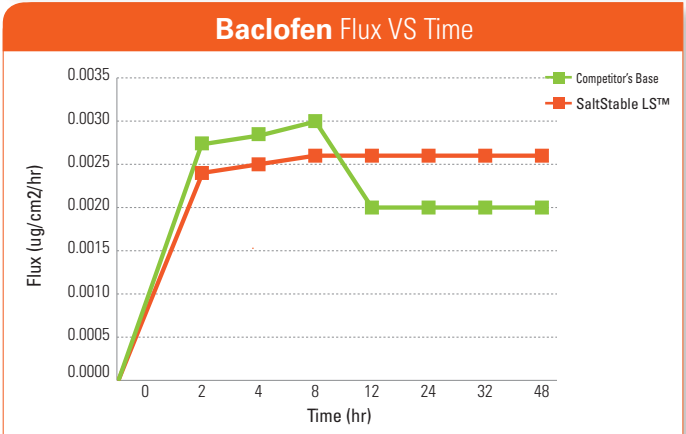
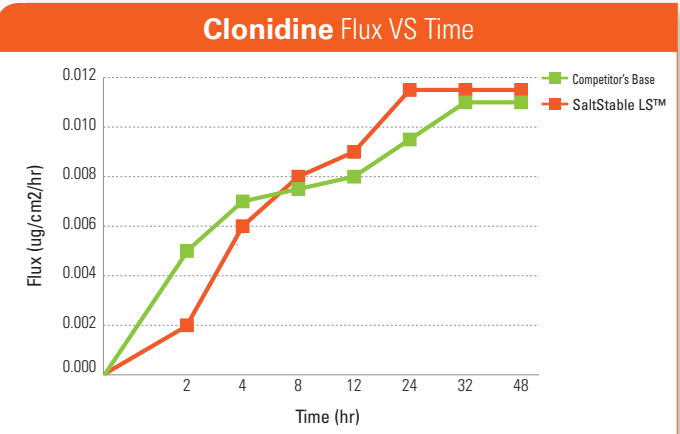
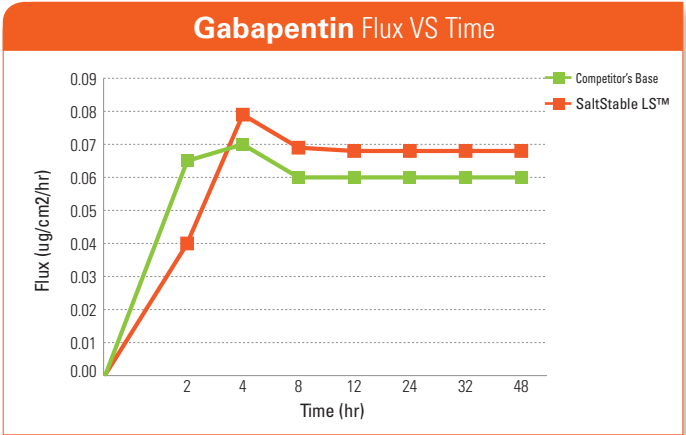
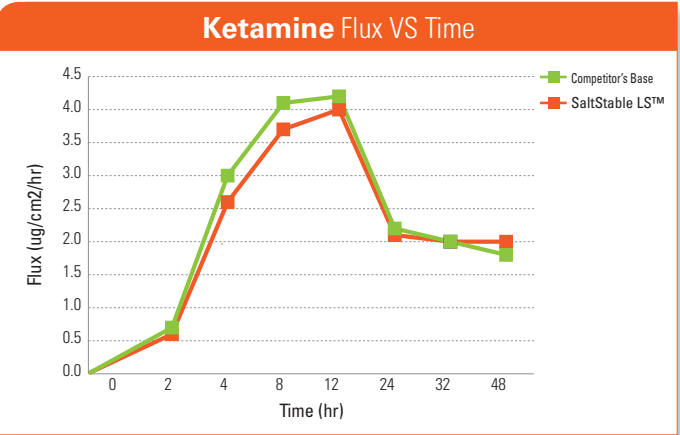
The in vitro human Epiderm skin model is a proven tool, valuable for the study of percutaneous absorption and the determination of the pharmacokinetics of topically applied drugs. The model uses human epidermal skin mounted in specially designed diffusion cells that allow the skin to be maintained at a temperature and humidity that match typical in vitro conditions. A finite dose of formulation is applied to the outer surface of the skin and drug absorption is measured by monitoring the rate of appearance in the receptor solution bathing the inner surface of the skin. Data defining total absorption, as well as rate of absorption can be accurately determined in this model.

RESULTS

Humco's SaltStable LS Advanced™ is proven to deliver multiple drugs (intact) beyond the stratum corneum, simultaneously into and through the human skin after a single dose in the base.

The data indicates that Humco's SaltStable LS Advanced™ delivered ketamine HCl, gabapentin, clonidine HCl and baclofen simultaneously into and through human epidermal

cultures, in vitro. The absorption profiles indicate a rapid penetration to a peak flux for gabapentin occurring at approximately 4 hours after dose application, and for baclofen occurring at approximately 8 hours after dose application. The absorption profiles indicate a steady penetration to a peak flux for ketamine HCl occurring at approximately 12 hours after dose application, and for clonidine HCl occurring at approximately 32 hours after dose application.

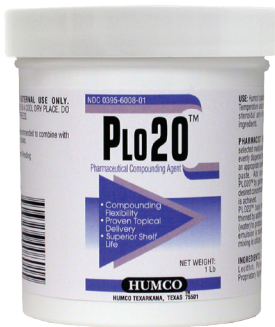


We Believe
The Most
Scientifically
Advanced
Product on
the Market
Today!

ADDITIONAL FORMULAS TESTED

Baclofen	2%
Bupivacaine HCl	1%
Cyclobenzaprine HCl	2%
Diclofenac Na	5%
Gabapentin	6%
Ibuprofen	3%
Ketamine HCl	10%
Pentoxifylline	3%
SaltStable LS Advanced™	q.s. 100%

Diclofenac Na	5%
Ibuprofen	3%
Pentoxifylline	3%
Verapamil HCl	10%
SaltStable LS Advanced™	q.s. 100%



Item No.	NDC No.	Size	Price
9914-1	0395-6008-01	1 lb	\$50.00
9914-10	0395-6008-79	10 lb	\$365.00
9914-40	0395-6008-81	40 lb	\$1310.00

Ingredients: Isopropyl palmitate, lecithin, poloxamer 407, water and proprietary ingredients.

Validated
Transdermal
Penetration

PLO20™

PRE-MADE PLO—VERSATILE TRANSDERMAL VEHICLE

PLO20™ and PLO20 Flowable™ are ready-to-use, absorption-enhanced transdermal vehicles that are elegant alternatives to PLO transdermal systems. They contain penetration enhancers to facilitate more efficacious active drug absorption, emollients for a better rub-in, preservatives for increased mold resistance, along with emulsifiers allowing for better cold-temperature stability. PLO20™ and PLO20 Flowable™ may be blended for viscosity optimization without wetting agents or milling to thin the formula, thus allowing for versatile compounding.

PLO20™ & PLO20 Flowable™ Important Benefits:

- Enhanced penetration – more efficacious drug absorption
- API compatibility – high lipophilic & moderate hydrophilic carrying capacity
- Adjustable viscosity – PLO20™ & PLO20 Flowable™ may be blended
- Temperature & shelf stable
- Cosmetically elegant
- Validated API compatibility & penetration
- No wetting or milling – high levels of oil-soluble powders & moderate levels of water-soluble powders may be directly incorporated

Published Stability/Potency Studies—Beyond-Use-Date (BUD)

ACTIVE INGREDIENT	PLO20	PLO20 Flowable
Diltiazem – 2%	90 Days	—
Gabapentin – 6%	90 Days	—
Haloperidol – 2%	—	90 Days
Ibuprofen – 10% – (piroxicam)	60 Days	—
Ibuprofen – 20% – (piroxicam)	—	90 Days
Ketoprofen – 10% – (piroxicam)	90 Days	—
Ketoprofen – 20% – (piroxicam)	—	90 Days
Methimazole – 5%	90 Days	90 Days
Piroxicam – 1% – (ibuprofen, ketoprofen)	60 Days	—
Piroxicam – 2% – (ibuprofen, ketoprofen)	—	60 Days
Prednisolone – 5%	90 Days	—
Prednisone – 5%	90 Days	—
Prednisone – 10%	—	90 Days
Promethazine – 5%	90 Days	—

When do you need PLO20™ or PLO20 Flowable™?

- When you want more efficacious active drug absorption.
- When you want to incorporate high levels of lipophilic substances.
- When you want a creamier base than a traditional PLO that is more cosmetically elegant and less sticky.
- When you want a penetrating cream that can be refrigerated.

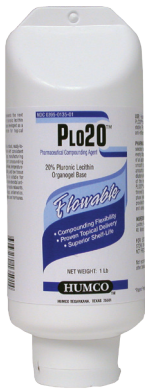
SAMPLE FORMULAS:

- Anti-Nausea Cream**
- **PLO20 Flowable™ Formula**
Ketoprofen 30 g
PLO20 Flowable qs 100g
 - **PLO20™ Formula**
Promethazine 5 g
PLO20 qs 100 g

PLO20 Flowable™

PRE-MADE FLOWABLE PLO—TRANSDERMAL VEHICLE

PLO Flowable™ represents the next generation of pluronic lecithin organogel (PLO) bases, it is a robust, ready-to-use transdermal base. This cosmetically elegant base has a lotion consistency that allows for incorporating high levels of APIs. It contains the same stability properties as PLO20™, allowing for versatile compounding. PLO20 Flowable™ provides enhanced chemical penetration that allows a deeper skin permeation than does PLO20™. This product is designed to accept the incorporation of high levels of lipophilic actives and moderate levels of hydrophilic actives.



Item No.	NDC No.	Size	Price
9915-1	0395-0135-01	1 lb	65.00

Ingredients: Isopropyl palmitate, lecithin, poloxamer 407, SD alcohol 40, water and proprietary ingredients.

BASE PROPERTIES	PLO20	PLO20 FLOWABLE
pH	pH – 7.0	pH – 7.0
Specific Gravity	0.97 g/ml	0.97 g/ml
Viscosity	300,000 cps	30,000 cps
Format	Heavy Cream	Light Cream/Lotion
Color	Light Beige	Light Beige
Transdermal Penetration	80%	90%
API Compatibility	Hydrophilic – 10% Lipophilic – 10% Total API Load – 10%	Hydrophilic – 10% Lipophilic – 30% Total API Load – 30%
Best Use	Low Levels of Lipophilics	High Levels of Lipophilics
Typical Applications	• Pain Management • Sports Medicine • Diabetes & Wound Care • Veterinary Medicine	• Pain Management • Sports Medicine • Immunotherapy • Veterinary Medicine



90-Day BUD
20% Ketoprofen
Study

HUMCO'S PLO20 FLOWABLE™ VS TRADITIONAL PLO & COMPETITOR'S BASE

Humco's PLO20 Flowable™	44%
Competitor's Base	39%
Traditional PLO	17%

% Permeation of Methimazole through the Stratum Corneum

Contact Our
Compounding
Resource Center
For Study Details
855.925.4736

Ready To Use • No Wetting • Actives Can Be Directly Incorporated

Ready To Use • No Wetting • Actives Can Be Directly Incorporated



Item No.	NDC No.	Size	Price
9923-16	0395-0090-16	16 oz	\$9.55
9923-128	0395-0090-28	1 gal	\$62.00

* Compares to Ora-Sweet®

Flavor Sweet™

SYRUP VEHICLE

Flavor Sweet™ is a cherry-flavored syrup vehicle formulated to simplify the preparation of oral extemporaneous delivery systems. It may be used alone or in conjunction with other agents to give flavor and sweetness while increasing the suspension's physical stability. Flavor Sweet™ contains suitable preservatives and is buffered to a slightly acidic pH to provide a dependable and consistent vehicle.

- Pink colored, cherry flavored syrup
- pH 4.5 – pH 5.0
- Recommended use – hydrophilic, acid-stable & hydrophobic actives

Ingredients: Sucrose, purified water, glycerin, sorbitol, flavoring, FD&C Red #33, FD&C Yellow #6, and buffered with sodium phosphate and citric acid. Preserved with potassium sorbate and methylparaben.



Item No.	NDC No.	Size	Price
9924-16	0395-0094-16	16 oz	\$9.55
9924-128	0395-0094-28	1 gal	\$62.00

* Compares to Ora-Sweet® SF

Flavor Sweet SF™

SUGAR-FREE SYRUP VEHICLE

Flavor Sweet SF™ is a sugar-free and alcohol-free cherry flavored syrup. It may be used alone or in conjunction with other agents to give flavor and sweetness while increasing the suspension's physical stability. Flavor Sweet SF™ contains suitable preservatives and is buffered to a slightly acidic pH to provide a dependable and consistent vehicle.

- Pink colored, cherry flavored, sugar-free syrup
- pH 4.5 – pH 5.0
- Recommended use – hydrophilic, acid-stable & hydrophobic actives
- Ideal for diabetic preparations

Ingredients: Purified water, glycerin, sorbitol, flavoring, sodium saccharin, xanthan gum, FD&C Red #40 and FD&C Yellow #6. Buffered with citric acid and sodium citrate. Preserved with methylparaben, propylparaben, and potassium sorbate.



Item No.	NDC No.	Size	Price
9925-16	0395-0091-16	16 oz	\$9.55
9925-128	0395-0091-28	1 gal	\$62.00

* Compares to Ora-Plus®

Flavor Plus™

ORAL SUSPENDING VEHICLE

A unique flavor-free, aqueous based suspending vehicle used to simplify the process of compounding oral non-soluble suspensions. It is buffered to an acidic pH providing a uniform, consistent and stable vehicle.

- Flavor-free, white liquid suspension
- pH 3.5 – pH 4.0
- Recommended use – hydrophilic, acid-stable & hydrophobic actives
- Ideal for diabetic preparations

Ingredients: Purified water, microcrystalline cellulose, carboxymethylcellulose sodium, xanthan gum, carrageenan, buffered with sodium phosphate and citric acid. Preserved with potassium sorbate and methylparaben.

Flavor Blend™

ALL-IN-ONE SYRUP – SUSPENDING VEHICLE

Flavor Blend™ is a uniquely formulated flavored oral suspending vehicle designed to simplify the extemporaneous compounding process of oral suspensions. It combines the flavoring agents of Flavor Sweet™ and the suspending agents of Flavor Plus™, along with preservatives and an anti-foam agent to provide an easy preparation of smooth, elegant oral suspensions.

- Easy to use
- Light pink liquid blend with a cherry flavor
- pH 4.5 – pH 5.0
- Recommended use – hydrophilic, acid-stable & hydrophobic actives
- Incorporate virtually all medicated powders or crushed tablets
- Ideal for pediatric & geriatric preparations

Ingredients: Purified water, sucrose, glycerin, sorbitol, flavoring, microcrystalline cellulose, carboxymethylcellulose sodium, xanthan gum, carrageenan, calcium sulfate, trisodium phosphate, citric acid and sodium phosphate as buffers and simethicone.



Item No.	NDC No.	Size	Price
9922-16	0395-0089-16	16 oz	\$9.55
9922-128	0395-0089-28	1 gal	\$62.00

* Compares to Ora-Blend®

* Ora-Sweet®, Ora-Sweet® SF, Ora-Plus® & Ora-Blend® are registered trademarks of Paddock Laboratories, Inc.



Item No.	NDC No.	Size	Price
9927-16	0395-0125-16	16 oz	\$10.47
9927-128	0395-0125-28	1 gal	\$75.00

Versa Free™

DYE-FREE, CHEMICAL-FREE & SUGAR-FREE SYRUP VEHICLE

A dye-free, flavor-free, paraben-free, sugar-free, saccharin-free syrup vehicle resulting in fewer patient allergic reactions. Virtually no aftertaste.

- Flavor-free clear liquid syrup
- pH 4.5 – pH 5.0
- Natural ingredients & natural preservatives
- Recommended use – hydrophilic, acid-stable & hydrophobic actives
- Ideal for diabetic & allergy-sensitive patients

Ingredients: Purified water, glycerin, sorbitol, xanthan gum, neotame, and buffered with sodium citrate and citric acid. Preserved with potassium sorbate and sodium benzoate.



Item No.	NDC No.	Size	Price
9926-16	0395-0126-16	16 oz	\$10.47
9926-128	0395-0126-28	1 gal	\$75.00

Versa Plus™

DYE-FREE, CHEMICAL-FREE & SUGAR-FREE SUSPENSION VEHICLE

A dye-free, flavor-free, paraben-free, sugar-free, saccharin-free suspension vehicle resulting in fewer patient allergic reactions. Virtually no aftertaste.

- Flavor-free white liquid suspension
- pH 3.5 – pH 4.0
- Natural ingredients & natural preservatives
- Recommended use – hydrophilic, acid-stable & hydrophobic actives
- Ideal for diabetic & allergy-sensitive patients

Ingredients: Purified water, microcrystalline cellulose, carboxymethyl cellulose sodium, carrageenan, xanthan gum, and buffered with citric acid and sodium phosphate. Preserved with potassium sorbate and sodium benzoate.



Item No. 9934-1 NDC No. 0395-3926-01 Size 1 lb Price \$29.00



Ingredients: Corn syrup solids, sucrose, proprietary blend of buffers and suspension aids.

When do you need Humco's Buffer Cream?

- When you want a sweetened buffer product for preparing oral suspensions.
- When you want an alkaline buffer.
- When you want palatability.
- When you want a product that contains no milk or protein.

Buffer Cream

SWEETENED BUFFERING AGENT FOR ORAL SUSPENSIONS

Buffer Cream is a sweetened buffering agent in powder form developed to provide an alkaline buffer for compounding oral proton pump inhibitor (PPI) suspensions. It provides immediate release and rapid absorption of PPI actives and is free of milk and protein. Highly palatable with added sweeteners for either flavored or unflavored alkaline solutions to help overcome patient compliance difficulties.

Buffer Cream Benefits:

- Alkaline buffer
- Immediate release & rapid absorption
- Validated long-term stability
- Masks unpleasant tastes
- API compatibility – all PPIs
- Flavor versatility

BUFFER CREAM PROPERTIES	
Physical Format	White Powder with Translucent Sheen
Suspension Stability	Up to 35 days
API Compatibility	All PPIs (Proton Pump Inhibitors)
Flavor Versatility	Any Flavor

LONG-TERM STABILITY

Active Ingredient	Stability
Lansoprazole	Stable - 21 Days at 25° C
Omeprazole	Stable - 35 Days at 25° C
Pantoprazole	Stable - 7 Days at 25° C

SAMPLE FORMULAS:

- **Omeprazole (Humco Buffer Cream) 10 mg/ml Suspension**
Humco Buffer Cream 54 g
Omeprazole 1.2 g
8.4% Sodium Bicarbonate qs 120 ml

Instructions:

1. Add omeprazole to 90 ml - 8.4% sodium bicarbonate, refrigerate for at least 1 hour and mix until dissolved.
2. Add omeprazole solution to Humco Buffer Cream to qs volume - 120 ml and shake well.
3. Add flavor if desired.



Syrups

PRODUCT	INGREDIENTS	ORDERING INFORMATION			
Cherry Syrup Recommended Use: Ionic & Hydrophilic Actives	Sucrose 82% w/v, purified water, artificial cherry flavors, citric acid, FDC Red #40, sodium benzoate as a preservative, inert ingredients and natural preservatives.	Item No.	NDC No.	Size	Price
		9929-16	0395-2662-16	16 oz	\$9.30
		9929-128	0395-2662-28	1 gal	\$56.00
Raspberry Syrup Recommended Use: Ionic & Hydrophilic Actives	Sucrose 82% w/v, purified water, artificial raspberry flavors, citric acid, FDC Red #40, FDC Blue #1, sodium benzoate as a preservative, inert ingredients and natural preservatives.	Item No.	NDC No.	Size	Price
		9935-16	0395-2664-16	16 oz	\$9.83
Simple Syrup Recommended Use: Ionic & Hydrophilic Actives	Sucrose 85% w/v, citric acid, purified water, methyl paraben as a preservative along with natural preservatives.	Item No.	NDC No.	Size	Price
		9928-16	0395-2661-16	16 oz	\$8.42
		9928-128	0395-2661-28	1 gal	\$42.50
Sorbitol Solution 70%, USP Recommended Use: Ionic & Hydrophilic Actives, Diabetic Additives	Natural ingredients and preservatives— 70% solution of sorbitol and purified water.	Item No.	NDC No.	Size	Price
		9933-16	0395-3913-16	16 oz	\$4.96
Syrpalta (red) Recommended Use: Ionic & Hydrophilic Actives	Sucrose 83% w/v, purified water, glycerin, artificial flavors, 0.2% alcohol, 0.1% sodium benzoate, 0.001% benzalkonium chloride as a preservative and inert ingredients.	Item No.	NDC No.	Size	Price
		9930-16	0395-3920-16	16 oz	\$12.04
Syrpalta (without color) Recommended Use: Ionic & Hydrophilic Actives	Sucrose 83% w/v, purified water, artificial flavors, 0.2% alcohol, 0.1% sodium benzoate, 0.001% benzalkonium chloride as a preservative, inert ingredients and natural preservatives.	Item No.	NDC No.	Size	Price
		9931-16	0395-3927-16	16 oz	\$12.64

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A special thanks to True Custom Pharmacy in Austin, Texas for their continued support and for graciously providing their facility to photograph our products.

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