

Nutricia leads the development of advanced medical nutrition. Nutricia products and services transform the daily lives of millions of infants, children, adults and seniors.



SUMMER

# 2013

## Product Reference Guide

FOR CLINICIANS

 **NUTRICIA**  
Advanced Medical Nutrition

## Nutricia Contacts

### My Nutricia sales representative(s):

Name: .....

Phone:.....

Email: .....

Name: .....

Phone:.....

Email: .....

Name: .....

Phone:.....

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## Nutricia's Nutrition Services

- **Phone:** (800) 365-7354 – Option 2
- **Email:** [nutritionservices@nutricia.com](mailto:nutritionservices@nutricia.com)
- **Live Chat:** [www.Neocate.com](http://www.Neocate.com) (M-F 8:30 am – 5 pm EST)

## Ordering Information

### Pharmacies/Hospitals/Wholesalers:

#### **USA: Customer Service Department**

- **Phone:** (800) 365-7354
- **Fax:** (301) 795-2301

#### **Canada: Customer Service Department**

- **Phone:** (877) 636-2283
- **Fax:** (514) 745-6625

### Consumers and Patients:

Nutricia products are available for convenient home delivery directly from Nutricia North America, with the exception of our Specialized Elderly Care products.\* Consumers can call our toll free number or visit one of our websites. See pages 196-197 for a list of our websites.

Consumers can also purchase Nutricia products through retail pharmacies (except for Specialized Elderly Care products in the US and metabolic products in Canada). Pharmacies can special order Nutricia products from their wholesaler or directly from Nutricia North America.

\*To purchase Specialized Elderly Care products, contact us at (800) 365-7354.

- Nutricia is a Global Health Company
- Nutricia Leads the Development and Use of Advanced Medical Nutrition for Specialized Care
- Nutricia Products and Services Transform the Daily Lives of Millions of Infants, Children, Adults and Aging Seniors

This guide is a convenient reference for clinicians to the full range of Nutricia's medical nutritional products. Nutricia strives to develop quality products that offer choice and flexibility to today's patients to enhance diet acceptance. Please note that all of our products require medical supervision. For additional information, please call our Nutrition Services team or visit our web site at [www.Nutricia-NA.com](http://www.Nutricia-NA.com). Our staff is comprised of individuals with the highest level of expertise ready to offer support and reliability to our customers. We look forward to hearing from you.

### Information:

Nutricia North America can be reached by phone Monday-Friday.

 **United States: (800) 365-7354** from 8:30 am - 7:00 pm EST

 **Canada:\* (877) 636-2283** from 8:30 am - 5:00 pm EST

### Internet:

For information on Nutricia products,\* reimbursement,\*\* and other helpful resources, visit [www.Nutricia-NA.com](http://www.Nutricia-NA.com). For a complete listing of our websites, see pages 196-197.

For information on Canadian products\* in English or French, visit [www.Nutricia-NA.com](http://www.Nutricia-NA.com).

Pour l'information sur les produits canadiens\* en anglais ou en français, visitez [www.Nutricia-NA.com](http://www.Nutricia-NA.com).

**E-mail:** [nutritionservices@nutricia.com](mailto:nutritionservices@nutricia.com)

**Live Chat:** Chat live on any of our products with a nutritionist at [Neocate.com](http://Neocate.com) (M-F 8:30 am - 5 pm EST).

\* Most of Nutricia North America's products are available in both the United States and Canada. For those products, information listed in this Product Reference Guide is taken from US labels, US reimbursement codes and US household measures. For Canadian specific information, see Canadian labels or call (877) 636-2283.

\*\* **For reimbursement information, please see page 191.**



### NEW FOR 2013 –

Nutricia North America has united with Applied Nutrition. Our product line has expanded to include PhenylAde, Complex MSD and the GlutarAde line of metabolic products. Learn more at [www.medicalfood.com](http://www.medicalfood.com).

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## Specialized Pediatrics




Find more information and resources on these and all of our products at [www.NutriciaLearningCenter.com](http://www.NutriciaLearningCenter.com)

NEW!



## Neocate Infant DHA / ARA (with Nucleotides)

A nutritionally complete, powdered amino acid-based exempt infant formula containing iron, DHA, ARA and nucleotides.

 This formulation is only available in the US.

*For details on administration and household measurements, please contact our Medical Affairs department at (800) 365-7354.*

### Main Features:

- Hypoallergenic
- Nucleotides, present in human milk 4.8 mg per 100 kcals
- DHA at 0.35% fatty acids  
DHA and ARA at 1:1 ratio
- Over 90 publications and counting support Neocate
- Osmolality (at 0.67 kcal/mL):  
340 mOsm/kg
- Energy distribution:  
Protein 11.2%  
Carbohydrate 43.1%  
Fat (MCT 33% / LCT 67%) 45.7%
- Potential Renal Solute Load:  
168 mOsm/L
- Halal
- Displacement 0.7 ml/g

### Indications:

- Cow and soy milk allergy
- Multiple food protein intolerance
- Food allergy associated conditions:
  - Short bowel syndrome (SBS)
  - Eosinophilic esophagitis (EoE)
  - Malabsorption
  - Gastroesophageal reflux
  - Other GI disorders

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
12595	49735-0125-95	B4161	4 x 400 g (14.1 oz)	1932

**WIC<sup>+</sup> eligible in all States.** For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 100 g	Per 100 kcal	Minerals	Per 100 g	Per 100 kcal
Calories	483	100	Calcium, mg	561	116
Protein Equivalent, g	13.5	2.8	Phosphorus, mg	397	82.2
Fat, g	24.5	5.1	Magnesium, mg	51.0	10.6
Linoleic Acid, mg	3565	738	Iron, mg	7.3	1.5
$\alpha$ -Linolenic Acid, mg	419	86.8	Zinc, mg	5.3	1.1
DHA, mg	81.6	16.9	Manganese, mcg	200	41.4
ARA, mg	81.6	16.9	Copper, mcg	410	84.9
Carbohydrate, g	52.0	10.8	Iodine, mcg	100	20.7
<b>Vitamins</b>			Molybdenum, mcg	11.3	2.3
Vitamin A, IU (mcg RE)	1352 (406)	280 (84.1)	Chromium, mcg	10.6	2.2
Vitamin D <sub>3</sub> , IU (mcg)	352 (8.8)	72.9 (1.8)	Selenium, mcg	14.5	3
Vitamin E, IU (mg $\alpha$ -T.E.)	6.8 (4.6)	1.4 (0.94)	Sodium, mg	189	39.1
Vitamin K, mcg	42.5	8.8	Potassium, mg	525	109
Thiamine, mcg	690	140	Chloride, mg	386	79.9
Riboflavin, mcg	540	110			
Vitamin B <sub>6</sub> , mcg	540	112			
Vitamin B <sub>12</sub> , mcg	1.3	0.27			
Niacin, mcg	4900	1014			
Folic Acid, mcg	64.0	13.3			
Pantothenic Acid, mcg	2900	600			
Biotin, mcg	19.0	3.9			
Vitamin C, mg	51.6	10.7			
Choline, mg	95.4	19.8			
Inositol, mg	108	22.4			

### Ingredients:

Corn Syrup Solids (54%), Refined Vegetable Oil (Medium Chain Triglycerides (8%), High Oleic Sunflower Oil (6%), Sunflower Oil (5%), Canola Oil (4%)), Calcium Phosphate Dibasic (2%), and less than 2% of each of the following: L-Arginine L-Aspartate, L-Leucine, Tripotassium Citrate, L-Lysine Acetate, L-Glutamine, L-Proline, CAEM (an emulsifier), L-Valine, Glycine, L-Isoleucine, L-Threonine, L-Phenylalanine, L-Tyrosine, L-Serine, L-Histidine, L-Alanine, Sodium Chloride, L-Cystine, Magnesium Chloride, L-Tryptophan, Choline Bitartrate, L-Methionine, Tricalcium Citrate, Magnesium L-Aspartate, M. Alpina Oil\*, C. Cohnii Oil\*\*, M-Inositol, L-Ascorbic Acid, Taurine, Ferrous Sulfate, Zinc Sulfate, L-Carnitine, Uridine 5'-Monophosphate Disodium Salt, Cytidine 5'-Monophosphate, Niacinamide, Inosine 5'-Monophosphate Disodium Salt, Adenosine 5'-Monophosphate, Calcium D-Pantothenate, Guanosine 5'-Monophosphate Disodium Salt, DL-alpha Tocopheryl Acetate, Ascorbyl Palmitate, Manganese Sulfate, Thiamine Chloride Hydrochloride, Pyridoxine Hydrochloride, Cupric Sulfate, Riboflavin, Vitamin A Acetate, DL-alpha Tocopherol, Potassium Iodide, Mixed Tocopherols, Folic Acid, Chromium Chloride, Phylloquinone, Sodium Selenite, Sodium Molybdate, D-Biotin, Vitamin D<sub>3</sub>, Cyanocobalamin.


\* A Source of Arachidonic Acid (ARA)

\*\* A Source of Docosahexaenoic Acid (DHA)



## Neocate Infant DHA / ARA

A nutritionally complete, powdered amino acid-based exempt infant formula containing iron and DHA and ARA.

 This formulation is only available in Canada.

### Main Features:

- Hypoallergenic
- DHA and ARA
- 100% non-allergenic free amino acids
- Nutritionally complete
- Over 90 publications and counting support Neocate
- Standard dilution = 0.67 kcal/mL
- Osmolality (at 0.67 kcal/mL): 375 mOsm/kg
- Energy distribution:
 

Protein	12%
Carbohydrate	47%
Fat (MCT 33% / LCT 67%)	41%
- Displacement 0.7 mL/g

### Indications:

- Cow and soy milk allergy
- Multiple food protein intolerance
- Food allergy associated conditions:
  - Short bowel syndrome (SBS)
  - Eosinophilic esophagitis (EoE)
  - Malabsorption
  - Gastroesophageal reflux
  - Other GI disorders

*For details on administration and household measurements, please see pages 24-34.*

### Ordering Information:

Product Code	Product Packaging	Calories Per Can
60722	4 x 400 g	1684

### Nutrition Information:

Nutrients	Per 100 g	Per 100 kcal	Minerals	Per 100 g	Per 100 kcal
Energy, kcal (kJ)	421 (1766)	67 (280)	Calcium, mg	522	82.5
Protein Equivalent, g	13.0	2.1	Phosphorus, mg	392	61.9
Carbohydrate, g	49.3	7.8	Magnesium, mg	52.0	8.2
Fat, g	19.1	3.0	Iron, mg	7.8	1.2
Linoleic Acid, g	2.9	0.45	Zinc, mg	7.0	1.1
$\alpha$ -Linolenic Acid, mg	346	55.0	Manganese, mg	0.380	0.060
DHA, mg	36.4	5.8	Copper, mg	0.520	0.0822
ARA, mg	63.7	10.1	Iodine, mg	0.0650	0.0103
Ash, g	3.4	0.54	Molybdenum, mg	0.020	0.0032
<b>Vitamins</b>			Chromium, mg	0.0150	0.0024
Vitamin A, IU	1648	260	Selenium, mg	0.0157	0.0025
Vitamin D <sub>3</sub> , IU	252	39.8	Sodium, mg	157	24.8
Vitamin E, IU	4.8	0.76	Potassium, mg	653	103
Vitamin K, mg	0.0370	0.0058	Chloride, mg	325	51.4
Thiamine, mg	0.31	0.05			
Riboflavin, mg	0.58	0.09			
Vitamin B <sub>6</sub> , mg	0.52	0.08			
Vitamin B <sub>12</sub> , mg	0.0011	0.0002			
Niacin, mg	6.5	1.0			
Folic Acid, mg	0.0430	0.0068			
Pantothenic Acid, mg	2.6	0.41			
Biotin, mg	0.0130	0.0021			
Vitamin C, mg	39.0	6.2			
Choline, mg	55.0	8.7			
Inositol, mg	98.0	15.5			

### Ingredients:

Corn Syrup Solids, Refined Vegetable Oil (Modified Coconut and/or Palm Kernel Oil (Medium Chain Triglycerides), High Oleic Sunflower Oil, Soy Oil), Calcium Phosphate, L-Arginine L-Aspartate, Tripotassium Citrate, L-Leucine, L-Lysine Acetate, L-Glutamine, L-Proline, L-Valine, Glycine, L-Isoleucine, Citric Acid Esters of Mono- and Diglycerides, L-Threonine, L-Phenylalanine, L-Tyrosine, L-Serine, L-Histidine, L-Alanine, Sodium Chloride, L-Cystine, L-Tryptophan, L-Methionine, Magnesium Acetate, Magnesium L-Aspartate, Potassium Chloride, Mortierella Alpina Oil\*, Choline Bitartrate, Inositol, Cryptocodium Cohnii Oil\*\*, Ascorbic Acid (Vitamin C), Ferrous Sulfate, Zinc Sulfate, Taurine, L-Carnitine, Sunflower Oil, Niacinamide, DL- $\alpha$ -Tocopheryl Acetate (Vitamin E), Calcium D-Pantothenate, Cupric Sulfate, Manganese Sulfate, Pyridoxine Hydrochloride, Riboflavin, Vitamin A Acetate, Thiamine Chloride Hydrochloride, Ascorbyl Palmitate, Potassium Iodide, Chromium Sulfate, Mixed Tocopherols, DL- $\alpha$ -Tocopherol (Vitamin E), Phylloquinone (Vitamin K<sub>1</sub>), Sodium Molybdate, Folic Acid, Sodium Hydrogen Selenite, Biotin, Cholecalciferol (Vitamin D<sub>3</sub>), Cyanocobalamin (Vitamin B<sub>12</sub>).

\* A Source of Arachidonic Acid (ARA)

\*\* A Source of Docosahexaenoic Acid (DHA)





## Neocate Nutra

The first and only amino acid-based semi-solid medical food for children and infants over 6 months of age.

This formulation is only available in the US.

### Main Features:

- Semi-solid medical food
- Smooth, spoonable consistency
- Hypoallergenic
- Made with 100% non-allergenic amino acids
- Milk protein- and gluten-free
- High in calcium
- Good source of vitamin D and iron
- Free from artificial flavors, colors and preservatives
- Energy distribution:
 

Protein	7%
Carbohydrate	57%
Fat (MCT 4% / LCT 96%)	36%

**Note: Not suitable as sole source of nutrition. Not for bottle or tube feed.**

### Indications:

- Cow and soy milk allergy
- Multiple food protein intolerance
- Food allergy associated conditions:
  - Short bowel syndrome (SBS)
  - Eosinophilic esophagitis (EoE)
  - Malabsorption
  - Gastroesophageal reflux
  - Other GI disorders

*For details on administration and household measurements, please see pages 24-34.*

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
66739	49735-016739	B4161	4 x 400 g (14.1 oz)	1888

**WIC<sup>+</sup> eligible in all States.**

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per Suggested Serving		Minerals	Per Suggested Serving	
	Per 100 g	(37 g Powder)		Per 100 g	(37 g Powder)
Calories	472	175	Calcium, mg	668	247
Protein Equivalent, g	8.2	3.0	Phosphorus, mg	340	126
Fat, g	18.8	7.0	Magnesium, mg	21.0	7.8
Linoleic Acid, mg	3222	1192	Iron, mg	5.9	2.2
Carbohydrate, g	67.4	24.9	Zinc, mg	4.1	1.5
<b>Vitamins</b>					
Vitamin A, IU (mcg RE)	649 (195)	240 (72.2)	Manganese, mcg	310	115
Vitamin D <sub>3</sub> , IU (mcg)	172 (4.3)	63.6 (1.6)	Copper, mcg	310	115
Vitamin E, IU (mg α T.E.)	3.4 (2.3)	1.3 (0.84)	Iodine, mcg	41.4	15.3
Vitamin K, mcg	18.5	6.8	Molybdenum, mcg	8.8	3.3
Thiamine, mcg	318	118	Chromium, mcg	10.0	3.7
Riboflavin, mcg	250	92.5	Selenium, mcg	11.3	4.2
Vitamin B <sub>6</sub> , mcg	250	92.5	Sodium, mg	38.0	14.1
Vitamin B <sub>12</sub> , mcg	0.6	0.22	Potassium, mg	<20	<10
Niacin, mcg	1100	407	Chloride, mg	44.0	16.3
Folic Acid, mcg	27.5	10.2			
Pantothenic Acid, mcg	1400	518			
Biotin, mcg	9.1	3.4			
Vitamin C, mg	23.0	8.5			
Choline, mg	45.0	16.7			
Inositol, mg	49.0	18.1			


### Ingredients:

Corn Syrup Solids (42%), Rice Starch (19%), Refined Vegetable Oil (18%) (Non-Hydrogenated Coconut (6%), High Oleic Sunflower (6%), Canola (3%), Sunflower (3%)), Sugar (9%), Calcium Phosphate Tribasic (2%), contains 2% or less than each of the following: L-Arginine L-Aspartate, L-Leucine, L-Lysine Acetate, CAEM (An Emulsifier), L-Glutamine, L-Proline, L-Valine, Glycine, L-Isoleucine, L-Threonine, L-Phenylalanine, L-Tyrosine, L-Serine, L-Histidine, L-Alanine, L-Cystine, L-Tryptophan, L-Methionine, Choline Bitartrate, Magnesium L-Aspartate, Magnesium Acetate, M-Inositol, L-Ascorbic Acid, Ferrous Sulfate, Taurine, Zinc Sulfate, L-Carnitine, DL-Alpha Tocopheryl Acetate, Calcium D-Pantothenate, Niacinamide, Manganese Sulfate, Cupric Sulfate, Thiamine Hydrochloride, Riboflavin, Vitamin A Acetate, Potassium Iodide, Chromium Chloride, Folic Acid, Sodium Selenite, Sodium Molybdate, Phylloquinone, D-Biotin, Vitamin D<sub>3</sub>, Cyanocobalamin.



## Neocate Junior

A nutritionally complete, powdered amino acid-based medical food for children over the age of 1.

 This product is available in the US and Canada.

For Canadian formulation nutrition profile, please contact our Medical Affairs department at (800) 365-7354.

### Main Features:

- Hypoallergenic
- 100% non-allergenic free amino acids
- Nutritionally complete
- Available in unflavored, tropical & chocolate
- Tailored vitamins and minerals for malabsorptive conditions
- Standard dilution = 1 kcal/mL
- Osmolality (mOsm/kg):
 

Dilution	Unflavored	Tropical	Chocolate
1 kcal/mL	550	630	650
- Energy distribution:
 

	Unflavored	Tropical/Chocolate
Protein	13%	14%
Carbohydrate	42%	44%
Fat (MCT 35% / LCT 65%)	45%	42%
- Displacement: 0.72 mL/g

### Indications:

- Cow and soy milk allergy
- Multiple food protein intolerance
- Food allergy associated conditions:
  - Short bowel syndrome (SBS)
  - Eosinophilic esophagitis (EoE)
  - Malabsorption
  - Gastroesophageal reflux
  - Other GI disorders

For details on administration and household measurements, please see pages 24-34.

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
11790 - Unflavored	49735-0117-90	B4161	4 x 400 g (14.1 oz)	1912
12124 - Tropical	49735-0121-24	B4161	4 x 400 g (14.1 oz)	1804
12690 - Chocolate	49735-0126-90	B4161	4 x 400 g (14.1 oz)	1804

**WIC<sup>+</sup> eligible in all States.**

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Unflavored		Tropical and Chocolate	
	Per 100 g	100 kcal	Per 100 g	100 kcal
Calories	478	100	451	100
Protein Equivalent, g	16.0	3.3	16.0	3.5
Fat, g	24.0	5.0	21.0	4.7
Linoleic Acid, mg	2622	549	2300	510
$\alpha$ -Linolenic Acid, mg	661	138	580	129
Carbohydrate, g	49.5	10.4	49.5	11.0
<b>Vitamins</b>				
Vitamin A, IU (mcg RE)	956 (287)	200 (60.0)	902 (271)	200 (60.1)
Vitamin D <sub>3</sub> , IU (mcg)	380 (9.5)	79.5 (2.0)	360 (9.0)	79.8 (2.0)
Vitamin E, IU (mg $\alpha$ T.E.)	10.0 (6.7)	2.1 (1.4)	9.4 (6.3)	2.1 (1.4)
Vitamin K, mcg	19.2	4.0	19.2	4.3
Thiamine, mg	0.61	0.13	0.61	0.14
Riboflavin, mg	0.96	0.20	0.90	0.20
Vitamin B <sub>6</sub> , mg	0.48	0.10	0.48	0.11
Vitamin B <sub>12</sub> , mcg	1.9	0.40	1.8	0.40
Niacin, mg	4.3	0.90	4.3	0.95
Folic Acid, mcg	143	29.9	143	31.7
Pantothenic Acid, mg	1.9	0.40	1.9	0.42
Biotin, mcg	14.4	3.0	13.5	3.0
Vitamin C, mg	44.6	9.3	44.6	9.9
Choline, mg	143	29.9	143	31.7
Inositol, mg	105	22.0	105	23.3
<b>Minerals</b>				
Calcium, mg	565	118	540	120
Phosphorus, mg	382	79.9	359	79.6
Magnesium, mg	76.5	16.0	76.5	17.0
Iron, mg	7.4	1.6	7.4	1.6
Zinc, mg	4.7	0.98	4.7	1.0
Manganese, mg	0.62	0.13	0.62	0.14
Copper, mcg	530	111	530	118
Iodine, mcg	85.2	17.8	85.2	18.9
Molybdenum, mcg	21.5	4.5	21.5	4.8
Chromium, mcg	18.0	3.8	18.0	4.0
Selenium, mcg	19.2	4.0	18.0	4.0
Sodium, mg	239	50.0	225	49.9
Potassium, mg	653	137	653	145
Chloride, mg	364	76.2	343	76.1

### Ingredients:

Corn Syrup Solids (52%), Refined Vegetable Oil (Palm Kernel and/or Coconut Oil (8%), Canola Oil (8%), High Oleic Safflower Oil (8%)), L-Arginine (2.4%), L-Glutamine (2.3%), L-Lysine L-Aspartate (2%), and less than 2% of each of the following: Tripotassium Citrate, Calcium Phosphate Dibasic, L-Leucine, L-Phenylalanine, L-Proline, Silicon Dioxide, L-Valine, Glycine, L-Isoleucine, N-Acetyl-L-Methionine, L-Threonine, Mono and Diglycerides, Sodium Chloride, L-Histidine, L-Serine, L-Alanine, Magnesium Acetate, Calcium Phosphate Tribasic, Choline Bitartrate, L-Tryptophan, L-Tyrosine, Diacetyl Tartaric Acid Esters of Mono and Diglycerides, M-Inositol, L-Ascorbic Acid, L-Cystine, Propylene Glycol Alginate, Taurine, Ferrous Sulfate, L-Carnitine, Zinc Sulfate, DL-Alpha Tocopheryl Acetate, Niacinamide, Calcium D-Pantothenate, Manganese Sulfate, Cupric Sulfate, Riboflavin, Thiamine Chloride Hydrochloride, Pyridoxine Hydrochloride, Vitamin A Acetate, Folic Acid, Potassium Iodide, Chromium Chloride, Sodium Molybdate, Sodium Selenite, Phylloquinone, D-Biotin, Vitamin D<sub>3</sub>, Cyanocobalamin.

**Tropical** flavored version also contains: Artificial Flavor (5.2%), Citric Acid (3.2%), and less than 2% of the following: Artificial Sweetener: Acesulfame Potassium.

**Chocolate** flavored version also contains: Artificial Flavor (7.2%), Sugar (4.7%), and less than 2% of the following: Artificial Sweetener: Sucralose.



## Neocate Junior with Prebiotics

A nutritionally complete, powdered amino acid-based medical food with prebiotic fiber for children over the age of 1.

This product is available in the US and Canada.

For Canadian formulation nutrition profile, please contact our Medical Affairs department at (800) 365-7354.

### Main Features:

- Hypoallergenic
- Contains prebiotic fiber to help support total gut health
- 100% non-allergenic free amino acids
- Nutritionally complete
- Available in unflavored & vanilla
- Tailored vitamins and minerals for malabsorptive conditions
- Standard dilution= 1 kcal/mL
- Osmolality (mOsm/kg):
 

Dilution	Unflavored	Vanilla
1 kcal/mL	550	650
- Energy distribution:
 

	Unflavored	Vanilla
Protein	13%	14%
Carbohydrate	42%	45%
Fat (MCT 35% / LCT 65%)	45%	41%
- Displacement:
 

	Unflavored	Vanilla
	0.74 mL/g	0.71 mL/g

### Indications:

- Cow and soy milk allergy
- Multiple food protein intolerance
- Food allergy associated conditions:
  - Short bowel syndrome (SBS)
  - Eosinophilic esophagitis (EoE)
  - Malabsorption
  - Gastroesophageal reflux
  - Other GI disorders

For details on administration and household measurements, please see pages 24-34.

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
12912 - Unflavored	49735-012912	B4161	4 x 400 g (14.1 oz)	1912
60627 - Vanilla	49735-010627	B4161	4 x 400 g (14.1 oz)	1836

**WIC+ eligible in all States.** For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Unflavored		Vanilla	
	Per 100g	100 kcal	Per 100 g	100 kcal
Calories	478	100	459	100
Protein Equivalent, g	16.0	3.3	16.0	3.5
Fat, g	24.0	5.0	21.0	4.6
Linoleic Acid, mg	2622	481	2300	501
α-Linolenic Acid, mg	661	138	580	126
Carbohydrate, g	49.5	10.4	51.4	11.2
Fiber, g	1.9	0.40	1.9	0.41
<b>Vitamins</b>				
Vitamin A, IU (mcg RE)	956 (287)	200 (60.0)	916 (276)	200 (60.1)
Vitamin D <sub>3</sub> , IU (mcg)	380 (9.5)	79.5 (2.0)	364 (9.1)	79.3 (2.0)
Vitamin E, IU (mg α T.E.)	10.0 (6.7)	2.1 (1.4)	9.5 (6.4)	2.1 (1.4)
Vitamin K, mcg	19.2	4.0	19.2	4.2
Thiamine, mg	0.61	0.13	0.61	0.13
Riboflavin, mg	0.96	0.20	0.92	0.20
Vitamin B <sub>6</sub> , mg	0.48	0.10	0.48	0.10
Vitamin B <sub>12</sub> , mcg	1.9	0.40	1.8	0.39
Niacin, mg	4.3	0.90	4.3	0.94
Folic Acid, mcg	143	29.9	143	31.2
Pantothenic Acid, mg	1.9	0.40	1.9	0.41
Biotin, mcg	14.4	3.0	13.8	3.0
Vitamin C, mg	44.6	9.3	44.6	9.7
Choline, mg	143	29.9	143	31.2
Inositol, mg	105	22.0	105	22.9
<b>Minerals</b>				
Calcium, mg	565	118	542	118
Phosphorus, mg	382	79.9	367	80.0
Magnesium, mg	76.5	16.0	76.5	16.7
Iron, mg	7.4	1.6	7.4	1.6
Zinc, mg	4.7	0.98	4.7	1.0
Manganese, mg	0.62	0.13	0.62	0.14
Copper, mcg	530	111	530	115
Iodine, mcg	85.2	17.8	85.2	18.6
Molybdenum, mcg	21.5	4.5	21.5	4.7
Chromium, mcg	18.0	3.8	18.0	3.9
Selenium, mcg	19.2	4.0	18.4	4.0
Sodium, mg	239	50.0	230	50.1
Potassium, mg	653	137	653	142
Chloride, mg	364	76.2	349	76.0

### Ingredients:

Corn Syrup Solids (51%), Refined Vegetable Oil (Palm Kernel and/or Coconut Oil (8%), Canola Oil (7.5%), High Oleic Safflower Oil (7.5%)), L-Arginine (2.4%), L-Glutamine (2.3%), L-Lysine L-Aspartate (2%), and less than 2% of each of the following: Tripotassium Citrate, Calcium Phosphate Dibasic, L-Leucine, L-Phenylalanine, Fructo-oligosaccharide, Inulin, L-Proline, L-Valine, Glycine, L-Isoleucine, N-Acetyl-L-Methionine, L-Threonine, Mono and Diglycerides, Sodium Chloride, L-Histidine, L-Serine, L-Alanine, Magnesium Acetate, Calcium Phosphate Tribasic, Choline Bitartrate, L-Tryptophan, L-Tyrosine, Diacetyl Tartaric Acid Esters of Mono and Diglycerides, M-Inositol, L-Ascorbic Acid, L-Cystine, Propylene Glycol Alginate, Taurine, Ferrous Sulfate, L-Carnitine, Zinc Sulfate, DL-Alpha Tocopheryl Acetate, Niacinamide, Calcium D-Pantothenate, Manganese Sulfate, Cupric Sulfate, Riboflavin, Thiamine Chloride Hydrochloride, Pyridoxine Hydrochloride, Vitamin A Acetate, Folic Acid, Potassium Iodide, Chromium Chloride, Sodium Molybdate, Sodium Selenite, Phylloquinone, D-Biotin, Vitamin D<sub>3</sub>, Cyanocobalamin.


**Unflavored** version also contains: Less than 2% of the following: Silicon Dioxide.

**Vanilla** flavored version also contains: Sugar (8%), and less than 2% of the following: Artificial Flavor, Artificial Sweetener: Sucralose.



## Neocate's E028 Splash

A ready-to-feed amino acid-based medical food for children over the age of 1.

 This formulation is available in the US and Canada.

### Main Features:

- Hypoallergenic
- 100% non-allergenic free amino acids
- To supplement essential nutrients in children on elimination diets
- Convenient ready-to-feed 8 fl oz drink boxes
- Available in 3 great flavors:
  - Grape
  - Tropical Fruit
  - Orange-Pineapple
- Energy density = 1 kcal/mL
- Osmolality (at 1 kcal/mL): 820 mOsm/kg
- Energy distribution:
 

Protein	10%
Carbohydrate	58%
Fat (MCT 35% / LCT 65%)	32%

### Indications:

- Cow and soy milk allergy
- Multiple food protein intolerance
- Food allergy associated conditions:
  - Short bowel syndrome (SBS)
  - Eosinophilic esophagitis (EoE)
  - Gastroesophageal reflux
  - Other GI disorders

For details on administration, please see pages 24-34.

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Box
12670 - Grape	49735-0126-70	B4161	27 x 237 mL (8 fl oz)	237
12666 - Tropical Fruit	49735-0126-66	B4161	27 x 237 mL (8 fl oz)	237
11050 - Orange-Pineapple	49735-0110-50	B4161	27 x 237 mL (8 fl oz)	237

**WIC<sup>+</sup> eligible in all States.**

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per drink box (237 mL)		Minerals	Per drink box (237 mL)	
	Per 100 kcal			Per 100 kcal	
Calories	237	100	Calcium, mg	147	62
Protein Equivalent, g	5.9	2.5	Phosphorus, mg	147	62
Fat, g	8.3	3.5	Magnesium, mg	21.3	9
Linoleic Acid, mg	626	264	Iron, mg	1.8	0.77
Carbohydrate, g	34.6	14.6	Zinc, mg	1.8	0.77
<b>Vitamins</b>			Manganese, mg	0.24	0.1
Vitamin A, IU (mcg RE)	277 (83)	117 (35)	Copper, mcg	240	100
Vitamin D <sub>3</sub> , IU (mcg)	73.5 (1.9)	31 (0.78)	Iodine, mcg	14.2	6
Vitamin E, IU (mg α T.E.)	1.9 (1.3)	0.82 (0.55)	Molybdenum, mcg	8.3	3.5
Vitamin K, mcg	3.6	1.5	Chromium, mcg	7.1	3
Thiamine, mg	0.13	0.06	Selenium, mcg	3.7	1.5
Riboflavin, mg	0.15	0.07	Sodium, mg	47.4	20
Vitamin B <sub>6</sub> , mg	0.19	0.08	Potassium, mg	220	93
Vitamin B <sub>12</sub> , mcg	0.17	0.07	Chloride, mg	83	35
Niacin, mg	2.1	0.9			
Folic Acid, mcg	14.2	6			
Pantothenic Acid, mg	0.57	0.24			
Biotin, mcg	4.7	2			
Vitamin C, mg	7.4	3.1			
Choline, mg	43.4	18.3			
Inositol, mg	4.3	1.8			

### Ingredients:

Water (80%), Maltodextrin (11%), Sugar (5%), and 2% or less of each of the following ingredients: Fractionated Coconut Oil, Canola Oil, High Oleic Sunflower Oil, L-Arginine, L-Lysine, L-Aspartate, Microcrystalline Cellulose, Calcium Glycerophosphate, L-Leucine, L-Phenylalanine, L-Proline, L-Valine, Glycine, L-Isoleucine, Mono and Diglycerides, Diacetyl Tartaric Acid Esters of Mono and Diglycerides, N-Acetyl L-Methionine, L-Threonine, Dispotassium Phosphate, L-Histidine, L-Serine, L-Alanine, Tripotassium Citrate, Fractionated Coconut Oil, Palm Kernel Oil, Magnesium Acetate, L-Tryptophan, Choline Bitartrate, Calcium Chloride, L-Tyrosine, Trisodium Citrate, L-Ascorbic Acid, Sodium Chloride, Artificial Sweetener: Acesulfame Potassium, L-Cystine, Taurine, Ferrous Sulfate, Zinc Sulfate, L-Carnitine, M-Inositol, Niacinamide, Manganese Sulfate, Cupric Sulfate, Calcium-D-Pantothenate, Pyridoxine Hydrochloride, Riboflavin, Vitamin A Palmitate, Thiamine Mononitrate, Chromium Sulfate, Sodium Molybdate, Potassium Iodide, Folic Acid, Sodium Hydrogen Selenite, D-Biotin, Phylloquinone, Vitamin D<sub>3</sub>, Cyanocobalamin.

**Grape** flavored version of this product contains 2% or less of each of the following: Malic Acid, Artificial Flavor, Vitamin E Acetate.

**Tropical Fruit** flavored version of this product contains 2% or less of each of the following: Artificial Flavor, Citric Acid, Vitamin E Acetate.


**Orange-Pineapple** flavored version of this product contains 2% or less of each of the following: Artificial Flavors, Citric Acid, Corn Syrup Solids, Malic Acid, DL-alpha Tocopherol Acetate.





## Pepdite Junior

A nutritionally complete powdered medical food, based on free amino acids and non-dairy hydrolysates, for children over the age of 1.

 This formulation is only available in the US.

### Main Features:

- 44% free amino acids
- 56% low molecular weight peptides (86% < 1000 daltons)
- Nutritionally complete
- Non-dairy hydrolysates
- Extra vitamins and minerals for malabsorptive conditions
- Standard dilution = 1 kcal/mL
- Osmolality (mOsm/kg):  
Dilution  
1 kcal/mL 430
- Energy distribution:  
Protein 12%  
Carbohydrate 42%  
Fat (MCT 35% / LCT 65%) 46%
- Displacement 0.58 mL/g

### Indications:

- Gastrointestinal tract impairment
- Malabsorption
- Short bowel syndrome (SBS)
- Whole protein intolerance
- Other medical conditions for which a semi-elemental diet is required

For details on administration, please see pages 25-34.

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Packet
11766 - Unflavored	49735-0117-66	B4161	15 x 51 g (1.8 oz)	240

**WIC<sup>+</sup> eligible in all States.**

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per packet (51 g)	Per 100 kcal	Minerals	Per packet (51 g)	Per 100 kcal
Calories	240	100	Calcium, mg	271	113
Protein Equivalent, g	7.4	3.1	Phosphorus, mg	225	94
Fat, g	12	5	Magnesium, mg	43.1	18
Linoleic Acid, mg	1313	548	Iron, mg	3.3	1.4
Carbohydrate, g	25.5	10.6	Zinc, mg	3.3	1.4
<b>Vitamins</b>			Manganese, mg	0.48	0.2
Vitamin A, IU (mcg RE)	582 (175)	243 (73)	Copper, mcg	265	110
Vitamin D <sub>3</sub> , IU (mcg)	78 (1.95)	32 (0.8)	Iodine, mcg	23	9.6
Vitamin E, IU (mg α T.E.)	3.9 (2.6)	1.6 (1.1)	Molybdenum, mcg	10.8	4.5
Vitamin K, mcg	6.5	2.7	Chromium, mcg	9.0	3.7
Thiamine, mg	0.24	0.1	Selenium, mcg	7.1	3
Riboflavin, mg	0.24	0.1	Sodium, mg	98	41
Vitamin B <sub>6</sub> , mg	0.24	0.1	Potassium, mg	327	136
Vitamin B <sub>12</sub> , mcg	0.48	0.2	Chloride, mg	151	63
Niacin, mg	2.9	1.2			
Folic Acid, mcg	72	30			
Pantothenic Acid, mg	0.97	0.4			
Biotin, mcg	4.8	2			
Vitamin C, mg	22.2	9.3			
Choline, mg	90	37.5			
Inositol, mg	53	22			

### Ingredients:

Corn Syrup Solids, Hydrolyzed Protein (Pork, Soy), Fractionated Coconut Oil, Canola Oil, High Oleic Safflower Oil, Calcium Phosphate Dibasic, L-Glutamine, Tripotassium Citrate, L-Lysine Acetate, Mono and Diglycerides, L-Leucine, Magnesium Acetate, Choline Hydrogen Tartrate, L-Isoleucine, L-Valine, L-Threonine, Potassium Chloride, L-Tryptophan, L-Cystine, L-Phenylalanine, Diacetyl Tartaric Acid Esters of Mono and Diglycerides, Sodium Chloride, M-Inositol, L-Methionine, L-Ascorbic Acid, L-Histidine, Propylene Glycol Alginate, Ferrous Sulfate, Taurine, Zinc Sulfate, L-Carnitine, DL-Alpha Tocopheryl Acetate, Chromium Sulfate, Niacinamide, Manganese Sulfate, Copper Sulfate, Calcium-D-Pantothenate, Thiamine Hydrochloride, Pyridoxine Hydrochloride, Vitamin A Acetate, Riboflavin, Folic Acid, Potassium Iodide, Sodium Molybdate, Sodium Hydrogen Selenite, Phylloquinone, D-Biotin, Vitamin D<sub>3</sub>, Cyanocobalamin.

## Neocate Infant\*

### DIRECTIONS FOR PREPARATION AND USE:

Neocate may be mixed with warm or cool sterile water†. Do not boil formula or use a microwave to prepare or warm formula. For standard dilution, use enclosed scoop (4.75 g) to mix one level scoop per fluid ounce of prepared formula.

### HOW TO MAKE A 5 FLUID OUNCE BOTTLE:

1. Add 5 unpacked, level scoops of Neocate to a clean sterile container.
2. Fill up to the 5 fluid ounce line with warm or cool sterile water.
3. Shake for 15-20 seconds or until the powder dissolves. Add additional water if necessary to fill to the 5 fl oz level and shake again.

† Boiling is the preferred method for sterilizing water, bottles, nipples and mixing utensils.

Freshly mixed formula is best. Refrigerate pre-mixed formula immediately and use within 24 hours of mixing. Shake immediately before use. Throw away formula left in the bottle one hour after feeding. Tube feeding hang time not to exceed 4 hours.

### STORAGE:

Cover and store open can in a cool dry place. Use within one month. Store unopened cans at room temperature. Avoid extreme temperatures.

## Neocate Nutra

### DIRECTIONS FOR PREPARATION AND USE

1. Add the recommended number of unpacked, level scoops of Neocate Nutra into a clean bowl.
2. Gradually add the required amount of water while stirring with a clean spoon. Mix until thickened. To alter the consistency, add more or less water as required.

Neocate Nutra should be prepared immediately prior to feeding. Any prepared product remaining should be discarded if not used within one hour. Neocate Nutra can be added to cooked dishes. Do not add to very hot foods. Do not warm prepared product. Not suitable as sole source of nutrition. Not for bottle or tube feed.

### STORAGE

Store unopened cans in a cool, dry place. Once opened, reseal can and store in a cool dry place. Use within one month.

## Neocate Junior, Pepdite Junior and Neocate's E028 Splash

### DIRECTIONS FOR PREPARATION AND USE:

Intake to be determined by a healthcare professional and is dependent on the age, body weight and medical condition of the patient. All formulas can be taken orally or tube fed.

#### Neocate Junior

1. Measure the required amount of warm or cool water into a container.
2. Add the prescribed amount of Neocate Junior to the water.
3. Cover and shake until the powder has dissolved.

#### Pepdite Junior

1. Pour 7 fl oz (210 mL) of cold water into a container suitable for shaking.
2. Add one packet of Pepdite Junior to yield a final volume of 8 fl oz (240 mL).
3. Shake vigorously until completely dissolved.

#### Neocate's E028 Splash: Shake before use.

Do not use boiling water to prepare formula. Do not boil or microwave prepared formula.

Once prepared or opened, the formula should be stored in a refrigerator and kept no longer than 24 hours from the time of preparation. Shake or stir immediately before use. If taken orally, formula is best served chilled. Tube feeding hang time not to exceed 4 hours.

### STORAGE:

**Neocate Junior:** Store unopened can at room temperature. Once opened, reseal can and store in a cool dry place (not in refrigerator) and use within one month of opening.

**Neocate's E028 Splash:** Store unopened product in a cool dry place. Once opened, Neocate's E028 Splash should be stored in a refrigerator and kept no longer than 24 hours. Do not freeze Neocate's E028 Splash.

**Pepdite Junior:** Store unopened packets at room temperature. Once opened, reseal packets and store in a cool, dry place (not in a refrigerator) and use within one week.


## Household Measures

Measure	Weight	Measure	Weight
<b>Neocate Infant (Canadian version)</b>		<b>Neocate Junior with Prebiotics (Unflavored)</b>	
1 scoop	4.75 g	1 scoop	8.2 g
1/2 tsp	1 g	1/2 tsp	1.4 g
1 tsp	2 g	1 tsp	2.7 g
1 Tbsp	7 g	1 Tbsp	8.1 g
1/4 cup	30 g	1/4 cup	32.3 g
1/3 cup	35 g	1/3 cup	43 g
1/2 cup	57 g	1/2 cup	64.5 g
1 cup	114 g	1 cup	129 g
<b>Neocate Nutra and Neocate Infant (US version)</b>		<b>Neocate Junior with Prebiotics (Vanilla)</b>	
1 scoop	4.6 g	1 scoop	8.2 g
1/2 tsp	1.3 g	1/2 tsp	1.3 g
1 tsp	2.6 g	1 tsp	2.5 g
1 Tbsp	7.8 g	1 Tbsp	7.5 g
1/4 cup	31.5 g	1/4 cup	30 g
1/3 cup	42 g	1/3 cup	40 g
1/2 cup	63 g	1/2 cup	60 g
1 cup	126 g	1 cup	120 g
<b>Neocate Junior (Unflavored, Tropical and Chocolate)</b>		<b>Pepdite Junior</b>	
1 scoop	8.2 g	1/2 tsp	1 g
1/2 tsp	1.2 g	1 tsp	2 g
1 tsp	2.4 g	1 Tbsp	7 g
1 Tbsp	7.3 g	1/4 cup	25 g
1/4 cup	29 g	1/3 cup	33 g
1/3 cup	38.7 g	1/2 cup	48 g
1/2 cup	58 g	1 cup	99 g
1 cup	116 g		

Household measures are based on standard US, dry household measures.\* All measures are level and unpacked. These values are approximations only and have been provided for convenience: results can vary significantly based on the individual, device, and method. Nutricia North America recommends using a gram scale for greatest accuracy. The scoops Nutricia provides are validated for use with Nutricia formulas, so are preferable to household measures.

\*US measures: 1 cup = 240 mL; 1/2 cup = 120 mL; 1/3 cup = 80 mL; 1/4 cup = 60 mL; 1 Tbsp = 15 mL; 1 tsp = 5 mL; 1/2 tsp = 2.5 mL

 \* Canadian version only

 For information on the new US version, please contact our Medical Affairs department at (800) 365-7354.

## Volume Prescription

Volume/day	Neocate Infant*					
	20 kcal/fl oz (# cans/mon)	22 kcal/fl oz (# cans/mon)	24 kcal/fl oz (# cans/mon)	26 kcal/fl oz (# cans/mon)	28 kcal/fl oz (# cans/mon)	30 kcal/fl oz (# cans/mon)
20 oz	7	8	9	10	10	11
24 oz	9	10	11	12	12	13
28 oz	10	11	12	14	14	15
32 oz	12	13	14	15	16	18
36 oz	13	15	16	17	18	20
40 oz	15	16	18	19	20	22
Total Volume/can	85 oz	76 oz	70 oz	64 oz	60 oz	56 oz


Servings/day	Neocate Nutra	
	4 scoops Nutra (88 kcal) (# cans/mon)	8 scoops Nutra (175 kcal) (# cs/mon)
1 Serving	2	1
2 Servings	3	1
3 Servings	5	2
4 Servings	6	2
Total Servings/can	21 Servings	

Volume/day	Neocate Junior Unflavored		Neocate Junior Flavored		Neocate's E028 Splash		Pepdite Junior	
	30 kcal/fl oz (# cans/mon)	30 kcal/fl oz (# cs/mon)	30 kcal/fl oz (# cans/mon)	30 kcal/fl oz (# cs/mon)	30 kcal/fl oz (# jc bxs/mon)	30 kcal/fl oz (# cs/mon)	30 kcal/fl oz (# pkts/mon)	30 kcal/fl oz (# cs/mon)
20 oz	10	3	10	3	76	3	75	5
24 oz	12	3	12	3	92	4	90	6
28 oz	14	4	14	4	107	4	105	7
32 oz	16	4	16	4	122	5	120	8
36 oz	17	5	18	5	137	6	135	9
40 oz	19	5	20	5	152	6	150	10

Number of cases per month (30 days) are rounded up to the nearest whole number.

# Neocate Infant\*

 \* Canadian version only

 For information on the new US version, please contact our Medical Affairs department at (800) 365-7354.

## Nutrient Dilution Chart (20-25 kcal/fl oz)

Nutrients per 100 mL						
Dilution	20 kcal/fl oz	21 kcal/fl oz	22 kcal/fl oz	23 kcal/fl oz	24 kcal/fl oz	25 kcal/fl oz
Calories	67	70	73	77	80	83
Protein Equivalent, g	2.1	2.2	2.3	2.4	2.5	2.6
Fat, g	3.0	3.2	3.3	3.5	3.6	3.8
Carbohydrate, g	7.8	8.2	8.5	9.0	9.4	9.7
Linoleic Acid, mg	454	474	494	521	542	562
<b>Vitamins</b>						
Vitamin A, IU	263	273	286.3	303	313	326.3
Vitamin D <sub>3</sub> , IU	40.1	41.7	43.5	45.9	47.6	49.4
Vitamin E, IU	0.76	0.80	0.84	0.87	0.92	0.95
Vitamin K, mcg	5.9	6.2	6.4	6.8	7	7.3
Thiamin, mcg	62	64.7	67.9	71.0	74.5	77.2
Riboflavin, mcg	92.2	96.3	100.9	105.6	110.8	114.8
Vitamin B <sub>6</sub> , mcg	82.7	86.3	90.5	94.6	99.3	103.0
Vitamin B <sub>12</sub> , mcg	0.17	0.18	0.19	0.20	0.21	0.22
Niacin, mg	1.03	1.08	1.13	1.19	1.24	1.28
Folic Acid, mcg	6.8	7.2	7.5	7.9	8.2	8.5
Pantothenic Acid, mg	0.41	0.43	0.45	0.48	0.50	0.51
Biotin, mcg	2.1	2.2	2.3	2.4	2.5	2.6
Vitamin C, mg	6.2	6.5	6.8	7.1	7.4	7.7
Choline, mg	8.8	9.1	9.5	10.1	10.5	10.8
Inositol, mg	15.6	16.3	17	17.8	18.6	19.3
<b>Minerals</b>						
Calcium, mg	83.1	86.8	90.5	95.5	99.2	102.9
Phosphorus, mg	62.3	65.2	68	71.7	74.5	77.3
Magnesium, mg	8.3	8.7	9.0	9.5	9.9	10.3
Iron, mg	1.2	1.3	1.4	1.4	1.5	1.5
Zinc, mg	1.1	1.2	1.2	1.3	1.3	1.4
Manganese, mcg	60.0	63.1	66.1	69.2	72.6	75.2
Copper, mcg	82.7	86.5	90.2	95.1	98.8	102.5
Iodine, mcg	10.3	10.8	11.3	11.9	12.4	12.8
Molybdenum, mcg	3.2	3.3	3.5	3.7	3.8	3.9
Chromium, mcg	2.4	2.5	2.6	2.7	2.9	3.0
Selenium, mcg	2.5	2.6	2.7	2.9	3.0	3.1
Sodium, mg	25	26.1	27.2	28.7	29.9	31
Potassium, mg	103.8	108.6	113.2	119.4	124.1	128.7
Chloride, mg	51.7	54	56.4	59.4	61.8	64.1

# Neocate Infant\*

 \* Canadian version only

 For information on the new US version, please contact our Medical Affairs department at (800) 365-7354.

## Nutrient Dilution Chart (26-30 kcal/fl oz)

Nutrients per 100 mL					
Dilution	26 kcal/fl oz	27 kcal/fl oz	28 kcal/fl oz	29 kcal/fl oz	30 kcal/fl oz
Calories	87	90	93	97	100
Protein Equivalent, g	2.7	2.8	2.9	3.0	3.1
Fat, g	3.9	4.1	4.2	4.4	4.5
Carbohydrate, g	10.2	10.5	10.9	11.4	11.7
Linoleic Acid, mg	589	609	630	657	677
<b>Vitamins</b>					
Vitamin A, IU	339.7	353	363	379.6	392.9
Vitamin D <sub>3</sub> , IU	51.8	53.6	55.4	57.8	59.9
Vitamin E, IU	1.0	1.0	1.1	1.1	1.1
Vitamin K, mcg	7.7	7.9	8.2	8.5	8.8
Thiamin, mcg	80.3	83.5	86.6	89.7	92.6
Riboflavin, mcg	119.5	124.1	128.8	133.4	137.8
Vitamin B <sub>6</sub> , mcg	107.1	111.3	115.4	119.6	123.5
Vitamin B <sub>12</sub> , mcg	0.23	0.24	0.24	0.25	0.26
Niacin, mg	1.34	1.44	1.44	1.50	1.54
Folic Acid, mcg	8.9	9.2	9.5	9.9	10.2
Pantothenic Acid, mg	0.54	0.58	0.58	0.60	0.62
Biotin, mcg	2.7	2.8	2.9	3.0	3.1
Vitamin C, mg	8.1	8.3	8.6	9.0	9.3
Choline, mg	11.4	11.8	12.2	12.7	13.1
Inositol, mg	20.3	21.0	21.7	22.6	23.3
<b>Minerals</b>					
Calcium, mg	107.9	111.6	115.3	120.3	124.0
Phosphorus, mg	81	83.8	86.6	90.3	93.1
Magnesium, mg	10.8	11.1	11.5	12.0	12.4
Iron, mg	1.6	1.7	1.7	1.8	1.9
Zinc, mg	1.5	1.5	1.6	1.6	1.7
Manganese, mcg	78.3	81.3	84.4	87.4	90.3
Copper, mcg	107.5	111.3	114.9	119.8	123.5
Iodine, mcg	13.4	13.9	14.4	15.0	15.4
Molybdenum, mcg	4.1	4.3	4.4	4.6	4.8
Chromium, mcg	3.1	3.2	3.3	3.5	3.6
Selenium, mcg	3.2	3.4	3.5	3.6	3.7
Sodium, mg	32.4	33.6	34.7	36.2	37.3
Potassium, mg	134.9	139.6	144.2	150.5	155.1
Chloride, mg	67.2	69.5	71.8	74.9	77.2





## Neocate Junior with Prebiotics, Vanilla

## Dilution Charts

20 kcal/fl oz				
Neocate Powder	Water Added		Final Volume	
g	fl oz†	mL	fl oz	mL
17	3.5	108	4	120
35	7	215	8	240
52	11	323	12	360
70	14.5	431	16	480
139	28.5	861	32	960

22 kcal/fl oz				
Neocate Powder	Water Added		Final Volume	
g	fl oz†	mL	fl oz	mL
19	3.5	106	4	120
38	7	213	8	240
58	10.5	319	12	360
77	14	426	16	480
153	28.5	851	32	960

24 kcal/fl oz				
Neocate Powder	Water Added		Final Volume	
g	fl oz†	mL	fl oz	mL
21	3.5	105	4	120
42	7	210	8	240
63	10.5	315	12	360
84	14	421	16	480
167	28	841	32	960

26 kcal/fl oz				
Neocate Powder	Water Added		Final Volume	
g	fl oz†	mL	fl oz	mL
23	3.5	104	4	120
45	7	208	8	240
68	10.5	312	12	360
91	14	416	16	480
181	27.5	831	32	960

28 kcal/fl oz				
Neocate Powder	Water Added		Final Volume	
g	fl oz†	mL	fl oz	mL
24	3.5	103	4	120
49	7	205	8	240
73	10.5	308	12	360
98	13.5	411	16	480
195	27.5	821	32	960

30 kcal/fl oz				
Neocate Powder	Water Added		Final Volume	
g	fl oz†	mL	fl oz	mL
26	3.5	101	4	120
52	7	203	8	240
78	10	304	12	360
105	13.5	406	16	480
209	27	812	32	960

32 kcal/fl oz				
Neocate Powder	Water Added		Final Volume	
g	fl oz†	mL	fl oz	mL
28	3.5	100	4	120
56	6.5	200	8	240
84	10	301	12	360
112	13.5	401	16	480
223	26.5	802	32	960

34 kcal/fl oz				
Neocate Powder	Water Added		Final Volume	
g	fl oz†	mL	fl oz	mL
30	3.5	99	4	120
59	6.5	198	8	240
89	10	297	12	360
119	13	396	16	480
237	26.5	792	32	960

## Neocate Junior, Chocolate and Tropical

## Dilution Charts

20 kcal/fl oz				
Neocate Powder	Water Added		Final Volume	
g	fl oz†	mL	fl oz	mL
18	3.5	107	4	120
35	7	214	8	240
53	10.5	322	12	360
71	14.5	429	16	480
142	28.5	858	32	960

22 kcal/fl oz				
Neocate Powder	Water Added		Final Volume	
g	fl oz†	mL	fl oz	mL
20	3.5	106	4	120
39	7	212	8	240
59	10.5	318	12	360
78	14	424	16	480
156	28.5	848	32	960

24 kcal/fl oz				
Neocate Powder	Water Added		Final Volume	
g	fl oz†	mL	fl oz	mL
21	3.5	105	4	120
43	7	209	8	240
64	10.5	314	12	360
85	14	419	16	480
170	28	837	32	960

26 kcal/fl oz				
Neocate Powder	Water Added		Final Volume	
g	fl oz†	mL	fl oz	mL
23	3.5	103	4	120
46	7	207	8	240
69	10.5	310	12	360
92	14	414	16	480
184	27.5	827	32	960

28 kcal/fl oz				
Neocate Powder	Water Added		Final Volume	
g	fl oz†	mL	fl oz	mL
25	3.5	102	4	120
50	7	204	8	240
75	10	306	12	360
99	13.5	408	16	480
199	27	817	32	960

30 kcal/fl oz				
Neocate Powder	Water Added		Final Volume	
g	fl oz†	mL	fl oz	mL
27	3.5	101	4	120
53	6.5	202	8	240
80	10	303	12	360
106	13.5	403	16	480
213	27	807	32	960

32 kcal/fl oz				
Neocate Powder	Water Added		Final Volume	
g	fl oz†	mL	fl oz	mL
28	3.5	100	4	120
57	6.5	199	8	240
85	10	299	12	360
114	13.5	398	16	480
227	26.5	797	32	960

34 kcal/fl oz				
Neocate Powder	Water Added		Final Volume	
g	fl oz†	mL	fl oz	mL
30	3.5	98	4	120
60	6.5	197	8	240
90	10	295	12	360
121	13	393	16	480
241	26	786	32	960

†Measures rounded to the closest 0.5 fluid ounce. Dilution chart calculations on this page were determined by using the average displacement of 0.71 mL/g of powder.

†Measures rounded to the closest 0.5 fluid ounce. Dilution chart calculations on this page were determined by using the average displacement of 0.72 mL/g of powder.

# Pepdite Junior Dilution Chart

Per 51 g Packet

kcal/ fl oz	Pepdite Junior Powder		Added Water		Final Volume	
	g	mL	fl oz †	mL	fl oz †	
20	51	330	11	360	12	
24	51	270	9	300	10	
27	51	246	8.2	276	9.2	
28	51	228	7.6	258	8.6	
30*	51	210	7	240	8	
32	51	195	6.5	225	7.5	
34	51	180	6	210	7	

\*Standard Dilution

† Measures rounded to closest 0.5 fluid ounce

Pepdite Junior dilution chart calculations were determined by using the average displacement factor of 0.58 mL/g of powder.



## Metabolics




Find more information and resources on these and all of our products at [www.NutriciaLearningCenter.com](http://www.NutriciaLearningCenter.com)



## Periflex Infant

A phenylalanine-free powdered infant formula containing iron, DHA and ARA, for the dietary management of phenylketonuria (PKU).

 This formulation is available in the US and Canada.

### Main Features:

- Phenylalanine-free
- Includes DHA and ARA
- Unflavored powder
- Contains a balanced mixture of all other essential and non-essential amino acids, carbohydrate, fat, vitamins, and minerals
- Periflex Infant provides 13 g of protein equivalent per 100 g of powder
- Osmolality (at 0.67 kcal/mL): 375 mOsm/kg
- Displacement: 0.68 mL/g

### Indications:

- Phenylketonuria

*For details on administration and household measurements, please see pages 126-137.*

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
118326	49735-0183-26	B4162	6 x 400 g (14.1 oz)	1684

**WIC<sup>+</sup> eligible in all States.**

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 10 g		Vitamins	Per 10 g	
	Per 100 g	Protein Equivalent		Per 100 g	Protein Equivalent
Calories	421	324	Vitamin A, IU (mcg R.E.)	1722 (517)	1325 (398)
Protein Equivalent, g	13	10	Vitamin D, IU (mcg)	252 (6.3)	194 (4.9)
Fat, g	19.1	14.7	Vitamin E, IU (mg. $\alpha$ T.E.)	4.8 (3.2)	4 (2.5)
Saturated, g	6.6	5.1	Vitamin K, mcg	37	28
Monounsaturated, g	7.7	5.9	Thiamine, mcg	390	300
Polyunsaturated, g	3.8	2.9	Riboflavin, mcg	580	446
Linoleic Acid, mg	2850	2192	Vitamin B <sub>6</sub> , mcg	520	400
DHA, mg	36.4	28.0	Vitamin B <sub>12</sub> , mcg	1.1	0.85
ARA, mg	63.7	49.0	Niacin, mcg	6500	5000
Carbohydrate, g	49.3	38	Folic Acid, mcg	43	33
<b>Amino Acids, g</b>			Pantothenic Acid, mcg	2610	2008
L-Alanine	0.62	0.48	Biotin, mcg	13	10
L-Arginine	1.09	0.84	Vitamin C, mg	39	30
L-Aspartic Acid	1.02	0.78	Choline, mg	55	42
L-Cystine	0.41	0.32	Inositol, mg	98	75
Glycine	0.96	0.74	<b>Minerals</b>		
L-Histidine	0.63	0.48	Calcium, mg	522	402
L-Isoleucine	0.96	0.74	Phosphorus, mg	392	302
L-Leucine	1.65	1.27	Magnesium, mg	52	40
L-Lysine	1.11	0.85	Iron, mg	7.8	6
L-Methionine	0.26	0.20	Zinc, mg	7	5
L-Phenylalanine	None	None	Manganese, mcg	380	292
L-Proline	1.10	0.85	Copper, mcg	520	400
L-Serine	0.72	0.55	Iodine, mcg	65	50
L-Threonine	0.81	0.62	Molybdenum, mcg	20	15
L-Tryptophan	0.31	0.24	Chromium, mcg	15	12
L-Tyrosine	1.44	1.11	Selenium, mcg	15.7	12
L-Valine	1.05	0.81	Sodium, mg (mEq)	157 (6.8)	121 (5.2)
L-Carnitine	0.01	0.01	Potassium, mg (mEq)	653 (16.7)	502 (12.8)
Taurine	0.02	0.02	Chloride, mg (mEq)	325 (9.3)	250 (7.2)
L-Glutamine	1.28	0.98			

### Ingredients:

Corn Syrup Solids, Refined Vegetable Oil (Soy, Coconut), High Oleic Sunflower Oil, Calcium Phosphate Dibasic, L-Arginine L-Aspartate, Tripotassium Citrate, L-Leucine, L-Lysine Acetate, L-Tyrosine, L-Glutamine, L-Proline, L-Valine, Glycine, L-Isoleucine, CAEM (An Emulsifier), L-Threonine, L-Serine, L-Histidine, L-Alanine, Sodium Chloride, L-Cystine, L-Tryptophan, L-Methionine, Magnesium Acetate, Magnesium L-Aspartate, Potassium Chloride, M. Alpina Oil\*, Choline Bitartrate, M-Inositol, C. Cohnii Oil\*\*, L-Ascorbic Acid, Ferrous Sulfate, Zinc Sulfate, Taurine, Carnitine, Niacinamide, Sunflower Oil, DL-Alpha Tocopherol Acetate, Calcium D-Pantothenate, Cupric Sulfate, Manganese Sulfate, Pyridoxine Hydrochloride, Riboflavin, Vitamin A Acetate, Thiamin Chloride Hydrochloride, Ascorbyl Palmitate, Potassium Iodide, Chromium Sulfate, DL-Alpha Tocopherol, Phylloquinone, Sodium Molybdate, Folic Acid, Sodium Hydrogen Selenite, D-Biotin, Vitamin D<sub>3</sub>, Cyanocobalamin.

\* A Source of Arachidonic Acid (ARA)

\*\* A Source of Docosahexaenoic Acid (DHA)



## Periflex Junior

A phenylalanine-free, powdered medical food for the dietary management of phenylketonuria (PKU) in toddlers and young children.

This formulation is available in the US and Canada.

### Main Features:

- Phenylalanine-free
- Heart healthy: low in saturated fat
- Easy transition from Periflex Infant
- Contains a balanced mixture of all other essential and non-essential amino acids, carbohydrate, fat, vitamins, minerals and trace elements
- Excellent balance of linoleic acid and  $\alpha$ -linolenic acid, providing a preferable 4:1 ratio of n-6 to n-3
- Age-appropriate DRI formulation
- Periflex Junior provides 25 g of protein equivalent and 14 g of fat per 100 g of powder
- Meets protein requirements in lower volume
- Pleasant taste, smell and texture
- Available in unflavored and orange
- Optimal nutrition for all ages

	Osmolality (mOsm/kg):		
	Dilution	Unflavored	Orange
1 to 5	720	770	
1 to 4	910	980	

### Indications:

- Phenylketonuria

*For details on administration and household measurements, please see pages 126-137.*

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
118308 - Unflavored	49735-0183-08	B4162	6 x 454 g (1 lb)	1789
118310 - Orange	49735-0183-10	B4162	6 x 454 g (1 lb)	1698

**WIC<sup>+</sup> eligible in all States.**

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 100 g	Per 10 g Protein Equivalent	Vitamins		
			Per 100 g	Per 10 g Protein Equivalent	
Calories (Orange*)	394 (374)	157.6 (149.6)	Vitamin A, IU (mcg RE)	1665 (500)	666 (200)
Protein Equivalent, g	25	10	Vitamin D <sub>3</sub> , IU (mcg)	480 (12)	192 (4.8)
Fat, g	14	5.6	Vitamin E, IU (mg $\alpha$ T.E.)	14.3 (9.6)	5.72 (3.84)
Saturated, g	1.6	0.64	Vitamin K, mcg	48	19.2
Monounsaturated, g	8.9	3.56	Thiamine, mg	0.8	0.32
Polyunsaturated, g	2.9	1.16	Riboflavin, mg	0.8	0.32
Linoleic Acid, mg	2305	920	Vitamin B <sub>6</sub> , mg	0.8	0.32
$\alpha$ -Linolenic Acid, mg	598	239	Vitamin B <sub>12</sub> , mcg	2	0.8
Carbohydrate, g (orange)	42 (37)	16.8 (14.8)	Niacin, mg	5	2
<b>Amino Acids, g</b>			Folic Acid, mcg	240	96
L-Alanine	1.4	0.56	Pantothenic Acid, mg	3.2	1.28
L-Arginine	0.81	0.32	Biotin, mcg	18	7.2
L-Cystine	0.75	0.30	Vitamin C, mg	62.5	25
L-Histidine	0.56	0.22	Choline, mg	250	100
L-Isoleucine	1.8	0.72	Inositol, mg	56	22.4
L-Leucine	2	0.80	<b>Minerals</b>		
L-Lysine	2	0.80	Calcium, mg	810	324
L-Methionine	0.51	0.20	Phosphorus, mg	810	324
L-Phenylalanine	None	None	Magnesium, mg	128	51.2
L-Proline	3.7	1.48	Iron, mg	14	5.6
L-Serine	1.8	0.72	Zinc, mg	11	4.4
L-Threonine	1	0.40	Manganese, mg	1.9	0.76
L-Tryptophan	0.34	0.14	Copper, mcg	1000	0.4
L-Tyrosine	2.3	0.92	Iodine, mcg	144	57.6
L-Valine	1.8	0.72	Molybdenum, mcg	33	13.2
L-Asparagine	2.5	1.00	Chromium, mcg	21.5	8.6
L-Citrulline	0.81	0.32	Selenium, mcg	40	16
L-Carnitine	0.03	0.01	Sodium, mg (mEq)	580 (25.2)	232 (10.1)
Taurine	0.65	0.26	Potassium, mg (mEq)	840 (21.5)	336 (8.6)
L-Glutamine	5.3	2.12	Chloride, mg (mEq)	450 (12.9)	180 (5.1)

### Ingredients:

Corn Syrup Solids, Canola Oil, High Oleic Safflower Oil, L-Glutamine, L-Proline, L-Asparagine, L-Lysine Hydrochloride, Tripotassium Citrate, L-Tyrosine, L-Leucine, and 2% or less of each of the following: Disodium Hydrogen Phosphate, L-Valine, L-Serine, L-Isoleucine, Tricalcium Citrate, Tricalcium Phosphate, L-Alanine, Maltodextrin, L-Threonine, Magnesium Hydrogen Phosphate, L-Citrulline, L-Arginine, L-Cystine, Choline Bitartrate, Taurine, Fractionated Coconut Oil, CAEM (An Emulsifier), L-Histidine, L-Methionine, L-Tryptophan, L-Ascorbic Acid, M-Inositol, Ferrous Sulfate, Zinc Sulfate, L-Carnitine, DL-Alpha Tocopheryl Acetate, Manganese Sulfate, Niacinamide, Calcium D-Pantothenate, Cupric Sulfate, Thiamine Chloride Hydrochloride, Pyridoxine Hydrochloride, Riboflavin, Vitamin A Acetate, Folic Acid, Potassium Iodide, Chromium Chloride, Sodium Selenite, Sodium Molybdate, Phylloquinone, D-Biotin, Vitamin D<sub>3</sub>, Cyanocobalamin.

**Unflavored** version also contains: 2% or less of Sugar.

**Orange** flavored version also contains: Sugar, Citric Acid, Artificial Flavors, and 2% or less of each of the following: Artificial Sweetener: Sucralose, Artificial Colors (Beta Carotene, Beet Red).



## Periflex Advance

A phenylalanine-free, powdered medical food for the dietary management of phenylketonuria (PKU) in older children and adults, including pregnant women and women of child-bearing age.

This formulation is available in the US and Canada.

### Main Features:

- Phenylalanine-free
- Heart healthy: low in saturated fat
- Easy transition from Periflex Junior
- Contains a balanced mixture of all other essential and non-essential amino acids, carbohydrate, fat, vitamins, minerals and trace elements
- Excellent balance of linoleic acid and  $\alpha$ -linolenic acid, providing a preferable 4:1 ratio of n-6 to n-3
- Age-appropriate DRI formulation
- Periflex Advance provides 35 g of protein equivalent and 12.6 g of fat per 100 g of powder
- Meets protein requirements in lower volume
- Pleasant taste, smell and texture
- Available in unflavored and orange
- Optimal nutrition for all ages

- Osmolality (mOsm/kg):

Dilution	Unflavored	Orange
1 to 5	830	890
1 to 4	1060	1100

### Indications:

- Phenylketonuria

For details on administration and household measurements, please see pages 126-137.

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
118305 - Unflavored	49735-0183-05	B4157 or B4162	6 x 454 g (1 lb)	1748
118307 - Orange	49735-0183-07	B4157 or B4162	6 x 454 g (1 lb)	1675

WIC<sup>+</sup> eligible in all States.

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 100 g		Vitamins	Per 100 g	
	Per 100 g	Protein Equivalent		Per 100 g	Protein Equivalent
Calories (orange*)	385 (369)	110 (105.4)	Vitamin A, IU (mcg RE)	1951 (586)	557.4 (167.4)
Protein Equivalent, g	35	10	Vitamin D <sub>3</sub> , IU (mcg)	292 (7.3)	83.4 (2.1)
Fat, g	12.6	3.6	Vitamin E, IU (mg $\alpha$ T.E.)	16.2 (10.9)	4.6 (3.1)
Saturated, g	1.4	0.4	Vitamin K, mcg	71.8	20.5
Monounsaturated, g	7.9	2.3	Thiamine, mg	0.8	0.2
Polyunsaturated, g	2.7	0.8	Riboflavin, mg	0.85	0.2
Linoleic Acid, mg	2064	590	Vitamin B <sub>6</sub> , mg	1.4	0.4
$\alpha$ -Linolenic Acid, mg	535	153	Vitamin B <sub>12</sub> , mcg	2.7	0.8
Carbohydrate, g (orange)	33 (29)	9.4 (8.3)	Niacin, mg	5	1.4
<b>Amino Acids, g</b>			Folic Acid, mcg	430	122.9
L-Alanine	1.4	0.40	Pantothenic Acid, mg	4.3	1.2
L-Arginine	2.6	0.74	Biotin, mcg	21.4	6.1
L-Aspartic Acid	2.5	0.71	Vitamin C, mg	54.3	15.5
L-Cystine	0.96	0.27	Choline, mg	376	107.4
Glycine	2.5	0.71	Inositol, mg	70	20
L-Histidine	1.5	0.43	<b>Minerals</b>		
L-Isoleucine	2.4	0.69	Calcium, mg	1035	296
L-Leucine	4.0	1.14	Phosphorus, mg	995	284
L-Lysine	3.1	0.89	Magnesium, mg	268	76.6
L-Methionine	0.64	0.18	Iron, mg	12.9	3.7
L-Phenylalanine	None	None	Zinc, mg	7.9	2.3
L-Proline	2.8	0.80	Manganese, mg	1.6	0.5
L-Serine	1.8	0.51	Copper, mcg	720	0.2
L-Threonine	1.9	0.54	Iodine, mcg	115	32.9
L-Tryptophan	0.78	0.22	Molybdenum, mcg	32.4	9.3
L-Tyrosine	3.5	1.00	Chromium, mcg	22.8	6.5
L-Valine	2.5	0.71	Selenium, mcg	50.8	14.5
L-Carnitine	0.03	0.01	Sodium, mg (mEq)	490 (21.3)	140 (6.1)
Taurine	0.12	0.03	Potassium, mg (mEq)	613 (15.7)	175.1 (4.5)
L-Glutamine	4.3	1.23	Chloride, mg (mEq)	490 (14)	140 (4.0)

### Ingredients:

Corn Syrup Solids, High Oleic Safflower Oil, Canola Oil, L-Lysine, L-Aspartate, L-Glutamine, L-Leucine, L-Tyrosine, L-Proline, L-Arginine, L-Valine, Glycine, L-Isoleucine, Magnesium Hydrogen Phosphate, L-Threonine, and 2% or less of each of the following: L-Serine, Disodium Hydrogen Phosphate, L-Histidine, L-Alanine, Potassium Chloride, Choline Hydrogen Tartrate, L-Cystine, L-Tryptophan, Sugar, L-Methionine, Fractionated Coconut Oil, L-Lysine Acetate, CAEM (An Emulsifier), Tripotassium Citrate, Taurine, L-Ascorbic Acid, M-Inositol, Ferrous Sulfate, L-Carnitine, Zinc Sulfate, DL-Alpha Tocopherol Acetate, Manganese Sulfate, Niacinamide, Calcium D-Panthenate, Cupric Sulfate, Pyridoxine Hydrochloride, Thiamine Chloride Hydrochloride, Riboflavin, Vitamin A Acetate, Folic Acid, Potassium Iodide, Chromium Chloride, Sodium Selenite, Sodium Molybdate, Phylloquinone, D-Biotin, Vitamin D<sub>3</sub>, Cyanocobalamin.

**Unflavored** version also contains: Tricalcium Citrate and 2% or less of Tricalcium Phosphate.

**Orange** flavored version also contains: Artificial Flavor, Citric Acid, Tricalcium Phosphate and 2% or less of each of the following: Tricalcium Citrate, Guar Gum, Xanthan Gum, Artificial Sweetener: Sucralose, Artificial Colors (Beet Red, Beta Carotene).



## XPhe Maxamaid

Strawberry flavor to be discontinued Fall 2013

A phenylalanine-free powdered medical food for the dietary management of phenylketonuria (PKU) in toddlers and young children.

This formulation is available in the US and Canada.

### Main Features:

- Phenylalanine-free
- Contains a balanced mixture of all other essential and non-essential amino acids, carbohydrate, vitamins, minerals and trace elements
- Age-appropriate DRI formulation
- XPhe Maxamaid provides 25 g of protein equivalent per 100 g of powder
- Available in unflavored, orange and strawberry flavors
- Does not contain fat thereby allowing greater flexibility in modifying energy intake

### Indications:

- Phenylketonuria

For details on administration and household measurements, please see pages 126-137.

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
117794 - Strawberry	49735-0177-94	B4162	6 x 454 g (1 lb)	1471
117792 - Orange	49735-0177-92	B4162	6 x 454 g (1 lb)	1471
117793 - Unflavored	49735-0177-93	B4162	6 x 454 g (1 lb)	1471

WIC<sup>+</sup> eligible in all States.

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 10 g		Vitamins	Per 10 g	
	Per 100 g	Protein Equivalent		Per 100 g	Protein Equivalent
Calories	324	130	Vitamin A, IU (mcg R.E.)	1665 (500)	666 (200)
Protein Equivalent, g	25	10	Vitamin D, IU (mcg)	480 (12)	192 (4.8)
Fat, g	<0.1	0.04	Vitamin E, IU (mg α T.E.)	14.3 (9.6)	5.7 (3.8)
Carbohydrate, g	56	22	Vitamin K, mcg	48	19
<b>Amino Acids, g</b>			Thiamine, mg	0.8	0.3
L-Alanine	1.03	0.41	Riboflavin, mg	0.8	0.3
L-Arginine	2.21	0.88	Vitamin B <sub>6</sub> , mg	0.8	0.3
L-Aspartic Acid	1.85	0.74	Vitamin B <sub>12</sub> , mcg	2	0.8
L-Cystine	0.71	0.28	Niacin, mg	5	2
Glycine	1.77	None	Folic Acid, mcg	240	96
L-Histidine	1.27	0.71	Pantothenic Acid, mg	3.2	1.3
L-Isoleucine	1.70	0.51	Biotin, mcg	18	7.2
L-Leucine	2.91	0.68	Vitamin C, mg	62.5	25
L-Lysine	2.22	1.16	Choline, mg	250	100
L-Methionine	0.48	0.89	Inositol, mg	56	22
L-Phenylalanine	None	0.19	<b>Minerals</b>		
L-Proline	2.05	None	Calcium, mg	810	324
L-Serine	1.26	0.82	Phosphorus, mg	810	324
L-Threonine	1.42	0.50	Magnesium, mg	128	51
L-Tryptophan	0.57	0.57	Iron, mg	14	5.6
L-Tyrosine	2.56	0.23	Zinc, mg	11	4.4
L-Valine	1.85	1.02	Manganese, mg	1.9	0.8
L-Carnitine	0.02	0.74	Copper, mcg	1000	400
Taurine	0.14	0.01	Iodine, mcg	144	58
L-Glutamine	1.5	0.06	Molybdenum, mcg	33	13
		0.60	Chromium, mcg	21.5	8.6
			Selenium, mcg	40	16
			Sodium, mg (mEq)	580 (25.2)	232 (10)
			Potassium, mg (mEq)	840 (21.5)	336 (8.6)
			Chloride, mg (mEq)	450 (12.9)	180 (5.1)

### Ingredients:

Corn Syrup Solids, L-Arginine L-Aspartate, Calcium Phosphate Dibasic, L-Lysine Acetate, L-Leucine, L-Tyrosine, Tripotassium Citrate, L-Proline, and 2% or less of each of the following: L-Valine, Glycine, L-Isoleucine, L-Glutamine, L-Threonine, L-Serine, L-Histidine, Maltodextrin, L-Alanine, Disodium Hydrogen Phosphate, Sodium Chloride, Magnesium Acetate, L-Cystine, Choline Bitartrate, N-Acetyl L-Methionine, L-Tryptophan, Magnesium L-Aspartate, Taurine, L-Ascorbic Acid, M-Inositol, Ferrous Sulfate, Zinc Sulfate, L-Carnitine, DL-Alpha Tocopheryl Acetate, Manganese Sulfate, Niacinamide, Calcium D-Pantothenate, Cupric Sulfate, Thiamine Chloride Hydrochloride, Pyridoxine Hydrochloride, Riboflavin, Vitamin A Acetate, Folic Acid, Potassium Iodide, Chromium Chloride, Sodium Selenite, Sodium Molybdate, Phylloquinone, D-Biotin, Vitamin D<sub>3</sub>, Cyanocobalamin.

**Unflavored** version also contains: 2% or less of Sugar.

**Orange** flavored version also contains: Sugar, Citric Acid, and 2% or less of each of the following: Artificial Flavors, Artificial Colors (Beta Carotene, Beet Red).


**Strawberry** flavored version also contains: Sugar, Citric Acid, and 2% or less of each of the following: Artificial Flavors, Artificial Color (Beet Red).





## XPhe Maxamum Powder

A phenylalanine-free powdered medical food for the dietary management of phenylketonuria (PKU) in older children and adults, including pregnant women and women of child-bearing age.

 This formulation is available in the US and Canada.

### Main Features:

- Phenylalanine-free
- Easy transition from XPhe Maxamum
- Contains a balanced mixture of all other essential and non-essential amino acids, carbohydrate, vitamins, minerals and trace elements
- Age-appropriate DRI formulation
- XPhe Maxamum Powder provides 40 g of protein equivalent per 100 g of powder
- Available in unflavored and orange flavor
- Does not contain fat thereby allowing greater flexibility in modifying energy intake
- Available in cans or sachets

### Indications:

- Phenylketonuria

For details on administration and household measurements, please see pages 126-137.

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can/Sachet
118324 - Orange (cans)	49735-0183-24	B4162 or B4157	6 x 454 g (1 lb)	1385
118323 - Unflavored (cans)	49735-0183-23	B4162 or B4157	6 x 454 g (1 lb)	1385
12312 - Orange (sachets)	49735-0123-12	B4162 or B4157	30 x 50 g (1.8 oz)	153
12311 - Unflavored (sachets)	49735-0123-11	B4162 or B4157	30 x 50 g (1.8 oz)	153

**WIC+ eligible in all States.**

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 10 g		Vitamins	Per 10 g	
	Per 100 g	Protein Equivalent		Per 100 g	Protein Equivalent
Calories	305	76	Vitamin A, IU (mcg R.E.)	2228 (669)	557 (167)
Protein Equivalent, g	40	10	Vitamin D, IU (mcg)	332 (8.3)	83 (2.1)
Fat, g	<1	<0.25	Vitamin E, IU (mg α.T.E.)	18.3 (12.3)	4.6 (3.1)
Carbohydrate, g	34	8.5	Vitamin K, mcg	82	21
<b>Amino Acids, g</b>			Thiamine, mg	0.91	0.23
L-Alanine	1.6	0.40	Riboflavin, mg	0.97	0.24
L-Arginine	3	0.75	Vitamin B <sub>6</sub> , mg	1.6	0.4
L-Aspartic Acid	2.8	0.70	Vitamin B <sub>12</sub> , mcg	3.1	0.8
L-Cystine	1.1	0.28	Niacin, mg	5.7	1.4
Glycine	2.8	None	Folic Acid, mcg	491	123
L-Histidine	1.7	0.70	Pantothenic Acid, mg	4.9	1.2
L-Isoleucine	2.7	0.43	Biotin, mcg	24.5	6.1
L-Leucine	4.6	0.68	Vitamin C, mg	62	16
L-Lysine	3.5	1.15	Choline, mg	430	108
L-Methionine	0.73	0.88	Inositol, mg	80	20
L-Phenylalanine	None	0.18	<b>Minerals</b>		
L-Proline	3.2	None	Calcium, mg	1183	296
L-Serine	2	0.80	Phosphorus, mg	1137	284
L-Threonine	2.2	0.50	Magnesium, mg	306	77
L-Tryptophan	0.89	0.55	Iron, mg	14.7	3.7
L-Tyrosine	4	0.22	Zinc, mg	9	2
L-Valine	2.9	1.00	Manganese, mg	1.8	0.5
L-Carnitine	0.039	0.73	Copper, mcg	820	205
Taurine	0.14	0.01	Iodine, mcg	131	33
L-Glutamine	4.9	0.04	Molybdenum, mcg	37	9
		1.23	Chromium, mcg	26	7
			Selenium, mcg	58	15
			Sodium, mg (mEq)	560 (24.3)	140 (6.1)
			Potassium, mg (mEq)	700 (17.9)	175 (4.5)
			Chloride, mg (mEq)	560 (16)	140 (4)

### Ingredients:


Sugar, L-Arginine L-Aspartate, L-Lysine Acetate, L-Glutamine, L-Leucine, L-Tyrosine, Calcium Glycerophosphate, L-Proline, L-Valine, Glycine, L-Isoleucine, L-Threonine, Tripotassium Citrate, Magnesium Hydrogen Phosphate, and 2% or less of each of the following: L-Serine, L-Histidine, L-Alanine, Calcium Phosphate Dibasic, Choline Bitartrate, L-Cystine, Tricalcium Phosphate, Sodium Chloride, N-Acetyl L-Methionine, Trisodium Citrate, L-Tryptophan, Soy Lecithin, Magnesium L-Aspartate, Taurine, L-Ascorbic Acid, M-Inositol, Ferrous Sulfate, L-Carnitine, Zinc Sulfate, DL-Alpha Tocopheryl Acetate, Niacinamide, Manganese Sulfate, Calcium D-Pantothenate, Cupric Sulfate, Pyridoxine Hydrochloride, Sodium Selenite, Thiamine Chloride Hydrochloride, Riboflavin, Vitamin A Acetate, Folic Acid, Potassium Iodide, Chromium Chloride, Sodium Molybdate, Phylloquinone, D-Biotin, Vitamin D<sub>3</sub>, Cyanocobalamin.

**Orange** flavored version also contains: Citric Acid, and 2% or less of each of the following: Artificial Flavor, Artificial Sweetener: Acesulfame Potassium, Artificial Colors (Beta Carotene, Beet Red).



## XPhe Maxamum Drink

A phenylalanine-free, ready-to-drink medical food for the dietary management of phenylketonuria (PKU) in children and adults, including pregnant women and women of child-bearing age.

 This formulation is available in the US and Canada.

### Main Features:

- Phenylalanine-free
- Contains a balanced mixture of other amino acids, carbohydrate, vitamins and minerals
- Can easily be used along with or in place of Periflex Junior or Advance
- No measuring or mixing
- Great addition to any daily PKU diet plan
- XPhe Maxamum Drink provides 15 g of protein equivalent per 250 mL Tetra Pak
- Available in orange and berry flavors
- Osmolality (mOsm/kg):
 

Dilution	Orange	Berry
0.64 kcal/mL	1080	1030
- Free Water: 84%

### Indications:

- Phenylketonuria

For details on administration, please see pages 126-137.

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Tetra Pak
12551 - Orange	49735-0125-51	B4162 or B4157	18 x 250 mL (8.5 fl oz)	160
12524 - Berry	49735-0125-24	B4162 or B4157	18 x 250 mL (8.5 fl oz)	160

**WIC<sup>+</sup> eligible in all States.**

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 10 g		Vitamins	Per 10 g	
	Per 250 mL	Protein Equivalent		Per 250 mL	Protein Equivalent
Calories	160	107	Vitamin A, IU (mcg R.E.)	833 (250)	555 (167)
Protein Equivalent, g	15	10	Vitamin D, IU (mcg)	130 (3.3)	87 (2.2)
Fat, g	5	3.3	Vitamin E, IU (mg α.T.E.)	7 (4.8)	4.7 (3.2)
Saturated, g	0.75	0.5	Vitamin K, mcg	30.8	21
Monounsaturated, g	3	2	Thiamine, mg	0.35	0.23
Polyunsaturated, g	1	0.7	Riboflavin, mg	0.38	0.25
Carbohydrate, g	13.8	9.2	Vitamin B <sub>6</sub> , mg	0.6	0.4
<b>Amino Acids, g</b>			Vitamin B <sub>12</sub> , mcg	1.2	0.8
L-Alanine	0.68	0.45	Niacin, mg	2.1	1.4
L-Arginine	1.28	0.85	Folic Acid, mcg	184	123
L-Aspartic Acid	1.2	0.80	Pantothenic Acid, mg	1.9	1.3
L-Cystine	0.48	0.32	Biotin, mcg	9.3	6.2
Glycine	1.23	0.82	Vitamin C, mg	23.3	16
L-Histidine	0.73	0.49	Choline, mg	161	107
L-Isoleucine	1.13	0.75	Inositol, mg	30	20
L-Leucine	1.95	1.30	<b>Minerals</b>		
L-Lysine	1.5	1.00	Calcium, mg	400	267
L-Methionine	0.33	0.22	Phosphorus, mg	288	192
L-Phenylalanine	None	None	Magnesium, mg	114	76
L-Proline	1.38	0.92	Iron, mg	5.5	3.7
L-Serine	0.85	0.57	Zinc, mg	3.5	2
L-Threonine	0.95	0.63	Manganese, mg	0.7	0.5
L-Tryptophan	0.38	0.25	Copper, mcg	310	207
L-Tyrosine	1.73	1.15	Iodine, mcg	49	33
L-Valine	1.25	0.83	Molybdenum, mcg	14	9
L-Carnitine	0.01	0.01	Chromium, mcg	9.8	7
Taurine	0.08	0.05	Selenium, mcg	21.8	15
L-Glutamine	None	None	Sodium, mg (mEq)	210 (9.3)	140 (6.2)
			Potassium, mg (mEq)	263 (6.8)	175 (4.5)
			Chloride, mg (mEq)	210 (6)	140 (4)

### Ingredients:


Water, Sugar, and less than 2% of each of the following: Calcium Glycerophosphate, High Oleic Sunflower Oil, L-Lysine Acetate, Canola Oil, L-Leucine, L-Tyrosine, Artificial Flavor, L-Proline, L-Arginine, L-Valine, Glycine, L-Aspartic Acid, L-Isoleucine, Micro-Crystalline Cellulose, Citric Acid, L-Threonine, L-Serine, Magnesium Acetate, Tripotassium Citrate, L-Histidine, L-Alanine, L-Cystine, Choline Hydrogen Tartrate, N-Acetyl L-Methionine, Sodium Chloride, L-Tryptophan, Trisodium Citrate, Soybean Oil, L-Ascorbic Acid, Diacetyl Tartaric Acid Esters of Monoglycerides, Mono- and Diglycerides, Guar Gum, Xanthan Gum, Artificial Sweetener: Acesulfame Potassium, Taurine, M-Inositol, Ferrous Sulphate, Tricalcium Phosphate, Carnitine, Zinc Sulfate, DL-Alpha Tocopherol Acetate, Niacinamide, Manganese Sulphate, Calcium-D-Pantothenate, Cupric Sulfate, Pyridoxine Hydrochloride, Thiamine Chloride Hydrochloride, Riboflavin, Vitamin A Acetate, Potassium Iodide, Chromium Chloride, Sodium Selenite, Sodium Molybdate, Phylloquinone, D-Biotin, Cholecalciferol, Folic Acid, Cyanocobalamin.





## Lophlex Powder

A low volume, phenylalanine-free, powdered medical food for the dietary management of phenylketonuria (PKU) in older children and adults, including pregnant women and women of child-bearing age.

 This formulation is available in the US and Canada.

### Main Features:

- Phenylalanine-free
- Low volume and low calorie
- Contains vitamins, minerals, and trace elements
- Age-appropriate DRI formulation
- Lophlex provides 10 g of protein equivalent per sachet
- Available in berry and orange flavors
- Osmolality (mOsm/kg):

Dilution	Orange	Berry
1 to 5	1390	1340

### Indications:

- Phenylketonuria

For details on administration, please see pages 126-137.

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Sachet
12169 - Berry	49735-0121-69	B4157 or B4162	30 x 14.3 g (0.5 oz)	42
12167 - Orange	49735-0121-67	B4157 or B4162	30 x 14.3 g (0.5 oz)	42

**WIC<sup>+</sup> eligible in all States.** For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per sachet (14.3 g)	Per 100 g	Vitamins	Per sachet (14.3 g)	Per 100 g
Calories	41	286	Vitamin A, IU (mcg R.E.)	557 (167)	3896 (1170)
Protein Equivalent, g	10	70	Vitamin D, IU (mcg)	82.9 (2.1)	580 (14.5)
Fat, g	0.03	0.2	Vitamin E, IU (mg α.T.E.)	4.6 (3.1)	32 (21.5)
Carbohydrate, g	0.14	1	Vitamin K, mcg	20.4	143
<b>Amino Acids, g</b>			Thiamine, mg	0.23	1.6
L-Alanine	0.47	3.3	Riboflavin, mg	0.24	1.7
L-Arginine	0.83	5.8	Vitamin B <sub>6</sub> , mg	0.4	2.8
L-Aspartic Acid	0.77	5.4	Vitamin B <sub>12</sub> , mcg	0.79	5.5
L-Cystine	0.31	2.2	Niacin, mg	1.4	10
Glycine	0.73	5.1	Folic Acid, mcg	123	860
L-Histidine	0.47	3.3	Pantothenic Acid, mg	1.2	8.6
L-Isoleucine	0.73	5.1	Biotin, mcg	6.1	43
L-Leucine	1.24	8.7	Vitamin C, mg	15.7	110
L-Lysine	0.84	5.9	Choline, mg	103	720
L-Methionine	0.20	1.4	Inositol, mg	20	140
L-Phenylalanine	None	None	<b>Minerals</b>		
L-Proline	0.89	6.2	Calcium, mg	296	2070
L-Serine	0.54	3.8	Phosphorus, mg	285	1990
L-Threonine	0.61	4.3	Magnesium, mg	76.5	535
L-Tryptophan	0.24	1.7	Iron, mg	3.7	25.7
L-Tyrosine	1.12	7.8	Zinc, mg	2.3	15.8
L-Valine	0.80	5.6	Manganese, mg	0.44	3.1
L-Carnitine	0.01	0.06	Copper, mcg	204	1430
Taurine	0.02	0.11	Iodine, mcg	32.7	229
L-Glutamine	0.56	3.95	Molybdenum, mcg	9.3	65
			Chromium, mcg	6.6	46
			Selenium, mcg	14.4	101
			Sodium, mg (mEq)	<3 (<1)	<20 (<1)
			Potassium, mg (mEq)	<6 (<1)	<40 (<1)
			Chloride, mg (mEq)	<1 (<1)	<1 (<1)

### Ingredients:

**Berry:** L-Leucine, L-Tyrosine, L-Proline, L-Lysine, L-Arginine, L-Valine, Tricalcium Phosphate, L-Aspartic Acid, Glycine, L-Isoleucine, L-Threonine, Magnesium Hydrogen Phosphate, L-Glutamine, L-Serine, L-Histidine, L-Alanine, Citric Acid, L-Cystine, Choline Bitartrate, and 2% or less of each of the following: L-Tryptophan, Calcium Phosphate, L-Methionine, Artificial Flavor, Guar Gum, Soy Lecithin, L-Ascorbic Acid, M-Inositol, Acesulfame Potassium, Taurine, Ferrous Sulfate, L-Carnitine, Zinc Niacinate, DL Alpha Tocopheryl Acetate, Niacinamide, Manganese Sulfate, Calcium-D-Pantothenate, Copper Sulfate, Pyridoxine Hydrochloride, Sodium Selenite, Thiamine Chloride Hydrochloride, Riboflavin, Vitamin A Acetate, Folic Acid, Artificial Color (Beet Red), Potassium Iodide, Chromium Chloride, Sodium Molybdate, Phylloquinone, D-Biotin, Vitamin D<sub>3</sub>, Cyanocobalamin.

**Orange** flavored version also contains: 2% or less of Artificial Color (Beta Carotene).



## PKU Lophlex LQ (Juicy Orange & Mixed Berry Blast)

A phenylalanine-free, ready-to-drink medical food containing amino acids, vitamins and minerals, based on fruit juice (from concentrate) with natural flavor; for the dietary management of proven phenylketonuria (PKU) in individuals 4 years and older, including pregnant women and women of child-bearing age.

This formulation is available in the US and Canada.

### Main Features:

- Phenylalanine-free
- Low volume; low calorie
- Convenient ready-to-drink
- Based on fruit juice (from concentrate) with natural flavor - no artificial flavors
- Contains a balanced mixture of other essential and non-essential amino acids, carbohydrates, vitamins and minerals
- Provides 20 g of protein equivalent in one pouch
- Available in juicy orange and mixed berry blast flavors
- Osmolality: 2460 mOsm/kg

### Indications:

- Phenylketonuria

For details on administration, please see pages 126-137.

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Pouch
66130	49735-016130	B4157 and B4162	30 x 4.2 fl oz (125 mL)	116
Juicy Orange				
66129	49735-016129	B4157 and B4162	30 x 4.2 fl oz (125 mL)	116
Mixed Berry Blast				

**WIC<sup>+</sup> eligible in all States.** For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per Pouch	Per 10 g	Vitamins	Per Pouch	Per 10 g
	(125 mL)	Protein Equivalent		(125 mL)	Protein Equivalent
Calories	116.0	58.0	Vitamin A, IU (mcg R.E.)	949 (285)	475 (143)
Protein Equivalent, g	20.0	10.0	Vitamin D, IU (mcg)	320 (8.0)	160 (4.0)
Fat, g	0	0	Vitamin E, IU (mg α T.E.)	4.8 (3.2)	2.4 (1.6)
Carbohydrate, g	9.3	4.7	Vitamin K, mcg	24.9	12.5
Fiber, g	0.50	0.25	Thiamin, mg	0.54	0.27
<b>Amino Acids, g</b>			Riboflavin, mg	0.50	0.25
L-Alanine	1.16	0.58	Vitamin B6, mg	0.58	0.29
L-Asparagine	0.00	0.00	Vitamin B12, mcg	1.8	0.90
L-Aspartic Acid	1.75	0.88	Niacin, mg	7.1	3.6
L-Cystine	0.51	0.26	Folic Acid, mcg	120	60.0
Glycine	1.88	0.94	Pantothenic Acid, mg	1.8	0.9
L-Histidine	0.79	0.40	Biotin, mcg	53.4	26.7
L-Isoleucine	1.24	0.62	Vitamin C, mg	17.8	8.9
L-Leucine	2.13	1.07	Choline, mg	153	76.5
L-Lysine	1.63	0.82	Inositol, mg	40.6	20.3
L-Methionine	0.34	0.17	<b>Minerals</b>		
L-Phenylalanine	nil added	nil added	Calcium, mg	319	160
L-Proline	2.00	1.00	Phosphorus, mg	244	122
L-Serine	1.09	0.55	Magnesium, mg	96.3	48.2
L-Threonine	1.04	0.52	Iron, mg	5.1	2.6
L-Tryptophan	0.41	0.21	Zinc, mg	3.8	1.9
L-Tyrosine	1.88	0.94	Manganese, mg	0.56	0.28
L-Valine	1.38	0.69	Copper, mcg	563	282
L-Carnitine	0.01	0.01	Iodine, mcg	56.3	28.2
Taurine	0.10	0.05	Molybdenum, mcg	25.0	12.5
			Chromium, mcg	10.8	5.4
			Selenium, mcg	26.8	13.4
			Sodium, mg (mmol)	<25.0 (<10)	<12.5 (<5)
			Potassium, mg (mmol)	90 (2.3)	45 (1.2)
			Chloride, mg (mmol)	<25.0 (<10)	<12.5 (<5)

### Ingredients:

Water, and less than 2% of each of the following: L-Leucine, Citric Acid, L-Proline, L-Arginine, Glycine, L-Tyrosine, L-Lysine, Acetate, L-Valine, L-Aspartic Acid, L-Isoleucine, Dicalcium Phosphate, L-Alanine, L-Serine, L-Threonine, L-Histidine, L-Lysine L-Aspartate, Maltodextrin, Magnesium Acetate, L-Cystine, Choline Bitartrate, L-Tryptophan, Sugar, N-Acetyl L-Methionine, Microcrystalline Cellulose, Natural Flavor, Taurine, L-Ascorbic Acid, L-Methionine, Guar Gum, Xanthan Gum, M-Inositol, Potassium Sorbate (preservative to delay spoilage), Artificial Sweetener: Sucralose, Ferrous Lactate, Artificial Sweetener: Acesulfame Potassium, L-Carnitine, Sodium Benzoate (preservative to delay spoilage), Zinc Sulfate, Niacinamide, DL-Alpha Tocopheryl Acetate, Calcium D-Pantothenate, Manganese Sulfate, Cupric Sulfate, Thiamine Chloride Hydrochloride, Pyridoxine Hydrochloride, Vitamin A Palmitate, Riboflavin, Folic Acid, Potassium Iodide, Sodium Molybdate, D-Biotin, Sodium Selenite, Chromium Chloride, Phylloquinone, Vitamin D<sub>3</sub>, Cyanocobalamin.

**Juicy Orange** flavored version also contains: Orange Juice from Concentrate (45.5%), and less than 2% of the following: Corn Syrup Solids.

**Mixed Berry Blast** flavored version also contains: Apple Juice from Concentrate (34.1%), Grape Juice from Concentrate (6.9%), Blackcurrant Juice from Concentrate (2.5%), and less than 2% of the following: Corn Syrup Solids, Elderberry Juice from Concentrate (0.6%), Fruit Concentrate (Apple, Blackcurrant, Radish).



## PKU Lophlex LQ (Berry and Tropical)

A phenylalanine-free, ready-to-drink medical food containing amino acids, carbohydrates, vitamins and minerals; for the dietary management of proven phenylketonuria (PKU) in individuals 4 years and older, including pregnant women and women of child-bearing age.

This formulation is available in the US and Canada.

### Main Features:

- Phenylalanine-free
- Low volume; low calorie
- Convenient ready-to-drink
- Contains a balanced mixture of other essential and non-essential amino acids, carbohydrate, vitamins and minerals
- Provides 20 g of protein equivalent in one pouch
- Available in berry and tropical flavors
- Osmolality: 2460 mOsm/kg

### Indications:

- Phenylketonuria

For details on administration, please see pages 126-137.

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Pouch
50962 Berry	49735-0150-96	B4157 or B4162	30 x 4.2 fl oz (125 mL)	115
119535 Tropical	49735-0195-35	B4157 or B4162	30 x 4.2 fl oz (125 mL)	116

**WIC<sup>+</sup> eligible in all States.**

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per Pouch (4.2 fl oz)	Per 10 g Protein Equivalent	Vitamins	Per Pouch (4.2 fl oz)	Per 10 g Protein Equivalent
Calories	116	58	Vitamin A, IU (mcg R.E.)	949 (285)	475 (143)
Protein Equivalent, g	20	10	Vitamin D, IU (mcg)	144 (3.6)	72 (1.8)
Fat, g	<1	<1	Vitamin E, IU (mg α T.E.)	4.8 (3.2)	2.4 (1.6)
Carbohydrate, g	8.8	4.4	Vitamin K, mcg	24.9	12.4
<b>Amino Acids, g</b>			Thiamine, mg	0.54	0.27
Alanine	1.16	0.58	Riboflavin, mg	0.5	0.25
Arginine	2.00	1.00	Vitamin B <sub>6</sub> , mg	0.58	0.29
Aspartic Acid	1.75	0.88	Vitamin B <sub>12</sub> , mcg	1.8	0.88
Cystine	0.51	0.26	Niacin, mg	7.1	3.6
Glycine	1.88	0.94	Folic Acid, mcg	249	124
Histidine	0.79	0.39	Pantothenic Acid, mg	1.8	0.88
Isoleucine	1.24	0.62	Biotin, mcg	53.4	26.7
Leucine	2.13	1.07	Vitamin C, mg	17.8	8.9
Lysine	1.63	0.82	Choline, mg	153	76.3
Methionine	0.34	0.17	Inositol, mg	40.6	20.3
Phenylalanine	0.00	0.00	<b>Minerals</b>		
Proline	2.00	1.00	Calcium, mg	319	159
Serine	1.09	0.55	Phosphorus, mg	244	122
Threonine	1.04	0.52	Magnesium, mg	96.3	48.1
Tryptophan	0.41	0.21	Iron, mg	5.1	2.6
Tyrosine	1.88	0.94	Zinc, mg	3.8	1.9
Valine	1.38	0.69	Manganese, mg	0.56	0.28
Carnitine	0.01	0.01	Copper, mcg	563	281
Taurine	0.10	0.05	Iodine, mcg	56.3	28.1
			Molybdenum, mcg	25.0	12.5
			Chromium, mcg	10.8	5.4
			Selenium, mcg	26.8	13.4
			Sodium, mg (mmol)	<25 (<10)	<12.5 (<5)
			Potassium, mg (mmol)	<25 (<10)	<12.5 (<5)
			Chloride, mg (mmol)	<25 (<10)	<12.5 (<5)

### Ingredients:

**Tropical:** Water, Artificial Flavor, Corn Syrup Solids, L-Leucine, L-Proline, L-Arginine, Glycine, L-Tyrosine, L-Lysine Acetate, L-Valine, L-Aspartic Acid, L-Isoleucine, Dicalcium Phosphate, L-Alanine, L-Serine, L-Threonine, Citric Acid, L-Histidine, L-Lysine L-Aspartate, Magnesium Acetate, Maltodextrin, L-Cystine, Choline Bitartrate, L-Tryptophan, Sugar, N-Acetyl L-Methionine, Microcrystalline Cellulose, L-Ascorbic Acid, Taurine, L-Methionine, Guar Gum, Xanthan Gum, M-Inositol, Potassium Sorbate (Preservative To Delay Spoilage), Artificial Sweetener (Acesulfame Potassium), Ferrous Sulfate, L-Carnitine, Sodium Benzoate (Preservative To Delay Spoilage), Zinc Sulfate, Niacinamide, DL-Alpha Tocopherol Acetate, Calcium-D-Pantothenate, Manganese Sulfate, Cupric Sulfate, Vitamin A Palmitate, Pyridoxine Hydrochloride, Thiamine Chloride Hydrochloride, Riboflavin, Folic Acid, Potassium Iodide, Sodium Molybdate, D-Biotin, Sodium Selenite, Chromium Chloride, Phylloquinone, Vitamin D<sub>3</sub>, Cyanocobalamin.

**Berry** flavored version also contains Artificial Color (Carmine).



## Phlexy-10 System

An interchangeable system of phenylalanine-free medical foods for the dietary management of phenylketonuria (PKU) in individuals over 1 year of age, including pregnant women and women of child-bearing age.

 *Phlexy-10 Drink Mix and Phlexy-10 Capsules are available in the US and Canada. Phlexy-10 Tablets are only available in the US.*

### Main Features:

- Phenylalanine-free
- Available as Phlexy-10 Drink Mix (black currant/apple or tropical surprise flavor), Phlexy-10 Tablets and Phlexy-10 Capsules
- Each unit (one drink mix sachet, 10 tablets or 20 capsules) provides 10 g of amino acids, equivalent to 8.33 g of protein
- Weighing no longer necessary
- Osmolality (mOsm/kg):

Dilution	Blackcurrant/ Apple	Tropical Surprise
1 to 5	1172	1140

### Indications:

- Phenylketonuria

*For details on administration, please see pages 126-137.*

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories
11467 - Drink Mix (Blackcurrant/Apple)	49735-0114-67	B4157 or B4162	30 x 20 g (0.7 oz)	69/sachet
11910 - Drink Mix (Tropical Surprise)	49735-0119-10	B4157 or B4162	30 x 20 g (0.7 oz)	69/sachet
11809 - Capsules	49735-0118-09	A9270	200/bottle	330/bottle
11951 - Tablets	49735-0119-51	A9270	75/bottle	285/bottle

**WIC<sup>+</sup> eligible in all States.**

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Phlexy-10 Drink Mix	Phlexy-10 Capsules	Phlexy-10 Tablets
	(Per 20 g sachet)	(Per 20 capsules)	(Per 10 tablets)
Calories	69	33	38
Protein Equivalent, g	8.33	8.33	8.33
Fat, g	None	None	0.2
Saturated, g	None	None	0.19
Monounsaturated, g	None	None	None
Polyunsaturated, g	None	None	None
Carbohydrate, g	8.8	None	0.65
Dietary Fiber, g	None	1.6	3
<b>Amino Acids, g</b>			
L-Alanine	0.41	0.41	0.41
L-Arginine	0.72	0.72	0.72
L-Aspartic Acid	0.68	0.68	0.68
L-Cystine	0.27	0.27	0.27
Glycine	0.64	0.64	0.64
L-Histidine	0.41	0.41	0.41
L-Isoleucine	0.64	0.64	0.64
L-Leucine	1.09	1.09	1.09
L-Lysine	0.74	0.74	0.74
L-Methionine	0.17	0.17	0.17
L-Phenylalanine	None	Negligible*	None
L-Proline	0.77	0.77	0.77
L-Serine	0.47	0.47	0.47
L-Threonine	0.54	0.54	0.54
L-Tryptophan	0.22	0.22	0.22
L-Tyrosine	0.97	0.97	0.97
L-Valine	0.7	0.7	0.7
L-Carnitine	0.007	0.007	0.007
Taurine	0.014	0.014	0.014
L-Glutamine	0.5	0.5	0.5

\* A negligible amount of phenylalanine is present in the cellulose capsules: <0.2 mg per 20 caps

### Ingredients:

**Phlexy-10 Drink Mix (blackcurrant/apple):** Sucrose, L-Lysine Aspartate, L-Leucine, L-Tyrosine, Artificial Flavors, L-Proline, L-Arginine, L-Valine, L-Isoleucine, Glycine, Malic Acid, L-Threonine, L-Glutamine, Corn Syrup Solids, L-Serine, L-Histidine, L-Alanine, L-Cystine, N-Acetyl L-Methionine, L-Tryptophan, Soy Lecithin, Taurine, L-Carnitine, Artificial Sweetener: Acesulfame Potassium, Artificial Color.

**Phlexy-10 Drink Mix (tropical surprise):** Sucrose, L-Lysine Aspartate, Artificial Flavors, L-Leucine, L-Tyrosine, L-Proline, L-Arginine, L-Valine, Citric Acid, Glycine, L-Isoleucine, L-Threonine, L-Glutamine, Corn Syrup Solids, L-Serine, L-Histidine, L-Alanine, L-Cystine, N-Acetyl L-Methionine, L-Tryptophan, Soy Lecithin, Artificial Sweetener: Acesulfame Potassium, Taurine, L-Carnitine, Artificial Color.

**Phlexy-10 Capsules:** Cellulose, L-Lysine L-Aspartate, L-Leucine, L-Tyrosine, L-Proline, L-Arginine, L-Valine, L-Isoleucine, Glycine, L-Threonine, L-Glutamine, L-Serine, L-Histidine, L-Alanine, L-Cystine, N-Acetyl L-Methionine, L-Tryptophan, Taurine, L-Carnitine.


**Phlexy-10 Tablets:** Microcrystalline Cellulose, L-Leucine, L-Tyrosine, L-Lysine Hydrochloride, L-Proline, L-Arginine, L-Valine, L-Aspartic Acid, Partially Pregelatinised Corn Starch, Glycine, L-Isoleucine, L-Threonine, L-Glutamine, L-Serine, L-Alanine, L-Histidine, L-Cystine, Hydroxypropyl Methyl Cellulose, L-Tryptophan, Acacia Gum, L-Methionine, Stearic Acid, Magnesium Stearate, Glycerol, Taurine, L-Carnitine.



## Add-Ins

To be discontinued late summer 2013

A flavorless, phenylalanine-free powdered medical food containing vitamins and minerals for the dietary management of phenylketonuria (PKU) in individuals over 4 years of age.

 This formulation is available in the US and Canada.

### Main Features:

- Flavorless
- Phenylalanine-free coated amino acids
- Now with vitamins and minerals
- Contains other essential and non-essential amino acids, fat, and micronutrients
- Specially designed to be added to food
- Add-Ins provide 10 g of protein equivalent per sachet (18.2 g)

### Indications:

- Phenylketonuria

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Sachet
12641	49735-0126-41	B4155	60 x 18.2 g (0.64 oz)	86

**WIC<sup>+</sup> eligible in all States.** For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per Sachet (18.2 g)	Per 100 g	Vitamins	Per Sachet (18.2 g)	Per 100 g
Calories	86	472	Vitamin A, IU (mcg R.E.)	476 (143)	2611 (784)
Protein Equivalent, g	10	55	Vitamin D, IU (mcg)	72 (1.8)	400 (10)
Fat, g	5.1	28	Vitamin E, IU (mg α.T.E.)	2.4 (1.6)	12.8 (8.6)
Carbohydrate, g	None	None	Vitamin K, mcg	12.4	68.4
<b>Amino Acids, g</b>			Thiamine, mg	0.22	1.2
L-Alanine	0.40	2.2	Riboflavin, mg	0.25	1.4
L-Arginine	0.75	4.1	Vitamin B <sub>6</sub> , mg	0.29	1.6
L-Aspartic Acid	0.69	3.8	Vitamin B <sub>12</sub> , mcg	0.87	4.8
L-Cystine	0.27	1.5	Niacin, mg	3.6	19.6
Glycine	0.69	3.8	Folic Acid, mcg	124	684
L-Histidine	0.42	2.3	Pantothenic Acid, mg	0.87	4.8
L-Isoleucine	0.67	3.7	Biotin, mcg	26.8	147
L-Leucine	1.15	6.3	Vitamin C, mg	8.9	48.8
L-Lysine	0.87	4.8	Choline, mg	76.3	419
L-Methionine	0.18	1	Inositol, mg	20.4	112
L-Phenylalanine	None	None	<b>Minerals</b>		
L-Proline	0.80	4.4	Calcium, mg	178	980
L-Serine	0.49	2.7	Phosphorus, mg	138	760
L-Threonine	0.55	3	Magnesium, mg	53.5	294
L-Tryptophan	0.22	1.2	Iron, mg	2.6	14.4
L-Tyrosine	1.00	5.5	Zinc, mg	1.9	10.7
L-Valine	0.73	4	Manganese, mg	0.25	1.4
L-Carnitine	None	None	Copper, mcg	270	1485
Taurine	None	None	Iodine, mcg	29.3	161
L-Glutamine	1.22	6.7	Molybdenum, mcg	12.5	68.8
			Chromium, mcg	5.3	29.2
			Selenium, mcg	13.4	73.6
			Sodium, mg (mEq)	None	None
			Potassium, mg (mEq)	None	None
			Chloride, mg (mEq)	None	None

### Ingredients:

Hydrogenated Vegetable Oil (Palm Oil), L-Arginine L-Aspartate, L-Lysine Acetate, L-Glutamine, L-Leucine, L-Tyrosine, L-Proline, L-Valine, Glycine, L-Isoleucine, L-Threonine, L-Serine, Tricalcium Phosphate, Magnesium Phosphate, L-Histidine, L-Alanine, L-Cystine, N-Acetyl L-Methionine, L-Tryptophan, Maltodextrin, Choline Bitartrate, L-Aspartic Acid, M-Inositol, L-Ascorbic Acid, Ferrous Sulfate, Zinc Sulphate, DL Alpha Tocopherol Acetate, Nicotinamide, Copper Gluconate, Vitamin A Acetate, Calcium D-Pantothenate, Manganese Sulfate, Vitamin D<sub>3</sub>, Pyridoxine Hydrochloride, Chromium Chloride, Thiamine Mononitrate, Riboflavin, Folic Acid, Potassium Iodide, Sodium Molybdate, Sodium Selenite, D-Biotin, Vitamin K<sub>1</sub>, Cyanocobalamin.

### Dosage and Administration:

- Dosage should be determined by a doctor or dietitian and is dependent on the age, body weight and medical condition of the patient. Diet must be supplemented with natural protein and other nutrients to meet complete protein and general nutrition requirements.
- For best results, stir Add-Ins powder gently into warm/cold foods (less than 60 °C /140 °F) and serve immediately. Add-Ins should be used as part of the daily protein substitute requirements. Hot foods may need to be cooled prior to the addition of Add-Ins.



## Lanaflex

A phenylalanine-free powdered medical food containing the remaining essential amino acids (large neutral amino acids and lysine) for the dietary management of phenylketonuria (PKU) in individuals over 12 years of age.



This formulation is available in the US and Canada.

### Main Features:

- Phenylalanine-free
- Contains lysine and other large neutral amino acids
- Contains carbohydrate, vitamins, minerals and trace elements
- One sachet of Lanaflex provides 6 g of amino acids equivalent to 5.2 g of protein
- Available in orange flavor
- Osmolality (at a 1 to 4 dilution): 1350 mOsm/kg

Visit [NutriciaLearningCenter.com](http://NutriciaLearningCenter.com) for guidelines on the usage of Lanaflex

### Precautions:

- Not for use when planning or during pregnancy
- Seek medical advice before using with serotonergic medications

### Indications:

- Phenylketonuria

For details on administration, please see pages 126-137.

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Sachet
12643	49735-0126-43	B4157	40 x 15.8 g (0.6 oz)	40

### Nutrition Information:

Nutrients	Per Sachet (15.8 g)		Minerals	Per Sachet (15.8 g)	
	Per Sachet (15.8 g)	Per 100 g		Per Sachet (15.8 g)	Per 100 g
Calories	40	253	Calcium, mg	474	2998
Protein Equivalent, g	5.2	33	Phosphorus, mg	456	2888
Fat, g	0.16	1	Magnesium, mg	122	775
Carbohydrate, g	4.4	28	Iron, mg	5.9	37.6
<b>Amino Acids, g</b>			Zinc, mg	3.7	23.2
L-Histidine	0.92	5.85	Manganese, mg	0.73	4.6
L-Isoleucine	0.46	2.92	Copper, mcg	332	2100
L-Leucine	0.46	2.92	Iodine, mcg	52.3	331
L-Lysine	0.46	2.92	Molybdenum, mcg	14.9	94.2
L-Methionine	0.92	5.85	Chromium, mcg	10.6	66.9
L-Threonine	0.46	2.92	Selenium, mcg	23.1	146
L-Tryptophan	0.92	5.85	Sodium, mg (mEq)	4.9 (0.21)	31 (1.3)
L-Tyrosine	0.92	5.85	Potassium, mg (mEq)	3.5 (0.09)	22 (0.56)
L-Valine	0.46	2.92	Chloride, mg (mEq)	0.25 (0.008)	1.6 (0.05)
<b>Vitamins</b>					
Vitamin A IU, (mcg R.E.)	892 (268)	5644 (1695)			
Vitamin D IU, (mcg R.E.)	135 (3.4)	852 (21.3)			
Vitamin E IU, (mg α T.E.)	7.4 (5)	46.9 (31.5)			
Vitamin K, mcg	32.7	207			
Thiamine, mg	0.36	2.3			
Riboflavin, mg	0.38	2.4			
Vitamin B <sub>6</sub> , mg	0.65	4.1			
Vitamin B <sub>12</sub> , mcg	1.3	8			
Niacin, mg	2.2	14.2			
Folic Acid, mcg	197	1246			
Pantothenic Acid, mg	1.9	12.2			
Biotin, mcg	9.8	61.9			
Vitamin C, mg	25.1	159			
Choline, mg	165	1045			
Inositol, mg	32.1	203			

### Ingredients:

Sugar, Calcium Phosphate, Artificial Flavors, L-Histidine, L-Tryptophan, L-Tyrosine, Tricalcium Phosphate, Magnesium Acetate, L-Lysine Acetate, N-Acetyl-L-Methionine, L-Leucine, L-Methionine, L-Threonine, L-Valine, L-Isoleucine, Choline Bitartrate, Guar Gum, Soy Lecithin, Citric Acid, L-Ascorbic Acid, M-Inositol, Ferrous Sulfate, Artificial Sweetener (Acesulfame Potassium), DL-Alpha-Tocopheryl Acetate, Zinc Sulfate, Nicotinamide, Manganese Sulfate, Calcium-D-Pantothenate, Cupric Sulfate, Pyridoxine Hydrochloride, Riboflavin, Vitamin A Acetate, Folic Acid, Artificial Color (Beta Carotene), Potassium Iodide, Chromium Chloride, Sodium Selenite, Sodium Molybdate, Phylloquinone, D-Biotin, Cholecalciferol, Cyanocobalamin.





## Milupa PKU 2

A powdered medical food containing a mixture of pure L-amino acids free from phenylalanine, and enriched with vitamins, minerals and trace elements. For the dietary management of phenylketonuria (PKU) in children.

This formulation is only available in the US.

### Main Features:

- Phenylalanine-free
- Concentrated, unflavored powder
- Enriched with vitamins, minerals and trace elements
- Osmolality (at a 1 to 9 dilution): 790 mOsm/kg

### Indications:

- Phenylketonuria

*For details on administration and household measurements, please see pages 126-137.*

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
659346	81361-0934-60	B4155	2 x 500 g (17.6 oz)	1450

**WIC+ eligible in all States.**

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 10 g Protein Equivalent		Vitamins	Per 10 g Protein Equivalent	
	Per 100 g	Per 10 g Protein Equivalent		Per 100 g	Per 10 g Protein Equivalent
Calories	293	44	Vitamin A, IU (mcg R.E.)	5200 (1562)	776 (234)
Protein Equivalent, g	67	10	Vitamin D, IU (mcg)	1310 (33)	196 (5)
Fat, g	None	None	Vitamin E, IU (mg α.T.E.)	18 (12)	2.7 (1.8)
Carbohydrate, g	6.2	0.9	Vitamin K, mcg	167	25
<b>Amino Acids, g</b>			Thiamine, mg	1.4	0.2
L-Alanine	3.1	0.46	Riboflavin, mg	2	0.3
L-Arginine	2.7	0.40	Vitamin B <sub>6</sub> , mg	1.5	0.2
L-Aspartic Acid	7.6	1.13	Vitamin B <sub>12</sub> , mcg	3	0.4
L-Cystine	1.8	0.27	Niacin, mg	24	4
L-Glutamic Acid	16.0	2.39	Folic Acid, mcg	400	60
L-Glycine	1.8	0.27	Pantothenic Acid, mg	11	2
L-Histidine	1.8	0.27	Biotin, mcg	300	45
L-Isoleucine	4.5	0.67	Vitamin C, mg	80	12
L-Leucine	7.6	1.13	Choline, mg	260	39
L-Lysine	5.4	0.81	Inositol, mg	300	45
L-Methionine	1.8	0.27	<b>Minerals</b>		
L-Phenylalanine	None	None	Calcium, mg	1310	196
L-Proline	7.1	1.06	Phosphorus, mg	1010	151
L-Serine	4.0	0.60	Magnesium, mg	156	23
L-Threonine	3.6	0.54	Iron, mg	15	2.2
L-Tryptophan	1.4	0.21	Zinc, mg	8	1.2
L-Tyrosine	4.5	0.67	Manganese, mg	0.7	0.1
L-Valine	5.4	0.81	Copper, mcg	2000	299
			Iodine, mcg	120	18
			Molybdenum, mcg	32	5
			Sodium, mg	640	96
			Potassium, mg	1330	199
			Chloride, mg	990	148

### Ingredients:

L-Amino Acids (L-Lysine-L-Glutamate, L-Glutamic Acid, L-Leucine, L-Proline, L-Aspartic Acid, L-Valine, L-Isoleucine, L-Tyrosine, L-Serine, L-Threonine, L-Alanine, L-Arginine, Magnesium-L-Aspartate, L-Histidine, L-Methionine, L-Cystine, Glycine, L-Tryptophan), Sugar, Potassium Phosphate, Calcium Phosphate, Calcium Carbonate, Salt, Choline Bitartrate, M-Inositol, Ascorbic Acid, Ferrous Sulfate, Vanillin, Niacinamide, Vitamin E Acetate, Zinc Sulfate, Calcium-D-Pantothenate, Copper Acetate, Pyridoxine Hydrochloride, Thiamine Hydrochloride, Riboflavin, Manganese Sulfate, Vitamin A Acetate, Biotin, Folic Acid, Potassium Iodide, Vitamin K<sub>1</sub>, Ammonium Heptamolybdate, Vitamin D<sub>3</sub>, Vitamin B<sub>12</sub>.



## Milupa PKU 3

A powdered medical food containing a mixture of pure L-amino acids free from phenylalanine, enriched with vitamins, minerals and trace elements. For the dietary management of phenylketonuria (PKU) in older children and adults, including pregnant women and women of child-bearing age.

This formulation is only available in the US.

### Main Features:

- Phenylalanine-free
- Concentrated, unflavored powder
- Enriched with vitamins, minerals and trace elements
- Osmolality (at a 1 to 9 dilution): 800 mOsm/kg

### Indications:

- Phenylketonuria (PKU)

For details on administration and household measurements, please see pages 126-137.

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
659347	81361-0934-70	B4155	2 x 500 g cans	1400

**WIC<sup>+</sup> eligible in all States.**

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 10 g Protein Equivalent		Vitamins	Per 10 g Protein Equivalent	
	Per 100 g	Per 10 g Protein Equivalent		Per 100 g	Per 10 g Protein Equivalent
Calories	279	41	Vitamin A, IU (mcg R.E.)	4000 (1201)	588 (177)
Protein Equivalent, g	68	10	Vitamin D, IU (mcg)	480 (12)	71 (1.8)
Fat, g	None	None	Vitamin E, IU (mg α.T.E.)	12 (8)	2 (1.18)
Carbohydrate, g	1.7	0.3	Vitamin K, mcg	167	25
<b>Amino Acids, g</b>			Thiamine, mg	1.8	0.3
L-Alanine	3.1	0.46	Riboflavin, mg	1.8	0.3
L-Arginine	2.7	0.40	Vitamin B <sub>6</sub> , mg	3.2	0.5
L-Aspartic Acid	7.6	1.12	Vitamin B <sub>12</sub> , mcg	5	0.7
L-Cystine	1.8	0.26	Niacin, mg	18	2.6
L-Glutamic Acid	16.0	2.4	Folic Acid, mcg	950	140
Glycine	1.8	0.26	Pantothenic Acid, mg	8.3	1.2
L-Histidine	1.8	0.26	Biotin, mcg	179	26
L-Isoleucine	4.5	0.66	Vitamin C, mg	100	15
L-Leucine	7.6	1.12	Choline, mg	260	38
L-Lysine	5.4	0.79	Inositol, mg	300	44
L-Methionine	1.8	0.26	<b>Minerals</b>		
L-Phenylalanine	None	None	Calcium, mg	1310	193
L-Proline	7.1	1.04	Phosphorus, mg	1010	149
L-Serine	4.0	0.6	Magnesium, mg	540	79
L-Threonine	3.6	0.53	Iron, mg	21	3.1
L-Tryptophan	1.4	0.21	Zinc, mg	24	3.5
L-Tyrosine	6.0	0.88	Manganese, mg	4.8	0.7
L-Valine	5.4	0.79	Copper, mcg	3600	529
			Iodine, mcg	143	21
			Molybdenum, mcg	480	71
			Sodium, mg	640	94
			Potassium, mg	1330	196
			Chloride, mg	1000	147


### Ingredients:

L-Amino Acids (L-Lysine-L-Glutamate, L-Glutamic Acid, L-Leucine, L-Proline, L-Tyrosine, L-Aspartic Acid, L-Valine, L-Isoleucine, L-Serine, L-Threonine, L-Alanine, L-Arginine, Magnesium-L-Aspartate, L-Histidine, L-Methionine, L-Cystine, Glycine, L-Tryptophan), Sugar, Potassium Phosphate, Magnesium Sulfate, Calcium Phosphate, Calcium Carbonate, Salt, Choline Bitartrate, M-Inositol, Ascorbic Acid, Ferrous Sulfate, Zinc Sulfate, Vanillin, Niacinamide, Vitamin E Acetate, Calcium-D-Pantothenate, Manganese Sulfate, Copper Acetate, Pyridoxine Hydrochloride, Thiamine Hydrochloride, Riboflavin, Vitamin A Acetate, Folic Acid, Ammonium Heptamolybdate, Biotin, Potassium Iodide, Vitamin K<sub>1</sub>, Vitamin D<sub>3</sub>, Vitamin B<sub>12</sub>.



## MSUD Analog

An isoleucine-, leucine- and valine-free powdered infant formula for the dietary management of maple syrup urine disease (MSUD).

 This formulation is available in the US and Canada.

### Main Features:

- Isoleucine-, leucine- and valine-free
- Unflavored powder
- Contains a balanced mixture of all other essential and non-essential amino acids, carbohydrate, fat, vitamins, minerals and trace elements (including iron, selenium and chromium)
- MSUD Analog provides 13 g of protein equivalent per 100 g of powder
- Osmolality (at 15% w/v): 377 mOsm/kg

### Indications:

- Maple syrup urine disease (MSUD)

For details on administration and household measurements, please see pages 126-137.

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
118302	49735-0183-02	B4162	6 x 400 g (14 oz)	1900

**WIC<sup>+</sup> eligible in all States.**

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 10 g		Vitamins	Per 10 g	
	Per 100 g	Protein Equivalent		Per 100 g	Protein Equivalent
Calories	475	365	Vitamin A, IU (mcg R.E.)	1760 (528)	1355 (406)
Protein Equivalent, g	13	10	Vitamin D, IU (mcg)	340 (8.5)	262 (6.5)
Fat, g	20.9	16	Vitamin E, IU (mg $\alpha$ T.E.)	4.9 (3.3)	3.8 (2.5)
Saturated, g	6.8	5.2	Vitamin K, mcg	21	16
Monounsaturated, g	9.5	7.3	Thiamine, mcg	500	385
Polyunsaturated, g	3.6	2.8	Riboflavin, mcg	600	462
Linoleic Acid, mg	3025	2330	Vitamin B <sub>6</sub> , mcg	520	400
Carbohydrate, g	59	45	Vitamin B <sub>12</sub> , mcg	1.25	0.96
<b>Amino Acids, g</b>			Niacin, mcg	4500	3462
L-Alanine	0.76	0.58	Folic Acid, mcg	38	29
L-Arginine	1.34	1.03	Pantothenic Acid, mcg	2600	2000
L-Aspartic Acid	1.11	0.85	Biotin, mcg	26	20
L-Cystine	0.49	0.38	Vitamin C, mg	40	31
L-Glutamic Acid	1.49	1.15	Choline, mg	50	38
Glycine	1.19	0.92	Inositol, mg	100	77
L-Histidine	0.76	0.58	<b>Minerals</b>		
L-Isoleucine	None	None	Calcium, mg	600	462
L-Leucine	None	None	Phosphorus, mg	500	385
L-Lysine	1.38	1.06	Magnesium, mg	40	31
L-Methionine	0.32	0.25	Iron, mg	10	8
L-Phenylalanine	0.90	0.69	Zinc, mg	8	6
L-Proline	1.44	1.11	Manganese, mcg	600	462
L-Serine	0.89	0.68	Copper, mcg	450	346
L-Threonine	1.00	0.77	Iodine, mcg	47	36
L-Tryptophan	0.40	0.31	Molybdenum, mcg	15	12
L-Tyrosine	0.90	0.69	Chromium, mcg	15	12
L-Valine	None	None	Selenium, mcg	15	12
L-Carnitine	0.01	0.01	Sodium, mg (mEq)	120 (5.2)	92 (4.0)
Taurine	0.02	0.02	Potassium, mg (mEq)	420 (10.8)	323 (8.3)
L-Glutamine	0.1	0.08	Chloride, mg (mEq)	290 (8.2)	223 (6.3)


### Ingredients:

Corn Syrup Solids, High Oleic Safflower Oil, Refined Vegetable Oil (Coconut, Soy), L-Lysine L-Glutamate, Calcium Phosphate Dibasic, L-Proline, L-Arginine, Glycine, L-Aspartic Acid, L-Threonine, L-Phenylalanine, L-Tyrosine, Galactose, L-Serine, Tripotassium Citrate, L-Histidine, L-Alanine, Calcium Phosphate Monobasic, Mono and Diglycerides, L-Cystine, L-Tryptophan, L-Methionine, Sodium Chloride, Magnesium Acetate, Potassium Chloride, Diacetyl Tartaric Acid Esters of Monoglycerides, Tricalcium Citrate, L-Glutamine, Choline Bitartrate, M-Inositol, L-Ascorbic Acid, L-Glutamic Acid, Soy Lecithin, Calcium Phosphate Tribasic, Ferrous Sulfate, Zinc Sulfate, Taurine, L-Carnitine, Nicotinamide, DL-Alpha Tocopheryl Acetate, Calcium Pantothenate, Manganese Sulfate, Cupric Sulfate, Vitamin A Acetate, Pyridoxine Hydrochloride, Riboflavin, Thiamine Chloride Hydrochloride, Chromium Sulfate, Potassium Iodide, Folic Acid, Sodium Molybdate, Phylloquinone, D-Biotin, Sodium Hydrogen Selenite, Vitamin D<sub>3</sub>, Cyanocobalamin.



## MSUD Maxamaid

An isoleucine-, leucine- and valine-free powdered medical food for the dietary management of maple syrup urine disease (MSUD) in toddlers and young children.

 This formulation is available in the US and Canada.

### Main Features:

- Isoleucine-, leucine- and valine-free
- Contains a balanced mixture of all other essential and non-essential amino acids, carbohydrate, vitamins, minerals and trace elements
- Age-appropriate DRI formulation
- MSUD Maxamaid provides 25 g of protein equivalent per 100 g of powder
- Available in orange flavor
- Does not contain fat thereby allowing greater flexibility in modifying energy intake

### Indications:

- Maple syrup urine disease (MSUD)

*For details on administration and household measurements, please see pages 126-137.*

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
117781	49735-0177-81	B4162	6 x 454 g (1 lb)	1471

**WIC<sup>+</sup> eligible in all States.** For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 10 g		Vitamins	Per 10 g	
	Per 100 g	Protein Equivalent		Per 100 g	Protein Equivalent
Calories	324	130	Vitamin A, IU (mcg R.E.)	1665 (500)	666 (200)
Protein Equivalent, g	25	10	Vitamin D, IU (mcg)	480 (12)	192 (4.8)
Fat, g	<0.1	0.04	Vitamin E, IU (mg $\alpha$ T.E.)	14.3 (9.6)	5.7 (3.8)
Carbohydrate, g	56	22	Vitamin K, mcg	48	19
<b>Amino Acids, g</b>			Thiamine, mg	0.8	0.3
L-Alanine	1.48	0.59	Riboflavin, mg	0.8	0.3
L-Arginine	2.60	1.04	Vitamin B <sub>6</sub> , mg	0.8	0.3
L-Aspartic Acid	2.17	0.87	Vitamin B <sub>12</sub> , mcg	2	0.8
L-Cystine	0.96	0.38	Niacin, mg	5	2
Glycine	2.31	0.92	Folic Acid, mcg	240	96
L-Histidine	1.49	0.60	Pantothenic Acid, mg	3.2	1.3
L-Isoleucine	None	None	Biotin, mcg	18	7.2
L-Leucine	None	None	Vitamin C, mg	62.5	25
L-Lysine	2.69	1.08	Choline, mg	250	100
L-Methionine	0.63	0.25	Inositol, mg	56	22
L-Phenylalanine	1.75	0.70	<b>Minerals</b>		
L-Proline	2.81	1.12	Calcium, mg	810	324
L-Serine	1.73	0.69	Phosphorus, mg	810	324
L-Threonine	1.94	0.78	Magnesium, mg	128	51
L-Tryptophan	0.77	0.31	Iron, mg	14	5.6
L-Tyrosine	1.75	0.70	Zinc, mg	11	4.4
L-Valine	None	None	Manganese, mg	1.9	0.8
L-Carnitine	0.02	0.01	Copper, mcg	1000	400
Taurine	0.14	0.06	Iodine, mcg	144	58
L-Glutamine	1.5	0.60	Molybdenum, mcg	33	13
			Chromium, mcg	21.5	8.6
			Selenium, mcg	40	16
			Sodium, mg (mEq)	580 (25.2)	232 (10)
			Potassium, mg (mEq)	840 (21.5)	336 (8.6)
			Chloride, mg (mEq)	450 (12.9)	180 (5.2)


### Ingredients:

Sugar, Corn Syrup Solids, L-Arginine  
L-Aspartate, L-Lysine Acetate, Calcium Phosphate Dibasic, Citric Acid, L-Proline, Tripotassium Citrate, Glycine, L-Threonine, L-Glutamine, L-Phenylalanine, L-Tyrosine, L-Serine, Artificial Flavors, L-Histidine, L-Alanine, Maltodextrin, Disodium Hydrogen Phosphate, L-Cystine, Sodium Chloride, N-Acetyl L-Methionine, L-Tryptophan, Magnesium Acetate, Choline Bitartrate, Magnesium L-Aspartate, Taurine, L-Ascorbic Acid, Tricalcium Phosphate, M-Inositol, Ferrous Sulfate, Zinc Sulfate, L-Carnitine, DL-Alpha Tocopheryl Acetate, Manganese Sulfate, Niacinamide, Calcium D-Pantothenate, Cupric Sulfate, Thiamine Chloride Hydrochloride, Pyridoxine Hydrochloride, Riboflavin, Vitamin A Acetate, Artificial Colors (Beta-Carotene, Beet Red), Folic Acid, Potassium Iodide, Chromium Chloride, Sodium Selenite, Sodium Molybdate, Phylloquinone, D-Biotin, Vitamin D<sub>3</sub>, Cyanocobalamin.



## MSUD Maxamum

An isoleucine-, leucine- and valine-free powdered medical food for the dietary management of maple syrup urine disease (MSUD) in older children and adults, including pregnant women and women of child-bearing age.

 This formulation is available in the US and Canada.

### Main Features:

- Isoleucine-, leucine- and valine-free
- Contains a balanced mixture of all other essential and non-essential amino acids, carbohydrate, vitamins, minerals and trace elements
- Age-appropriate DRI formulation
- MSUD Maxamum provides 40 g of protein equivalent per 100 g of powder
- Available in orange flavor
- Does not contain fat thereby allowing greater flexibility in modifying energy intake

### Indications:

- Maple syrup urine disease (MSUD)

*For details on administration and household measurements, please see pages 126-137.*

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
117789	49735-0177-89	B4157 or B4162	6 x 454 g (1 lb)	1385

**WIC+ eligible in all States.**

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 10 g		Vitamins	Per 10 g	
	Per 100 g	Protein Equivalent		Per 100 g	Protein Equivalent
Calories	305	76	Vitamin A, IU (mcg R.E.)	2228 (669)	557 (167)
Protein Equivalent, g	40	10	Vitamin D, IU (mcg)	332 (8.3)	83 (2.1)
Fat, g	<1	<0.25	Vitamin E, IU (mg $\alpha$ T.E.)	18.3 (12.3)	4.6 (3.1)
Carbohydrate, g	34	8.5	Vitamin K, mcg	82	21
<b>Amino Acids, g</b>			Thiamine, mg	0.91	0.23
L-Alanine	2.4	0.60	Riboflavin, mg	0.97	0.24
L-Arginine	4.1	1.03	Vitamin B <sub>6</sub> , mg	1.6	0.4
L-Aspartic Acid	3.4	0.85	Vitamin B <sub>12</sub> , mcg	3.1	0.8
L-Cystine	1.6	0.40	Niacin, mg	5.7	1.4
L-Glutamic Acid	4.6	1.15	Folic Acid, mcg	491	123
Glycine	3.7	0.93	Pantothenic Acid, mg	4.9	1.2
L-Histidine	2.3	0.58	Biotin, mcg	24.5	6.1
L-Isoleucine	None	None	Vitamin C, mg	62	16
L-Leucine	None	None	Choline, mg	430	108
L-Lysine	4.2	1.05	Inositol, mg	80	20
L-Methionine	0.99	0.25	<b>Minerals</b>		
L-Phenylalanine	2.8	0.70	Calcium, mg	1183	296
L-Proline	4.5	1.13	Phosphorus, mg	1137	284
L-Serine	2.8	0.70	Magnesium, mg	306	77
L-Threonine	3.1	0.78	Iron, mg	14.7	3.7
L-Tryptophan	1.3	0.33	Zinc, mg	9	2
L-Tyrosine	2.8	0.70	Manganese, mg	1.8	0.5
L-Valine	None	None	Copper, mcg	820	205
L-Carnitine	0.039	0.01	Iodine, mcg	131	33
Taurine	0.14	0.04	Molybdenum, mcg	37	9
L-Glutamine	0.32	0.08	Chromium, mcg	26	7
			Selenium, mcg	58	15
			Sodium, mg (mEq)	560 (24.3)	140 (6.1)
			Potassium, mg (mEq)	700 (17.9)	175 (4.5)
			Chloride, mg (mEq)	560 (16)	140 (4)

### Ingredients:


Sugar, L-Lysine L-Glutamate, Corn Syrup Solids, Calcium Phosphate Dibasic, L-Proline, L-Arginine, Glycine, L-Aspartic Acid, L-Threonine, L-Phenylalanine, L-Tyrosine, L-Serine, Artificial Flavor, L-Histidine, L-Alanine, Citric Acid, Magnesium Acetate, L-Cystine, L-Tryptophan, Tripotassium Citrate, Choline Bitartrate, L-Methionine, Sodium Chloride, Soy Lecithin, Disodium Hydrogen Phosphate, Dipotassium Hydrogen Phosphate, L-Glutamine, Tricalcium Phosphate, L-Glutamic Acid, Taurine, L-Ascorbic Acid, M-Inositol, Ferrous Sulfate, L-Carnitine, Zinc Sulfate, DL-Alpha Tocopheryl Acetate, Niacinamide, Manganese Sulfate, Calcium D-Pantothenate, Cupric Sulfate, Pyridoxine Hydrochloride, Sodium Selenite, Thiamine Chloride Hydrochloride, Riboflavin, Vitamin A Acetate, Folic Acid, Artificial Colors (Beta-Carotene, Beet Red), Potassium Iodide, Chromium Chloride, Sodium Molybdate, Phylloquinone, D-Biotin, Vitamin D<sub>3</sub>, Cyanocobalamin.





## MSUD Lophlex LQ

An isoleucine-, leucine- and valine-free, ready-to-drink medical food containing amino acids, carbohydrates, vitamins, minerals and DHA, based on mixed fruit juices (from concentrate) with natural flavor; for the dietary management of proven maple syrup urine disease (MSUD) in individuals 4 years and older, including pregnant women and women of child-bearing age.

 This formulation is available in the US and Canada.

### Main Features:

- Isoleucine-, leucine- and valine-free
- Low volume; low calorie
- Convenient ready-to-drink
- Based on fruit juices (from concentrate) with natural flavor - no artificial flavors
- Contains a balanced mixture of other essential and non-essential amino acids, carbohydrates, vitamins, minerals and DHA
- Provides 20 g of protein equivalent in one pouch
- Available in mixed berry blast flavor
- Osmolality: 2460 mOsm/kg
- Does not contain fat thereby allowing greater flexibility in modifying energy intake

### Indications:

- Maple syrup urine disease (MSUD)

*For details on administration, please see page 134.*

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Pouch
66749	49735-016749	B4157 or B4162	30 X 4.2 fl oz (125 mL)	120

**WIC<sup>+</sup> eligible in all States.**

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per Pouch	Per 10 g	Vitamins	Per Pouch	Per 10 g
	(4.2 fl oz)	Protein Equivalent		(4.2 fl oz)	Protein Equivalent
Calories	120.0	60.0	Vitamin A, IU (mcg R.E.)	949 (285)	475 (143)
Protein Equivalent, g	20.0	10.0	Vitamin D, IU (mcg)	320 (8.0)	160 (4.0)
Fat, g	0.44	0.22	Vitamin E, IU (mg α.T.E.)	4.8 (3.2)	2.4 (1.6)
DHA, mg	150	75.0	Vitamin K, mcg	24.9	12.5
Carbohydrate, g	9.3	4.7	Thiamin, mg	0.54	0.27
Fiber, g	0.50	0.25	Riboflavin, mg	0.50	0.25
<b>Amino Acids, g</b>			Vitamin B <sub>6</sub> , mg	0.58	0.29
L-Alanine	1.40	0.70	Vitamin B12, mcg	1.8	0.90
L-Arginine	1.90	0.95	Niacin, mg	7.1	3.6
L-Aspartic Acid	1.45	0.73	Folic Acid, mcg	120	60.0
L-Cystine	1.20	0.60	Pantothenic Acid, mg	1.8	0.9
Glycine	1.90	0.95	Biotin, mcg	53.4	26.7
L-Histidine	1.00	0.50	Vitamin C, mg	17.8	8.9
L-Isoleucine	nil added	nil added	Choline, mg	153	76.5
L-Leucine	nil added	nil added	Inositol, mg	40.6	20.3
L-Lysine	1.78	0.89	<b>Minerals</b>		
L-Methionine	0.43	0.22	Calcium, mg	319	160
L-Phenylalanine	1.18	0.59	Phosphorus, mg	244	122
L-Proline	2.38	1.19	Magnesium, mg	96.3	48.2
L-Serine	1.65	0.83	Iron, mg	5.1	2.6
L-Threonine	1.30	0.65	Zinc, mg	3.8	1.9
L-Tryptophan	0.53	0.27	Manganese, mg	0.56	0.28
L-Tyrosine	2.00	1.00	Copper, mcg	563	282
L-Valine	nil added	nil added	Iodine, mcg	56.3	28.2
L-Carnitine	0.01	0.01	Molybdenum, mcg	25.0	12.5
Taurine	0.06	0.03	Chromium, mcg	10.8	5.4
			Selenium, mcg	26.8	13.4
			Sodium, mg (mmol)	<25.0 (<10)	<12.5 (<5)
			Potassium, mg (mmol)	90 (2.3)	45 (1.2)
			Chloride, mg (mmol)	<25.0 (<10)	<12.5 (<5)

### Ingredients:

Water, Apple Juice from Concentrate (34.1%), Grape Juice from Concentrate (6.9%), Blackcurrant Juice from Concentrate (2.5%), L-Lysine Acetate, L-Proline, Citric Acid, L-Tyrosine, L-Arginine, Glycine, L-Serine, L-Aspartic Acid, L-Alanine, L-Threonine, Corn Syrup Solids, L-Cystine, L-Phenylalanine, Dicalcium Phosphate, L-Histidine, Elderberry Juice from Concentrate (0.6%), Maltodextrin, Magnesium Acetate, N-Acetyl L-Methionine, L-Tryptophan, Choline Bitartrate, C. Cohnii Oil\*, Sugar, Microcrystalline Cellulose, Natural Flavor, Fruit Concentrate (Apple, Blackcurrant, Radish), L-Ascorbic Acid, Taurine, Guar Gum, Sunflower Lecithin, Xanthan Gum, M-Inositol, Potassium Sorbate (preservative to delay spoilage), Artificial Sweetener: Sucralose, Ferrous Lactate, Artificial Sweetener: Acesulfame Potassium, Sodium Benzoate (preservative to delay spoilage), Zinc Sulfate, L-Carnitine, Niacinamide, DL-alpha Tocopheryl Acetate, Calcium D-Pantothenate, Manganese Sulfate, Cupric Sulfate, Thiamine Chloride Hydrochloride, Pyridoxine Hydrochloride, Vitamin A Palmitate, Riboflavin, Folic Acid, Potassium Iodide, Ascorbyl Palmitate, Mixed Tocopherols, Sodium Molybdate, D-Biotin, Sodium Selenite, Chromium Chloride, Phylloquinone, Vitamin D<sub>3</sub>, Cyanocobalamin.


\*A Source of Docosahexaenoic Acid (DHA).



## Acerflex

To be discontinued Fall 2013

An isoleucine-, leucine- and valine-free powdered medical food for the dietary management of maple syrup urine disease (MSUD) in individuals over 1 year of age.

 This formulation is available in the US and Canada.

### Main Features:

- Isoleucine-, leucine- and valine-free
- Contains a balanced mixture of all other essential and non-essential amino acids, carbohydrate, fat, vitamins, minerals, trace elements
- Excellent balance of linoleic acid and  $\alpha$ -linolenic acid, providing a preferable 4:1 ratio of n-6 to n-3
- Acerflex provides 20 g of protein equivalent per 100 g of powder
- Available in pineapple flavor
- Osmolality (mOsm/kg):

Dilution	
1 to 4	830
1 to 5	670

### Indications:

- Maple syrup urine disease (MSUD)

*For details on administration and household measurements, please see pages 126-137.*

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
118842	49735-0188-42	B4157 or B4162	6 x 454 g (1 lb)	1793

**WIC<sup>+</sup> eligible in all States.** For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 10 g Protein Equivalent		Vitamins	Per 10 g Protein Equivalent	
	Per 100 g	Protein Equivalent		Per 100 g	Protein Equivalent
Calories	395	198	Vitamin A, IU (mcg R.E.)	1615 (485)	807.5 (242.5)
Protein Equivalent, g	20	10	Vitamin D, IU (mcg)	440 (11)	220 (5.5)
Fat, g	17	8.5	Vitamin E, IU (mg $\alpha$ T.E.)	11.3 (7.6)	5.65 (3.8)
Saturated, g	2.1	1.05	Vitamin K, mcg	21	10.5
Monounsaturated, g	10.8	5.4	Thiamine, mg	0.8	0.4
Polyunsaturated, g	3.3	1.65	Riboflavin, mg	0.92	0.46
Linoleic Acid, mg	2689	1344.5	Vitamin B <sub>6</sub> , mg	1.1	0.55
$\alpha$ -Linolenic Acid, mg	680	340	Vitamin B <sub>12</sub> , mcg	1.1	0.55
Carbohydrate, g	40.5	20.25	Niacin, mg	12.8	6.4
<b>Amino Acids, g</b>			Folic Acid, mcg	85	42.5
L-Alanine	1.25	0.63	Pantothenic Acid, mg	3.3	1.65
L-Arginine	2.20	1.10	Biotin, mcg	30	15
L-Aspartic Acid	1.83	0.92	Vitamin C, mg	45	22.5
L-Cystine	0.81	0.41	Choline, mg	80	40
Glycine	1.95	0.98	Inositol, mg	30	15
L-Histidine	1.26	0.63	<b>Minerals</b>		
L-Isoleucine	None	None	Calcium, mg	850	425
L-Leucine	None	None	Phosphorus, mg	850	425
L-Lysine	2.27	1.14	Magnesium, mg	110	55
L-Methionine	0.53	0.27	Iron, mg	12	6
L-Phenylalanine	1.48	0.74	Zinc, mg	12	6
L-Proline	2.37	1.19	Manganese, mg	1.6	0.8
L-Serine	1.46	0.73	Copper, mcg	1600	800
L-Threonine	1.64	0.82	Iodine, mcg	85	42.5
L-Tryptophan	0.65	0.33	Molybdenum, mcg	55	55
L-Tyrosine	1.48	0.74	Chromium, mcg	50	27.5
L-Valine	None	None	Selenium, mcg	23	11.5
L-Carnitine	0.02	0.01	Sodium, mg (mEq)	300 (13)	150 (6.5)
Taurine	0.14	0.07	Potassium, mg (mEq)	1120 (29)	560 (14.5)
L-Glutamine	2.69	1.35	Chloride, mg (mEq)	500 (14)	250 (7.0)

### Ingredients:

Corn Syrup Solids, Canola Oil, High Oleic Safflower Oil, L-Arginine L-Aspartate, Calcium Glycerophosphate, L-Lysine Acetate, Artificial Flavor, Citric Acid, L-Glutamine, L-Proline, Glycine, Tripotassium Citrate, L-Threonine, L-Tyrosine, L-Phenylalanine, L-Serine, L-Histidine, L-Alanine, Potassium Chloride, Disodium Hydrogen Phosphate, Tricalcium Phosphate, Fractionated Coconut Oil, L-Cystine, Magnesium Hydrogen Phosphate, Sucrose, N-Acetyl L-Methionine, L-Tryptophan, Mono and Diglycerides, Choline Hydrogen Tartrate, Taurine, Magnesium L-Aspartate, Artificial Sweetener: Acesulfame Potassium, Diacetyl Tartaric Acid Esters of Mono and Diglycerides, Ferrous Sulphate, L-Ascorbic Acid, Zinc Sulphate, M-Inositol, Propylene Glycol Alginate, L-Carnitine, Niacinamide, DL-Alpha Tocopheryl Acetate, Manganese Sulfate, Cupric Sulphate, Calcium-D-Pantothenate, Pyridoxine Hydrochloride, Thiamine Chloride Hydrochloride, Artificial Colors, Riboflavin, Vitamin A Acetate, Chromium Sulfate, Sodium Molybdate, Potassium Iodide, Folic Acid, Sodium Hydrogen Selenite, D-Biotin, Phylloquinone, Vitamin D<sub>3</sub>, Cyanocobalamin.



## Milupa MSUD 2

A powdered medical food containing a mixture of pure L-amino acids free from isoleucine, leucine and valine, and enriched with vitamins, minerals and trace elements. For the dietary management of disorders of branched-chain amino acid metabolism in children and adults, including pregnant women and women of child-bearing age.

This formulation is only available in the US.

### Main Features:

- Isoleucine, leucine and valine-free
- Concentrated, unflavored powder
- Enriched with vitamins, minerals and trace elements
- Osmolality (at a 1 to 9 dilution): 700 mOsm/kg

### Indications:

- Maple syrup urine disease (classic, inherited and intermittent forms)
- Hypervalinemia (isoleucine and leucine should be added)
- Alpha-Methylacetoacetic aciduria (leucine and valine should be added)
- Ketotic hypoglycemia (leucine induced, idiopathic form) (isoleucine and valine should be added)
- Hyperprolinemia type II, with hyperleucine-isoleucinemia (valine should be added)

For details on administration and household measurements, please see pages 126-137.

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
659351	81361-0935-10	B4155	2 x 500 g (17.6 oz)	1500

WIC<sup>+</sup> eligible in all States.

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 10 g Protein Equivalent		Vitamins	Per 10 g Protein Equivalent	
	Per 100 g	Per 10 g Protein Equivalent		Per 100 g	Per 10 g Protein Equivalent
Calories	300	56	Vitamin A, IU (mcg R.E.)	5200 (1562)	963 (288)
Protein Equivalent, g	54	10	Vitamin D, IU (mcg)	1310 (32.8)	243 (6)
Fat, g	None	None	Vitamin E, IU (mg α T.E.)	18 (12)	3.3 (2.2)
Carbohydrate, g	21	3.9	Vitamin K, mcg	167	31
<b>Amino Acids, g</b>			Thiamine, mg	1.4	0.3
L-Alanine	3.1	0.57	Riboflavin, mg	2	0.4
L-Arginine	2.7	0.50	Vitamin B <sub>6</sub> , mg	1.5	0.3
L-Aspartic Acid	7.6	1.41	Vitamin B <sub>12</sub> , mcg	3	0.6
Cystine	1.8	0.33	Niacin, mg	24	4
L-Glutamic Acid	16.0	2.96	Folic Acid, mcg	400	74
Glycine	1.8	0.33	Pantothenic Acid, mg	11	2
L-Histidine	1.8	0.33	Biotin, mcg	300	56
L-Isoleucine	None	None	Vitamin C, mg	80	15
L-Leucine	None	None	Choline, mg	260	48
L-Lysine	5.4	1	Inositol, mg	300	56
L-Methionine	1.8	0.33	<b>Minerals</b>		
L-Phenylalanine	3.2	0.59	Calcium, mg	1310	243
L-Proline	7.1	1.31	Phosphorus, mg	1010	187
L-Serine	4.0	0.74	Magnesium, mg	156	29
L-Threonine	3.6	0.67	Iron, mg	15	2.8
L-Tryptophan	1.4	0.26	Zinc, mg	7.8	1.4
L-Tyrosine	3.9	0.72	Manganese, mg	0.7	0.1
L-Valine	None	None	Copper, mcg	2000	370
			Iodine, mcg	120	22
			Molybdenum, mcg	32	6
			Sodium, mg	640	119
			Potassium, mg	1330	246
			Chloride, mg	990	183

### Ingredients:

L-Amino Acids (L-Lysine-L-Glutamate, L-Glutamic Acid, L-Proline, L-Aspartic Acid, L-Serine, L-Tyrosine, L-Threonine, L-Phenylalanine, L-Alanine, L-Arginine, Magnesium-L-Aspartate, L-Histidine, L-Methionine, L-Cystine, Glycine, L-Tryptophan), Sugar, Potassium Phosphate, Calcium Phosphate, Calcium Carbonate, Salt, Choline Bitartrate, M-Inositol, Ascorbic Acid, Ferrous Sulfate, Vanillin, Niacinamide, Vitamin E Acetate, Zinc Sulfate, Calcium-D-Pantothenate, Copper Acetate, Pyridoxine Hydrochloride, Thiamine Hydrochloride, Riboflavin, Manganese Sulfate, Vitamin A Acetate, Biotin, Folic Acid, Potassium Iodide, Vitamin K<sub>1</sub>, Ammonium Heptamolybdate, Vitamin D<sub>3</sub>, Vitamin B<sub>12</sub>.





## MSUD Aid

A leucine-, isoleucine-, valine-free powdered medical food for the dietary management of maple syrup urine disease in individuals over 1 year of age.



This formulation is available in the US and Canada.

### Main Features:

- Leucine-, isoleucine-, valine-free
- Contains a mixture of the other essential and non-essential amino acids, carbohydrate, and select vitamins, minerals and trace elements
- Unflavored powder
- MSUD Aid provides 60 g of protein equivalent per 100 g of powder
- Does not contain fat thereby allowing for greater flexibility in modifying energy intake

### Indications:

- Maple syrup urine disease (MSUD)

For general guidance on administration, please follow instructions for Maxamaid or Maxamum brands on page 131.

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
10143	49735-0101-43	TBD	4 x 200 g (7 oz)	500

WIC<sup>+</sup> eligible in all States.

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 10 g		Vitamins	Per 10 g	
	Per 100 g	Protein Equivalent		Per 100 g	Protein Equivalent
Calories	250	42	Thiamine, mg	2.0	0.3
Protein Equivalent, g	60	10	Riboflavin, mg	2.5	0.4
Fat, g	0	0	Vitamin B <sub>6</sub> , mg	2.0	0.3
Carbohydrate, g	3	0.5	Vitamin B <sub>12</sub> , mcg	20	3.3
<b>Amino Acids, g</b>			Niacin, mg	25	4.2
L-Alanine	7.1	1.18	Folic Acid, mcg	400	67
L-Arginine	5.1	0.85	Pantothenic Acid, mcg	20	3.3
L-Aspartic Acid	12.1	2.02	Biotin, mcg	600	100
L-Cystine	2.1	0.35	<b>Minerals</b>		
L-Glutamic Acid	13.3	2.22	Calcium, mg	2500	417
Glycine	3.9	0.65	Phosphorus, mg	1500	250
L-Histidine	2.7	0.45	Magnesium, mg	300	50
L-Isoleucine	None	None	Iron, mg	25	4.2
L-Leucine	None	None	Zinc, mg	15	2.5
L-Lysine	7.1	1.18	Manganese, mg	3.5	0.58
L-Methionine	1.9	0.32	Copper, mcg	2500	417
L-Phenylalanine	3.8	0.63	Iodine, mcg	150	25
L-Proline	2.3	0.38	Sodium, mg (mEq)	1400 (60.9)	233 (10.2)
L-Serine	2.4	0.40	Potassium, mg (mEq)	2600 (66.7)	433 (11.1)
L-Threonine	3.3	0.55	Chloride, mg (mEq)	2800 (80)	467 (13.3)
L-Tryptophan	1.2	0.20			
L-Tyrosine	3.8	0.63			
L-Valine	None	None			

### Ingredients:

L-Lysine L-Glutamate, L-Aspartic Acid, L-Alanine, Tripotassium Citrate, L-Glutamic Acid, Calcium Phosphate Dibasic, L-Arginine, Glycine, Sodium Chloride, L-Phenylalanine, L-Tyrosine, Calcium Phosphate Tribasic, L-Threonine, Hydrolyzed Cornstarch, L-Histidine, L-Serine, L-Proline, L-Cystine, L-Methionine, Magnesium, Acetate, L-Tryptophan, Potassium Chloride, Calcium Chloride, Ferrous Sulfate, Zinc Sulfate, Niacinamide, Calcium-D-Pantothenate, Manganese Sulfate, Cupric Sulfate, Pyridoxine Hydrochloride, Riboflavin, Thiamine Hydrochloride, Biotin, Folic Acid, Potassium Iodide, Cyanocobalamin.



## XLeu Analog

A leucine-free powdered infant formula for the dietary management of isovaleric acidemia and other proven disorders of leucine metabolism.

This formulation is available in the US and Canada.

### Main Features:

- Leucine-free
- Unflavored powder
- Contains a balanced mixture of all other essential and non-essential amino acids, carbohydrate, fat, vitamins, minerals and trace elements (including iron, selenium and chromium)
- XLeu Analog provides 13 g of protein equivalent per 100 g of powder
- Osmolality (at 15% w/v): 377 mOsm/kg

### Indications:

- Isovaleric acidemia
- Other proven disorders of leucine metabolism

*For details on administration and household measurements, please see pages 126-137.*

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
118361	49735-0183-61	B4162	6 x 400 g (14 oz)	1900

**WIC<sup>+</sup> eligible in all States.**

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 10 g Protein Equivalent		Vitamins	Per 10 g Protein Equivalent	
	Per 100 g	Protein Equivalent		Per 100 g	Protein Equivalent
Calories	475	365	Vitamin A, IU (mcg R.E.)	1760 (528)	1356 (406)
Protein Equivalent, g	13	10	Vitamin D, IU (mcg)	340 (8.5)	262 (6.5)
Fat, g	20.9	16	Vitamin E, IU (mg $\alpha$ T.E.)	4.9 (3.3)	3.8 (2.5)
Saturated, g	6.8	5.2	Vitamin K, mcg	21	16
Monounsaturated, g	9.5	7.3	Thiamine, mcg	500	385
Polyunsaturated, g	3.6	2.8	Riboflavin, mcg	600	462
Linoleic Acid, mg	3025	2330	Vitamin B <sub>6</sub> , mcg	520	400
Carbohydrate, g	59	45	Vitamin B <sub>12</sub> , mcg	1.25	0.96
<b>Amino Acids, g</b>			Niacin, mcg	4500	3462
L-Alanine	0.6	0.46	Folic Acid, mcg	38	29
L-Arginine	1	0.77	Pantothenic Acid, mcg	2600	2000
L-Aspartic Acid	0.8	0.62	Biotin, mcg	26	20
L-Cystine	0.42	0.32	Vitamin C, mg	40	31
L-Glutamic Acid	1	0.77	Choline, mg	50	38
Glycine	2.05	1.58	Inositol, mg	100	77
L-Histidine	0.66	0.51	<b>Minerals</b>		
L-Isoleucine	0.49	0.38	Calcium, mg	600	462
L-Leucine	None	None	Phosphorus, mg	500	385
L-Lysine	1.18	0.91	Magnesium, mg	40	31
L-Methionine	0.28	0.22	Iron, mg	10	8
L-Phenylalanine	0.77	0.59	Zinc, mg	8	6
L-Proline	2	1.54	Manganese, mcg	600	462
L-Serine	0.6	0.46	Copper, mcg	450	346
L-Threonine	0.86	0.66	Iodine, mcg	47	36
L-Tryptophan	0.34	0.26	Molybdenum, mcg	15	12
L-Tyrosine	0.77	0.59	Chromium, mcg	15	12
L-Valine	0.55	0.42	Selenium, mcg	15	12
L-Carnitine	0.01	0.01	Sodium, mg (mEq)	120 (5.2)	92 (4.0)
Taurine	0.02	0.02	Potassium, mg (mEq)	420 (10.8)	323 (8.3)
L-Glutamine	0.1	0.08	Chloride, mg (mEq)	290 (8.2)	223 (6.3)


### Ingredients:

Corn Syrup Solids, High Oleic Safflower Oil, Refined Vegetable Oil (Coconut, Soy), L-Lysine L-Glutamate, L-Proline, Glycine, Calcium Phosphate Dibasic, L-Arginine, L-Aspartic Acid, Galactose, Tripotassium Citrate, L-Phenylalanine, L-Tyrosine, L-Alanine, Calcium Phosphate Monobasic, L-Threonine, L-Histidine, L-Serine, Mono and Diglycerides, L-Valine, L-Cystine, L-Isoleucine, Sodium Chloride, L-Methionine, L-Glutamic Acid, L-Tryptophan, Magnesium Acetate, Potassium Chloride, Diacetyl Tartaric Acid Esters of Monoglycerides, Tricalcium Citrate, L-Glutamine, Choline Bitartrate, M-Inositol, L-Ascorbic Acid, Soy Lecithin, Calcium Phosphate Tribasic, Ferrous Sulfate, Zinc Sulfate, Taurine, L-Carnitine, Nicotinamide, DL-Alpha Tocopheryl Acetate, Calcium Pantothenate, Manganese Sulfate, Cupric Sulfate, Vitamin A Acetate, Pyridoxine Hydrochloride, Riboflavin, Thiamine Chloride Hydrochloride, Chromium Sulfate, Potassium Iodide, Folic Acid, Sodium Molybdate, Phylloquinone, D-Biotin, Sodium Hydrogen Selenite, Vitamin D<sub>3</sub>, Cyanocobalamin.



## XLeu Maxamaid

A leucine-free powdered medical food for the dietary management of isovaleric acidemia and other proven disorders of leucine metabolism in toddlers and younger children.

 This formulation is available in the US and Canada.

### Main Features:

- Leucine-free
- Contains a balanced mixture of all other essential and non-essential amino acids, carbohydrate, vitamins, minerals and trace elements
- Age-appropriate DRI formulation
- XLeu Maxamaid provides 25 g of protein equivalent per 100 g of powder
- Available in orange flavor
- Does not contain fat thereby allowing greater flexibility in modifying energy intake

### Indications:

- Isovaleric acidemia
- Other proven disorders of leucine metabolism

*For details on administration and household measurements, please see pages 126-137.*

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
117791	49735-0177-91	B4162	6 x 454 g (1 lb)	1471

**WIC<sup>+</sup> eligible in all States.**

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 10 g Protein Equivalent		Vitamins	Per 10 g Protein Equivalent	
	Per 100 g	Protein Equivalent		Per 100 g	Protein Equivalent
Calories	324	130	Vitamin A, IU (mcg R.E.)	1665 (500)	666 (200)
Protein Equivalent, g	25	10	Vitamin D, IU (mcg)	480 (12)	192 (4.8)
Fat, g	<0.1	0.04	Vitamin E, IU (mg α T.E.)	14.3 (9.6)	5.7 (3.8)
Carbohydrate, g	56	22	Vitamin K, mcg	48	19
<b>Amino Acids, g</b>			Thiamine, mg	0.8	0.3
L-Alanine	1.36	0.54	Riboflavin, mg	0.8	0.3
L-Arginine	2.22	0.89	Vitamin B <sub>6</sub> , mg	0.8	0.3
L-Aspartic Acid	1.87	0.75	Vitamin B <sub>12</sub> , mcg	2	0.8
L-Cystine	0.82	0.33	Niacin, mg	5	2
Glycine	3.99	1.60	Pantothenic Acid, mg	240	96
L-Histidine	1.28	0.51	Biotin, mcg	3.2	1.3
L-Isoleucine	0.78	0.31	Vitamin C, mg	18	7.2
L-Leucine	None	None	Choline, mg	62.5	25
L-Lysine	1.95	0.78	Inositol, mg	250	100
L-Methionine	0.54	0.22	<b>Minerals</b>		
L-Phenylalanine	1.5	0.60	Calcium, mg	810	324
L-Proline	4.01	1.60	Phosphorus, mg	810	324
L-Serine	1.24	0.50	Magnesium, mg	128	51
L-Threonine	1.32	0.53	Iron, mg	14	5.6
L-Tryptophan	0.5	0.20	Zinc, mg	11	4.4
L-Tyrosine	1.45	0.58	Manganese, mg	1.9	0.8
L-Valine	0.87	0.35	Copper, mcg	1000	400
L-Carnitine	0.02	0.01	Iodine, mcg	144	58
Taurine	0.14	0.06	Molybdenum, mcg	33	13
L-Glutamine	1.5	0.60	Chromium, mcg	21.5	8.6
			Selenium, mcg	40	16
			Sodium, mg (mEq)	580 (25.2)	232 (10)
			Potassium, mg (mEq)	840 (21.5)	336 (8.6)
			Chloride, mg (mEq)	450 (12.9)	180 (5.2)

### Ingredients:


Sugar, Corn Syrup Solids, L-Proline, Glycine, L-Arginine L-Aspartate, Calcium Phosphate Dibasic, Citric Acid, L-Lysine Acetate, Tripotassium Citrate, Artificial Flavors, L-Glutamine, L-Phenylalanine, L-Tyrosine, L-Alanine, L-Threonine, L-Histidine, L-Serine, Maltodextrin, Disodium Hydrogen Phosphate, L-Valine, L-Cystine, Sodium Chloride, L-Isoleucine, Magnesium Acetate, N-Acetyl L-Methionine, Choline Bitartrate, L-Tryptophan, Magnesium L-Aspartate, Taurine, L-Ascorbic Acid, Tricalcium Phosphate, M-Inositol, Ferrous Sulfate, Zinc Sulfate, L-Carnitine, DL-Alpha Tocopheryl Acetate, Manganese Sulfate, Niacinamide, Calcium D-Pantothenate, Cupric Sulfate, Thiamine Chloride Hydrochloride, Pyridoxine Hydrochloride, Riboflavin, Vitamin A Acetate, Artificial Colors (Beta Carotene, Beet Red), Folic Acid, Potassium Iodide, Chromium Chloride, Sodium Selenite, Sodium Molybdate, Phylloquinone, D-Biotin, Vitamin D<sub>3</sub>, Cyanocobalamin.





## XLeu Maxamum

A leucine-free powdered medical food for the dietary management of isovaleric acidemia and other proven disorders of leucine metabolism in older children and adults, including pregnant women and women of child-bearing age.

 This formulation is available in the US and Canada.

### Main Features:

- Leucine-free
- Contains a balanced mixture of all other essential and non-essential amino acids, carbohydrate, vitamins, minerals and trace elements (including iron, selenium and chromium)
- Age-appropriate DRI formulation
- XLeu Maxamum provides 40 g of protein equivalent per 100 g of powder
- Available in orange flavor
- Does not contain fat thereby allowing greater flexibility in modifying energy intake

### Indications:

- Isovaleric acidemia
- Other proven disorders of leucine metabolism

For details on administration and household measurements, please see pages 126-137.

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
117790	49735-0177-90	B4157 or B4162	6 x 454 g (1 lb)	1385

**WIC<sup>+</sup> eligible in all States.**

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 10 g Protein Equivalent		Vitamins	Per 10 g Protein Equivalent	
	Per 100 g	Protein Equivalent		Per 100 g	Protein Equivalent
Calories	305	76	Vitamin A, IU (mcg R.E.)	2228 (669)	557 (167)
Protein Equivalent, g	40	10	Vitamin D, IU (mcg)	332 (8.3)	83 (2.1)
Fat, g	<1	<0.25	Vitamin E, IU (mg $\alpha$ T.E.)	18.3 (12.3)	4.6 (3.1)
Carbohydrate, g	34	8.5	Vitamin K, mcg	82	21
<b>Amino Acids, g</b>			Thiamine, mg	0.91	0.23
L-Alanine	2.2	0.55	Riboflavin, mg	0.97	0.24
L-Arginine	3.6	0.90	Vitamin B <sub>6</sub> , mg	1.6	0.4
L-Aspartic Acid	3	0.75	Vitamin B <sub>12</sub> , mcg	3.1	0.8
L-Cystine	1.3	0.33	Niacin, mg	5.7	1.4
L-Glutamic Acid	3.9	0.98	Folic Acid, mcg	491	123
Glycine	6.3	1.58	Pantothenic Acid, mg	4.9	1.2
L-Histidine	2.1	0.53	Biotin, mcg	24.5	6.1
L-Isoleucine	1.2	0.30	Vitamin C, mg	62	16
L-Leucine	None	None	Choline, mg	430	108
L-Lysine	3	0.75	Inositol, mg	80	20
L-Methionine	0.86	0.22	<b>Minerals</b>		
L-Phenylalanine	2.3	0.58	Calcium, mg	1183	296
L-Proline	6.3	1.58	Phosphorus, mg	1137	284
L-Serine	1.9	0.48	Magnesium, mg	306	77
L-Threonine	2.1	0.53	Iron, mg	14.7	3.7
L-Tryptophan	0.79	0.20	Zinc, mg	9	2
L-Tyrosine	2.3	0.58	Manganese, mg	1.8	0.5
L-Valine	1.4	0.35	Copper, mcg	820	205
L-Carnitine	0.039	0.01	Iodine, mcg	131	33
Taurine	0.14	0.04	Molybdenum, mcg	37	9
L-Glutamine	0.32	0.08	Chromium, mcg	26	7
			Selenium, mcg	58	15
			Sodium, mg (mEq)	560 (24.3)	140 (6.1)
			Potassium, mg (mEq)	700 (17.9)	175 (4.5)
			Chloride, mg (mEq)	560 (16)	140 (4)

### Ingredients:


Sugar, L-Lysine L-Glutamate, L-Proline, Glycine, Corn Syrup Solids, Calcium Phosphate Dibasic, L-Arginine, L-Aspartic Acid, L-Phenylalanine, Artificial Flavor, L-Tyrosine, L-Alanine, L-Threonine, Citric Acid, L-Histidine, L-Serine, Magnesium Acetate, L-Valine, L-Cystine, L-Isoleucine, Tripotassium Citrate, Choline Bitartrate, Sodium Chloride, L-Methionine, L-Glutamic Acid, L-Tryptophan, Soy Lecithin, Disodium Hydrogen Phosphate, Dipotassium Hydrogen Phosphate, L-Glutamine, Tricalcium Phosphate, Taurine, L-Ascorbic Acid, M-Inositol, Ferrous Sulfate, L-Carnitine, Zinc Sulfate, DL-Alpha Tocopheryl Acetate, Niacinamide, Manganese Sulfate, Calcium D-Pantothenate, Cupric Sulfate, Pyridoxine Hydrochloride, Sodium Selenite, Thiamine Chloride Hydrochloride, Riboflavin, Vitamin A Acetate, Folic Acid, Artificial Colors (Beta-Carotene, Beet Red), Potassium Iodide, Chromium Chloride, Sodium Molybdate, Phylloquinone, D-Biotin, Vitamin D<sub>3</sub>, Cyanocobalamin.





## XLys, XTrp Analog

A lysine- and tryptophan-free powdered infant formula for the dietary management of glutaric acidemia type I.

 This formulation is available in the US and Canada.

### Main Features:

- Lysine- and tryptophan-free
- Unflavored powder
- Contains a balanced mixture of all other essential and non-essential amino acids, carbohydrate, fat, vitamins, minerals and trace elements (including iron, selenium and chromium)
- XLys, XTrp Analog provides 13 g of protein equivalent per 100 g of powder
- Osmolality (at 15% w/v): 377 mOsm/kg

### Indications:

- Glutaric acidemia type I

*For details on administration and household measurements, please see pages 126-137.*

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
118328	49735-0183-28	B4162	6 x 400 g (14 oz)	1900

**WIC<sup>+</sup> eligible in all States.**

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 10 g Protein Equivalent		Vitamins	Per 10 g Protein Equivalent	
	Per 100 g	Per 10 g Protein Equivalent		Per 100 g	Per 10 g Protein Equivalent
Calories	475	365	Vitamin A, IU (mcg R.E.)	1760 (528)	1357 (406)
Protein Equivalent, g	13	10	Vitamin D, IU (mcg)	340 (8.5)	262 (6.5)
Fat, g	20.9	16	Vitamin E, IU (mg $\alpha$ T.E.)	4.9 (3.3)	3.8 (2.5)
Saturated, g	6.8	5.2	Vitamin K, mcg	21	16
Monounsaturated, g	9.5	7.3	Thiamine, mcg	500	385
Polyunsaturated, g	3.6	2.8	Riboflavin, mcg	600	462
Linoleic Acid, mg	3025	2330	Vitamin B <sub>6</sub> , mcg	520	400
Carbohydrate, g	59	45	Vitamin B <sub>12</sub> , mcg	1.25	0.96
<b>Amino Acids, g</b>			Niacin, mcg	4500	3462
L-Alanine	0.61	0.47	Folic Acid, mcg	38	29
L-Arginine	1.1	0.85	Pantothenic Acid, mcg	2600	2000
L-Aspartic Acid	0.9	0.69	Biotin, mcg	26	20
L-Cystine	0.43	0.33	Vitamin C, mg	40	31
L-Glutamic Acid	1.1	0.85	Choline, mg	50	38
Glycine	1	0.77	Inositol, mg	100	77
L-Histidine	0.65	0.50	<b>Minerals</b>		
L-Isoleucine	1.03	0.79	Calcium, mg	600	462
L-Leucine	1.75	1.35	Phosphorus, mg	500	385
L-Lysine	None	None	Magnesium, mg	40	31
L-Methionine	0.27	0.21	Iron, mg	10	8
L-Phenylalanine	0.77	0.59	Zinc, mg	8	6
L-Proline	1.24	0.95	Manganese, mcg	600	462
L-Serine	0.77	0.59	Copper, mcg	450	346
L-Threonine	0.86	0.66	Iodine, mcg	47	36
L-Tryptophan	None	None	Molybdenum, mcg	15	12
L-Tyrosine	0.77	0.59	Chromium, mcg	15	12
L-Valine	1.12	0.86	Selenium, mcg	15	12
L-Carnitine	0.01	0.01	Sodium, mg (mEq)	120 (5.2)	92 (4.0)
Taurine	0.02	0.02	Potassium, mg (mEq)	420 (10.8)	323 (8.3)
L-Glutamine	0.1	0.08	Chloride, mg (mEq)	290 (8.2)	223 (6.3)


### Ingredients:

Corn Syrup Solids, High Oleic Safflower Oil, Refined Vegetable Oil (Coconut, Soy), Calcium Phosphate Dibasic, L-Leucine, L-Glutamic Acid, L-Proline, L-Arginine, L-Valine, Glycine, L-Isoleucine, L-Aspartic Acid, Galactose, L-Threonine, Tripotassium Citrate, L-Phenylalanine, L-Tyrosine, L-Serine, Calcium Phosphate Monobasic, L-Alanine, L-Histidine, Mono and Diglycerides, L-Cystine, Sodium Chloride, L-Methionine, Magnesium Acetate, Potassium Chloride, Diacetyl Tartaric Acid Esters of Monoglycerides, Tricalcium Citrate, L-Glutamine, Choline Bitartrate, M-Inositol, L-Ascorbic Acid, Soy Lecithin, Calcium Phosphate Tribasic, Ferrous Sulfate, Zinc Sulfate, Taurine, L-Carnitine, Nicotinamide, DL-Alpha Tocopheryl Acetate, Calcium Pantothenate, Manganese Sulfate, Cupric Sulfate, Vitamin A Acetate, Pyridoxine Hydrochloride, Riboflavin, Thiamine Chloride Hydrochloride, Chromium Sulfate, Potassium Iodide, Folic Acid, Sodium Molybdate, Phylloquinone, Biotin, Sodium Hydrogen Selenite, Vitamin D<sub>3</sub>, Cyanocobalamin.



## XLys, XTrp Maxamaid

A lysine- and tryptophan-free powdered medical food for the dietary management of glutaric acidemia type I in toddlers and young children.

 This formulation is available in the US and Canada.

### Main Features:

- Lysine- and tryptophan-free
- Contains a balanced mixture of all other essential and non-essential amino acids, carbohydrate, vitamins, minerals and trace elements
- Age-appropriate DRI formulation
- XLys, XTrp Maxamaid provides 25 g of protein equivalent per 100 g of powder
- Available in orange flavor
- Does not contain fat thereby allowing greater flexibility in modifying energy intake

### Indications:

- Glutaric acidemia type I

*For details on administration and household measurements, please see pages 126-137.*

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
117780	49735-0177-80	B4162	6 x 454 g (1 lb)	1471

**WIC<sup>+</sup> eligible in all States.**

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 10 g Protein Equivalent		Vitamins	Per 10 g Protein Equivalent	
	Per 100 g	Per 10 g Protein Equivalent		Per 100 g	Per 10 g Protein Equivalent
Calories	324	130	Vitamin A, IU (mcg R.E.)	1665 (500)	666 (200)
Protein Equivalent, g	25	10	Vitamin D, IU (mcg)	480 (12)	192 (4.8)
Fat, g	<0.1	0.04	Vitamin E, IU (mg $\alpha$ T.E.)	14.3 (9.6)	5.7 (3.8)
Carbohydrate, g	56	22	Vitamin K, mcg	48	19
<b>Amino Acids, g</b>			Thiamine, mg	0.8	0.3
L-Alanine	1.28	0.51	Riboflavin, mg	0.8	0.3
L-Arginine	2.23	0.89	Vitamin B <sub>6</sub> , mg	0.8	0.3
L-Aspartic Acid	1.86	0.74	Vitamin B <sub>12</sub> , mcg	2	0.8
L-Cystine	0.83	0.33	Niacin, mg	14.5	5.8
Glycine	2	0.80	Folic Acid, mcg	240	96
L-Histidine	1.27	0.51	Pantothenic Acid, mg	3.2	1.3
L-Isoleucine	2	0.80	Biotin, mcg	18	7.2
L-Leucine	3.42	1.37	Vitamin C, mg	62.5	25
L-Lysine	None	None	Choline, mg	250	100
L-Methionine	0.53	0.21	Inositol, mg	56	22
L-Phenylalanine	1.51	0.60	<b>Minerals</b>		
L-Proline	2.42	0.97	Calcium, mg	810	324
L-Serine	1.49	0.60	Phosphorus, mg	810	324
L-Threonine	1.68	0.67	Magnesium, mg	128	51
L-Tryptophan	None	None	Iron, mg	14	5.6
L-Tyrosine	1.51	0.60	Zinc, mg	11	4.4
L-Valine	2.18	0.87	Manganese, mg	1.9	0.8
L-Carnitine	0.02	0.01	Copper, mcg	1000	400
Taurine	0.14	0.06	Iodine, mcg	144	58
L-Glutamine	1.5	0.60	Molybdenum, mcg	33	13
			Chromium, mcg	21.5	8.6
			Selenium, mcg	40	16
			Sodium, mg (mEq)	580 (25.2)	232 (10)
			Potassium, mg (mEq)	840 (21.5)	336 (8.6)
			Chloride, mg (mEq)	450 (12.9)	180 (5.2)

### Ingredients:

Sugar, Corn Syrup Solids, L-Arginine, L-Aspartate, Calcium Phosphate Dibasic, L-Leucine, Citric Acid, Tripotassium Citrate, L-Proline, L-Valine, Glycine, L-Isoleucine, Artificial Flavors, L-Threonine, L-Glutamine, L-Phenylalanine, L-Tyrosine, L-Serine, L-Histidine, L-Alanine, Maltodextrin, Disodium Hydrogen Phosphate, L-Cystine, Sodium Chloride, Magnesium Acetate, N-Acetyl L-Methionine, Choline Bitartrate, Magnesium L-Aspartate, Taurine, L-Ascorbic Acid, Tricalcium Phosphate, M-Inositol, Ferrous Sulfate, Zinc Sulfate, L-Carnitine, DL-Alpha Tocopheryl Acetate, Manganese Sulfate, Niacinamide, Calcium D-Pantothenate, Cupric Sulfate, Thiamine Chloride Hydrochloride, Pyridoxine Hydrochloride, Riboflavin, Vitamin A Acetate, Artificial Colors (Beta-Carotene, Beet Red), Folic Acid, Potassium Iodide, Chromium Chloride, Sodium Selenite, Sodium Molybdate, Phylloquinone, D-Biotin, Vitamin D<sub>3</sub>, Cyanocobalamin.



## XLys, XTrp Maxamum

A lysine- and tryptophan-free powdered medical food for the dietary management of glutaric acidemia type I in older children and adults, including pregnant women and women of child-bearing age.

This formulation is available in the US and Canada.

### Main Features:

- Lysine- and tryptophan-free
- Contains a balanced mixture of all other essential and non-essential amino acids, carbohydrate, vitamins, minerals and trace elements
- Age-appropriate DRI formulation
- XLys, XTrp Maxamum provides 40 g of protein equivalent per 100 g of powder
- Available in orange flavor
- Does not contain fat thereby allowing greater flexibility in modifying energy intake

### Indications:

- Glutaric acidemia type I

For details on administration and household measurements, please see pages 126-137.

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
117788	49735-0177-88	B4157 or B4162	6 x 454 g (1 lb)	1385

**WIC+ eligible in all States.**

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 10 g Protein Equivalent		Vitamins	Per 10 g Protein Equivalent	
	Per 100 g	Per 10 g		Per 100 g	Per 10 g
Calories	305	76	Vitamin A, IU (mcg R.E.)	2228 (669)	557 (167)
Protein Equivalent, g	40	10	Vitamin D, IU (mcg)	332 (8.3)	83 (2.1)
Fat, g	<1	<0.25	Vitamin E, IU (mg T.E.)	18.3 (12.3)	4.6 (3.1)
Carbohydrate, g	34	8.5	Vitamin K, mcg	82	21
<b>Amino Acids, g</b>			Thiamine, mg	0.91	0.23
L-Alanine	2	0.50	Riboflavin, mg	0.97	0.24
L-Arginine	3.5	0.88	Vitamin B <sub>6</sub> , mg	1.6	0.4
L-Aspartic Acid	2.9	0.73	Vitamin B <sub>12</sub> , mcg	3.1	0.8
L-Cystine	1.3	0.33	Niacin, mg	12	3.0
L-Glutamic Acid	3.9	0.98	Folic Acid, mcg	491	123
Glycine	3.1	0.78	Pantothenic Acid, mg	4.9	1.2
L-Histidine	2	0.50	Biotin, mcg	24.5	6.1
L-Isoleucine	3.1	0.78	Vitamin C, mg	62	16
L-Leucine	5.3	1.33	Choline, mg	430	108
L-Lysine	None	None	Inositol, mg	80	20
L-Methionine	0.82	0.21	<b>Minerals</b>		
L-Phenylalanine	2.3	0.58	Calcium, mg	1183	296
L-Proline	3.7	0.93	Phosphorus, mg	1137	284
L-Serine	2.3	0.58	Magnesium, mg	306	77
L-Threonine	2.6	0.65	Iron, mg	14.7	3.7
L-Tryptophan	None	None	Zinc, mg	9	2
L-Tyrosine	2.3	0.58	Manganese, mg	1.8	0.5
L-Valine	3.4	0.85	Copper, mcg	820	205
L-Carnitine	0.039	0.01	Iodine, mcg	131	33
Taurine	0.14	0.04	Molybdenum, mcg	37	9
L-Glutamine	0.32	0.08	Chromium, mcg	26	7
			Selenium, mcg	58	15
			Sodium, mg (mEq)	560 (24.3)	140 (6.1)
			Potassium, mg (mEq)	700 (17.9)	175 (4.4)
			Chloride, mg (mEq)	560 (16)	140 (4)

### Ingredients:

Sugar, L-Leucine, Corn Syrup Solids, Calcium Phosphate Dibasic, L-Glutamic Acid, L-Proline, L-Arginine, L-Valine, Glycine, L-Isoleucine, L-Aspartic Acid, L-Threonine, Artificial Flavor, L-Phenylalanine, L-Tyrosine, L-Serine, Citric Acid, L-Alanine, L-Histidine, Magnesium Acetate, L-Cystine, Tripotassium Citrate, Choline Bitartrate, Sodium Chloride, L-Methionine, Soy Lecithin, Disodium Hydrogen Phosphate, Dipotassium Hydrogen Phosphate, L-Glutamine, Tricalcium Phosphate, Taurine, L-Ascorbic Acid, M-Inositol, Ferrous Sulfate, L-Carnitine, Zinc Sulfate, DL-Alpha Tocopheryl Acetate, Niacinamide, Manganese Sulfate, Calcium D-Pantothenate, Cupric Sulfate, Pyridoxine Hydrochloride, Sodium Selenite, Thiamine Chloride Hydrochloride, Riboflavin, Vitamin A Acetate, Folic Acid, Artificial Colors (Beta-Carotene, Beet Red), Potassium Iodide, Chromium Chloride, Sodium Molybdate, Phylloquinone, D-Biotin, Vitamin D<sub>3</sub>, Cyanocobalamin.



## XMet Analog

A methionine-free powdered infant formula for the dietary management of vitamin B<sub>6</sub> non-responsive homocystinuria or hypermethioninemia.

This formulation is available in the US and Canada.

### Main Features:

- Methionine-free
- Unflavored powder
- Contains a balanced mixture of all other essential and non-essential amino acids, carbohydrate, fat, vitamins, minerals and trace elements (including iron, selenium and chromium)
- XMet Analog provides 13 g of protein equivalent per 100 g of powder
- Osmolality (at 15% w/v): 377 mOsm/kg

### Indications:

- Vitamin B<sub>6</sub> non-responsive homocystinuria
- Hypermethioninemia

For details on administration and household measurements, please see pages 126-137.

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
118327	49735-0183-27	B4162	6 x 400 g (14 oz)	1900

**WIC<sup>+</sup> eligible in all States.**

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 10 g Protein Equivalent		Vitamins	Per 10 g Protein Equivalent	
	Per 100 g	Protein Equivalent		Per 100 g	Protein Equivalent
Calories	475	365	Vitamin A, IU (mcg R.E.)	1760 (528)	1358 (406)
Protein Equivalent, g	13	10	Vitamin D, IU (mcg)	340 (8.5)	262 (6.5)
Fat, g	20.9	16	Vitamin E, IU (mg α.T.E.)	4.9 (3.3)	3.8 (2.5)
Saturated, g	6.8	5.2	Vitamin K, mcg	21	16
Monounsaturated, g	9.5	7.3	Thiamine, mcg	500	385
Polyunsaturated, g	3.6	2.8	Riboflavin, mcg	600	462
Linoleic Acid, mg	3025	2330	Vitamin B <sub>6</sub> , mcg	520	400
Carbohydrate, g	59	45	Vitamin B <sub>12</sub> , mcg	1.25	0.96
<b>Amino Acids, g</b>			Niacin, mcg	4500	3462
L-Alanine	0.50	0.38	Folic Acid, mcg	38	29
L-Arginine	1	0.77	Pantothenic Acid, mcg	2600	2000
L-Aspartic Acid	0.8	0.62	Biotin, mcg	26	20
L-Cystine	0.39	0.30	Vitamin C, mg	40	31
L-Glutamic Acid	1.14	0.88	Choline, mg	50	38
Glycine	0.93	0.72	Inositol, mg	100	77
L-Histidine	0.6	0.46	<b>Minerals</b>		
L-Isoleucine	0.93	0.72	Calcium, mg	600	462
L-Leucine	1.59	1.22	Phosphorus, mg	500	385
L-Lysine	1.08	0.83	Magnesium, mg	40	31
L-Methionine	None	None	Iron, mg	10	8
L-Phenylalanine	0.70	0.54	Zinc, mg	8	6
L-Proline	1.12	0.86	Manganese, mcg	600	462
L-Serine	0.69	0.53	Copper, mcg	450	346
L-Threonine	0.78	0.62	Iodine, mcg	47	36
L-Tryptophan	0.31	0.24	Molybdenum, mcg	15	12
L-Tyrosine	0.8	0.62	Chromium, mcg	15	12
L-Valine	1.01	0.78	Selenium, mcg	15	12
L-Carnitine	0.01	0.01	Sodium, mg (mEq)	120 (5.2)	92 (4.0)
Taurine	0.02	0.02	Potassium, mg (mEq)	420 (10.8)	323 (8.3)
L-Glutamine	0.1	0.08	Chloride, mg (mEq)	290 (8.2)	223 (6.3)

### Ingredients:


Corn Syrup Solids, High Oleic Safflower Oil, Refined Vegetable Oil (Coconut, Soy), L-Lysine L-Glutamate, Calcium Phosphate Dibasic, L-Leucine, L-Proline, L-Arginine, L-Valine, Glycine, L-Isoleucine, Galactose, L-Aspartic Acid, Tripotassium Citrate, L-Threonine, L-Phenylalanine, L-Tyrosine, L-Serine, Calcium Phosphate Monobasic, L-Alanine, L-Histidine, Mono and Diglycerides, L-Cystine, L-Tryptophan, Sodium Chloride, Magnesium Acetate, Potassium Chloride, Diacetyl Tartaric Acid Esters of Monoglycerides, Tricalcium Citrate, L-Glutamine, Choline Bitartrate, M-Inositol, L-Ascorbic Acid, Soy Lecithin, L-Glutamic Acid, Calcium Phosphate Tribasic, Ferrous Sulfate, Zinc Sulfate, Taurine, L-Carnitine, Nicotinamide, DL-Alpha Tocopheryl Acetate, Calcium Pantothenate, Manganese Sulfate, Cupric Sulfate, Vitamin A Acetate, Pyridoxine Hydrochloride, Riboflavin, Thiamine Chloride Hydrochloride, Chromium Sulfate, Potassium Iodide, Folic Acid, Sodium Molybdate, Phylloquinone, D-Biotin, Sodium Hydrogen Selenite, Vitamin D<sub>3</sub>, Cyanocobalamin.





## XMet Maxamaid

A methionine-free powdered medical food for the dietary management of vitamin B<sub>6</sub> non-responsive homocystinuria or hypermethioninemia in toddlers and young children.

 This formulation is available in the US and Canada.

### Main Features:

- Methionine-free
- Contains a balanced mixture of all other essential and non-essential amino acids, carbohydrate, vitamins, minerals and trace elements
- Age-appropriate DRI formulation
- XMet Maxamaid provides 25 g of protein equivalent per 100 g of powder
- Available in orange flavor
- Does not contain fat thereby allowing greater flexibility in modifying energy intake

### Indications:

- Vitamin B<sub>6</sub> non-responsive homocystinuria
- Hypermethioninemia

*For details on administration and household measurements, please see pages 126-137.*

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
117787	49735-0177-87	B4162	6 x 454 g (1 lb)	1471

**WIC<sup>+</sup> eligible in all States.**

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 10 g Protein Equivalent		Vitamins	Per 10 g Protein Equivalent	
	Per 100 g	Protein Equivalent		Per 100 g	Protein Equivalent
Calories	324	130	Vitamin A, IU (mcg R.E.)	1665 (500)	666 (200)
Protein Equivalent, g	25	10	Vitamin D, IU (mcg)	480 (12)	192 (4.8)
Fat, g	<0.1	0.04	Vitamin E, IU (mg T.E.)	14.3 (9.6)	5.7 (3.8)
Carbohydrate, g	56	22	Vitamin K, mcg	48	19
<b>Amino Acids, g</b>			<b>Minerals</b>		
L-Alanine	1.16	0.46	Thiamine, mg	0.8	0.3
L-Arginine	2.04	0.82	Riboflavin, mg	0.8	0.3
L-Aspartic Acid	1.70	0.68	Vitamin B <sub>6</sub> , mg	0.8	0.3
L-Cystine	0.75	0.30	Vitamin B <sub>12</sub> , mcg	2	0.8
Glycine	1.81	0.72	Niacin, mg	5	2
L-Histidine	1.16	0.46	Folic Acid, mcg	240	96
L-Isoleucine	1.81	0.72	Pantothenic Acid, mg	3.2	1.3
L-Leucine	3.1	1.24	Biotin, mcg	18	7.2
L-Lysine	2.1	0.84	Vitamin C, mg	62.5	25
L-Methionine	None	None	Choline, mg	250	100
L-Phenylalanine	1.37	0.55	Inositol, mg	56	22
L-Proline	2.19	0.88			
L-Serine	1.35	0.54	Calcium, mg	810	324
L-Threonine	1.52	0.61	Phosphorus, mg	810	324
L-Tryptophan	0.61	0.24	Magnesium, mg	128	51
L-Tyrosine	1.37	0.55	Iron, mg	14	5.6
L-Valine	1.97	0.79	Zinc, mg	11	4.4
L-Carnitine	0.02	0.01	Manganese, mg	1.9	0.8
Taurine	0.14	0.06	Copper, mcg	1000	400
L-Glutamine	1.5	0.60	Iodine, mcg	144	58
			Molybdenum, mcg	33	13
			Chromium, mcg	21.5	8.6
			Selenium, mcg	40	16
			Sodium, mg (mEq)	580 (25.2)	232 (10)
			Potassium, mg (mEq)	840 (21.5)	336 (8.6)
			Chloride, mg (mEq)	450 (12.9)	180 (5.2)

### Ingredients:


Sugar, Corn Syrup Solids, Calcium Phosphate Dibasic, L-Arginine L-Aspartate, L-Leucine, L-Lysine Acetate, Citric Acid, Tripotassium Citrate, L-Proline, L-Valine, Artificial Flavors, Glycine, L-Isoleucine, L-Threonine, L-Glutamine, L-Phenylalanine, L-Tyrosine, L-Serine, L-Alanine, L-Histidine, Maltodextrin, Disodium Hydrogen Phosphate, Sodium Chloride, Magnesium Acetate, L-Cystine, Choline Bitartrate, L-Tryptophan, Taurine, Magnesium L-Aspartate, L-Ascorbic Acid, Tricalcium Phosphate, M-Inositol, Ferrous Sulfate, Zinc Sulfate, L-Carnitine, DL-Alpha Tocopheryl Acetate, Manganese Sulfate, Niacinamide, Calcium D-Pantothenate, Cupric Sulfate, Thiamine Chloride Hydrochloride, Pyridoxine Hydrochloride, Riboflavin, Vitamin A Acetate, Artificial Colors (Beta-Carotene, Beet Red), Folic Acid, Potassium Iodide, Chromium Chloride, Sodium Selenite, Sodium Molybdate, Phylloquinone, D-Biotin, Vitamin D<sub>3</sub>, Cyanocobalamin.





## XMet Maxamum

A methionine-free powdered medical food for the dietary management of vitamin B<sub>6</sub> non-responsive homocystinuria or hypermethioninemia in older children and adults, including pregnant women and women of child-bearing age.

 This formulation is available in the US and Canada.

### Main Features:

- Methionine-free
- Contains a balanced mixture of all other essential and non-essential amino acids, carbohydrate, vitamins, minerals and trace elements
- Age-appropriate DRI formulation
- XMet Maxamum provides 40 g of protein equivalent per 100 g of powder
- Available in orange flavor
- Does not contain fat thereby allowing greater flexibility in modifying energy intake

### Indications:

- Vitamin B<sub>6</sub> non-responsive homocystinuria
- Hypermethioninemia

*For details on administration and household measurements, please see pages 126-137.*

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
117795	49735-0177-95	B4157 or B4162	6 x 454 g (1 lb)	1385

**WIC<sup>+</sup> eligible in all States.**

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 10 g Protein Equivalent		Vitamins	Per 10 g Protein Equivalent	
	Per 100 g	Protein Equivalent		Per 100 g	Protein Equivalent
Calories	305	76	Vitamin A, IU (mcg R.E.)	2228 (669)	557 (167)
Protein Equivalent, g	40	10	Vitamin D, IU (mcg)	332 (8.3)	83 (2.1)
Fat, g	<1	<0.25	Vitamin E, IU (mg α.T.E.)	18.3 (12.3)	4.6 (3.1)
Carbohydrate, g	34	8.5	Vitamin K, mcg	82	21
<b>Amino Acids, g</b>			Thiamine, mg	0.91	0.23
L-Alanine	1.8	0.45	Riboflavin, mg	0.97	0.24
L-Arginine	3.2	0.80	Vitamin B <sub>6</sub> , mg	1.6	0.4
L-Aspartic Acid	2.7	0.68	Vitamin B <sub>12</sub> , mcg	3.1	0.8
L-Cystine	1.2	0.30	Niacin, mg	5.7	1.4
L-Glutamic Acid	3.6	0.90	Folic Acid, mcg	491	123
Glycine	2.8	0.70	Pantothenic Acid, mg	4.9	1.2
L-Histidine	1.8	0.45	Biotin, mcg	24.5	6.1
L-Isoleucine	2.8	0.70	Vitamin C, mg	62	16
L-Leucine	4.9	1.23	Choline, mg	430	108
L-Lysine	3.3	0.83	Inositol, mg	80	20
L-Methionine	None	None	<b>Minerals</b>		
L-Phenylalanine	2.2	0.55	Calcium, mg	1183	296
L-Proline	3.4	0.85	Phosphorus, mg	1137	284
L-Serine	2.1	0.53	Magnesium, mg	306	77
L-Threonine	2.4	0.60	Iron, mg	14.7	3.7
L-Tryptophan	0.95	0.24	Zinc, mg	9	2
L-Tyrosine	2.2	0.55	Manganese, mg	1.8	0.5
L-Valine	3.1	0.78	Copper, mcg	820	205
L-Carnitine	0.039	0.01	Iodine, mcg	131	33
Taurine	0.14	0.04	Molybdenum, mcg	37	9
L-Glutamine	0.32	0.08	Chromium, mcg	26	7
			Selenium, mcg	58	15
			Sodium, mg (mEq)	560 (24.3)	140 (6.1)
			Potassium, mg (mEq)	700 (17.9)	175 (4.5)
			Chloride, mg (mEq)	560 (16)	140 (4)

### Ingredients:

Sugar, L-Lysine L-Glutamate, Corn Syrup Solids, L-Leucine, Calcium Phosphate Dibasic, L-Proline, L-Arginine, L-Valine, Glycine, L-Isoleucine, L-Aspartic Acid, L-Threonine, Artificial Flavor, L-Phenylalanine, L-Tyrosine, L-Serine, Citric Acid, Magnesium Acetate, L-Alanine, L-Histidine, Tripotassium Citrate, L-Cystine, Choline Bitartrate, L-Tryptophan, Sodium Chloride, Soy Lecithin, Disodium Hydrogen Phosphate, Dipotassium Hydrogen Phosphate, L-Glutamic Acid, Taurine, L-Ascorbic Acid, M-Inositol, Ferrous Sulfate, L-Carnitine, Zinc Sulfate, DL-Alpha Tocopheryl Acetate, Niacinamide, Manganese Sulfate, Calcium D-Pantothenate, Cupric Sulfate, Pyridoxine Hydrochloride, Sodium Selenite, Thiamine Chloride Hydrochloride, Riboflavin, Vitamin A Acetate, Folic Acid, Artificial Colors (Beta-Carotene, Beet Red), Potassium Iodide, Chromium Chloride, Sodium Molybdate, Phylloquinone, D-Biotin, Vitamin D<sub>3</sub>, Cyanocobalamin.



## HCU Lophlex LQ

A methionine-free, ready-to-drink medical food containing amino acids, carbohydrates, vitamins, minerals and DHA, based on mixed fruit juices (from concentrate) with natural flavor; for the dietary management of proven homocystinuria in individuals 4 years and older, including pregnant women and women of child-bearing age.

This formulation is available in the US and Canada.

### Main Features:

- Methionine-free
- Low volume; low calorie
- Convenient ready-to-drink
- Based on fruit juices (from concentrate) with natural flavor - no artificial flavors
- Contains a balanced mixture of other essential and non-essential amino acids, carbohydrates, vitamins, minerals and DHA
- Provides 20 g of protein equivalent in one pouch
- Available in mixed berry blast flavor
- Osmolality: 2460 mOsm/kg

### Indications:

- Homocystinuria

*For details on administration, please see page 134.*

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Pouch
66748	49735-016748	B4157 or B4162	30 X 4.2 fl oz (125 mL)	120

**WIC<sup>+</sup> eligible in all States.** For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per Pouch	Per 10 g	Vitamins	Per Pouch	Per 10 g
	(4.2 fl oz)	Protein Equivalent		(4.2 fl oz)	Protein Equivalent
Calories	120.0	60.0	Vitamin A, IU (mcg R.E.)	949 (285)	475 (143)
Protein Equivalent, g	20.0	10.0	Vitamin D, IU (mcg)	320 (8.0)	160 (4.0)
Fat, g	0.44	0.22	Vitamin E, IU (mg α.T.E.)	4.8 (3.2)	2.4 (1.6)
DHA, mg	150	75.0	Vitamin K, mcg	24.9	12.5
Carbohydrate, g	9.3	4.7	Thiamin, mg	0.54	0.27
Fiber, g	0.50	0.25	Riboflavin, mg	0.50	0.25
<b>Amino Acids, g</b>			Vitamin B6, mg	0.58	0.29
L-Alanine	1.18	0.59	Vitamin B12, mcg	1.8	0.90
L-Arginine	1.50	0.75	Niacin, mg	7.1	3.6
L-Aspartic Acid	1.73	0.87	Folic Acid, mcg	120	60.0
L-Cystine	0.98	0.49	Pantothenic Acid, mg	1.8	0.9
Glycine	1.60	0.80	Biotin, mcg	53.4	26.7
L-Histidine	0.85	0.43	Vitamin C, mg	17.8	8.9
L-Isoleucine	1.35	0.68	Choline, mg	153	76.5
L-Leucine	2.30	1.15	Inositol, mg	40.6	20.3
L-Lysine	1.55	0.78	<b>Minerals</b>		
L-Methionine	nil added	nil added	Calcium, mg	319	160
L-Phenylalanine	1.00	0.50	Phosphorus, mg	244	122
L-Proline	2.03	1.02	Magnesium, mg	96.3	48.2
L-Serine	1.38	0.69	Iron, mg	5.1	2.6
L-Threonine	1.13	0.57	Zinc, mg	3.8	1.9
L-Tryptophan	0.45	0.23	Manganese, mg	0.56	0.28
L-Tyrosine	1.65	0.83	Copper, mcg	563	282
L-Valine	1.45	0.73	Iodine, mcg	56.3	28.2
L-Carnitine	0.01	0.01	Molybdenum, mcg	25.0	12.5
Taurine	0.06	0.03	Chromium, mcg	10.8	5.4
			Selenium, mcg	26.8	13.4
			Sodium, mg (mmol)	<25.0 (<10)	<12.5 (<5)
			Potassium, mg (mmol)	90 (2.3)	45 (1.2)
			Chloride, mg (mmol)	<25.0 (<10)	<12.5 (<5)

### Ingredients:


Water, Apple Juice from Concentrate (34.1%), Grape Juice from Concentrate (6.9%), Blackcurrant Juice from Concentrate (2.5%), L-Arginine L-Aspartate, L-Leucine, L-Lysine Acetate, Citric Acid, L-Proline, L-Tyrosine, Glycine, L-Valine, L-Serine, L-Isoleucine, Corn Syrup Solids, Dicalcium Phosphate, L-Alanine, L-Threonine, L-Phenylalanine, L-Cystine, L-Histidine, Elderberry Juice from Concentrate (0.6%), Maltodextrin, Magnesium L-Aspartate, Magnesium Acetate, L-Tryptophan, Choline Bitartrate, C. Cohnii Oil\*, Sugar, Microcrystalline Cellulose, Natural Flavor, Fruit Concentrate (Apple, Blackcurrant, Radish), L-Ascorbic Acid, Taurine, Guar Gum, Sunflower Lecithin, Xanthan Gum, M-Inositol, Potassium Sorbate (preservative to delay spoilage), Artificial Sweetener: Sucralose, Artificial Sweetener: Acesulfame Potassium, Ferrous Lactate, Sodium Benzoate (preservative to delay spoilage), Zinc Sulfate, L-Carnitine, Niacinamide, DL-alpha Tocopheryl Acetate, Calcium D-Pantothenate, Manganese Sulfate, Cupric Sulfate, Thiamine Chloride Hydrochloride, Pyridoxine Hydrochloride, Vitamin A Palmitate, Riboflavin, Folic Acid, Potassium Iodide, Ascorbyl Palmitate, Mixed Tocopherols, Sodium Molybdate, D-Biotin, Sodium Selenite, Chromium Chloride, Phylloquinone, Vitamin D<sub>3</sub>, Cyanocobalamin.

\*A Source of Docosahexaenoic Acid (DHA).



## Milupa HOM 2

A powdered medical food containing a mixture of pure L-amino acids free from methionine and enriched with vitamins, minerals, and trace elements. For the dietary management of vitamin B<sub>6</sub> non-responsive homocystinuria in children and adults, including pregnant women and women of child-bearing age.

 This formulation is only available in the US.

### Main Features:

- Methionine-free
- Concentrated, unflavored powder
- Enriched with vitamins, minerals and trace elements
- Osmolality (at a 1 to 9 dilution): 810 mOsm/kg

### Indications:

- Homocystinuria - vitamin B<sub>6</sub> non-responsive (due to Cystathionine β-Synthase Deficiency)

*For details on administration and household measurements, please see pages 126-137.*

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
659357	81361-0935-70	B4155	2 x 500 g (17.6 oz)	1450

**WIC<sup>+</sup> eligible in all States.**

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 10 g Protein Equivalent		Vitamins	Per 10 g Protein Equivalent	
	Per 100 g	Per 10 g Protein Equivalent		Per 100 g	Per 10 g Protein Equivalent
Calories	290	42	Vitamin A, IU (mcg R.E.)	5200 (1562)	754 (226)
Protein Equivalent, g	69	10	Vitamin D, IU (mcg)	1310 (33)	190 (4.8)
Fat, g	None	None	Vitamin E, IU (mg α.T.E.)	18 (12)	2.6 (1.7)
Carbohydrate, g	3.8	0.6	Vitamin K, mcg	167	24
<b>Amino Acids, g</b>			Thiamine, mg	1.4	0.2
L-Alanine	3.1	0.45	Riboflavin, mg	2	0.3
L-Arginine	2.7	0.39	Vitamin B <sub>6</sub> , mg	1.5	0.2
L-Aspartic Acid	7.6	1.10	Vitamin B <sub>12</sub> , mcg	3	0.4
L-Cystine	3.4	0.49	Niacin, mg	24	3
L-Glutamic Acid	16.0	2.32	Folic Acid, mcg	400	58
Glycine	1.8	0.26	Pantothenic Acid, mg	11	2
L-Histidine	1.8	0.26	Biotin, mcg	300	43
L-Isoleucine	4.5	0.65	Vitamin C, mg	80	12
L-Leucine	7.6	1.10	Choline, mg	260	38
L-Lysine	5.4	0.78	Inositol, mg	300	43
L-Methionine	None	None	<b>Minerals</b>		
L-Phenylalanine	3.2	0.46	Calcium, mg	1310	190
L-Proline	7.1	1.03	Phosphorus, mg	1010	146
L-Serine	4.0	0.58	Magnesium, mg	156	23
L-Threonine	3.6	0.52	Iron, mg	15	2.2
L-Tryptophan	1.4	0.20	Zinc, mg	8	1.1
L-Tyrosine	3.9	0.57	Manganese, mg	0.7	0.1
L-Valine	5.4	0.78	Copper, mcg	2000	290
			Iodine, mcg	120	17
			Molybdenum, mcg	32	5
			Sodium, mg	640	93
			Potassium, mg	1330	193
			Chloride, mg	990	143


### Ingredients:

L-Amino Acids (L-Lysine-L-Glutamate, L-Glutamic Acid, L-Leucine, L-Proline, L-Aspartic Acid, L-Valine, L-Isoleucine, L-Serine, L-Tyrosine, L-Threonine, L-Cystine, L-Phenylalanine, L-Alanine, L-Arginine, Magnesium-L-Aspartate, L-Histidine, Glycine, L-Tryptophan), Sugar, Potassium Phosphate, Calcium Phosphate, Calcium Carbonate, Salt, Choline Bitartrate, M-Inositol, Ascorbic Acid, Ferrous Sulfate, Vanillin, Niacinamide, Vitamin E Acetate, Zinc Sulfate, Calcium-D-Pantothenate, Copper Acetate, Pyridoxine Hydrochloride, Thiamine Hydrochloride, Riboflavin, Manganese Sulfate, Vitamin A Acetate, Biotin, Folic Acid, Potassium Iodide, Vitamin K<sub>1</sub>, Ammonium Heptamolybdate, Vitamin D<sub>3</sub>, Vitamin B<sub>12</sub>.



## Methionaid

A methionine-free powdered medical food for the dietary management of vitamin B<sub>6</sub> non-responsive homocystinuria or hypermethioninemia in individuals over 1 year of age.

 This formulation is available in the US and Canada.

### Main Features:

- Methionine-free
- Contains a mixture of the other essential and non-essential amino acids, carbohydrate, and select vitamins, minerals and trace elements
- Unflavored powder
- Methionaid provides 60 g of protein equivalent per 100 g of powder
- Does not contain fat thereby allowing for greater flexibility in modifying energy intake

### Indications:

- Vitamin B<sub>6</sub> non-responsive homocystinuria
- Hypermethioninemia

*For general guidance on administration, please follow instructions for Maxamaid or Maxamum brands on page 131.*

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
10242	49735-0102-42	TBD	10 x 200 g (7 oz)	500

**WIC<sup>+</sup> eligible in all States.**

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 10 g Protein Equivalent		Vitamins	Per 10 g Protein Equivalent	
	Per 100 g	Per 10 g Protein Equivalent		Per 100 g	Per 10 g Protein Equivalent
Calories	250	42	Thiamine, mg	2	0.3
Protein Equivalent, g	60	10	Riboflavin, mg	2.5	0.4
Fat, g	0	0	Vitamin B <sub>6</sub> , mg	2.0	0.3
Carbohydrate, g	3	0.5	Vitamin B <sub>12</sub> , mcg	20	3.3
<b>Amino Acids, g</b>			Niacin, mg	25	4.2
L-Alanine	5.6	0.93	Folic Acid, mcg	400	67
L-Arginine	4.4	0.73	Pantothenic Acid, mcg	20	3.3
L-Aspartic Acid	9.5	1.58	Biotin, mcg	600	100
L-Cystine	3.7	0.62	<b>Minerals</b>		
L-Glutamic Acid	11	1.83	Calcium, mg	2500	417
Glycine	4.3	0.72	Phosphorus, mg	1500	250
L-Histidine	2.8	0.47	Magnesium, mg	300	50
L-Isoleucine	2.4	0.40	Iron, mg	25	4.2
L-Leucine	3.1	0.52	Zinc, mg	15	2.5
L-Lysine	6.0	1.00	Manganese, mg	3.5	0.58
L-Methionine	None	None	Copper, mcg	2500	417
L-Phenylalanine	4.3	0.72	Iodine, mcg	150	25
L-Proline	1.6	0.27	Sodium, mg (mEq)	1400 (60.9)	233 (10.2)
L-Serine	1.7	0.28	Potassium, mg (mEq)	2600 (66.7)	433 (11.1)
L-Threonine	3.2	0.53	Chloride, mg (mEq)	2800 (80)	467 (13.3)
L-Tryptophan	0.9	0.15			
L-Tyrosine	4.3	0.72			
L-Valine	3.2	0.53			


### Ingredients:

L-Lysine L-Glutamate, L-Aspartic Acid, Tripotassium Citrate, L-Alanine, Calcium Phosphate Dibasic, L-Glutamic Acid, L-Arginine, Glycine, L-Phenylalanine, L-Tyrosine, Sodium Chloride, L-Cystine, Calcium Phosphate Tribasic, Hydrolyzed Cornstarch, L-Leucine, L-Valine, L-Threonine, L-Histidine, L-Isoleucine, Magnesium Acetate, L-Serine, L-Proline, L-Tryptophan, Potassium Chloride, Calcium Chloride, Ferrous Sulfate, Zinc Sulfate, Niacinamide, Calcium-D-Pantothenate, Manganese Sulfate, Cupric Sulfate, Pyridoxine Hydrochloride, Riboflavin, Thiamin Hydrochloride, Biotin, Folic Acid, Potassium Iodide, Cyanocobalamin.



## XMTVI Analog

A methionine-, threonine-, valine-free and isoleucine-low powdered infant formula for the dietary management of vitamin B<sub>12</sub> non-responsive methylmalonic acidemia or propionic acidemia.

 This formulation is available in the US and Canada.

### Main Features:

- Methionine-, threonine-, valine-free and isoleucine-low
- Unflavored powder
- Contains a balanced mixture of all other essential and non-essential amino acids, carbohydrate, fat, vitamins, minerals and trace elements (including iron, selenium and chromium)
- XMTVI Analog provides 13 g of protein equivalent per 100 g of powder
- Osmolality (at 15% w/v): 377 mOsm/kg

### Indications:

- Vitamin B<sub>12</sub> non-responsive methylmalonic acidemia
- Propionic acidemia

*For details on administration and household measurements, please see pages 126-137.*

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
118303	49735-0183-03	B4162	6 x 400 g (14 oz)	1900

**WIC<sup>+</sup> eligible in all States.**

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 10 g Protein Equivalent		Vitamins	Per 10 g Protein Equivalent	
	Per 100 g	Protein Equivalent		Per 100 g	Protein Equivalent
Calories	475	365	Vitamin A, IU (mcg R.E.)	1760 (528)	1359 (406)
Protein Equivalent, g	13	10	Vitamin D, IU (mcg)	340 (8.5)	262 (6.5)
Fat, g	20.9	16	Vitamin E, IU (mg α.T.E.)	4.9 (3.3)	3.8 (2.5)
Saturated, g	6.8	5.2	Vitamin K, mcg	21	16
Monounsaturated, g	9.5	7.3	Thiamine, mcg	500	385
Polyunsaturated, g	3.6	2.8	Riboflavin, mcg	600	462
Linoleic Acid, mg	3025	2330	Vitamin B <sub>6</sub> , mcg	520	400
Carbohydrate, g	59	45	Vitamin B <sub>12</sub> , mcg	1.25	0.96
<b>Amino Acids, g</b>			Niacin, mcg	4500	3462
L-Alanine	1.48	1.14	Folic Acid, mcg	38	29
L-Arginine	1.33	1.02	Pantothenic Acid, mcg	2600	2000
L-Aspartic Acid	1.17	0.90	Biotin, mcg	26	20
L-Cystine	0.49	0.38	Vitamin C, mg	40	31
L-Glutamic Acid	1.47	1.13	Choline, mg	50	38
Glycine	0.59	0.45	Inositol, mg	100	77
L-Histidine	0.9	0.69	<b>Minerals</b>		
L-Isoleucine	Trace	Trace	Calcium, mg	600	462
L-Leucine	2.00	1.54	Phosphorus, mg	500	385
L-Lysine	1.36	1.05	Magnesium, mg	40	31
L-Methionine	None	None	Iron, mg	10	8
L-Phenylalanine	0.88	0.68	Zinc, mg	8	6
L-Proline	0.59	0.45	Manganese, mcg	600	462
L-Serine	0.83	0.64	Copper, mcg	450	346
L-Threonine	None	None	Iodine, mcg	47	36
L-Tryptophan	0.39	0.30	Molybdenum, mcg	15	12
L-Tyrosine	0.88	0.68	Chromium, mcg	15	12
L-Valine	None	None	Selenium, mcg	15	12
L-Carnitine	0.01	0.01	Sodium, mg (mEq)	120 (5.2)	92 (4.0)
Taurine	0.02	0.02	Potassium, mg (mEq)	420 (10.8)	323 (8.3)
L-Glutamine	0.1	0.08	Chloride, mg (mEq)	290 (8.2)	223 (6.3)

### Ingredients:

Corn Syrup Solids, High Oleic Safflower Oil, Refined Vegetable Oil (Coconut, Soy), L-Lysine L-Glutamate, L-Leucine, Calcium Phosphate Dibasic, L-Alanine, L-Arginine, L-Aspartic Acid, Galactose, L-Histidine, L-Phenylalanine, L-Tyrosine, Tripotassium Citrate, L-Serine, Calcium Phosphate Monobasic, Glycine, L-Proline, Mono and Diglycerides, L-Cystine, L-Tryptophan, Sodium Chloride, Magnesium Acetate, Potassium Chloride, Diacetyl Tartaric Acid Esters of Monoglycerides, Tricalcium Citrate, L-Glutamine, Choline Bitartrate, M-Inositol, L-Ascorbic Acid, L-Glutamic Acid, Soy Lecithin, Calcium Phosphate Tribasic, Ferrous Sulfate, Zinc Sulfate, Taurine, L-Carnitine, Nicotinamide, DL-Alpha Tocopheryl Acetate, Calcium Pantothenate, Manganese Sulfate, Cupric Sulfate, Vitamin A Acetate, Pyridoxine Hydrochloride, Riboflavin, Thiamine Chloride Hydrochloride, Chromium Sulfate, Potassium Iodide, Folic Acid, Sodium Molybdate, Phylloquinone, Biotin, Sodium Hydrogen Selenite, Vitamin D<sub>3</sub>, Cyanocobalamin.



## XMTVI Maxamaid

A methionine-, threonine-, valine-free and isoleucine-low powdered medical food for the dietary management of vitamin B<sub>12</sub> non-responsive methylmalonic acidemia or propionic acidemia in toddlers and young children.

This formulation is available in the US and Canada.

### Main Features:

- Methionine-, threonine-, valine-free and isoleucine-low
- Contains a balanced mixture of all other essential and non-essential amino acids, carbohydrate, vitamins, minerals and trace elements
- Age-appropriate DRI formulation
- XMTVI Maxamaid provides 25 g of protein equivalent per 100 g of powder
- Available in orange flavor
- Does not contain fat thereby allowing greater flexibility in modifying energy intake

### Indications:

- Vitamin B<sub>12</sub> non-responsive methylmalonic acidemia
- Propionic acidemia

*For details on administration and household measurements, please see pages 126-137.*

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
117785	49735-0177-85	B4162	6 x 454 g (1 lb)	1471

**WIC<sup>+</sup> eligible in all States.**

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 10 g		Vitamins	Per 10 g	
	Per 100 g	Protein Equivalent		Per 100 g	Protein Equivalent
Calories	324	130	Vitamin A, IU (mcg R.E.)	1665 (500)	666 (200)
Protein Equivalent, g	25	10	Vitamin D, IU (mcg)	480 (12)	192 (4.8)
Fat, g	<0.1	0.04	Vitamin E, IU (mg α.T.E.)	14.3 (9.6)	5.7 (3.8)
Carbohydrate, g	56	22	Vitamin K, mcg	48	19
<b>Amino Acids, g</b>			Thiamine, mg	0.8	0.3
L-Alanine	2.89	1.16	Riboflavin, mg	0.8	0.3
L-Arginine	2.59	1.04	Vitamin B <sub>6</sub> , mg	0.8	0.3
L-Aspartic Acid	2.3	0.92	Vitamin B <sub>12</sub> , mcg	2	0.8
L-Cystine	0.95	0.38	Niacin, mg	5	2
Glycine	1.16	0.46	Folic Acid, mcg	240	96
L-Histidine	1.75	0.70	Pantothenic Acid, mg	3.2	1.3
L-Isoleucine	<0.07	Trace	Biotin, mcg	18	7.2
L-Leucine	3.9	1.56	Vitamin C, mg	62.5	25
L-Lysine	2.65	1.06	Choline, mg	250	100
L-Methionine	None	None	Inositol, mg	56	22
L-Phenylalanine	1.72	0.69	<b>Minerals</b>		
L-Proline	1.16	0.46	Calcium, mg	810	324
L-Serine	1.62	0.65	Phosphorus, mg	810	324
L-Threonine	None	None	Magnesium, mg	128	51
L-Tryptophan	0.76	0.30	Iron, mg	14	5.6
L-Tyrosine	1.72	0.69	Zinc, mg	11	4.4
L-Valine	None	None	Manganese, mg	1.9	0.8
L-Carnitine	0.02	0.01	Copper, mcg	1000	400
Taurine	0.14	0.06	Iodine, mcg	144	58
L-Glutamine	1.5	0.60	Molybdenum, mcg	33	13
			Chromium, mcg	21.5	8.6
			Selenium, mcg	40	16
			Sodium, mg (mEq)	580 (25.2)	232 (10)
			Potassium, mg (mEq)	840 (21.5)	336 (8.6)
			Chloride, mg (mEq)	450 (12.9)	180 (5.2)


### Ingredients:

Sugar, Corn Syrup Solids, L-Arginine, L-Aspartate, L-Leucine, L-Lysine Acetate, Calcium Phosphate Dibasic, Citric Acid, L-Alanine, Tripotassium Citrate, Artificial Flavors, L-Histidine, L-Glutamine, L-Phenylalanine, L-Tyrosine, L-Serine, Glycine, L-Proline, Maltodextrin, Disodium Hydrogen Phosphate, L-Cystine, Sodium Chloride, L-Tryptophan, Choline Bitartrate, Magnesium Acetate, Magnesium L-Aspartate, Taurine, L-Ascorbic Acid, Tricalcium Phosphate, M-Inositol, Ferrous Sulfate, Zinc Sulfate, L-Carnitine, DL-Alpha Tocopheryl Acetate, Manganese Sulfate, Niacinamide, Calcium D-Pantothenate, Cupric Sulfate, Thiamine Chloride Hydrochloride, Pyridoxine Hydrochloride, Riboflavin, Vitamin A Acetate, Artificial Colors (Beta-Carotene, Beet Red), Folic Acid, Potassium Iodide, Chromium Chloride, Sodium Selenite, Sodium Molybdate, Phylloquinone, D-Biotin, Vitamin D<sub>3</sub>, Cyanocobalamin.



## XMTVI Maxamum

A methionine-, threonine-, valine-free and isoleucine-low medical food for the dietary management of vitamin B<sub>12</sub> non-responsive methylmalonic acidemia or propionic acidemia in older children and adults, including pregnant women and women of child-bearing age.

 This formulation is available in the US and Canada.

### Main Features:

- Methionine-, threonine-, valine-free and isoleucine-low
- Contains a balanced mixture of all other essential and non-essential amino acids, carbohydrate, vitamins, minerals and trace elements
- Age-appropriate DRI formulation
- XMTVI Maxamum provides 40 g of protein equivalent per 100 g of powder
- Available in orange flavor
- Does not contain fat thereby allowing greater flexibility in modifying energy intake

### Indications:

- Vitamin B<sub>12</sub> non-responsive methylmalonic acidemia
- Propionic acidemia

*For details on administration and household measurements, please see pages 126-137.*

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
117779	49735-0177-79	B4162 or B4157	6 x 454 g (1 lb)	1385

**WIC<sup>+</sup> eligible in all States.** For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 10 g		Vitamins	Per 10 g	
	Per 100 g	Protein Equivalent		Per 100 g	Protein Equivalent
Calories	305	76	Vitamin A, IU (mcg R.E.)	2228 (669)	557 (167)
Protein Equivalent, g	40	10	Vitamin D, IU (mcg)	332 (8.3)	83 (2.1)
Fat, g	<1	<0.25	Vitamin E, IU (mg α.T.E.)	18.3 (12.3)	4.6 (3.1)
Carbohydrate, g	34	8.5	Vitamin K, mcg	82	21
<b>Amino Acids, g</b>			Thiamine, mg	0.91	0.23
L-Alanine	4.6	1.15	Riboflavin, mg	0.97	0.24
L-Arginine	4.1	1.03	Vitamin B <sub>6</sub> , mg	1.6	0.4
L-Aspartic Acid	3.6	0.90	Vitamin B <sub>12</sub> , mcg	3.1	0.8
L-Cystine	1.5	0.38	Niacin, mg	5.7	1.4
L-Glutamic Acid	4.5	1.13	Folic Acid, mcg	491	123
Glycine	1.8	0.45	Pantothenic Acid, mg	4.9	1.2
L-Histidine	2.8	0.70	Biotin, mcg	24.5	6.1
L-Isoleucine	<0.14	Trace	Vitamin C, mg	62	16
L-Leucine	6.2	1.55	Choline, mg	430	108
L-Lysine	4.2	1.05	Inositol, mg	80	20
L-Methionine	None	None	<b>Minerals</b>		
L-Phenylalanine	2.7	0.68	Calcium, mg	1183	296
L-Proline	1.9	0.48	Phosphorus, mg	1137	284
L-Serine	2.6	0.65	Magnesium, mg	306	77
L-Threonine	None	None	Iron, mg	14.7	3.7
L-Tryptophan	1.2	0.30	Zinc, mg	9	2
L-Tyrosine	2.7	0.68	Manganese, mg	1.8	0.5
L-Valine	None	None	Copper, mcg	820	205
L-Carnitine	0.039	0.01	Iodine, mcg	131	33
Taurine	0.14	0.04	Molybdenum, mcg	37	9
L-Glutamine	0.32	0.08	Chromium, mcg	26	7
			Selenium, mcg	58	15
			Sodium, mg (mEq)	560 (24.3)	140 (6.1)
			Potassium, mg (mEq)	700 (17.9)	175 (4.5)
			Chloride, mg (mEq)	560 (16)	140 (4)

### Ingredients:

Sugar, L-Lysine L-Glutamate, L-Leucine, Corn Syrup Solids, L-Alanine, Calcium Phosphate Dibasic, L-Arginine, L-Aspartic Acid, L-Histidine, L-Phenylalanine, L-Tyrosine, L-Serine, Artificial Flavor, Citric Acid, Magnesium Acetate, Glycine, L-Proline, L-Cystine, L-Tryptophan, Tripotassium Citrate, Choline Bitartrate, Sodium Chloride, Soy Lecithin, Disodium Hydrogen Phosphate, Dipotassium Hydrogen Phosphate, L-Glutamine, Tricalcium Phosphate, L-Glutamic Acid, Taurine, L-Ascorbic Acid, M-Inositol, Ferrous Sulfate, L-Carnitine, Zinc Sulfate, DL-Alpha Tocopheryl Acetate, Niacinamide, Manganese Sulfate, Calcium D-Pantothenate, Cupric Sulfate, Pyridoxine Hydrochloride, Sodium Selenite, Thiamine Chloride Hydrochloride, Riboflavin, Vitamin A Acetate, Folic Acid, Artificial Colors (Beta Carotene, Beet Red), Potassium Iodide, Chromium Chloride, Sodium Molybdate, Phylloquinone, D-Biotin, Vitamin D<sub>3</sub>, Cyanocobalamin.





## Milupa OS 2

A powdered medical food containing a mixture of pure L-amino acids free from isoleucine, methionine, threonine and valine, and enriched with vitamins, minerals and trace elements. For the dietary management of propionic and methylmalonic acidemia in children and adults, including pregnant women and women of child-bearing age.



*This formulation is only available in the US.*

### Main Features:

- Isoleucine, methionine, threonine and valine-free
- Concentrated, unflavored powder
- Enriched with vitamins, minerals and trace elements
- Osmolality (at a 1 to 9 dilution): 720 mOsm/kg

### Indications:

- Propionic acidemia
- Methylmalonic acidemia (vitamin B<sub>12</sub> non-responsive)

*For details on administration and household measurements, please see pages 126-137.*

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
659349	81361-0934-90	B4155	2 x 500 g (17.6 oz)	1500

**WIC<sup>+</sup> eligible in all States.**

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 10 g Protein Equivalent		Vitamins	Per 10 g Protein Equivalent	
	Per 100 g	Per 10 g Protein Equivalent		Per 100 g	Per 10 g Protein Equivalent
Calories	300	54	Vitamin A, IU (mcg R.E.)	5200 (1562)	929 (279)
Protein Equivalent, g	56.2	10	Vitamin D, IU (mcg)	1310 (33)	234 (5.9)
Fat, g	None	None	Vitamin E, IU (mg α T.E.)	18 (12)	3.2 (2.1)
Carbohydrate, g	18.9	3.4	Vitamin K, mcg	167	30
<b>Amino Acids, g</b>			Thiamine, mg	1.4	0.3
L-Alanine	3.1	0.55	Riboflavin, mg	2.0	0.4
L-Arginine	2.7	0.5	Vitamin B <sub>6</sub> , mg	1.5	0.3
L-Aspartic Acid	7.6	1.4	Vitamin B <sub>12</sub> , mcg	3	0.5
L-Cystine	1.8	0.32	Niacin, mg	24	4
L-Glutamic Acid	16.0	2.9	Folic Acid, mcg	400	71
Glycine	1.8	0.32	Pantothenic Acid, mg	11	2
L-Histidine	1.8	0.32	Biotin, mcg	300	54
L-Isoleucine	None	None	Vitamin C, mg	80	14
L-Leucine	7.6	1.36	Choline, mg	260	46
L-Lysine	5.4	0.96	Inositol, mg	300	54
L-Methionine	None	None	<b>Minerals</b>		
L-Phenylalanine	3.2	0.57	Calcium, mg	1310	234
L-Proline	7.1	1.27	Phosphorus, mg	1010	180
L-Serine	4.0	0.7	Magnesium, mg	156	28
L-Threonine	None	None	Iron, mg	15	2.7
L-Tryptophan	1.4	0.3	Zinc, mg	7.8	1.4
L-Tyrosine	3.9	0.70	Manganese, mg	0.7	0.1
L-Valine	None	None	Copper, mcg	2000	357
			Iodine, mcg	120	21
			Molybdenum, mcg	32	6
			Sodium, mg	640	114
			Potassium, mg	1330	238
			Chloride, mg	990	177


### Ingredients:

L-Amino Acids (L-Lysine-L-Glutamate, L-Glutamic Acid, L-Leucine, L-Proline, L-Aspartic Acid, L-Serine, L-Tyrosine, L-Phenylalanine, L-Alanine, L-Arginine, Magnesium-L-Aspartate, L-Histidine, L-Cystine, Glycine, L-Tryptophan), Sugar, Potassium Phosphate, Calcium Phosphate, Calcium Carbonate, Salt, Choline Bitartrate, M-Inositol, Ascorbic Acid, Ferrous Sulfate, Vanillin, Niacinamide, Vitamin E Acetate, Zinc Sulfate, Calcium-D-Pantothenate, Copper Acetate, Pyridoxine Hydrochloride, Thiamine Hydrochloride, Riboflavin, Manganese Sulfate, Vitamin A Acetate, Biotin, Folic Acid, Potassium Iodide, Vitamin K<sub>1</sub>, Ammonium Heptamolybdate, Vitamin D<sub>3</sub>, Vitamin B<sub>12</sub>.



## XPhe, XTyr Analog

A phenylalanine- and tyrosine-free powdered infant formula for the dietary management of tyrosinemia when plasma methionine level is normal.

 This formulation is available in the US and Canada.

### Main Features:

- Phenylalanine- and tyrosine-free
- Unflavored powder
- Contains a balanced mixture of all other essential and non-essential amino acids, carbohydrate, fat, vitamins, minerals and trace elements (including iron, selenium and chromium)
- XPhe, XTyr Analog provides 13 g of protein equivalent per 100 g of powder
- Osmolality (at 15% w/v): 377 mOsm/kg

### Indications:

- Tyrosinemia, when plasma methionine level is normal

*For details on administration and household measurements, please see pages 126-137.*

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
118301	49735-0183-01	B4162	6 x 400 g (14 oz)	1900

**WIC<sup>+</sup> eligible in all States.**

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 10 g Protein Equivalent		Vitamins	Per 10 g Protein Equivalent	
	Per 100 g	Per 10 g Protein Equivalent		Per 100 g	Per 10 g Protein Equivalent
Calories	475	365	Vitamin A, IU (mcg R.E.)	1760 (528)	1361 (406)
Protein Equivalent, g	13	10	Vitamin D, IU (mcg)	340 (8.5)	262 (6.5)
Fat, g	20.9	16	Vitamin E, IU (mg α.T.E.)	4.9 (3.3)	3.8 (2.5)
Saturated, g	6.8	5.2	Vitamin K, mcg	21	16
Monounsaturated, g	9.5	7.3	Thiamine, mcg	500	385
Polyunsaturated, g	3.6	2.8	Riboflavin, mcg	600	462
Linoleic Acid, mg	3025	2330	Vitamin B <sub>6</sub> , mcg	520	400
Carbohydrate, g	59	45	Vitamin B <sub>12</sub> , mcg	1.25	0.96
<b>Amino Acids, g</b>			Niacin, mcg	4500	3462
L-Alanine	0.63	0.48	Folic Acid, mcg	38	29
L-Arginine	1.13	0.87	Pantothenic Acid, mcg	2600	2000
L-Aspartic Acid	0.93	0.72	Biotin, mcg	26	20
L-Cystine	0.42	0.32	Vitamin C, mg	40	31
L-Glutamic Acid	1.26	0.97	Choline, mg	50	38
Glycine	0.96	0.74	Inositol, mg	100	77
L-Histidine	0.65	0.50	<b>Minerals</b>		
L-Isoleucine	1.00	0.77	Calcium, mg	600	462
L-Leucine	1.72	1.32	Phosphorus, mg	500	385
L-Lysine	1.17	0.90	Magnesium, mg	40	31
L-Methionine	0.27	0.21	Iron, mg	10	8
L-Phenylalanine	None	None	Zinc, mg	8	6
L-Proline	1.21	0.93	Manganese, mcg	600	462
L-Serine	0.74	0.57	Copper, mcg	450	346
L-Threonine	0.84	0.65	Iodine, mcg	47	36
L-Tryptophan	0.34	0.26	Molybdenum, mcg	15	12
L-Tyrosine	None	None	Chromium, mcg	15	12
L-Valine	1.1	0.85	Selenium, mcg	15	12
L-Carnitine	0.01	0.01	Sodium, mg (mEq)	120 (5.2)	92 (4.0)
Taurine	0.02	0.02	Potassium, mg (mEq)	420 (10.8)	323 (8.3)
L-Glutamine	0.1	0.08	Chloride, mg (mEq)	290 (8.2)	223 (6.3)


### Ingredients:

Corn Syrup Solids, High Oleic Safflower Oil, Refined Vegetable Oil (Coconut, Soy), L-Lysine L-Glutamate, Calcium Phosphate Dibasic, L-Leucine, L-Proline, L-Arginine, L-Valine, Glycine, L-Isoleucine, L-Aspartic Acid, Galactose, L-Threonine, Tripotassium Citrate, L-Serine, Calcium Phosphate Monobasic, L-Alanine, L-Histidine, Mono and Diglycerides, L-Cystine, L-Tryptophan, Sodium Chloride, L-Methionine, Magnesium Acetate, Potassium Chloride, Diacetyl Tartaric Acid Esters of Monoglycerides, Tricalcium Citrate, L-Glutamine, Choline Bitartrate, M-Inositol, L-Ascorbic Acid, Soy Lecithin, L-Glutamic Acid, Calcium Phosphate Tribasic, Ferrous Sulfate, Zinc Sulfate, Taurine, L-Carnitine, Nicotinamide, DL-Alpha Tocopheryl Acetate, Calcium Pantothenate, Manganese Sulfate, Cupric Sulfate, Vitamin A Acetate, Pyridoxine Hydrochloride, Riboflavin, Thiamine Chloride Hydrochloride, Chromium Sulfate, Potassium Iodide, Folic Acid, Sodium Molybdate, Phylloquinone, Biotin, Sodium Hydrogen Selenite, Vitamin D<sub>3</sub>, Cyanocobalamin.



## XPhe, XTyr Maxamaid

A phenylalanine- and tyrosine-free powdered medical food for the dietary management of tyrosinemia in toddlers and young children.

 This formulation is available in the US and Canada.

### Main Features:

- Phenylalanine- and tyrosine-free
- Contains a balanced mixture of all other essential and non-essential amino acids, carbohydrate, vitamins, minerals and trace elements
- Age-appropriate DRI formulation
- XPhe, XTyr Maxamaid provides 25 g of protein equivalent per 100 g of powder
- Available in orange flavor
- Does not contain fat thereby allowing greater flexibility in modifying energy intake

### Indications:

- Tyrosinemia, when plasma methionine level is normal

*For details on administration and household measurements, please see pages 126-137.*

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
117786	49735-0177-86	B4162	6 x 454 g (1 lb)	1471

**WIC+ eligible in all States.**

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 10 g		Vitamins	Per 10 g	
	Per 100 g	Protein Equivalent		Per 100 g	Protein Equivalent
Calories	324	130	Vitamin A, IU (mcg R.E.)	1665 (500)	666 (200)
Protein Equivalent, g	25	10	Vitamin D, IU (mcg)	480 (12)	192 (4.8)
Fat, g	<0.1	0.04	Vitamin E, IU (mg α.T.E.)	14.3 (9.6)	5.7 (3.8)
Carbohydrate, g	56	22	Vitamin K, mcg	48	19
<b>Amino Acids, g</b>			Thiamine, mg	0.8	0.3
L-Alanine	1.25	0.50	Riboflavin, mg	0.8	0.3
L-Arginine	2.21	0.88	Vitamin B <sub>6</sub> , mg	0.8	0.3
L-Aspartic Acid	1.84	0.74	Vitamin B <sub>12</sub> , mcg	2	0.8
L-Cystine	0.82	0.33	Niacin, mg	5	2
Glycine	1.96	0.78	Folic Acid, mcg	240	96
L-Histidine	1.26	0.50	Pantothenic Acid, mg	3.2	1.3
L-Isoleucine	1.96	0.78	Biotin, mcg	18	7.2
L-Leucine	3.36	1.34	Vitamin C, mg	62.5	25
L-Lysine	2.28	0.91	Choline, mg	250	100
L-Methionine	0.54	0.22	Inositol, mg	56	22
L-Phenylalanine	None	None	<b>Minerals</b>		
L-Proline	2.38	0.95	Calcium, mg	810	324
L-Serine	1.46	0.58	Phosphorus, mg	810	324
L-Threonine	1.64	0.66	Magnesium, mg	128	51
L-Tryptophan	0.66	0.26	Iron, mg	14	5.6
L-Tyrosine	None	None	Zinc, mg	11	4.4
L-Valine	2.14	0.86	Manganese, mg	1.9	0.8
L-Carnitine	0.02	0.01	Copper, mcg	1000	400
Taurine	0.14	0.06	Iodine, mcg	144	58
L-Glutamine	1.5	0.60	Molybdenum, mcg	33	13
			Chromium, mcg	21.5	8.6
			Selenium, mcg	40	16
			Sodium, mg (mEq)	580 (25.2)	232 (10)
			Potassium, mg (mEq)	840 (21.5)	336 (8.6)
			Chloride, mg (mEq)	450 (12.9)	180 (5.2)

### Ingredients:

Sugar, Corn Syrup Solids, L-Arginine, L-Aspartate, Calcium Phosphate Dibasic, L-Leucine, L-Lysine Acetate, Citric Acid, Tripotassium Citrate, L-Proline, L-Valine, Artificial Flavors, Glycine, L-Isoleucine, L-Threonine, L-Glutamine, L-Serine, L-Alanine, L-Histidine, Maltodextrin, Disodium Hydrogen Phosphate, L-Cystine, Sodium Chloride, Magnesium Acetate, N-Acetyl L-Methionine, Choline Bitartrate, L-Tryptophan, Taurine, Magnesium L-Aspartate, L-Ascorbic Acid, Tricalcium Phosphate, M-Inositol, Ferrous Sulfate, Zinc Sulfate, L-Carnitine, DL-Alpha Tocopheryl Acetate, Manganese Sulfate, Niacinamide, Calcium D-Pantothenate, Cupric Sulfate, Thiamine Chloride Hydrochloride, Pyridoxine Hydrochloride, Riboflavin, Vitamin A Acetate, Artificial Colors (Beta-Carotene, Beet Red), Folic Acid, Potassium Iodide, Chromium Chloride, Sodium Selenite, Sodium Molybdate, Phylloquinone, D-Biotin, Vitamin D<sub>3</sub>, Cyanocobalamin.



## XPHEN, TYR Maxamaid

An unflavored, phenylalanine- and tyrosine-free powdered product for the dietary management of tyrosinemia in toddlers and young children.

This formulation is only available in Canada.

### Main Features:

- Phenylalanine- and tyrosine- free
- Contains a balanced mixture of all other essential and non-essential amino acids, carbohydrate, vitamins, minerals and trace elements
- XPHEN, TYR Maxamaid provides 25 g of protein equivalent per 100 g of powder
- Does not contain fat thereby allowing greater flexibility in modifying energy intake
- Osmolality (mOsm/kg):  
Dilution  
1 to 5      690  
1 to 7      490

### Indications:

- Tyrosinemia type 2

*For details on administration and household measurements, please see pages 126-137.*

### Ordering Information:

Product Code	Product Packaging	Calories Per Can
116189	3 x 500 g (17.6 oz)	1545

### Nutrition Information:

Nutrients	Per 10 g		Vitamins	Per 10 g	
	Per 100 g	Protein Equivalent		Per 100 g	Protein Equivalent
Calories	309	124	Vitamin A, IU (mcg R.E.)	1748 (525)	699 (210)
Protein Equivalent, g	25	10	Vitamin D, IU (mcg)	480 (12)	192 (4.8)
Fat, g	<0.5	0.04	Vitamin E, IU (mg α.T.E.)	6.5 (4.35)	2.6 (1.7)
Carbohydrate, g	51	20	Vitamin K, mcg	30	12
<b>Amino Acids, g</b>			<b>Thiamine, mg</b>		
L-Alanine	1.32	0.53	Riboflavin, mg	1.08	0.4
L-Arginine	2.31	0.92	Vitamin B <sub>6</sub> , mg	1.2	0.5
L-Aspartic Acid	1.93	0.77	Vitamin B <sub>12</sub> , mcg	1.4	0.6
L-Cystine	0.86	0.34	Vitamin B <sub>12</sub> , mcg	3.9	1.56
L-Glutamic Acid	2.59	1.04	Niacin, mg	12	4.8
Glycine	2.06	0.82	Folic Acid, mcg	240	96
L-Histidine	1.32	0.53	Pantothenic Acid, mg	3.7	1.5
L-Isoleucine	2.06	0.82	Biotin, mcg	120	48
L-Leucine	3.53	1.41	Vitamin C, mg	135	54
L-Lysine	2.40	0.96	Choline, mg	110	44
L-Methionine	0.56	0.22	Inositol, mg	55.5	22
L-Phenylalanine	None	None	<b>Minerals</b>		
L-Proline	2.50	1.00	Calcium, mg	810	324
L-Serine	1.54	0.62	Phosphorus, mg	810	324
L-Threonine	1.73	0.69	Magnesium, mg	200	80
L-Tryptophan	0.69	0.28	Iron, mg	12	4.8
L-Tyrosine	None	None	Zinc, mg	13	5.2
L-Valine	2.25	0.90	Manganese, mg	1.6	0.6
L-Carnitine	0.02	0.01	Copper, mcg	1800	720
Taurine	0.1	0.04	Iodine, mcg	100	40
L-Glutamine	0.33	0.13	Molybdenum, mcg	100	40
			Chromium, mcg	40	16
			Selenium, mcg	40	16
			Sodium, mg (mEq)	580 (25.2)	232 (10)
			Potassium, mg (mEq)	840 (21.5)	336 (8.6)
			Chloride, mg (mEq)	450 (12.7)	180 (5.1)


### Ingredients:

Dried Glucose Syrup, L-Lysine L-Glutamate, L-Leucine, Calcium Phosphate Dibasic, L-Proline, Trisodium Citrate, L-Arginine, L-Valine, Glycine, L-Isoleucine, L-Aspartic Acid, L-Threonine, L-Serine, Magnesium Hydrogen Phosphate, L-Alanine, L-Histidine, Tripotassium Citrate, Potassium Chloride, L-Cystine, Soy Lecithine, L-Tryptophan, L-Methionine, Sugar, L-Glutamine, Choline Bitartrate, L-Glutamic Acid, Ascorbic Acid, Taurine, Tricalcium Phosphate, Ferrous Sulphate, M-Inositol, Zinc Sulphate, L-Carnitine, Nicotinamide, Copper Sulphate, Manganese Sulphate, DL-Alpha Tocopheryl Acetate, Calcium D-Pantothenate, Pyridoxine Hydrochloride, Thiamine Hydrochloride, Riboflavin, Vitamin A Acetate, Chromium Sulphate, Folic Acid, Sodium Molybdate, Potassium Iodide, D-Biotin, Sodium Hydrogen Selenite, Vitamin K<sub>1</sub>, Vitamin D<sub>3</sub>, Cyanocobalamin.



## XPHEN, TYR Maxamum

An unflavored phenylalanine- and tyrosine-free powdered product for the dietary management of tyrosinemia type 2 in older children and adults, including pregnant women and women of child-bearing age.

 This formulation is only available in Canada.

### Main Features:

- Phenylalanine- and tyrosine- free
- Contains a balanced mixture of all other essential and non-essential amino acids, carbohydrate, vitamins, minerals and trace elements
- XPHEN, TYR Maxamum provides 39 g of protein equivalent per 100 g of powder
- Does not contain fat thereby allowing greater flexibility in modifying energy intake
- Osmolality (mOsm/kg):  
Dilution  
1 to 5      1000  
1 to 7      690

### Indications:

- Tyrosinemia type 2

*For details on administration and household measurements, please see pages 126-137.*

### Ordering Information:

Product Code	Product Packaging	Calories Per Can
116196	3 x 500 g (17.6 oz)	1485

### Nutrition Information:

Nutrients	Per 10 g Protein Equivalent		Vitamins	Per 10 g Protein Equivalent	
	Per 100 g	Protein Equivalent		Per 100 g	Protein Equivalent
Calories	297	76	Vitamin A, IU (mcg R.E.)	2364 (710)	606 (182)
Protein Equivalent, g	39	10	Vitamin D, IU (mcg)	312 (7.8)	80 (2.0)
Fat, g	<0.5	<0.25	Vitamin E, IU (mg α.T.E.)	7.7 (5.2)	2.0 (1.3)
Carbohydrate, g	34	8.7	Vitamin K, mcg	70	18
<b>Amino Acids, g</b>			Thiamine, mg	1.4	0.36
L-Alanine	1.9	0.49	Riboflavin, mg	1.4	0.36
L-Arginine	3.5	0.90	Vitamin B <sub>6</sub> , mg	2.1	0.5
L-Aspartic Acid	3.3	0.85	Vitamin B <sub>12</sub> , mcg	3.6	0.9
L-Cystine	1.3	0.33	Niacin, mg	13.6	3.5
L-Glutamic Acid	5.3	1.36	Folic Acid, mcg	500	128
Glycine	3.3	0.85	Pantothenic Acid, mg	5	1.3
L-Histidine	2	0.51	Biotin, mcg	140	35.9
L-Isoleucine	3.1	0.79	Vitamin C, mg	90	23
L-Leucine	5.3	1.36	Choline, mg	321	82
L-Lysine	4	1.03	Inositol, mg	85.7	22
L-Methionine	0.85	0.22	<b>Minerals</b>		
L-Phenylalanine	None	None	Calcium, mg	670	172
L-Proline	3.7	0.95	Phosphorus, mg	670	172
L-Serine	2.3	0.59	Magnesium, mg	285	73
L-Threonine	2.6	0.67	Iron, mg	23.5	6.0
L-Tryptophan	1	0.26	Zinc, mg	13.6	3
L-Tyrosine	None	None	Manganese, mg	2.1	0.5
L-Valine	3.4	0.87	Copper, mcg	1400	359
L-Carnitine	0.02	0.01	Iodine, mcg	107	27
Taurine	0.15	0.04	Molybdenum, mcg	107	27
L-Glutamine	0.4	0.10	Chromium, mcg	50	13
			Selenium, mcg	50	13
			Sodium, mg (mEq)	560 (24.3)	144 (6.2)
			Potassium, mg (mEq)	700 (17.9)	179 (4.6)
			Chloride, mg (mEq)	560 (15.8)	144 (4.1)

### Ingredients:

Dried Glucose Syrup, L-Lysine L-Glutamate, L-Leucine, L-Proline, L-Arginine, Calcium Glycerophosphate, L-Valine, Glycine, Aspartic Acid, L-Isoleucine, L-Threonine, L-Serine, L-Histidine, Tripotassium Citrate, L-Alanine, L-Cystine, Magnesium Hydrogen Phosphate, L-Glutamic Acid, L-Tryptophan, Sodium Chloride, L-Methionine, Trisodium Citrate, Sugar, Choline Bitartrate, Soy Lecithin, Magnesium Acetate, L-Glutamine, Taurine, Tricalcium Phosphate, Ferrous Sulphate, Ascorbic Acid, M-Inositol, Zinc Sulphate, L-Carnitine, Nicotinamide, Manganese Sulphate, DL-Alpha Tocopheryl, Calcium D-Pantothenate, Copper Sulphate, Pyridoxine Hydrochloride, Thiamine Hydrochloride, Riboflavin, Vitamin A Acetate, Folic Acid, Chromium Sulphate, Sodium Molybdate, Potassium Iodide, D-Biotin, Sodium Hydrogen Selenite, Vitamin K<sub>1</sub>, Vitamin D<sub>3</sub>, Cyanocobalamin.



## TYR Lophlex LQ

A tyrosine- and phenylalanine-free, ready-to-drink medical food containing amino acids, carbohydrates, vitamins, minerals and DHA, based on mixed fruit juices (from concentrate) with natural flavor; for the dietary management of proven tyrosinemia in individuals 4 years and older, including pregnant women and women of child-bearing age.

This formulation is available in the US and Canada.

### Main Features:

- Tyrosine- and phenylalanine-free
- Low volume; low calorie
- Convenient ready-to-drink
- Based on fruit juices (from concentrate) with natural flavor - no artificial flavors
- Contains a balanced mixture of essential and non-essential amino acids, carbohydrates, vitamins, minerals and DHA
- Provides 20 g of protein equivalent in one pouch
- Available in mixed berry blast flavor
- Osmolality: 2460 mOsm/kg

### Indications:

- Tyrosinemia

For details on administration, please see page 134.

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Pouch
66750	49735-016750	B4157 or B4162	30 X 4.2 fl oz (125 mL)	120

**WIC+ eligible in all States.** For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per Pouch	Per 10 g	Vitamins	Per Pouch	Per 10 g
	(4.2 fl oz)	Protein Equivalent		(4.2 fl oz)	Protein Equivalent
Calories	120.0	60.0	Vitamin A, IU (mcg R.E.)	949 (285)	475 (143)
Protein Equivalent, g	20.0	10.0	Vitamin D, IU (mcg)	320 (8.0)	160 (4.0)
Fat, g	0.44	0.22	Vitamin E, IU (mg α.T.E.)	4.8 (3.2)	2.4 (1.6)
DHA, mg	150	75.0	Vitamin K, mcg	24.9	12.5
Carbohydrate, g	9.3	4.7	Thiamin, mg	0.54	0.27
Fiber, g	0.50	0.25	Riboflavin, mg	0.50	0.25
<b>Amino Acids, g</b>			Vitamin B6, mg	0.58	0.29
L-Alanine	1.13	0.57	Vitamin B12, mcg	1.8	0.90
L-Arginine	1.68	0.84	Niacin, mg	7.1	3.6
L-Aspartic Acid	1.63	0.82	Folic Acid, mcg	120	60.0
L-Cystine	0.83	0.42	Pantothenic Acid, mg	1.8	0.9
Glycine	1.63	0.82	Biotin, mcg	53.4	26.7
L-Histidine	0.95	0.48	Vitamin C, mg	17.8	8.9
L-Isoleucine	1.55	0.78	Choline, mg	153	76.5
L-Leucine	2.50	1.25	Inositol, mg	40.6	20.3
L-Lysine	1.75	0.88	<b>Minerals</b>		
L-Methionine	0.40	0.20	Calcium, mg	319	160
L-Phenylalanine	nil added	nil added	Phosphorus, mg	244	122
L-Proline	2.03	1.02	Magnesium, mg	96.3	48.2
L-Serine	1.30	0.65	Iron, mg	5.1	2.6
L-Threonine	1.25	0.63	Zinc, mg	3.8	1.9
L-Tryptophan	0.50	0.25	Manganese, mg	0.56	0.28
L-Tyrosine	nil added	nil added	Copper, mcg	563	282
L-Valine	1.65	0.83	Iodine, mcg	56.3	28.2
L-Carnitine	0.02	0.01	Molybdenum, mcg	25.0	12.5
Taurine	0.14	0.07	Chromium, mcg	10.8	5.4
			Selenium, mcg	26.8	13.4
			Sodium, mg (mmol)	<25.0 (<10)	<12.5 (<5)
			Potassium, mg (mmol)	90 (2.3)	45 (1.2)
			Chloride, mg (mmol)	<25.0 (<10)	<12.5 (<5)

### Ingredients:


Water, Apple Juice from Concentrate (34.1%), Grape Juice from Concentrate (6.9%), Blackcurrant Juice from Concentrate (2.5%), L-Leucine, L-Lysine Acetate, Citric Acid, L-Proline, L-Arginine, L-Valine, L-Aspartic Acid, Glycine, L-Isoleucine, L-Serine, L-Threonine, Corn Syrup Solids, Dicalcium Phosphate, L-Alanine, L-Histidine, L-Cystine, Elderberry Juice from Concentrate (0.6%), Maltodextrin, Magnesium Acetate, Sugar, N-Acetyl L-Methionine, L-Tryptophan, Choline Bitartrate, C. Cohnii Oil\*, Microcrystalline Cellulose, Natural Flavor, Taurine, Fruit Concentrate (Apple, Blackcurrant, Radish), L-Ascorbic Acid, Guar Gum, Sunflower Lecithin, Xanthan Gum, M-Inositol, Potassium Sorbate (preservative to delay spoilage), Artificial Sweetener: Sucralose, Ferrous Lactate, Artificial Sweetener: Acesulfame Potassium, L-Carnitine, Sodium Benzoate (preservative to delay spoilage), Zinc Sulfate, Niacinamide, DL-alpha Tocopheryl Acetate, Calcium D-Pantothenate, Manganese Sulfate, Cupric Sulfate, Thiamine Chloride Hydrochloride, Pyridoxine Hydrochloride, Vitamin A Palmitate, Riboflavin, Folic Acid, Potassium Iodide, Ascorbyl Palmitate, Mixed Tocopherols, Sodium Molybdate, D-Biotin, Sodium Selenite, Chromium Chloride, Phylloquinone, Vitamin D<sub>2</sub>, Cyanocobalamin.

\*A Source of Docosahexaenoic Acid (DHA).



## XMet, XCys Analog

A methionine- and cystine-free powdered infant formula for the dietary management of conditions requiring restriction of methionine and cystine (e.g. sulphite oxidase deficiency).

 This formulation is available in the US and Canada.

### Main Features:

- Methionine- and cystine-free
- Unflavored powder
- Contains a balanced mixture of all other essential and non-essential amino acids, carbohydrate, fat, vitamins, minerals and trace elements (including iron, selenium and chromium)
- XMet, XCys Analog provides 13 g of protein equivalent per 100 g of powder
- Osmolality (at 15% w/v): 353 mOsm/kg

### Indications:

- Sulphite oxidase deficiency
- Other conditions requiring restriction of methionine and cystine

*For details on administration and household measurements, please see pages 126-137.*

### Additional Information:


Please note that this product is available by special order only. For detailed information on XMet, XCys Analog, please contact our Nutrition Services Department.

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
11653 (Special Order)	49735-0116-53	B4162	2 x 400 g (14 oz)	1900

## XMet, XCys Maxamaid

A methionine- and cystine-free powdered medical food for the dietary management of conditions requiring restriction of methionine and cystine (e.g. sulphite oxidase deficiency) in individuals over 1 year of age.

 This formulation is available in the US and Canada.

### Main Features:

- Methionine- and cystine-free
- Contains a balanced mixture of all other essential and non-essential amino acids, carbohydrate, vitamins, minerals and trace elements
- XMet, XCys Maxamaid provides 25 g of protein equivalent per 100 g of powder
- Available as unflavored powder
- Does not contain fat thereby allowing greater flexibility in modifying energy intake
- Osmolality (mOsm/kg):

Dilution	
1 to 5	690
1 to 7	490

### Indications:

- Sulphite oxidase deficiency
- Other conditions requiring restriction of methionine and cystine

*For details on administration and household measurements, please see pages 126-137.*

### Additional Information:

Please note that this product is available by special order only. For detailed information on XMet, XCys Maxamaid, please contact our Nutrition Services Department.

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
116194 (Special Order)	49735-0161-94	B4162	3 x 500 g (17.6 oz)	1545



## UCD Anamix Junior

A powdered medical food containing essential amino acids (with increased levels of branched chain amino acids (BCAAs) and tryptophan), carbohydrates, fat, vitamins and minerals; for the dietary management of urea cycle disorders (UCD); hyperammonemia, hyperornithinemia, homocitrullinemia (HHH) syndrome; and gyrate atrophy in patients over the age of 1.

This formulation is available in the US and Canada.

### Main Features:

- Contains essential amino acids to help maintain a positive nitrogen balance in UCD
- Amino acid profile rich in BCAAs for efficient and optimal protein synthesis for children with UCD
- Sufficient non-protein calories to prevent protein being broken down for energy and toxic metabolites being produced
- Essential micronutrients such as calcium, vitamin D, iron and zinc supplied to compensate for low intake from natural food
- Available in unflavored and vanilla flavor
- Osmolality (at a 1 to 3.5 dilution): 1040 mOsm/kg
- Displacement: 0.70 mL/g

### Indications:

- Urea Cycle Disorders (UCD)
- Hyperammonemia, Hyperornithinemia, Homocitrullinemia (HHH) syndrome
- Gyrate atrophy

For details on administration and household measurements, please see pages 126-137.

Visit [NutriciaLearningCenter.com](http://NutriciaLearningCenter.com) for a practical guide for the use of UCD Anamix Junior.

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
59292 - Unflavored	49735-019292	B4157 or B4162	6 X 400 g (14 oz)	1540
59293 - Vanilla	49735-019293	B4157 or B4162	6 X 400 g (14 oz)	1540

WIC+ eligible in all States.

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 10 g Protein Equivalent		Vitamins	Per 10 g Protein Equivalent	
	Per 100 g	Per 10 g Protein Equivalent		Per 100 g	Per 10 g Protein Equivalent
Calories	385	321	Vitamin A, IU (mcg R.E.)	3197 (960)	2664 (800)
Protein Equivalent, g	12.0	10.0	Vitamin D, IU (mcg)	920 (23.0)	767 (19.2)
Fat, g	17.0	14.2	Vitamin E, IU (mg $\alpha$ T.E.)	27.5 (18.5)	22.9 (15.4)
Carbohydrate, g	46.0	38.3	Vitamin K, mcg	92.2	76.8
<b>Amino Acids, g</b>			Thiamin, mg	1.9	1.6
L-Alanine	None	None	Riboflavin, mg	1.5	1.3
L-Arginine	None	None	Vitamin B <sub>6</sub> , mg	1.5	1.3
L-Asparagine	None	None	Vitamin B <sub>12</sub> , mcg	3.8	3.2
L-Aspartic Acid	None	None	Niacin, mg	9.6	8.0
L-Citrulline	None	None	Folic Acid, mcg	461	384
L-Cystine	0.43	0.36	Pantothenic Acid, mg	6.1	5.1
L-Glutamic Acid	None	None	Biotin, mcg	34.6	28.8
L-Glutamine	None	None	Vitamin C, mg	120	100
Glycine	None	None	Choline, mg	480	400
L-Histidine	0.51	0.43	Inositol, mg	108	90
L-Isoleucine	2.26	1.88	<b>Minerals</b>		
L-Leucine	3.82	3.18	Calcium, mg	1555	1296
L-Lysine	1.92	1.60	Phosphorus, mg	1555	1296
L-Methionine	0.40	0.33	Magnesium, mg	246	205
L-Phenylalanine	0.67	0.56	Iron, mg	26.9	22.4
L-Proline	None	None	Zinc, mg	21.1	17.6
L-Serine	None	None	Manganese, mg	3.6	3.0
L-Threonine	1.59	1.33	Copper, mcg	1900	1583
L-Tryptophan	0.48	0.40	Iodine, mcg	276	230
L-Tyrosine	1.23	1.03	Molybdenum, mcg	63.4	52.8
L-Valine	2.29	1.91	Chromium, mcg	41.3	34.4
L-Carnitine	0.009	0.008	Selenium, mcg	76.8	64.0
Taurine	0.069	0.058	Sodium, mg (mmol)	1114 (48.4)	928 (40.3)
			Potassium, mg (mmol)	1613 (41.3)	1344 (34.4)
			Chloride, mg (mmol)	864 (24.3)	720 (20.3)

### Ingredients:

Unflavored: Corn Syrup Solids, Refined Vegetable Oils (High Oleic Safflower, Canola, Fractionated Coconut), Sugar, L-Leucine, Sodium Phosphate Dibasic, Tripotassium Citrate, Tricalcium Citrate, Tricalcium Phosphate, L-Lysine Hydrochloride, L-Valine, L-Isoleucine, Magnesium Hydrogen Phosphate, L-Threonine, Choline Bitartrate, L-Tyrosine, Potassium Chloride, Citric Acid Ester of Mono- And Diglycerides (An Emulsifier), L-Phenylalanine, L-Histidine, L-Tryptophan, L-Cystine, L-Methionine, L-Ascorbic Acid, M-Inositol, Ferrous Sulfate, Taurine, Zinc Sulfate, DL-alpha Tocopheryl Acetate, Manganese Sulfate, Niacinamide, L-Carnitine, Calcium-D-Pantothenate, Cupric Sulfate, Thiamine Chloride Hydrochloride, Pyridoxine Hydrochloride, Riboflavin, Vitamin A Acetate, Folic Acid, Potassium Iodide, Sodium Selenite, Chromium Chloride, Sodium Molybdate, Phylloquinone, D-Biotin, Vitamin D<sub>3</sub>, Cyanocobalamin.

Vanilla flavored version also contains: Artificial flavor.





## Milupa UCD 2

A powdered medical food containing a mixture of essential pure L-amino acids, enriched with vitamins, minerals and trace elements. For the dietary management of urea cycle disorders in children and adults, including pregnant women and women of child-bearing age.

This formulation is only available in the US.

### Main Features:

- Essential amino acids
- Concentrated, unflavored powder
- Enriched with vitamins, minerals and trace elements
- Osmolality (at a 1 to 9 dilution): 810 mOsm/kg

### Indications:

- Carbamylphosphate synthetase deficiency (CPS) (citrulline or arginine supplementation required)
- Ornithine transcarbamylase deficiency (OTC) (citrulline or arginine supplementation required)
- Citrullinemia or argininosuccinic acid synthetase deficiency (AS) (arginine supplementation required)
- Argininosuccinic acid lyase deficiency (AL) (arginine supplementation required)
- Arginase deficiency

For details on administration and household measurements, please see pages 126-137.

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
659361	81361-0936-10	B4155	2 x 500 g (17.6 oz)	1450

WIC<sup>+</sup> eligible in all States.

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 10 g Protein Equivalent		Vitamins	Per 10 g Protein Equivalent	
	Per 100 g	Per 10 g Protein Equivalent		Per 100 g	Per 10 g Protein Equivalent
Calories	290	43	Vitamin A, IU (mcg R.E.)	5200 (1560)	780 (233)
Protein Equivalent, g	67	10	Vitamin D, IU (mcg)	1310 (33)	200 (4.9)
Fat, g	None	None	Vitamin E, IU (mg α T.E.)	18 (12)	2.7 (1.8)
Carbohydrate, g	4.4	0.7	Vitamin K, mcg	167	25
<b>Amino Acids, g</b>			Thiamine, mg	1.4	0.2
L-Alanine	None	None	Riboflavin, mg	2	0.3
L-Arginine	None	None	Vitamin B <sub>6</sub> , mg	1.5	0.2
L-Aspartic Acid	None	None	Vitamin B <sub>12</sub> , mcg	3	0.5
L-Cystine	None	None	Niacin, mg	24	3.6
L-Glutamic Acid	None	None	Folic Acid, mcg	400	60
Glycine	None	None	Pantothenic Acid, mg	11	1.6
L-Histidine	3.6	0.54	Biotin, mcg	300	45
L-Isoleucine	8.9	1.33	Vitamin C, mg	80	12
L-Leucine	15.0	2.24	Choline, mg	260	39
L-Lysine	10.7	1.60	Inositol, mg	300	45
L-Methionine	7.1	1.06	<b>Minerals</b>		
L-Phenylalanine	14.1	2.10	Calcium, mg	1310	200
L-Proline	None	None	Phosphorus, mg	1010	151
L-Serine	None	None	Magnesium, mg	None	None
L-Threonine	7.1	1.06	Iron, mg	15	2.2
L-Tryptophan	2.8	0.42	Zinc, mg	7.8	1.2
L-Tyrosine	None	None	Manganese, mg	0.7	0.1
L-Valine	10.7	1.60	Copper, mcg	2000	300
			Iodine, mcg	120	18
			Molybdenum, mcg	32	5
			Sodium, mg	640	100
			Potassium, mg	1330	200
			Chloride, mg	990	148

### Ingredients:

L-Amino Acids (L-Lysine Acetate, L-Leucine, L-Phenylalanine, L-Valine, L-Isoleucine, L-Methionine, L-Threonine, L-Histidine, L-Tryptophan), Sugar, Potassium Phosphate, Calcium Phosphate, Calcium Carbonate, Salt, Choline Bitartrate, M-Inositol, Ascorbic Acid, Ferrous Sulfate, Vanillin, Niacinamide, Vitamin E Acetate, Zinc Sulfate, Calcium-D-Pantothenate, Copper Acetate, Pyridoxine Hydrochloride, Thiamine Hydrochloride, Riboflavin, Manganese, Sulfate, Vitamin A Acetate, Biotin, Folic Acid, Potassium Iodide, Vitamin K<sub>1</sub>, Ammonium Heptamolybdate, Vitamin D<sub>3</sub>, Vitamin B<sub>12</sub>.

## Household Measurements

Measure	g Product	g Protein Equivalent
<b>Periflex Infant</b>		
1 scoop	4.75	0.62
1 tsp	2	0.26
1 Tbsp	7	0.91
1/4 cup	30	3.9
1/3 cup	35	4.6
1/2 cup	57	7.4
1 cup	114	14.8
<b>Periflex Junior (Flavored &amp; Unflavored)</b>		
1 tsp	3.1	0.78
1 Tbsp	9.4	2.4
1/4 cup	37.8	9.5
1/3 cup	50.3	13
1/2 cup	75.5	19
1 cup	151	38
<b>Periflex Advance (Flavored &amp; Unflavored)</b>		
1 tsp	3.1	1.1
1 Tbsp	9.4	3.3
1/4 cup	37.5	13
1/3 cup	50	18
1/2 cup	75	26
1 cup	150	53

Household measures are based on standard US, dry household measures.\* All measures are level and unpacked. These values are approximations only and have been provided for convenience: results can vary significantly based on the individual, device, and method. Nutricia North America recommends using a gram scale for greatest accuracy. The scoops Nutricia provides are validated for use with Nutricia formulas, so are preferable to household measures.

\*US measures: 1 cup = 240 mL; ½ cup = 120 mL; ¼ cup = 60 mL; 1 Tbsp = 15 mL; 1 tsp = 5 mL; ½ tsp = 2.5 mL

Measure	g Product	g Protein Equivalent
<b>Analog Range</b>		
1 scoop	5	0.65
1 Tbsp	8	1.0
1/4 cup	30	3.9
1/2 cup	55	7.2
1 cup	115	15
<b>Maxamaid Range (Flavored &amp; Unflavored)</b>		
1 Tbsp	9	2.3
1/4 cup	35	8.8
1/2 cup	70	18
1 cup	145	36
<b>Maxamum Range (Flavored &amp; Unflavored)</b>		
1 Tbsp	9	3.6
1/4 cup	35	14
1/2 cup	70	28
1 cup	145	58
<b>Acerflex</b>		
1 Tbsp	8	1.6
1/4 cup	30	6.0
1/2 cup	65	13
1 cup	130	26
<b>UCD Anamix Junior Unflavored</b>		
1 scoop	5.0	0.60
1 tsp	3.0	0.36
1 Tbsp	9.0	1.1
1/4 cup	35.8	4.3
1/3 cup	47.7	5.7
1/2 cup	71.5	8.6
1 cup	143	17.2
<b>UCD Anamix Junior Vanilla</b>		
1 scoop	5.0	0.60
1 tsp	2.9	0.35
1 Tbsp	8.7	1.0
1/4 cup	34.8	4.2
1/3 cup	46.3	5.6
1/2 cup	69.5	8.3
1 cup	139	16.7

Measure	g Product	g Protein Equivalent
<b>Milupa PKU 2</b>		
1 Tbsp	9	6
1/4 Cup	35	24
1/3 Cup	50	34
1/2 Cup	80	54
1 Cup	160	107
<b>Milupa PKU 3</b>		
1 Tbsp	8.5	6
1/4 Cup	35	24
1/3 Cup	50	34
1/2 Cup	80	54
1 Cup	155	105
<b>Milupa HOM 2</b>		
1 Tbsp	9	6
1/4 Cup	37	24
1/3 Cup	50	35
1/2 Cup	82	55
1 Cup	161	110

Measure	g Product	g Protein Equivalent
<b>Milupa MSUD 2</b>		
1 Tbsp	10	5
1/4 Cup	40	22
1/3 Cup	50	27
1/2 Cup	85	46
1 Cup	175	95
<b>Milupa OS 2</b>		
1 Tbsp	9	5
1/4 Cup	40	22
1/3 Cup	50	28
1/2 Cup	80	45
1 Cup	160	90
<b>Milupa UCD 2</b>		
1 Tbsp	8	5
1/4 Cup	34	24
1/3 Cup	45	30
1/2 Cup	74	50
1 Cup	146	97

Household measures are based on standard US, dry household measures.\* All measures are level and unpacked. These values are approximations only and have been provided for convenience: results can vary significantly based on the individual, device, and method. Nutricia North America recommends using a gram scale for greatest accuracy. The scoops Nutricia provides are validated for use with Nutricia formulas, so are preferable to household measures.

\*US measures: 1 cup = 240 mL; ½ cup = 120 mL; ¼ cup = 60 mL; 1 Tbsp = 15 mL; 1 tsp = 5 mL; ½ tsp = 2.5 mL

## Periflex Infant

Infant formula containing iron, DHA & ARA, for the dietary management of phenylketonuria.

### Administration:

- Periflex Infant formula must be consumed in conjunction with a whole protein source (e.g. breast milk or standard infant formula) in quantities prescribed by a dietitian or physician to meet complete protein requirements and ensure normal growth.
- Formula dosage and dilution will vary depending on the age, body weight, medical condition and protein tolerance of the infant.

### Mixing Instructions:

- For standard dilution (20 kcal/fl oz), mix one unpacked level scoop (4.75 g) per fluid ounce of prepared formula. For accuracy, Periflex Infant should be weighed on a gram scale.
- Periflex Infant may be mixed with warm or cool sterile water.\* Do not boil formula or use a microwave to prepare or warm formula.

To make a 5 fluid ounce bottle:

- Add 5 level scoops of Periflex Infant to a clean, sterile\* container.
- Fill up to the 5 fluid ounce line with warm or cool sterile\* water.
- Shake for 15-20 seconds or until the powder dissolves. Add additional water if necessary to make final volume and shake again.

Desired Volume	Amount of Powder	Water Added	Approx. Protein Equiv.
8 fl oz	8 scoops (38 g)	7 fl oz (213 mL)	4.9 g
12 fl oz	12 scoops (57 g)	11 fl oz (320 mL)	7.4 g
24 fl oz	24 scoops (114 g)	21 fl oz (640 mL)	14.8 g

Freshly prepared formula is best. Refrigerate pre-mixed formula immediately and use within 24 hours of mixing. Shake immediately before use. Formula remaining in the bottle one hour after feeding should be discarded. Tube feeding hang time not to exceed 4 hours.

\* Boiling is the preferred method for sterilizing water, bottles, nipples and mixing utensils.

### Precautions:

- Do not boil formula. Do not use a microwave oven to prepare or warm formula.
- Must only be given under strict medical supervision to infants with a proven phenylketonuria (PKU). Not intended as the sole source of nutrition. Not for parenteral use.

### Storage:

- Store unopened can at room temperature. Do not store at extreme temperatures. Once opened, reseal can and store in a cool, dry place (not refrigerator) and use within one month of opening.

## Periflex Junior and Periflex Advance

Age-specific medical foods for the dietary management of phenylketonuria (PKU) in children and adults, including pregnant women and women of child-bearing age.

### Administration:

- Use only under the direction of a physician or dietitian. Periflex must be consumed in conjunction with natural protein, fluid and other nutrients in quantities prescribed by a physician or dietitian to meet phenylalanine and general nutritional requirements.
- Periflex Junior is intended for toddlers and younger children; Periflex Advance is intended for older children and adults, including pregnant women and women of child-bearing age.
- Intake of Periflex is dependent on the age, bodyweight and medical condition of the individual. Periflex should be divided into equal portions and distributed throughout the day.

### Mixing Instructions:

- Add the desired volume of water to a shaker or other container with a tight fitting lid. Then add the prescribed amount of powder and shake until fully blended together. Dilution guidelines are shown in the tables below. Periflex is best served chilled.
- Periflex tastes great when blended with 1 fl oz (30 mL) of water for every 5 to 6 grams of powder.

Dilutions are guidelines only. Periflex Junior or Periflex Advance may be given in a more concentrated form (e.g., a paste or concentrated drink) by using less water. If consumed in a concentrated form, water or other drinks should also be consumed at the same time.

#### Dilution Guidelines for Periflex Junior

Volume of Water	Prescribed Amount	Approx. Protein Equiv.
2 to 3 fl oz (60-90 mL)	16 g	4 g
4 to 5 fl oz (120-150 mL)	32 g	8 g
8 to 10 fl oz (240-300 mL)	64 g	16 g
16 to 20 fl oz (480-600 mL)	128 g	32 g

#### Dilution Guidelines for Periflex Advance

Volume of Water	Prescribed Amount	Approx. Protein Equiv.
2 to 3 fl oz (60-90 mL)	16 g	6 g
4 to 5 fl oz (120-150 mL)	32 g	11 g
8 to 10 fl oz (240-300 mL)	64 g	22 g
16 to 20 fl oz (480-600 mL)	128 g	45 g

- Once prepared, store formula in a refrigerator for no longer than 24 hours from the time of preparation. Shake or stir prepared formula immediately before use.

### Precautions:

- Must only be consumed by individuals with proven phenylketonuria. Not intended for infants. Not intended as the sole source of nutrition. Not for parenteral use.

### Storage:

- Store unopened can at room temperature. Do not store at extreme temperatures. Once opened, reseal can and store in a cool, dry place (not in refrigerator) and use within one month of opening.

## Analog

Infant formulas for the dietary management of metabolic disorders.

### Administration:

- Analog metabolic infant formulas must be consumed in conjunction with a whole protein source (e.g. breast milk or standard infant formula) in quantities prescribed by a dietitian or physician to meet complete protein requirements and ensure normal growth.
- Formula dosage will vary depending on the age, body weight, medical condition and protein tolerance of the infant.

### Mixing Instructions:

1. Wash hands thoroughly and clean preparation area. Sterilize bottle feeding system.
2. Boil water for 5 minutes and allow to cool for at least 30 minutes so that it feels warm to the wrist.
3. Add the prescribed amount of Analog powder and a protein source to the sterilized feeding bottle. For accuracy, Analog should be weighed on a gram scale. If using the provided scoop, fill it and level off with a clean, dry knife. Do not press the powder into the scoop.
4. Pour the required amount of cooled, boiled water into feeding bottle. To make the recommended dilution (21 kcal/fl oz), Analog requires 1 fl oz (30 mL) of water for every 5 g (1 unpacked, level

scoop) of powder. Place cap on bottle and shake until powder has dissolved.

5. Make sure the formula is lukewarm by placing a few drops on your wrist.

Formula prepared in advance must be cooled rapidly, stored in the refrigerator (35°F to 40°F) and used within 24 hours of preparation. Shake immediately before use. Formula remaining in the bottle after one hour of feeding should be discarded. Tube feeding “hang time” should not exceed 4 hours.

### Caution:

- Do not boil formula. Do not use a microwave oven to prepare or warm formula.

### Precautions:

- Must only be given under strict medical supervision to infants with a proven metabolic disorder. Not intended as the sole source of nutrition. Not for parenteral use.

### Storage:

- Store unopened can at room temperature. Do not store at extreme temperatures. Once opened, reseal can and store in a cool, dry place (not refrigerator) and use within one month of opening.

## Maxamaid and Maxamum

Age-specific medical foods for the dietary management of metabolic disorders in individuals over 1 year of age, including pregnant women and women of child-bearing age.

### Administration:

- Must be consumed in conjunction with natural protein, fluid and other nutrients in quantities prescribed by a physician or dietitian to meet protein and general nutrition requirements.
- Recommended intake will vary depending on the age, body weight and medical condition of the individual. Intake is adjusted to maintain normal growth and development. For accuracy, weigh on a gram scale. The daily intake should be divided into equal portions and distributed throughout the day.
- Maxamaid products are intended for toddlers and younger children; Maxamum products are intended for older children and adults, including pregnant women and women of child-bearing age.

advanced to a 1 to 5 dilution. These dilutions are guidelines only. May be given in a more concentrated form (e.g. drink or paste). If so, water or diluted drinks should be offered at the same time.

#### Dilution Guidelines for Maxamaid

Dilution	Amount of Powder	Volume of Water	Approx. PE
1 to 7	35 g	245 mL (approx. 8 fl oz)	8.8 g
1 to 5	35 g	175 mL (approx. 6 fl oz)	8.8 g

#### Dilution Guidelines for Maxamum

Dilution	Amount of Powder	Volume of Water	Approx. PE
1 to 7	35 g	245 mL (approx. 8 fl oz)	14 g
1 to 7	1 sachet (50 g)	350 mL (approx. 12 fl oz)	20 g
1 to 5	35 g	175 mL (approx. 6 fl oz)	14 g
1 to 5	1 sachet (50 g)	250 mL (approx. 8 fl oz)	20 g

### Precautions:

- Must only be given under strict medical supervision to patients with proven phenylketonuria. Not intended for children under one year of age. Not suitable as the sole source of nutrition. Not for parenteral use.

### Storage:

- Store unopened cans/sachets at room temperature. Do not store at extreme temperatures. Once opened, reseal can and store in a cool, dry place (not in refrigerator) and use within one month.
- Store XPhE Maxamum drink in a cool dry place away from sunlight.

### Mixing Instructions:

- Best served with meals.
- **XPhE Maxamum Drink:** Shake well before use. Best served chilled.
- **Maxamaid and Maxamum Powders:** Make a paste of the prescribed amount of powder with a small volume of chilled water. Gradually add sufficient water to make the desired volume.
- For best taste, consume immediately. Larger volumes of prepared formula should be refrigerated and used within 24 hours of preparation.
- It is recommended that Maxamaid and Maxamum be prepared at a 1 to 7 dilution initially and

## Phlexy-10 System

An interchangeable system of phenylalanine-free medical foods for the dietary management of phenylketonuria (PKU) in individuals over 1 year of age, including pregnant women and women of child-bearing age.

### Administration:

- The Phlexy-10 products must be consumed in conjunction with natural protein, fluid and other nutrients in quantities prescribed by a physician or dietitian to meet phenylalanine and general nutrition requirements. Fat, carbohydrate and low protein sources may be used to supply needed calories and to fulfill essential fatty acid requirements.
- Intake of the Phlexy-10 products will vary depending on the age, body weight and medical condition of the individual. Intake is adjusted to maintain normal growth and development. One packet of the drink mix, 20 capsules or 10 tablets provide 10 g of amino acids, equivalent to 8.33 g of protein.
- The Phlexy-10 products do not contain vitamins, minerals, or trace elements. It is essential that these nutrients are supplied separately. Phlexy-Vits (see pages 180-181) are available to be used as a supplement to the Phlexy-10 System. One 7 g packet supplies the majority of vitamins and minerals needed to meet the RDA of individuals 11 years and older.

### Mixing Instructions:

- **Phlexy-10 Drink Mix:** Mix the contents of one packet with a small amount of water, stirring into a thick paste. Continue stirring while adding water to make up a final volume of approximately 100 mL (~3.5 fl oz).
- **Phlexy-10 Tablets and Phlexy-10 Capsules:** These products should be taken with water or a non-phenylalanine-containing beverage.

### Precautions:

- Must only be given under strict medical supervision to patients with proven phenylketonuria. Not intended for use as the sole source of nutrition. Not intended for infants under 1 year of age. Not for parenteral use.

### Storage:

- Phlexy-10 Drink Mix, Phlexy-10 Tablets and Phlexy-10 Capsules should be stored in a cool, dry place. Once reconstituted, Phlexy-10 Drink Mix should be stored in a refrigerator and must be used within 24 hours of preparation. Once Phlexy-10 Capsules or Phlexy-10 Tablets are opened, reseal can and store in a cool, dry place (not in refrigerator) and use within one month.

## Lanaflex

A phenylalanine-free powdered medical food containing the remaining essential amino acids (large neutral amino acids and lysine). For the dietary management of phenylketonuria (PKU) in individuals over 12 years of age.

### Administration:

- Use only under the direction of a physician or dietitian. Lanaflex must be consumed in conjunction with natural protein, fluid and other nutrients in quantities prescribed by a physician or dietitian to meet phenylalanine and general nutrition requirements.
- Intake of Lanaflex is dependent on the age, bodyweight and medical condition of the individual.
- The recommended quantity of Lanaflex is 0.8 g per kg bodyweight per day. This quantity should be distributed over the day in three or more portions. Do not exceed three sachets per day.

### Mixing Instructions:

- It is recommended that Lanaflex is prepared at an approximate 1 to 4 dilution. In a screw top container, add 60 mL (2 fl oz or 1/4 cup) of chilled water. Add the contents of one sachet and shake well until dissolved. The product is best consumed immediately.

- If taken in a more concentrated form, water or diluted drinks should be consumed immediately afterwards.
- Opened sachets should be stored in an airtight container and used within 24 hours

### Precautions:

- Must only be consumed by individuals with proven phenylketonuria. Suitable for individuals 18 years and older. Not suitable as the sole source of nutrition. Not for parenteral use.
- Not for use when planning or during pregnancy.
- Seek medical advice before using with serotonergic medications or any kind of psychotropic medications.

### Storage:

- Store unopened sachets in a cool, dry place.

Visit [NutritionalLearningCenter.com](http://NutritionalLearningCenter.com) for guidelines on the usage of Lanaflex

## Lophlex Powder and Lophlex LQ

A low volume, amino acid-based medical food for the dietary management of metabolic disorders in children and adults, including pregnant women and women of child-bearing age.

### Administration:

- Use only under the direction of a physician or dietitian. Lophlex and Lophlex LQ must be consumed in conjunction with natural protein, fluid and other nutrients in quantities prescribed by a physician or dietitian to meet amino acid and general nutrition requirements. Fat, carbohydrate and low protein sources may be used to supply needed calories and to fulfill essential fatty acid requirements.
- Intake of Lophlex and Lophlex LQ will vary depending on the age, body weight and medical condition of the individual. Intake is adjusted to maintain normal growth and development. Lophlex and Lophlex LQ should be divided into equal portions and distributed throughout the day.

### Preparation (Lophlex LQ)

- Lophlex LQ is ready-to-drink and tastes best when served chilled. Shake vigorously before use.

### Mixing Instructions (Lophlex):

- Mix the contents of one sachet with a small amount of water to make a paste. Continue stirring while adding water to make up a final volume of approximately 70 mL (2.5 fl oz). This would be a 1 to 5 dilution. Lophlex may be taken in a more concentrated form, either as a drink or paste. If so, water or diluted drinks should be offered at the same time. Lophlex is best prepared with chilled water and consumed immediately after preparation.

### Precautions:

- Must only be given under strict medical supervision in individuals with a proven metabolic disorder. Not intended as a sole source of nutrition. Not for parenteral use.

### Storage:

- Store in a cool, dry place, below 86°F (not in the refrigerator) and away from sunlight.

## UCD Anamix Junior

Age-specific medical food for the dietary management of urea cycle disorders in individuals over 1 year of age.

### Administration:

- Must be consumed in conjunction with natural protein, fluid and other nutrients in quantities prescribed by a physician or dietitian to meet protein and general nutrition requirements.
- Recommended intake of UCD Anamix Junior is dependent on age, body weight and medical condition of the individual. Intake is adjusted to maintain normal growth and development. For accuracy, weigh on a gram scale. The daily intake should be divided into equal portions and distributed throughout the day.
- UCD Anamix Junior is intended for patients over 1 year of age, including pregnant women and women of child-bearing age.

### Mixing Instructions:

- Best served chilled with meals.
- Pour the required volume of cold water into a glass or cup.
- Add the prescribed amount of UCD Anamix Junior powder to the water and stir. For accuracy it is recommended to use a gram scale.

- It is recommended that UCD Anamix Junior be prepared at a 1 to 3.5 dilution. This dilution is a guideline only. An alternative dilution may be recommended by a clinician or dietitian (e.g. drink or paste). If given in a more concentrated form, water or diluted drinks should be offered at the same time.

#### Dilution Guidelines for UCD Anamix Junior

Dilution	Amount of Powder	Volume of Water	Approx. PE
1 to 3.5	50 g (10 scoops)	175 mL (approx. 6 fl oz)	6.0 g

### Precautions:

- Must only be given under strict medical supervision to patients with proven urea cycle disorders. Not intended for children under one year of age. Not suitable as the sole source of nutrition. Not for parenteral use.

### Storage:

- Once reconstituted store in a refrigerator and use within 24 hours.
- Store unopened cans in a cool, dry place. Do not store at extreme temperatures. Once opened, reseal can and store in a cool, dry place (not in refrigerator) and use within one month.

Visit [NutriciaLearningCenter.com](http://NutriciaLearningCenter.com) for a practical guide for the use of UCD Anamix Junior.

## Milupa

Milupa products are used for the dietary management of inborn errors of amino acid metabolism.

### Milupa Stage 2 and 3 Products

#### Administration:

- The amount of Milupa needed to supplement total daily protein requirements depends on age, body weight, and individual tolerance. The dose of Milupa must be determined by a physician or dietitian and adjusted periodically.
- The daily amount required should be divided into 3 to 5 single portions and can be taken mixed with calculated amounts of other food (e.g. beverages, fruit mousse, solid foods). For accuracy, Milupa should be weighed on a gram scale.

#### Precaution:

- Must be used under medical supervision
- For individuals over one year of age with a proven metabolic disorder
- Not suitable as a sole source of nutrition
- Not for parenteral use

#### Storage:

- Store unopened cans at room temperature. Do not store at extreme temperatures. After opening, keep can tightly covered and store in a cool, dry place (not in the refrigerator) and use within four weeks.

To be discontinued Fall 2013

## Acerflex

Medical food for the dietary management of maple syrup urine disease (MSUD) in individuals over 1 year of age.

#### Administration:

- Acerflex must be consumed in conjunction with natural protein, fluid and other nutrients in quantities prescribed by a physician or dietitian to meet protein and general nutrition requirements. Fat, carbohydrate and low protein sources may be used to supply needed calories and to fulfill essential fatty acid requirements.
- Intake will vary depending on the age, body weight and medical condition of the individual. Intake is adjusted to maintain normal growth and development.

#### Mixing Instructions:

- Acerflex is best served as a chilled drink with meals. Make a paste of the prescribed amount of powder with a small quantity of water. For accuracy, the powder should be weighed on a gram scale. Gradually add sufficient water to yield the prescribed volume. It is recommended that Acerflex be reconstituted at a 1 to 5 dilution (e.g. 100 g of powder and 500 mL of water). It can

however be given in a more concentrated form (e.g. at a 1 to 4 dilution or in paste form), according to taste preferences. Additional fluids should be offered at the same time.

- Reconstituted formula should be stored in the refrigerator and used within 24 hours.

#### Precautions:

- Must only be given under strict medical supervision to patients with a proven Maple Syrup Urine Disease. Not intended for infants under 1 year of age. Not intended as a sole source of nutrition. Not intended for parenteral use.

#### Storage:

- Store unopened can at room temperature. Do not store at extreme temperatures. Once opened, reseal can and store in a cool, dry place (not refrigerator) and use within one month.







## Low Protein Foods




Find more information and resources on these and all of our products at [www.NutriciaLearningCenter.com](http://www.NutriciaLearningCenter.com)



## Loprofin, Milupa & Wel-Plan Low Protein Foods

A line of low protein foods including: baking mixes, cake mix, pasta, rice, cereals, drink mix, cookies, energy bars, and other snacks.

 These products are available in the US and Canada.

### Main Features:

- A wide range of products to add variety to a protein-restricted diet

### Indications:

- Dietary management of inherited metabolic disorders
- Renal or liver failure requiring a low protein diet
- Other medical conditions where a low protein diet is indicated

### Nutritional Information - Per Serving

Product	Loprofin Pasta Variety	Loprofin Baking Mix	Wel-Plan Baking Mix	Loprofin Cake Mix Chocolate	Loprofin Rice	Loprofin Cereal Loops	Milupa lp-ringlets chocolate
<b>Serving Size</b>	3/4 cup dry (56 g)	1/3 cup dry (39 g)	1/3 cup dry (39 g)	1/3 cup dry (39 g)	1/4 cup dry (56 g)	1 cup (28 g)	3/4 cup (30 g)
Calories	203	139	139	143	205	108	116
Protein, g	0.3	0.1	0.1	0.4	0.2	0.1	0.3
Phenylalanine, mg	6.9	<4	2	11.7	7.8	1.7	9.3
Isoleucine, mg	4.5	1.9	1.8	7.4	5.6	0.8	6.9
Leucine, mg	15.5	3.6	4.5	14.4	16	2.5	13.5
Valine, mg	7	3	2.8	12.5	7	2	10.8
Tyrosine, mg	1.6	1.2	1.4	2.3	2.2	0.8	3.6
Fat, g	0.7	0.2	0.6	0.4	0.7	0.3	0.6
Saturated, g	0.1	0.1	none	0.2	0.1	0.2	0.5
Carbohydrate, g	48.8	34.1	33.2	34.5	49.2	26.2	27.5
Sugars, g	none	2	1.8	14.8	none	11	10.1
<b>Selected Minerals</b>							
Sodium, mg	8.4	55.1	7.9	97.7	20.7	23	19.5
Potassium, mg	9.5	10.4	3.7	37.5	8.4	18.5	33
Phosphorus, mg	15	17.2	11.8	46.9	16.2	10.1	10.5

Household measures are based on standard US, dry household measures.\* These values are approximations only and have been provided for convenience: results can vary significantly based on the individual, device, and method. Nutricia North America recommends using a gram scale for greatest accuracy.

\*US measures: 1 cup = 240 mL; ½ cup = 120 mL; ¼ cup = 60 mL; 1 Tbsp = 15 mL; 1 tsp = 5 mL; ½ tsp = 2.5 mL





## Nutritional Information - Per Serving

Product	Milupa lp-drink	Loprofin Crackers	Milupa lp-bar Fruits Forest	Milupa lp-bar Ap-Cinn.	Milupa lp-chips Paprika	Milupa lp-flakes	Milupa lp-fruity pear cereal mix	Milupa lp-fruity apple-banana cereal mix
Serving Size	3 Tbsp. (24 g)	5 crackers (31 g)	1 bar (25 g)	1 bar (25 g)	3/4 cup (30g)	1 cup (60 g)	1/2 cup dry (50 g)	1/2 cup dry (50 g)
Calories	126.6	138	113	113	103	222	225	224
Protein, g	1.1	<1	0.2	0.3	0.2	0.2	0.9	0.9
Phenylalanine, mg	24	3.1	4	8	10.8	3	35	35
Isoleucin , mg	14.4	1.6	4	8	8.7	2.4	30	30
Leucine, mg	76.7	5	6	15	15.3	4.8	65	65
Valine, mg	38.4	2.7	5	9	12.9	3.6	40	40
Tyrosine, mg	38.4	1.5	2	4	6	1.2	30	30
Fat, g	7.2	4.6	5.8	5	1.1	0.5	7.4	7.4
Saturated, g	3	2.2	4.1	3	24	0.3	3.2	3.2
Carbohydrate, g	14.3	24.2	15.3	16.8	23.1	54.2	38.5	38.5
Sugars, g	13.9	0.5	6.7	9.3	0.9	15	6.8	6.6
<b>Selected Minerals</b>								
Sodium, mg	52.8	154.8	4	7.5	375.4	32.3	8.5	6
Potassium, mg	215.8	4.6	45	74	none	10.2	20	30
Phosphorus, mg	60	4.3	6	10	none	16.8	12.5	12.5

Household measures are based on standard US, dry household measures.\* These values are approximations only and have been provided for convenience: results can vary significantly based on the individual, device, and method. Nutricia North America recommends using a gram scale for greatest accuracy.

\*US measures: 1 cup = 240 mL; ½ cup = 120 mL; ¼ cup = 60 mL; 1 Tbsp = 15 mL; 1 tsp = 5 mL; ½ tsp = 2.5 mL

## Pasta



### Loprofin Low Protein Pasta

- Ideal for hearty sauces, casseroles, and salads
- A variety of pastas for your favorite dishes including: penne, spirals (fusilli), spaghetti\*, lasagna, tagliatelle, animal pasta, and macaroni elbows\*

**Ingredients:** Cornstarch, Pregelatinized Potato Starch, Pregelatinized Cornstarch, Emulsifier (Mono-And Diglycerides), Stabilizer (Methylcellulose), Artificial Color (Beta Carotene), Antioxidant (L-Ascorbic Acid).

\* Loprofin Low Protein Pasta products are pasta substitutes.

## Baking Mixes



### Loprofin All-Purpose Baking Mix

- Great for breads, pancakes, tortillas and muffins
- Free packet of yeast in each box

**Ingredients:** Wheat Starch, Sugar, Stabilizers (Guar Gum, Pectin), Leavening Agents (Glucono Delta-Lactose, Sodium Bicarbonate), Niacin, Iron Powder, Thiamin, Pyridoxine, Riboflavin.

### Wel-Plan Baking Mix

- Excellent for use in bread, cake and cookie recipes
- A must have for any baking pantry

**Ingredients:** Wheat Starch, Cornstarch, Sugar, Stabilizer (Hydroxy Propyl Methyl Cellulose), Mono- and Diglycerides, Iron, Niacin, Thiamine.



## Cereal



### Milupa lp-fruity

- Fruity, soft cereal that is enjoyable hot or cold
- Two great flavors: pear and apple-banana

**Pear Ingredients:** Maltodextrin, Cereal Flours (Rice, Corn), Vegetable Fats and Oils, Sucrose, Starch, Pear Powder, Orange Powder, Calcium Carbonate, Emulsifiers (Citric Acid Esters of Mono- and Diglycerides), Vitamin Mixture, Ferric-III-Diphosphate, L-Carnitine, Stabilizer (Ascorbyl Palmitate), Potassium Iodide.

**Apple-Banana Ingredients:** Maltodextrin, Cereal Flours (Rice, Corn), Vegetable Fats and Oils, Sucrose, Starch, Banana Flakes, Apple Powder, Calcium Carbonate, Emulsifiers (Citric Acid Esters of Mono- and Diglycerides), Vitamin Mixture, Ferric-III-Diphosphate, L-Carnitine, Stabilizer (Ascorbyl Palmitate), Potassium Iodide.

## Drink Mix



### Milupa lp-drink

- Easy to use drink mix – great for cooking, baking, and by itself
- Try with one of our great tasting low protein cereals

**Ingredients:** Whey (low in Protein) from Milk, Vegetable Oils, Demineralized Whey Powder, Sugar, Calcium Carbonate, Lactose, Emulsifier (Citric Acid Esters of Mono- and Diglycerides of Fatty Acids), Acidifier (Citric Acid), Antioxidant (Ascorbyl Palmitate).

## Cereal



### Loprofin Cereal Loops

- Great for a healthy morning start or anytime snack
- Ideal for toddlers trying new foods

**Ingredients:** Modified Wheat Starch, Sugar, Modified Starch, Inulin, Dried Plums, Honey, Maltodextrin, Emulsifier (Mono- and Diglycerides of Fatty Acids), Salt, Beta-Carotene.



### Milupa lp-ringlets chocolate

- Chocolate cereal loops great for breakfast or snacking
- Perfect for homemade cereal bars
- Great finger food or snacking on the go

**Ingredients:** Starch (corn, wheat - contains gluten, potato), Sucrose, Modified Starch, Honey, Chocolate, Dietary Fiber (Inulin), Cocoa Powder, Emulsifier (Monoglyceride), Salt.



### Milupa lp-flakes

- Light and flakey cereal for a healthy start to your day
- Great in recipes, baking or dressing up casseroles

**Ingredients:** Starch (wheat - contains gluten, potato, corn), Sucrose, Modified Starch, Dietary Fiber (Inulin), Honey, Maltodextrin, Emulsifier (Mono- and Diglycerides of Fatty Acids), Iodized Salt, Carotin (from soy), Malt Extract, Vitamin mixture.



## Cake Mix



### Loprofin Chocolate Flavor Cake Mix

- A delicious low protein dessert
- Great for any chocolate cake recipes

**Ingredients:** Wheat Starch, Sugar, Dextrose, Cocoa Powder (2.2%), Artificial Flavors, Sodium Bicarbonate, Sodium Pyrophosphate, Guar Gum.

## Rice



### Loprofin Rice

- An excellent low protein side dish
- A great addition to any casserole or hot dish

**Ingredients:** Rice Starch, Corn Starch, Potato Starch, Calcium Carbonate, Mono- and Diglycerides.

## Crackers



### Loprofin Crackers

- An excellent choice for any snack
- Great with dips and salsa

**Ingredients:** Cornstarch, Tapioca Starch, Partially Hydrogenated Vegetable Oil (Palm), Invert Sugar, Salt, Leavening Agent (Ammonium Bicarbonate), Emulsifier (Mono- and Diacetyltartaric Acid Esters of Mono- and Diglycerides), Artificial Color (Beta Carotene).

## Savory Snacks



### Ip-chips paprika\*

- A spicy, salty, and crunchy low protein snack
- Add to salads for a kick

**Ingredients:** Starch (Potato, Corn), Dietary Fiber (Inulin), Modified Starch, Vegetable Fats, Iodized Salt, Paprika, Spice Preparation (Contains Flavor Enhancer Monosodium Glutamate And Mustard), Spice Salt (Contains Flavor Enhancer Monosodium Glutamate, Mustard And Celery).

\* This product available only in the U.S.



## Energy Bars



**Seasonal Item**  
Please contact us for details

### Milupa lp-bar

- Two tasty flavors: Fruits of the Forest\* and Apple-Cinnamon
- Fruity on-the-go snack for quick energy
- Available in 25 g bars (3 bars per package, 10 packages per case)

#### Ingredients:

**Fruits Of The Forest:** Fruit Mix With Pieces (Apple, Pear, Fruits Of The Forest 6.1% (Straw-, Ras-, Blue-, Boysen-, Blackberries, Black Current)), Glucose Syrup, Wetting Agent Glycerine, Maltodextrin, Sucrose, Plum, Natural And Nature Identical Flavors, Dietary Fibers Wheat Fiber, Acidifier Citric Acid, Gelling Agent Pectin, Coloring Agent Fruit And Vegetable Extracts, Vegetable Fats And Oils, Maltodextrin, Low Protein Extrudate (Potato Starch, Dietary Fibers (Inulin, Wheat Fiber), Modified Starch, Sugar, Maltodextrin, Emulsifier Mono- And Diglycerides Of Fatty Acids), Wheat Fiber, Red Beet Powder, Emulsifier Citric Acid Esters Of Mono- And Diglycerides Of Fatty Acids, L-Carnitine, Antioxidant Ascorbylpalmitate

**Apple-Cinnamon:** Apple Puree Concentrate, Vegetable Oils And Fats, Maltodextrin, Milk Chocolate (Sugar, Whole Milk Powder, Cocoa Mass, Cocoa Butter, Skimmed Milk Powder, Hazelnuts, Emulsifier Soy Lecithin, Vanillin), Apple Powder, Low Protein Extrudate (Potato Starch, Dietary Fibers (Inulin, Wheat Fiber), Modified Starch, Sugar, Maltodextrin, Emulsifier Mono- And Diglycerides Of Fatty Acids), Dietary Fibers (Wheat Fiber, Inulin, Fructooligosaccharides), Corn Starch, Cinnamon, Emulsifiers (Citric Acid Esters Of Mono- And Diglycerides Of Fatty Acids, Soy Lecithin), L-Carnitine, Antioxidant Ascorbyl Palmitate.

\* This product available only in the U.S.

## Ordering Information:

Product Name	PRODUCT CODES AND PACKAGING			Reimbursement Code
	Unit Code	Pack Size	Case Size	
Loprofin Baking Mix	112658	500 g	18 x 500 g	49735-0151-45
Wel-Plan Baking Mix	105175	400 g	18 x 400 g	49735-0150-16
Loprofin Cake Mix Chocolate	113089	500 g	5 x 500 g	49735-0130-89
Loprofin Spaghetti*	112310	500 g	6 x 500 g	49735-0150-15
Loprofin Penne	112298	500 g	6 x 500 g	49735-0150-25
Loprofin Spirals (Fusilli)	112292	500 g	6 x 500 g	49735-0150-35
Loprofin Tagliatelle	112304	250 g	6 x 250 g	49735-0123-04
Loprofin Animal Pasta	114155	500 g	6 x 500 g	49735-0141-55
Loprofin Macaroni Elbows*	112296	250 g	12 x 250 g	49735-0122-96
Loprofin Lasagna	112308	250 g	12 x 250 g	49735-0150-55
Loprofin Rice	112302	500 g	6 x 500 g	49735-0123-02
Loprofin Cereal Loops	112656	375 g	4 x 375 g	49735-0151-35
Loprofin Crackers	112660	150 g	12 x 150 g	49735-0150-85
<b>Milupa Low Protein (lp) foods</b>				
lp-Drink	659916	400 g	2 x 400 g	49735-0152-34
lp-Fruity Pear Cereal Mix	659920	300 g	2 x 300 g	49735-0152-44
lp-Fruity Apple-Banana Cereal Mix	659919	300 g	2 x 300 g	49735-0152-54
lp-Flakes	309403	375 g	6 x 375 g	49735-0151-94
lp-Ringlets Chocolate	309471	250 g	6 x 250 g	49735-0152-04
lp-Chips Paprika	309406	175 g	4 x 175 g	49735-0152-14
lp-Bar Fruits of the Forest	309481	75 g	10 x 75 g	49735-0151-74
lp-Bar Apple-Cinnamon	309116	75 g	10 x 75 g	49735-0151-84

\* Loprofin Low Protein Pasta products are pasta substitutes.





## Neurology

**NLC**


Find more information and resources on these and all of our products at [www.NutriciaLearningCenter.com](http://www.NutriciaLearningCenter.com)





## KetoCal 3:1 Powder

A 3:1 ketogenic formula (high fat, low carbohydrate), with DHA & ARA for the dietary management of intractable epilepsy and other medical conditions where the ketogenic diet is indicated; designed for children up to 8 years of age. A medical food.

 This formulation is only available in the US.

### Main Features:

- Nutritionally complete
- DHA and ARA
- 3:1 ratio, which supports earlier initiation of the diet
- Unflavored
- Nutrient dense for children up to 8 years old with low energy requirements
- One stop preparation with a non-modular approach
- Appropriate for enteral or oral feedings
- Osmolality (at 1 kcal/mL)  
150 mOsm/kg
- No artificial sweeteners
- Energy Distribution:
 

Protein	8.8%
Carbohydrate	4.1%
Fat (LCT 100%)	87.1%
- Displacement  
1 mL/g

### Indications:

- Intractable epilepsy
- Pyruvate dehydrogenase deficiency (PDH)
- Glucose transporter type-1 deficiency (GLUT1DS)
- Other disorders where the ketogenic diet is indicated

For details on administration, please see pages 160-161.

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
16672	49735-0166-72	B4154	6 x 300 g (11 oz)	2097

**WIC<sup>+</sup> eligible in all States.**

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 100 g	Per 100 mL*		
Calories	699	100	Choline, mg	180 25.8
Protein, g	15.3	2.2	Inositol, mg	153 21.9
Carbohydrate, g	7.2	1.0	<b>Minerals</b>	<b>Per 100 g Per 100 mL*</b>
Fat, g	67.7	9.7	Calcium, mg	760 109
Linoleic Acid, mg	12700	1817	Phosphorus, mg	510 73
$\alpha$ -Linolenic Acid, mg	1481	212	Magnesium, mg	95 13.6
DHA, mg	116	16.6	Iron, mg	10.9 1.6
AHA, mg	116	16.6	Zinc, mg	7.4 1.1
<b>Vitamins</b>			Manganese, mcg	570 81.5
Vitamin A, IU (mcg RE)	1748 (525)	250 (75)	Copper, mcg	760 109
Vitamin D, IU (mcg)	508 (12.7)	72.7 (1.8)	Iodine, mcg	124 17.7
Vitamin E, IU (mg $\alpha$ TE)	11.8 (7.9)	1.7 (1.1)	Molybdenum, mcg	31.3 4.5
Vitamin K, mcg	55.9	8	Chromium, mcg	26.2 3.7
Thiamine, mg	0.89	0.13	Selenium, mcg	18.9 2.7
Riboflavin, mg	0.7	0.1	Sodium, mg	287 41.1
Vitamin B <sub>6</sub> , mg	0.7	0.1	Potassium, mg	900 129
Vitamin B <sub>12</sub> , mcg	1.4	0.2	Chloride, mg	440 62.9
Niacin, mcg	4900	701	L-Carnitine, mg	50 7.16
Folic Acid, mcg	140	20	Taurine, mg	48.0 6.9
Pantothenic Acid, mg	2.8	0.401		
Biotin, mcg	13.9	2		
Vitamin C, mg	84	12		

\*Standard Dilution = 30 kcal/fl oz

### Ingredients:

Refined Vegetable Oils (Palm, Soy, Sunflower), Milk Protein (Casein, Whey), Lactose (Milk), Tricalcium Phosphate, Tripotassium Citrate, Corn Syrup Solids, Potassium Chloride, Calcium Phosphate Dibasic, Magnesium Acetate, Choline Bitartrate, L-Cystine, M. Alpina Oil\*, C. Cohnii Oil\*\*, L-Tryptophan, M-Inositol, Ferrous Sulfate, Sodium Caseinate (Milk), Sodium Chloride, Sodium Ascorbate, L-Ascorbic Acid, L-Carnitine, Taurine, Mono and Diglycerides, Zinc Sulfate, DL-alpha Tocopheryl Acetate, Niacinamide, Soy Lecithin, Calcium D-Pantothenate, Cupric Sulfate, Manganese Sulfate, Thiamine Chloride Hydrochloride, Pyridoxine Hydrochloride, Riboflavin, Vitamin A Acetate, Potassium Iodide, Folic Acid, Ascorbyl Palmitate, Mixed Tocopherols, Chromium Chloride, Sodium Molybdate, Phylloquinone, Sodium Selenite, D-Biotin, Vitamin D<sub>3</sub>, Cyanocobalamin.


\*A Source of Arachidonic Acid (ARA)

\*\*A Source of Docosahexaenoic Acid (DHA)



## KetoCal 4:1 Powder

A nutritionally complete, ketogenic formula in a 4:1 ratio (fat:carbohydrate + protein) for the dietary management of intractable epilepsy; designed for individuals over 1 year of age. A medical food.

 This formulation is only available in the US.

### Main Features:

- Nutritionally complete
- 4:1 Ratio
- Vanilla flavor
- Convenient one step preparation with a non-modular approach
- Nutrient dense for children with low energy requirements
- Appropriate for enteral or oral feedings
- Standard dilution = 1.44 kcal/mL
- Osmolality (at 1.44 kcal/mL): 197 mOsm/kg
- Energy distribution:
 

Protein	8.4%
Carbohydrate	1.6%
Fat (LCT 100%)	90%
- Displacement 1 mL/g

### Indications:

- Intractable epilepsy
- Pyruvate dehydrogenase deficiency (PDH)
- Glucose transporter type-1 deficiency (GLUT1DS)
- Other disorders where the ketogenic diet is indicated

For details on administration, please see pages 160-161.

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
16670	49735-0166-70	B4154	6 x 300 g (11 oz)	2160

**WIC<sup>+</sup> eligible in all States.**

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 100 g	Per 100 mL*	Minerals	Per 100 g	Per 100 mL*
Calories	720	144	Calcium, mg	800	160
Protein, g	15	3	Phosphorus, mg	650	130
Fat, g	72	14.4	Magnesium, mg	110	22
Linoleic Acid, mg	11077	2215	Iron, mg	11	2.2
$\alpha$ -Linolenic Acid, mg	826	115	Zinc, mg	5.8	1.2
Carbohydrate, g	3	0.6	Manganese, mg	1.6	0.32
<b>Vitamins</b>			Copper, mcg	600	120
Vitamin A, IU (mcg)	1265 (380)	253 (76)	Iodine, mcg	82	16.4
Vitamin D <sub>3</sub> , IU (mcg)	208 (5.2)	41.6 (1)	Molybdenum, mcg	26	5.2
Vitamin E, IU (mg $\alpha$ T.E.)	11 (7.4)	2.2 (1.5)	Chromium, mcg	19	3.8
Vitamin K, mcg	40	8	Selenium, mcg	34	6.8
Thiamine, mg	0.64	0.13	Sodium, mg	300	60
Riboflavin, mg	0.64	0.13	Potassium, mg	1080	216
Vitamin B <sub>6</sub> , mg	0.64	0.13	Chloride, mg	500	100
Vitamin B <sub>12</sub> , mcg	1.3	0.26	L-Carnitine, mg	40	8.0
Niacin, mg	7.5	1.5			
Folic Acid, mcg	190	38			
Pantothenic Acid, mg	2.6	0.52			
Biotin, mcg	12.5	2.5			
Vitamin C, mg	60	12			
Choline, mg	480	96			
Inositol, mg	135	27			

\* Recommended dilution of 4 mL of water to 1 g of powder

### Ingredients:

Hydrogenated Soybean Oil, Dry Whole Milk, Refined Soybean Oil, Soy Lecithin, Corn Syrup Solids, Tripotassium Citrate, Tricalcium Citrate, Potassium Chloride, Tricalcium Phosphate, Choline Bitartrate, Magnesium Hydrogen Phosphate, Calcium Phosphate, Magnesium Acetate, Trisodium Citrate, M-Inositol, L-Isoleucine, L-Tryptophan, Artificial Flavor (Ethyl Vanillin), L-Ascorbic Acid, Ferrous Sulfate, Artificial Sweetener (Aspartame), L-Carnitine, Taurine, Zinc Sulfate, DL-Alpha Tocopheryl Acetate, Nicotinamide, Magnesium Sulfate, Calcium-D-Pantothenate, Copper Sulfate, Artificial Color (Beta Carotene), Thiamin Hydrochloride, Pyridoxine Hydrochloride, Riboflavin, Vitamin A Acetate, Folic Acid, Chromium Sulfate, Potassium Iodide, Sodium Molybdate, Sodium Hydrogen Selenite, Phylloquinone, D-Biotin, Vitamin D<sub>3</sub>, Cyanocobalamin.




## KetoCal 4:1 LQ

A nutritionally complete, ready-to-feed ketogenic formula in a 4:1 ratio (fat:carbohydrate + protein) for the dietary management of intractable epilepsy; designed for individuals over 1 year of age. A medical food.



*KetoCal 4:1 LQ Vanilla is available in the US and Canada. KetoCal 4:1 LQ Unflavored is available in the US and will be available in Canada.*

### Main Features:

- Nutritionally complete
- 4:1 Ratio
- Ready-to-feed
- Great Vanilla flavor or Unflavored
- Contains multi-fiber system:  a blend of insoluble and soluble fiber
- Supplemented with DHA and ARA
- Appropriate for enteral or oral feedings
- No *trans* fat
- Aspartame-free
- Nutrient dense for children up to 13 years old with low energy requirements
- Osmolality (at 1.5 kcal/mL):  
Vanilla 260 mOsm/kg  
Unflavored 280 mOsm/kg
- Energy distribution:  
Protein 8.2%  
Carbohydrate 3.1%  
Fiber 1.5%  
Fat (LCT 100%) 90%
- Free water 77.8%

### Indications:

- Intractable epilepsy
- Pyruvate dehydrogenase deficiency (PDH)
- Glucose transporter type-1 deficiency (GLUT1DS)
- Other disorders where the ketogenic diet is indicated

*For details on administration, please see pages 160-161.*

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Box
118796 – Vanilla	49735-0187-96	B4154	27 x 237 mL (8 fl oz)	356
53054 – Unflavored	49735-0130-54	B4154	27 x 237 mL (8 fl oz)	356

**WIC<sup>+</sup> eligible in all States.**

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 100 mL	Per Tetra Pak (237 mL)	Minerals, Trace Elements	Per 100 mL	Per Tetra Pak (237 mL)
Calories	150	356	Calcium, mg	88.4	210
Protein, g	3.09	7.32	Phosphorus, mg	88.4	210
Carbohydrate, g	1.73	4.10	Magnesium, mg	22.7	53.8
Fiber, g	1.12	2.65	Iron, mg	1.5	3.6
Soluble, g	0.56	1.33	Zinc, mg	1.2	2.8
Insoluble, g	0.56	1.33	Manganese, mg	0.18	0.43
Fat, g	14.8	35.1	Copper, mcg	120	284
Saturates, g	2.2	5.2	Iodine, mcg	18.5	43.8
Monounsaturates, g	8.3	19.7	Molybdenum, mcg	6.2	14.7
Polyunsaturates, g	3.7	8.8	Chromium, mcg	3.2	7.6
Linoleic Acid, mg	3228	7650	Selenium, mcg	7.1	16.8
$\alpha$ -Linolenic Acid, mg	313	741	Sodium, mg	103	244
DHA, mg	55	131	Potassium, mg	165	391
ARA, mg	55	131	Chloride, mg	155	367
			L-Carnitine, mg	8.3	19.7
			Taurine, mg	6.3	14.9
<b>Vitamins</b>					
Vitamin A, IU (mcg R.E.)	264 (79.2)	626 (188)			
Vitamin D, IU (mcg)	92.0 (2.3)	220 (5.5)			
Vitamin E, IU (mg $\alpha$ T.E.)	2.3 (1.5)	5.5 (3.6)			
Vitamin K, mcg	5.6	13.3			
Thiamine, mg	0.19	0.45			
Riboflavin, mg	0.15	0.36			
Vitamin B6, mg	0.15	0.36			
Vitamin B12, mcg	0.17	0.40			
Niacin, mg	1.5	3.6			
Folic Acid, mcg	28.7	68.0			
Pantothenic Acid, mg	0.62	1.5			
Biotin, mcg	4.1	9.7			
Vitamin C, mg	9.3	22.0			
Choline, mg	51.5	122			
Inositol, mg	4.1	9.7			

### Ingredients:

Water, Refined Vegetable Oil (High Oleic Sunflower, Soy, Palm), Sodium Caseinate (Milk), Whey Protein Concentrate (Milk), Soy Fiber, Corn Starch, Inulin, CAEM (an Emulsifier), Dipotassium Phosphate, Gum Arabic, Calcium Chloride, M. Alpina Oil\*, Magnesium Acetate, Potassium Chloride, C. Cohnii Oil\*\*, Microcrystalline Cellulose, Fructooligosaccharide, L-Ascorbic Acid, Calcium Phosphate Monobasic, Mono and Diglycerides, Trisodium Citrate, Sodium Hydroxide, Choline Chloride, L-Cystine, Calcium Phosphate Dibasic, Propylene Glycol Alginate, Ferrous Lactate, L-Carnitine, Taurine, M-Inositol, L-Tryptophan, Zinc Sulfate, DL-Alpha Tocopheryl Acetate, Soy Lecithin, Niacinamide, Calcium D-Pantothenate, Manganese Sulfate, Ascorbyl Palmitate, Cupric Sulfate, Thiamine Chloride Hydrochloride, Pyridoxine Hydrochloride, Riboflavin, Vitamin A Acetate, Mixed Tocopherols, DL-Alpha Tocopherol, Folic Acid, Potassium Iodide, Chromium Chloride, Sodium Selenite, Sodium Molybdate, Phylloquinone, D-Biotin, Vitamin D<sub>3</sub>, Cyanocobalamin.

**Unflavored** version also contains: Sugar.

**Vanilla** flavored version also contains: Artificial Flavor, Sugar, Artificial Sweetener: Sucralose.


\*A Source of Arachidonic Acid (ARA)

\*\*A Source of Docosahexaenoic Acid (DHA)



## KetoCal 4:1 Powder

A nutritionally complete, ketogenic formula in a 4:1 ratio (fat:carbohydrate + protein) for the dietary management of intractable epilepsy; designed for individuals over 1 year of age. A medical food.

 This formulation is only available in Canada.

### Main Features:

- Nutritionally complete
- 4:1 Ratio
- Vanilla flavor
- Convenient one step preparation with a non-modular approach
- Nutrient dense for children with low energy requirements
- Appropriate for enteral or oral feedings
- Standard dilution = 1.44 kcal/mL
- Osmolality (at 1.44 kcal/mL): 197 mOsm/kg
- Energy distribution:
 

Protein	8.4%
Carbohydrate	1.6%
Fat (LCT 100%)	90%
- Displacement 1 mL/g

### Indications:

- Intractable epilepsy
- Pyruvate dehydrogenase deficiency (PDH)
- Glucose transporter type-1 deficiency (GLUT1DS)

*For details on administration, please see pages 160-161.*

### Ordering/Reimbursement Information:

Product Code	Product Packaging	Calories Per Can
16671	6 x 300 g (11 oz)	2160

### Nutrition Information:

Nutrients	Per 100 g	Per 100 mL*		
Calories	720	144	Choline, mg	480 96
Protein, g	15	3	Inositol, mg	135 27
Fat, g	72	14.4	<b>Minerals</b>	<b>Per 100 g Per 100 mL*</b>
Linoleic Acid, mg	11077	2215	Calcium, mg	800 160
$\alpha$ -Linolenic Acid, mg	826	115	Phosphorus, mg	650 130
Carbohydrate, g	3	0.6	Magnesium, mg	110 22
<b>Vitamins</b>			Iron, mg	11 2.2
Vitamin A, IU (mcg)	1500 (450)	300 (90)	Zinc, mg	5.8 1.2
Vitamin D <sub>3</sub> , IU (mcg)	208 (5.2)	41.6 (1)	Manganese, mg	1.6 0.32
Vitamin E, IU (mg $\alpha$ T.E.)	11 (7.4)	2.2 (1.5)	Copper, mcg	800 160
Vitamin K, mcg	40	8	Iodine, mcg	82 16.4
Thiamine, mg	0.64	0.13	Molybdenum, mcg	26 5.2
Riboflavin, mg	0.64	0.13	Chromium, mcg	19 3.8
Vitamin B <sub>6</sub> , mg	0.64	0.13	Selenium, mcg	34 6.8
Vitamin B <sub>12</sub> , mcg	1.3	0.26	Sodium, mg	300 60
Niacin, mg	7.5	1.5	Potassium, mg	1080 216
Folic Acid, mcg	190	38	Chloride, mg	500 100
Pantothenic Acid, mg	2.6	0.52	L-Carnitine, mg	40 8.0
Biotin, mcg	12.5	2.5		
Vitamin C, mg	60	12		

\* Recommended dilution of 4 mL of water to 1 g of powder

### Ingredients:

Hydrogenated Soybean Oil, Dry Whole Milk, Refined Soybean Oil, Soy Lecithin, Corn Syrup Solids, Tripotassium Citrate, Tricalcium Citrate, Potassium Chloride, Tricalcium Phosphate, Choline Bitartrate, Magnesium Hydrogen Phosphate, Calcium Phosphate, Magnesium Acetate, Trisodium Citrate, M-Inositol, L-Isoleucine, L-Tryptophan, Artificial Flavour (Ethyl Vanillin), L-Ascorbic Acid, Aspartame (Contains Phenylalanine), L-Carnitine, Ferrous Sulphate, Taurine, Zinc Sulphate, DL-Alpha Tocopheryl Acetate, Calcium-D-Pantothenate, Copper Sulphate, Nicotinamide, Manganese Sulphate, Artificial Colour (Beta Carotene), Potassium Iodide, Thiamine Hydrochloride, Pyridoxine Hydrochloride, Sodium Selenite, Riboflavin, Vitamin A Acetate, Folic Acid, Chromium Chloride, Sodium Molybdate, Phylloquinone, D-Biotin, Vitamin D<sub>3</sub>, Cyanocobalamin.

## KetoCal Family

### Directions for Preparation and Use:

For oral and tube feeding:

#### KetoCal 3:1 and 4:1 Powders

1. Measure the required amount of warm water into a container that seals with a screw top lid. To completely dissolve the powder, the water must be at a temperature of 113-122°F (45-50°C).
2. Add the prescribed amount of KetoCal to the water.
3. Cover and shake until the powder has dissolved.
4. Once prepared, the formula should be stored in a refrigerator and kept no longer than 24 hours.
5. Shake or stir immediately before serving. For oral feeding, KetoCal is best served chilled.

#### KetoCal 4:1 LQ

1. Shake vigorously for at least 5 seconds before use.
2. For oral feeding, best served chilled and consumed immediately.
3. For tube feeding, hang time not to exceed 4 hours. It is recommended that the tube is flushed with lukewarm water (approximately 98°F or 37°C) between each feed.
4. Do not boil or microwave formula.
5. Do not freeze. Recommended storage between 39°F-77°F (4°C-25°C).
6. Once opened, use immediately or refrigerate promptly at 39°F/4°C or less and use within 24 hours.

### Mixing Guide:

#### KetoCal 4:1 Powder

To obtain the recommended dilution of 4 parts water to 1 part powder, mix the following amounts of water and powder:

Water	Powder	Final Volume	Kcal/mL
80 mL	20 g	100 mL	1.44
400 mL	100 g	500 mL	1.44
800 mL	200 g	1000 mL	1.44

A gram scale is necessary for proper preparation of formula.

#### KetoCal 3:1 Powder

Dilution to be determined by medical prescription:

Dilution	Powder	Water	Final Volume
20 kcal/fl.oz.	9.5 g	90 mL	100 mL
24 kcal/fl.oz.	11.4 g	89 mL	100 mL
30 kcal/fl.oz.	14.3 g	86 mL	100 mL

A gram scale is necessary for proper preparation of formula.

### Storage:

Store unopened product in a cool, dry place and away from sunlight.

**KetoCal 3:1 and 4:1 Powders:** Once can has been opened, reseal and store in a cool, dry place (not in a refrigerator) and use within one month.

## Household Measurements:

It is recommended that KetoCal be measured by using a gram scale due to the need for accuracy in managing the ketogenic diet.

### Volume Prescription:

Calories/day	Calories/mo.	KetoCal 4:1		KetoCal 3:1		KetoCal 4:1 LQ – Vanilla	
		Cans/mo.	Cases/mo.*	Cans/mo.	Cases/mo.*	Tetra paks/mo.	Cases/mo.*
500	15,000	7	2	8	2	42	2
600	18,000	9	2	9	2	51	2
700	21,000	10	2	11	2	59	2
800	24,000	12	2	12	2	67	3
900	27,000	13	3	13	3	76	3
1,000	30,000	14	3	15	3	84	3
1,100	33,000	16	3	16	3	93	3
1,200	36,000	17	3	18	3	101	4
1,300	39,000	19	4	19	4	110	4
1,400	42,000	20	4	21	4	118	4
1,500	45,000	21	4	22	4	126	5

\* Number of cases per month is rounded up to the nearest whole number.

### Caution:

- 1 Do not boil or microwave formula.
- 2 Monitor for hypoglycemia, renal stones, hyperlipidemia, and adequate growth.

USE ONLY UNDER STRICT MEDICAL SUPERVISION

NOT FOR PARENTERAL USE

Intake to be determined by a medical professional and is dependent on the age, body weight, and medical condition of the patient.





## Specialized Elderly Care




Find more information and resources on these and all of our products at [www.NutriciaLearningCenter.com](http://www.NutriciaLearningCenter.com)



## Pro-Stat Sugar Free

A sugar-free, ready-to-drink medical food providing 15 grams of enzyme-hydrolyzed, complete protein and 100 calories per 1 fl oz.

 This formulation is only available in the US.

### Main Features:

- Clinically shown to promote wound healing
- 15 grams complete protein in 1 fl oz: Hydrolyzed for rapid absorption & efficient utilization
- No sugar added
- Low volume to help with diet adherence
- Ready to drink: Use orally or for tube feeding
- Available in 4 great flavors in bottles or single-serve units
- Viscosity: Nectar-like
- Lactose-, gluten-, and soy-free
- Kosher

### Indications:

- Wound/pressure ulcer (Stage I & II)
- At risk for pressure ulcer
- Protein-energy malnutrition (PEM)
- Unintentional weight loss
- Low serum protein levels

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Unit
10064 - Cherry (bottle)	26974-0410-07	B4155	6 x 30 oz	3000
30064 - Citrus (bottle)	26974-0300-64	B4155	6 x 30 oz	3000
50064 - Grape (bottle)	26974-0410-50	B4155	6 x 30 oz	3000
40064 - Vanilla (bottle)	26974-0410-40	B4155	6 x 30 oz	3000
10464-U - Cherry (unit)	26974-0410-17	B4155	4 x 24 x 1 oz	100
30464-U - Citrus (unit)	26974-0410-64	B4155	4 x 24 x 1 oz	100
50464-U - Grape (unit)	26974-0410-52	B4155	4 x 24 x 1 oz	100
40464-U - Vanilla (unit)	26974-0410-42	B4155	4 x 24 x 1 oz	100

### Nutrition Information:

Nutrients	Per 30 mL (2 Tbsp)
Calories	100
Protein, g	15.0
Fat, g	0
Carbohydrate, g	10.0
<b>Minerals</b>	
Sodium, mg	50.0
Potassium, mg	20.0
Phosphorus, mg	50.0

### Ingredients:

Hydrolyzed Collagen Protein, Water, Glycerin, Malic Acid. Contains 2% or less: Potassium Sorbate (to help protect flavor), Sodium Benzoate (to help protect flavor), Sucralose, L-Tryptophan, Phosphoric Acid.

**Cherry** flavored version also contains: Natural flavors.

**Citrus, Grape and Vanilla** flavored versions also contain: Natural and Artificial flavors.

### Administration:

Healthcare professionals should determine dosage based on condition, estimated need, and dietary intake.

Suggested dosage: 1-3 servings per day.

### Oral Feeding:

Can be mixed with any hot or cold prepared beverages or food.

### Tube Feeding:

1. Flush feeding tube with 30-60 mL water.
2. Measure and administer the prescribed dose via syringe.
3. Dilute Pro-Stat with 30-60 mL water.
4. Administer Pro-Stat as you would a medication, straight into the enteral tube.
5. Flush the tube with additional 30-60 mL water.

### Precautions

- Do not add Pro-Stat to an open or closed system of the tube feeding formula or into a container of enteral feeding.
- Do not add medications to Pro-Stat, even after dilution.

### Storage:


- **Do not refrigerate.** Refrigeration causes gelling.
- Store and serve at room temperature.
- If product is stored under 30° F it may thicken; return to normal consistency at room temperature for 6-8 hours.
- Excessive heat could cause product to expand.
- Discard three (3) months after opening. Record date opened on bottom of container.





## Pro-Stat Sugar Free AWC (Advanced Wound Care)

A ready-to-drink medical food providing 17 grams of enzyme-hydrolyzed, complete protein and 100 calories with added arginine, citrulline, cystine, vitamin C and zinc per 1 fl oz.

 This formulation is only available in the US.

### Main Features:

- Clinically shown to promote wound healing
- Contains arginine, citrulline, cystine, vitamin C and zinc
- 17 grams complete protein in 1 fl oz: Hydrolyzed for rapid absorption & efficient utilization
- High in conditionally indispensable amino acids (CIAA) needed for recovery
- No sugar added
- Low volume to help with diet adherence
- Ready to drink: Use orally or for tube feeding
- Available in 2 great flavors in bottles or single-serve units
- Viscosity: Honey-like
- Lactose-, gluten-, and soy-free
- Kosher

### Indications:

- Stage III & IV pressure ulcers
- Multiple pressure ulcers
- Wounds
  - Surgical
  - Diabetic
  - Venous stasis
  - Burns

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Unit
40130 - Wild Cherry Punch (bottle)	26974-0410-30	B4155	4 x 30 oz	3000
40230 - Citrus Splash (bottle)	26974-0410-23	B4155	4 x 30 oz	3000
40130-U - Wild Cherry Punch (unit)	26974-0410-31	B4155	4 x 24 x 1 oz	100
40230-U - Citrus Splash (unit)	26974-0410-67	B4155	4 x 24 x 1 oz	100

### Nutrition Information:

Nutrients	Per 30 mL (2 Tbsp)
Calories	100
Protein, g	17.0
L-Arginine, g	3.3
Fat, g	0
Carbohydrate, g	7.0
<b>Vitamins</b>	
Vitamin C, mg	175
<b>Minerals</b>	
Zinc, mg	10.0
Sodium, mg	50.0
Potassium, mg	20.0
Phosphorus, mg	50.0

### Ingredients:

Hydrolyzed Collagen Protein, Water, Glycerin, Malic Acid, L-Arginine. Contains 2% or less: L-Citrulline, L-Tryptophan, L-Cysteine HCL, Phosphoric Acid, Ascorbic Acid, Potassium Sorbate (to help protect flavor), Sodium Benzoate (to help protect flavor), Sucralose, Zinc Sulfate.

**Cherry** flavored version also contains: Natural flavors.

**Citrus** flavored version also contains: Natural and Artificial Flavors.

### Administration:

Healthcare professionals should determine dosage based on condition, estimated need, and dietary intake.

Suggested dosage: 1-3 servings per day.

### Oral Feeding:

Can be mixed with any hot or cold prepared beverages or food.

### Tube Feeding:

1. Flush feeding tube with 30-60 mL water.
2. Measure and administer the prescribed dose via syringe.
3. Dilute Pro-Stat with 30-60 mL water.
4. Administer Pro-Stat as you would a medication, straight into the enteral tube.
5. Flush the tube with additional 30-60 mL water.

### Precautions

- This product contains zinc and is not recommended for more than six weeks of continual use without physician recommendation.
- Do not add Pro-Stat to an open or closed system of the tube feeding formula or into a container of enteral feeding.
- Do not add medications to Pro-Stat, even after dilution.

### Storage:

- **Do not refrigerate.** Refrigeration causes gelling.
- Store and serve at room temperature.
- If product is stored under 30° F it may thicken; return to normal consistency at room temperature for 6-8 hours.
- Excessive heat could cause product to expand.
- Discard three (3) months after opening. Record date opened on bottom of container.





## Other Nutritionals




Find more information and resources on these and all of our products at [www.NutriciaLearningCenter.com](http://www.NutriciaLearningCenter.com)



## Monogen

A milk protein-based powder, low in fat, and high in medium chain triglycerides (MCT).  
A medical food for individuals over 1 year of age.

 This formulation is available in the US and Canada.

### Main Features:

- 24% of calories from fat
- 80% of fat as MCT
- Excellent ratio of essential fatty acids (n6:n3 ratio of 6.2:1)
- Contains complete profile of vitamins and minerals including trace elements
- Osmolality (mOsm/kg):  
Dilution  
22 kcal/fl oz: 250 mOsm/kg  
30 kcal/fl oz: 370 mOsm/kg
- Displacement: 0.67 mL/g

### Indications:

- Long chain fatty acid oxidation disorders
- Hyperlipoproteinemia type 1
- Chylolothorax
- Intestinal lymphangiectasia
- Intractable malabsorption with steatorrhea
- Post-operative feeding in short bowel syndrome
- Other lipid and lymphatic disorders where a low fat, high MCT diet is indicated

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
667097	49735-0170-97	B4150 or B4158	6 x 400 g (14 oz)	1680

WIC<sup>+</sup> eligible in all States.

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 100 g
Calories	420
Protein Equivalent, g	12.5
Fat, g	11.0
LCT	20%
MCT	80%
Linoleic Acid, mg	530
$\alpha$ -Linolenic Acid, mg	80
Carbohydrate, g	68
<b>Vitamins</b>	
Vitamin A, IU (mcg R.E.)	1082 (325)
Vitamin D, IU (mcg)	264 (6.6)
Vitamin E, IU (mg $\alpha$ T.E.)	4.1 (2.75)
Vitamin K, mcg	21
Thiamin, mg	0.35
Riboflavin, mg	0.52
Vitamin B <sub>6</sub> , mg	0.4
Vitamin B <sub>12</sub> , mcg	0.86
Niacin, mg	7.4
Folic Acid, mcg	47
Pantothenic Acid, mg	1.46
Biotin, mcg	22.3
Vitamin C, mg	35
Choline, mg	56
Inositol, mg	85.7
<b>Minerals</b>	
Calcium, mg	257
Phosphorus, mg	200
Magnesium, mg	35
Iron, mg	4.2
Zinc, mg	3.3
Manganese, mg	0.33
Copper, mcg	340
Iodine, mcg	40.6
Molybdenum, mcg	21.4
Chromium, mcg	10
Selenium, mcg	10.8
Sodium, mg	200
Potassium, mg	360
Chloride, mg	214

### Ingredients:

Corn Syrup Solids, Whey Protein Concentrate (milk, soy lecithin), Fractionated Coconut Oil, Calcium Phosphate Dibasic, Tripotassium Citrate, Walnut Oil, Citric Acid Esters of Mono- and Diglycerides of Fatty Acids, Trisodium Citrate, L-Threonine, Magnesium Chloride, Sodium Chloride, L-Phenylalanine, Choline Bitartrate, L-Lysine Acetate, L-Tyrosine, L-Glutamine, L-Isoleucine, L-Valine, L-Leucine, M-Inositol, L-Ascorbic Acid, L-Histidine, L-Methionine, L-Cystine, Taurine, Ferrous Sulfate, Zinc Sulfate, L-Carnitine, DL-Alpha Tocopheryl Acetate, Niacinamide, Calcium-D-Pantothenate, Manganese Sulfate, Copper Sulfate, Riboflavin, Vitamin A Acetate, Pyridoxine Hydrochloride, Thiamine Hydrochloride, Sodium Molybdate, Potassium Iodide, Chromium Chloride, Folic Acid, Sodium Selenite, Phylloquinone, D-Biotin, Vitamin D<sub>3</sub>, Cyanocobalamin.

### Administration:

- Intake is determined by a medical professional and is dependent on the age, body weight and medical condition of the patient.
- Not intended for use as the sole source of nutrition. Consider supplementation of essential fatty acids and micronutrients depending on individual's needs. Not for parenteral use.

For oral or tube feeding:

1. Measure the required amount of warmed water into a container.
2. Add the prescribed amount of Monogen to the water. The scoop provided in the can measures 5 g.
3. Cover and shake until the powder has dissolved.

The following are guidelines for achieving desired concentrations:

Concentration	Powder	Water	Final Volume
22 kcal/fl oz	17.5 g (3 1/2 Scoops)	90 mL (3 fl oz)	100 mL
30 kcal/fl oz	24 g (5 Scoops)	80 mL (2 1/2 fl oz)	100 mL

Scoops are approximations only. For accuracy, use a gram scale.

- Once prepared, the formula should be stored in a refrigerator and kept no longer than 24 hours from the time of preparation. Shake or stir Monogen immediately before use.


### Storage:

Store in a cool, dry place. Once opened, use contents within one month. Replace lid firmly after use.



## Liguigen

A high energy medium chain triglyceride (MCT) emulsion for conditions where MCTs are part of dietary management, such as long-chain fatty acid oxidation disorders or conditions managed by the ketogenic diet. A medical food.

 This formulation is available in the US.

### Main Features:

- Simplifies addition of MCTs to the diet
- Emulsified for better mixing
- 50% MCT/ 50% water
- Unflavored
- High energy: 4.5 kcal/mL
- For oral or enteral use
- Can be used in beverages and foods
- **Not for parenteral use**

### Indications:

- Conditions where MCTs are part of dietary management
  - Conditions managed by the ketogenic diet
  - Long-chain fatty acid oxidation disorders
  - Chylothorax
  - Fat malabsorption
  - Short bowel syndrome

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Bottle
71957 (Case)	49735-011957	Pending	3 x 4 x 250 mL (8.5 fl oz)	1125
71957-3 (Unit)	49735-019573	Pending	4 x 250 mL (8.5 fl oz)	1125

### Nutrition Information:

Nutrients	Per 100 mL	Per 250 mL
Calories	450	1125
Protein Equivalent, g	None	None
Carbohydrate, g	None	None
Fat, g	50	125
Saturated, g	47.1	118
MCT, g	45.4	114
MCT %	96.4	
<b>Minerals</b>		
Calcium, mg	0.30	0.75
Sodium, mg	5.0	12.5
Potassium, mg	0.10	0.25
Chloride, mg	0.10	0.25

### Ingredients:

Refined Vegetable Oil (Medium Chain Triglycerides (Palm Kernel and/or Coconut Oil)), Water, Citric Acid Esters of Mono and Diglycerides (Emulsifier), Mono and Diglycerides (Emulsifier), Citric Acid.

### Administration:

- The quantity of Liguigen should be determined by a healthcare professional only and is dependent on the age, bodyweight and medical condition of the patient. Liguigen may require dilution for children under 5 years of age.

### Precautions:

- Use under medical supervision.
- Not suitable for use as a sole source of nutrition.
- Not for parenteral use.
- **Shake well before use.**


### Storage:

- Recommended storage between 39°-77°F (4°-25°C).
- Once opened store in a refrigerator and use within 14 days.
- Always replace the bottle lid after use.



## Super Soluble Duocal

A powdered medical food\* providing fat and carbohydrate for increased caloric intake.

 This formulation is available in the US and Canada.

### Main Features:

- Calorically dense – 1 scoop (5 g) provides 25 kcal
- Tolerance – unique dual energy source of fat and carbohydrate
- Super soluble without altering the taste or texture of foods and beverages
- **Not for parenteral use**
- Milk protein-free
- Osmolality (1:3 dilution): 310 mOsm/kg
- 1 gram contributes approximately 0.93 mOsm when added to a solution
- PRSL of less than 0.017 mOsm/g
- Energy distribution:
 

Carbohydrate	59%
Fat (MCT 35% / LCT 65%)	41%
- Displacement 0.77 mL/g

### Indications:

- Conditions where a high energy, low fluid, low electrolytes diet is indicated
- Protein restricted diets
- Disorders of protein and amino acid metabolism
- Malabsorptive states
- Modular diets
- Catabolic states (e.g. burns, trauma, post-operative stress)
- Suitable for oral and tube feedings

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can/Sachet
118262	49735-0182-62	B4155	6 x 400 g (14.1 oz)	1968

**WIC<sup>+</sup> eligible in all States.**

For more US reimbursement information see page 191.

\* In the US, Duocal is classified as a Medical Food.

### Nutrition Information:

Nutrients	Per 100 g	Per 10 g sachet
Calories	492	49
Protein, g	None	None
Fat, g	22.3	2.2
Saturated, g	13.8	1.4
Monounsaturated, g	2.5	0.25
Polyunsaturated, g	4.8	0.48
Carbohydrate, g	72.7	7.3
<b>Minerals</b>		
Sodium, mg	≤ 20	≤ 2
Potassium, mg	≤ 5	≤ 0.5
Chloride, mg	≤ 20	≤ 2
Calcium, mg	≤ 5	≤ 0.5
Phosphorus, mg	≤ 5	≤ 0.5

### Ingredients:

Hydrolyzed Cornstarch, Blend of Refined Vegetable Oils (Corn, Coconut), Medium Chain Triglycerides (Fractionated Coconut Oil, Palm Kernel Oil), Mono and Diglycerides, Diacetyl Tartaric Acid Esters of Monoglycerides.

### Household Measures:

(all measures are unpacked)

Measure	Weight	Calories
1 Scoop	5 g	25
1 tsp	2.6 g	13
1 Tbsp	8.5 g	42
1/4 cup	30 g	148
1/2 cup	56 g	276
1 cup	117 g	576
1 sachet	10 g	49

Based on standard US dry, household measurements. All measurements are level and unpacked. Household measurements are approximations only. For accuracy use a gram scale.

(1 cup = 240 mL; 1/2 cup = 120 mL; 1/3 cup = 80 mL; 1/4 cup = 60 mL)

Displacement Factor: 0.77 mL/g

### Administration:

- Intake to be determined by a medical professional and is dependent on the age, body weight and medical condition of the patient.

For oral or tube feeding:

1. Measure the prescribed amount of Super Soluble Duocal.
2. Add powder to the required volume of liquid and/or soft food and stir continuously until the powder has dissolved.
3. Unused foods mixed with Duocal should be refrigerated and used within 24 hours. Shake or stir immediately before serving.

### Storage:


- Store unopened can at room temperature. Once opened, reseal can and store in a cool, dry place (not in refrigerator) and use within one month.





## Complete Amino Acid Mix

An unflavored, powdered mixture of essential and non-essential amino acids.

 This formulation is available in the US and Canada.

### Main Features:

- Balanced mixture of essential and non-essential amino acids
- Supplements increased protein needs in enteral formulas
- Complete Amino Acid Mix provides 4 g of protein equivalent per 5 g of powder
- Recommended feeding concentration is 5% w/v (e.g. 5 g powder to 100 mL of water)
- Best served as a chilled drink, mixed with water, fruit juices or other formulas
- Not suitable as the sole source of nutrition; micronutrients and energy must be supplied separately
- Not for parenteral use**
- Osmolality (5% w/v): 360 mOsm/kg
- Approximate displacement: 0.75 mL/g

### Indications:

- Conditions in which a nutritionally complete feed is not suitable or a modular approach is required
- Conditions where an oligoallergenic diet is indicated (e.g. individuals with intolerance to milk protein or other whole protein)
- Intractable malabsorption
- Feeding difficulties in post-operative conditions
- Chronic intestinal diseases (e.g. Crohn's disease)
- Short bowel syndrome following intestinal resection

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
10124-1	49735-0101-24	B4155	2 x 200 g (7 oz)	656

**WIC<sup>+</sup> eligible in all States.**

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 100 g
Calories	328
Protein Equivalent, g	82
Fat, g	None
Carbohydrate, g	None
<b>Amino Acids, g</b>	
L-Alanine	3.5
L-Arginine	7.66
L-Aspartic Acid	6.39
L-Cystine	2.4
L-Glutamic Acid	8.17
Glycine	6.0
L-Histidine	4.38
L-Isoleucine	5.95
L-Leucine	10.22
L-Lysine	7.55
L-Methionine	1.65
L-Phenylalanine	4.5
L-Proline	7.0
L-Serine	4.29
L-Threonine	5.0
L-Tryptophan	2.0
L-Tyrosine	4.3
L-Valine	6.5
L-Glutamine	0.7

### Ingredients:

L-Lysine L-Glutamate, L-Leucine, L-Arginine, L-Proline, L-Valine, L-Aspartic Acid, Glycine, L-Isoleucine, L-Threonine, L-Phenylalanine, L-Histidine, L-Serine, L-Tyrosine, L-Alanine, L-Cystine, L-Tryptophan, L-Methionine, L-Glutamine, L-Glutamic Acid.

### Household Measures:

(all measures are unpacked)

Measure	Weight
1/2 tsp	1.4 g
1 tsp	2.9 g
1/2 Tbsp	4.4 g
1 Tbsp	9.5 g

Based on standard US dry, household measurements. All measurements are level and unpacked. Household measurements are approximations only. For accuracy use a gram scale.

### Administration:

- Dosage should be determined by a doctor or dietitian and is dependent on the age, body weight and medical condition of the patient. Complete Amino Acid Mix must not be used as the sole source of nutrition. Micronutrients and energy must be supplied to meet nutrient needs and to ensure proper growth.
- The recommended feeding concentration is 5% w/v (e.g. 5 g powder to 100 mL of water). Per 5 g of powder, Complete Amino Acid Mix provides 4 g of protein.
- Complete Amino Acid Mix should be weighed on a scale that reads in grams. It is best served as a chilled drink, mixed with water, fruit juices or other formulas. Complete Amino Acid Mix may also be added to soft, moist foods, such as applesauce.

### Storage:


- Store in a cool, dry place. Once opened, use within one month. Always replace container lid after use.
- Once reconstituted, the prepared feed should be stored in a refrigerator and must not be kept longer than 24 hours from the time of preparation. Stir or shake immediately before serving.





## Essential Amino Acid Mix

An unflavored, powdered mixture of essential amino acids, including cystine and histidine.

 This formulation is available in the US and Canada.

### Main Features:

- Balanced mixture of essential amino acids
- Essential Amino Acid Mix provides 4 g of protein equivalent per 5 g of powder
- Recommended feeding concentration is 5% w/v (e.g. 5 g powder to 100 mL of water)
- Best served as a chilled drink, mixed with water, fruit juices or other formulas
- Not suitable as the sole source of nutrition; micronutrients and energy must be supplied separately
- **Not for parenteral use**
- Osmolality (5% w/v): 360 mOsm/kg
- Approximate displacement: 0.75 mL/g

### Indications:

- Dietary management of urea cycle disorders
- Conditions in which a nutritionally complete feed is not suitable or a modular approach is required

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Can
11490-1	49735-0114-90	B4155	2 x 200 g (7 oz)	632

**WIC<sup>+</sup> eligible in all States.**

For more US reimbursement information see page 191.

### Nutrition Information:

Nutrients	Per 100 g
Calories	316
Protein Equivalent, g	79
Fat, g	None
Carbohydrate, g	None
<b>Amino Acids, g</b>	
L-Cystine	3.78
L-Histidine	3.78
L-Isoleucine	10.4
L-Leucine	16.17
L-Lysine	13.25
L-Methionine	3.78
L-Phenylalanine	5.67
L-Threonine	11.35
L-Tryptophan	2.36
L-Tyrosine	9.46
L-Valine	14.56

### Ingredients:

L-Lysine Acetate, L-Leucine, L-Valine, L-Threonine, L-Isoleucine, L-Tyrosine, L-Phenylalanine, L-Histidine, L-Cystine, L-Methionine, L-Tryptophan.

### Household Measures:

(all measures are unpacked)

Measure	Weight
1/2 tsp	1.4 g
1 tsp	2.7 g
1/2 Tbsp	4.1 g
1 Tbsp	9.0 g

Based on standard US dry, household measurements. All measurements are level and unpacked. Household measurements are approximations only. For accuracy use a gram scale.

### Administration:

- Dosage should be determined by a doctor or dietitian and is dependent on the age, body weight and medical condition of the patient. Essential Amino Acid Mix must not be used as the sole source of nutrition. Micronutrients and energy must be supplied to meet nutrient needs and to ensure proper growth.
- The recommended feeding concentration is 5% w/v (e.g. 5 g powder to 100 mL of water). Per 5 g of powder, Essential Amino Acid Mix provides 4 g of protein.
- Essential Amino Acid Mix should be weighed on a scale that reads in grams. It is best served as a chilled drink, mixed with water, fruit juices or other formulas. It may also be added to soft, moist foods, such as applesauce.

### Storage:


- Store in a cool, dry place. Once opened, use within one month. Always replace container lid after use.
- Once reconstituted, the prepared feed should be stored in a refrigerator and must not be kept longer than 24 hours from the time of preparation. Stir or shake immediately before serving.





## Phlexy-Vits

A concentrated, powdered vitamin, mineral and trace element preparation designed to help meet the micronutrient requirements of older children (11 years and older) and adults.

 This formulation is available in the US and Canada.

### Main Features:

- One 7 g packet supplies the majority of vitamins and minerals needed to meet the DRI of individuals 11 years and older

### Indications:

- Restrictive therapeutic diets

### Ordering/Reimbursement Information:

Product Code	Reimbursement Code	HCPCS Code	Product Packaging	Calories Per Packet
10685	49735-0106-85	A9270	30 x 7 g	0.2

### Nutrition Information:

Nutrients	Per 7 g packet
Calories	0.2
Protein, g	0.02
Fat, g	None
Carbohydrate, g	0.04
<b>Vitamins</b>	
Vitamin A, IU (mcg R.E.)	2664 (800)
Vitamin D, IU (mcg)	400 (10)
Vitamin E, IU (mg $\alpha$ .T.E.)	13.5 (9)
Vitamin K, mcg	70
Thiamine, mg	1.2
Riboflavin, mg	1.4
Vitamin B <sub>6</sub> , mg	1.6
Vitamin B <sub>12</sub> , mcg	5
Niacin, mg	20
Folic Acid, mcg	700
Pantothenic Acid, mg	5
Biotin, mcg	150
Vitamin C, mg	50
<b>Minerals</b>	
Calcium, mg	1000
Phosphorus, mg	775
Magnesium, mg	300
Iron, mg	15.1
Zinc, mg	11.1
Manganese, mg	1.5
Copper, mcg	1505
Iodine, mcg	150
Molybdenum, mcg	70
Chromium, mcg	30
Selenium, mcg	75
Sodium, mg	8.8
Potassium, mg	<1.4
Chloride, mg	<0.35

### Ingredients:

Calcium Phosphate Dibasic, Magnesium Acetate, Guar Gum, L-Ascorbic Acid, Ferrous Sulfate, Dextrose, Zinc Sulfate, Nicotinamide, DL-Alpha Tocopheryl Acetate, Copper Gluconate, Calcium D-Pantothenate, Manganese Sulfate, Pyridoxine Hydrochloride, Thiamine Mononitrate, Riboflavin, Vitamin A Acetate, Folic Acid, Potassium Iodide, Sodium Molybdate, Sodium Selenite, D-Biotin, Chromium Chloride, Phylloquinone, Vitamin D<sub>3</sub>, Cyanocobalamin.

### Household Measures:

(all measures are unpacked)

Measure	Weight
1/4 tsp	0.7 g
1/2 tsp	1.4 g
1 tsp	3 g
1 Tbsp	10 g

Based on standard US dry, household measurements. All measurements are level and unpacked. Household measurements are approximations only. For accuracy use a gram scale.

### Administration:

- Mix one sachet of Phlexy-Vits with one sachet of dry powdered Phlexy-10 Drink Mix. Add a small amount of water and mix to a smooth paste. Add the remaining water to give a final volume of approximately 100 mL. Alternatively, mix one sachet of Phlexy-Vits to a smooth paste with a small amount of lemonade or fruit juice (approx. 1.5 fl oz). Dilute to a final volume of 150 mL (5 fl oz). The amount of lemonade/juice and water used will vary according to taste.

### Storage:

- Store in a cool, dry place. Once opened, a sachet should be stored in an airtight container and used within 2-3 days.





## Resources



Find more information and resources at  
[www.NutriciaLearningCenter.com](http://www.NutriciaLearningCenter.com)

The following pages include pocket-sized versions of treatment flowcharts that are available free at [www.NutriciaLearningCenter.com](http://www.NutriciaLearningCenter.com)

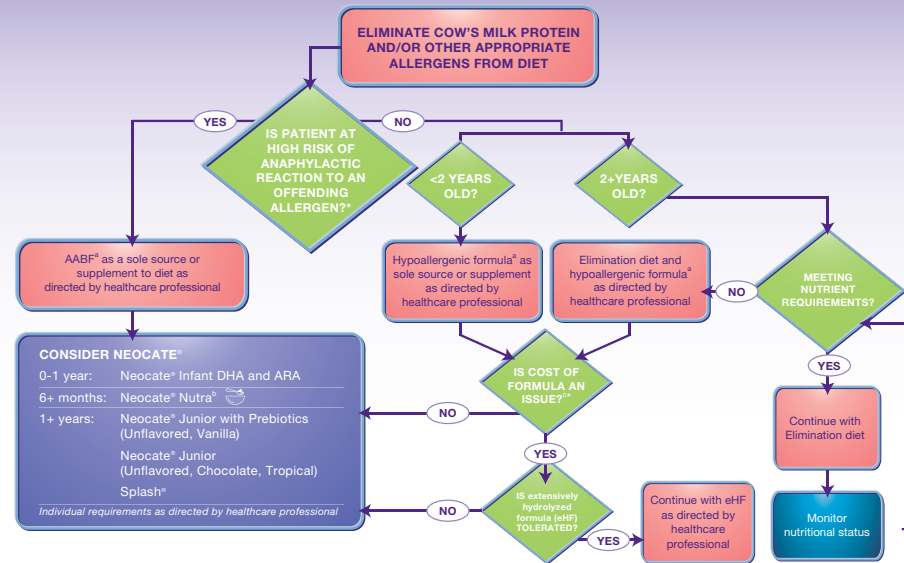
These three flow charts illustrate options for the nutrition management of conditions where elemental nutrition (Neocate) fits in. They are evidence-based tools that may be used as decision-making guides to help clinicians to determine the best way to nutritionally manage patients.

Please visit our website for free electronic copies of these and the other flow charts we offer.

Nutricia Learning Center is a unique education tool for clinicians managing patients with specialized nutritional requirements. This set of valuable resources and clinical tools includes:

- Recorded Webinars (CEU eligible)
- Healthcare Professional Tools
- Patient Education Tools
- Reference Library
- Case Studies

## Cow's Milk Allergy / Multiple Food Protein Intolerance

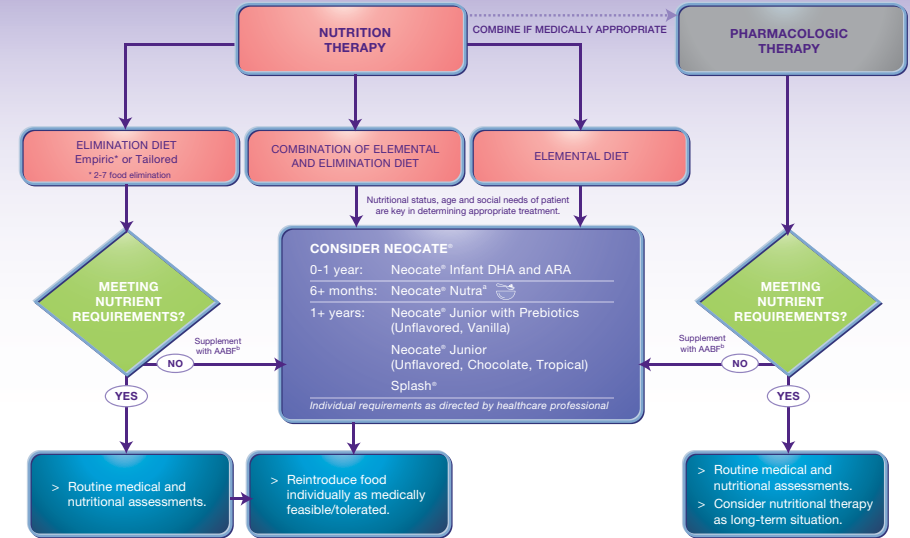


# Cow's Milk Allergy / Multiple Food Protein Intolerance

**References:**

1. de Boissieu et al. Allergy to Extensively Hydrolyzed Cow Milk Proteins in Infants: Identification and Treatment with an Amino Acid-Based Formula. *J Pediatr* 1997;131:744-747.
2. de Boissieu et al. Allergy to Extensively Hydrolyzed Cow's Milk Proteins in Infants: Safety and Duration of Amino Acid-Based Formula. *J Pediatr* 2002;141:271-73.
3. de Boissieu et al. Time Course of Allergy to Extensively Hydrolyzed Cow's Milk Proteins in Infants. *J Pediatr* 2000;136:119 – 20.
4. Flocchi et al. Diagnosis and Rationale for Action against Cow's Milk Allergy (DRACMA): A summary report. *J Allergy Clin Immunol* 2010;1119 -1128.
5. Sampson et al. Safety of An Amino Acid-Derived Infant Formula in Children Allergic to Cow Milk. *Pediatrics* 1992;90:463 – 465.
6. Vanderhoof et al. Intolerance to Protein Hydrolyzed Infant Formulas: an Under Recognized cause of Gastrointestinal Symptoms in Infants *J Pediatr* 1997;131:741-744.

# Eosinophilic Esophagitis



<sup>a</sup> Neocate Nutra is a supplemental semi-solid elemental food for 6+ months  
<sup>b</sup> AABF – Amino Acid-Based Formula

# Eosinophilic Esophagitis

## References:

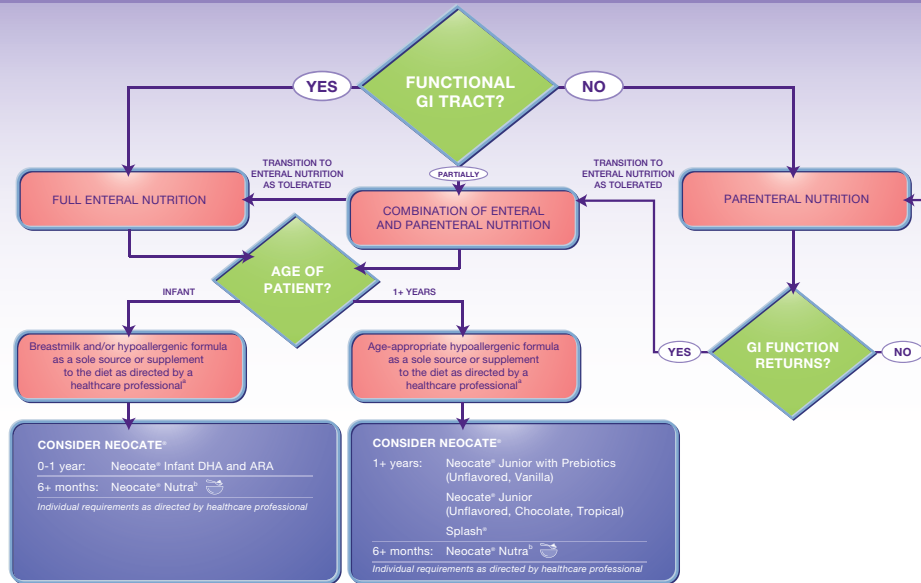
1. American Dietetic Association. Pediatric Nutrition Care Manual®. Eosinophilic Esophagitis <http://www.peds.nutritioncaremanual.org> Accessed July 6, 2011.
2. Boyce et al. Guidelines for the Diagnosis and Management of Food Allergy in the United States: Report of the NIAID-Sponsored Expert Panel. *J Allergy Clin Immunol*.2010;S1 – 58.
3. Feuling and Noel. Medical and Nutritional Management of Eosinophilic Esophagitis in Children. *Nutr Clin Pract* 2010;(25):166 – 174.
4. Haas. Development, Mealtime Dynamics and Nutrition: Use of an Amino Acid-Based Semi-Solid Supplement in a Child with Eosinophilic Esophagitis. *Nutr Clin Pract* 2011;(26)19.
5. Liacouras et al. Eosinophilic Esophagitis: Updated Consensus Recommendations for Children and Adults. *J Allergy Clin Immunol* 2011;(128) 3 – 20 e6. Epub 2011 Apr 7.
6. Putnam. Evaluation of the Child who has Eosinophilic Esophagitis. In Furuta GT, Atkins D & Alam R, eds. *Eosinophilic Gastrointestinal Diseases, Immunol Allergy Clin North Am Philadelphia, PA: Elsevier* 2009; 19–27.



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# Short Bowel Syndrome



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- \* Hypoallergenic formula includes AABF (Amino Acid-Based Formula) and eHF (Extensively Hydrolyzed Formula)
- † Neocate Nutra is a supplemental semi-solid elemental food for 6+ months



## Short Bowel Syndrome

### References:

1. Andorsky et al. Nutritional and Other Postoperative Management of Neonates with Short Bowel Syndrome Correlates with Clinical Outcomes. *J Pediatr* 2001;139:27-33.
2. Becker. Cow's Milk Allergy in a Preterm Infant: A Case Presentation *ICAN: Infant, Child, & Adolescent Nutrition* 2009;214 - 219.
3. Bines et al. Reducing Parenteral Requirement in Children with Short Bowel Syndrome: Impact of an Amino Acid-Based Complete Infant Formula. *J Pediatr Gastroenterol Nutr* 1998;26:123-8.
4. De Greef et al. The Influence of Neocate in Paediatric Short Bowel Syndrome on PN Weaning. *J Nutr Metab* 2010; pii: 297575. Epub 2010 May 31.



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## Reimbursement

### WIC:

‡WIC is a registered service mark of the U.S. Department of Agriculture for USDA's Special Supplemental Nutrition Program for Women, Infants and Children.

*WIC eligible* means that a product has been approved at the Federal level and, therefore, may be included on a State agency's authorized food list if the State agency so chooses.

Each WIC State agency determines its own allowed formula list. Contact your State WIC office to determine the availability of a specific WIC eligible Nutricia product in your area – <http://www.fns.usda.gov/wic>.

### US Reimbursement Codes:

US Reimbursement codes listed in this Guide have been submitted by Nutricia North America to US data warehouses based on the format established by the data warehouses. These codes are not NDC numbers.

### Other US Reimbursement Information:

For additional information on reimbursement of Nutricia North America's products in the United States, please contact us at (800) 365-7354 or visit our websites:



[www.Nutricia-NA.com](http://www.Nutricia-NA.com)



[www.Neocate.com](http://www.Neocate.com)

## Resources

Dietary Reference Intakes (DRIs): Recommended Dietary Allowances and Adequate Intakes, Total Water, Macro-Nutrients, Vitamins and Elements

Food and Nutrition Board, Institute of Medicine, National Academies (1997-2005)

**\* Note:** The tables (taken from the DRI reports, see [www.nap.edu](http://www.nap.edu)) present Recommended Dietary Allowances (RDAs) in **bold type** and Adequate Intakes (AIs) in ordinary type followed by an asterisk (\*). RDAs and AIs may both be used as goals for individual intake. RDAs are set to meet the needs of almost all (97 to 98 percent) individuals in a group. For healthy breastfed infants, the AI is the mean intake. The AI for other life stage and gender groups is believed to cover needs of all individuals in the group, but lack of data or uncertainty in the data prevent being able to specify with confidence the percentage of individuals covered by this intake.

<sup>a</sup> Total Water includes all water contained in food, beverages, and drinking water

<sup>b</sup> Based on g protein per kg body weight:

- 1.52 g/kg/day for infants 0-6 months
- 1.5 g/kg/day for infants 7-12 months
- 1.1 g/kg/day for 1-3
- 0.95 g/kg/day for 4-13 y
- 0.85 g/kg/day for 14-18 y
- 0.80 g/kg/day for adults
- 1.1 g/kg/day for pregnant (using pre-pregnancy weight) and lactating women

## Macronutrients

Life Stage Group	Total Water <sup>a</sup> (L/d)	Carbohydrate (g/d)	Total Fiber (g/d)	Fat (g/d)	Linoleic Acid (g/d)	$\alpha$ -Linolenic Acid (g/d)	Protein (g/d)
<b>Infants</b>							
0-6 mo	0.7*	60*	ND	31*	4.4*	0.5*	9.1*
7-12 mo	0.8*	95*	ND	30*	4.6*	0.5*	<b>11.0+</b>
<b>Children</b>							
1-3 y	1.3*	<b>130</b>	19*	ND	7*	0.7*	<b>13</b>
4-8 y	1.7*	<b>130</b>	25*	ND	10*	0.9*	<b>19</b>
<b>Males</b>							
9-13 y	2.4*	<b>130</b>	31*	ND	12*	1.2*	<b>34</b>
14-18 y	3.3*	<b>130</b>	38*	ND	16*	1.6*	<b>52</b>
19-30 y	3.7*	<b>130</b>	38*	ND	17*	1.6*	<b>56</b>
31-50 y	3.7*	<b>130</b>	38*	ND	17*	1.6*	<b>56</b>
51-70 y	3.7*	<b>130</b>	30*	ND	14*	1.6*	<b>56</b>
>70 y	3.7*	<b>130</b>	30*	ND	14*	1.6*	<b>56</b>
<b>Females</b>							
9-13 y	2.1*	<b>130</b>	26*	ND	10*	1.0*	<b>34</b>
14-18 y	2.3*	<b>130</b>	26*	ND	11*	1.1*	<b>46</b>
19-30 y	2.7*	<b>130</b>	25*	ND	12*	1.1*	<b>46</b>
31-50 y	2.7*	<b>130</b>	25*	ND	12*	1.1*	<b>46</b>
51-70 y	2.7*	<b>130</b>	21*	ND	11*	1.1*	<b>46</b>
>70 y	2.7*	<b>130</b>	21*	ND	11*	1.1*	<b>46</b>
<b>Pregnancy</b>							
14-18 y	3.0*	<b>175</b>	28*	ND	13*	1.4*	<b>71</b>
19-30 y	3.0*	<b>175</b>	28*	ND	13*	1.4*	<b>71</b>
31-50 y	3.0*	<b>175</b>	28*	ND	13*	1.4*	<b>71</b>
<b>Lactation</b>							
14-18 y	3.8*	<b>210</b>	29*	ND	13*	1.3*	<b>71</b>
19-30 y	3.8*	<b>210</b>	29*	ND	13*	1.3*	<b>71</b>
31-50 y	3.8*	<b>210</b>	29*	ND	13*	1.3*	<b>71</b>

## Vitamins

Life Stage Group	Vitamin A (mcg/d)	Vitamin D (mcg/d)	Vitamin E (mg/d)	Vitamin K (mcg/d)	Thiamin (mg/d)	Riboflavin (mg/d)	Niacin (mg/d)	Vitamin B <sub>6</sub> (mg/d)	Folate (mcg/d)	Vitamin B <sub>12</sub> (mcg/d)	Pantothenic Acid (mg/d)	Biotin (mcg/d)	Choline (mg/d)	Vitamin C (mg/d)
<b>Infants</b>														
0-6 mo	400*	10*	4*	2.0*	0.2*	0.3*	2*	0.1*	65*	0.4*	1.7*	5*	125*	40*
7-12 mo	500*	10*	5*	2.5*	0.3*	0.4*	4*	0.3*	80*	0.5*	1.8*	6*	150*	50*
<b>Children</b>														
1-3 y	<b>300</b>	<b>15</b>	<b>6</b>	30*	<b>0.5</b>	<b>0.5</b>	<b>6</b>	<b>0.5</b>	<b>150</b>	<b>0.9</b>	2*	8*	200*	<b>15</b>
4-8 y	<b>400</b>	<b>15</b>	<b>7</b>	55*	<b>0.6</b>	<b>0.6</b>	<b>8</b>	<b>0.6</b>	<b>200</b>	<b>1.2</b>	3*	12*	250*	<b>25</b>
<b>Males</b>														
9-13 y	<b>600</b>	<b>15</b>	<b>11</b>	60*	<b>0.9</b>	<b>0.9</b>	<b>12</b>	<b>1.0</b>	<b>300</b>	<b>1.8</b>	4*	20*	375*	<b>45</b>
14-18 y	<b>900</b>	<b>15</b>	<b>15</b>	75*	<b>1.2</b>	<b>1.3</b>	<b>16</b>	<b>1.3</b>	<b>400</b>	<b>2.4</b>	5*	25*	550*	<b>75</b>
19-30 y	<b>900</b>	<b>15</b>	<b>15</b>	120*	<b>1.2</b>	<b>1.3</b>	<b>16</b>	<b>1.3</b>	<b>400</b>	<b>2.4</b>	5*	30*	550*	<b>90</b>
31-50 y	<b>900</b>	<b>15</b>	<b>15</b>	120*	<b>1.2</b>	<b>1.3</b>	<b>16</b>	<b>1.3</b>	<b>400</b>	<b>2.4</b>	5*	30*	550*	<b>90</b>
51-70 y	<b>900</b>	<b>15</b>	<b>15</b>	120*	<b>1.2</b>	<b>1.3</b>	<b>16</b>	<b>1.7</b>	<b>400</b>	<b>2.4</b>	5*	30*	550*	<b>90</b>
>70 y	<b>900</b>	<b>20</b>	<b>15</b>	120*	<b>1.2</b>	<b>1.3</b>	<b>16</b>	<b>1.7</b>	<b>400</b>	<b>2.4</b>	5*	30*	550*	<b>90</b>
<b>Females</b>														
9-13 y	<b>600</b>	<b>15</b>	<b>11</b>	60*	<b>0.9</b>	<b>0.9</b>	<b>12</b>	<b>1.0</b>	<b>300</b>	<b>1.8</b>	4*	20*	375*	<b>45</b>
14-18 y	<b>700</b>	<b>15</b>	<b>15</b>	75*	<b>1.0</b>	<b>1.0</b>	<b>14</b>	<b>1.2</b>	<b>400</b>	<b>2.4</b>	5*	25*	400*	<b>65</b>
19-30 y	<b>700</b>	<b>15</b>	<b>15</b>	90*	<b>1.1</b>	<b>1.1</b>	<b>14</b>	<b>1.3</b>	<b>400</b>	<b>2.4</b>	5*	30*	425*	<b>75</b>
31-50 y	<b>700</b>	<b>15</b>	<b>15</b>	90*	<b>1.1</b>	<b>1.1</b>	<b>14</b>	<b>1.3</b>	<b>400</b>	<b>2.4</b>	5*	30*	425*	<b>75</b>
51-70 y	<b>700</b>	<b>15</b>	<b>15</b>	90*	<b>1.1</b>	<b>1.1</b>	<b>14</b>	<b>1.5</b>	<b>400</b>	<b>2.4</b>	5*	30*	425*	<b>75</b>
>70 y	<b>700</b>	<b>20</b>	<b>15</b>	90*	<b>1.1</b>	<b>1.1</b>	<b>14</b>	<b>1.5</b>	<b>400</b>	<b>2.4</b>	5*	30*	425*	<b>75</b>
<b>Pregnancy</b>														
14-18 y	<b>750</b>	<b>15</b>	<b>15</b>	75*	<b>1.4</b>	<b>1.4</b>	<b>18</b>	<b>1.9</b>	<b>600</b>	<b>2.6</b>	6*	30*	450*	<b>80</b>
19-30 y	<b>770</b>	<b>15</b>	<b>15</b>	90*	<b>1.4</b>	<b>1.4</b>	<b>18</b>	<b>1.9</b>	<b>600</b>	<b>2.6</b>	6*	30*	450*	<b>85</b>
31-50 y	<b>770</b>	<b>15</b>	<b>15</b>	90*	<b>1.4</b>	<b>1.4</b>	<b>18</b>	<b>1.9</b>	<b>600</b>	<b>2.6</b>	6*	30*	450*	<b>85</b>
<b>Lactation</b>														
14-18 y	<b>1,200</b>	<b>15</b>	<b>19</b>	75*	<b>1.4</b>	<b>1.6</b>	<b>17</b>	<b>2.0</b>	<b>500</b>	<b>2.8</b>	7*	35*	550*	<b>115</b>
19-30 y	<b>1,300</b>	<b>15</b>	<b>19</b>	90*	<b>1.4</b>	<b>1.6</b>	<b>17</b>	<b>2.0</b>	<b>500</b>	<b>2.8</b>	7*	35*	550*	<b>120</b>
31-50 y	<b>1,300</b>	<b>15</b>	<b>19</b>	90*	<b>1.4</b>	<b>1.6</b>	<b>17</b>	<b>2.0</b>	<b>500</b>	<b>2.8</b>	7*	35*	550*	<b>120</b>



## Minerals

Life Stage Group	Calcium (mg/d)	Phosphorus (mg/d)	Magnesium (mg/d)	Fluoride (mg/d)	Selenium (mcg/d)	Chromium (mcg/d)	Copper (mcg/d)	Iodine (mcg/d)	Iron (mg/d)	Manganese (mg/d)	Molybdenum (mcg/d)	Zinc (mg/d)
<b>Infants</b>												
0-6 mo	200*	100*	30*	0.01*	15*	0.2*	200*	110*	0.27*	0.003*	2*	2*
7-12 mo	260*	275*	75*	0.5*	20*	5.5	220*	130*	11	0.6*	3*	3
<b>Children</b>												
1-3 y	700	460	80	0.7*	20	11*	340	90	7	1.2*	17	3
4-8 y	1,000	500	130	1*	30	15*	440	90	10	1.5*	22	5
<b>Males</b>												
9-13 y	1,300	1,250	240	2*	40	25*	700	120	8	1.9*	34	8
14-18 y	1,300	1,250	410	3*	55	35*	890	150	11	2.2*	43	11
19-30 y	1,000	700	400	4*	55	35*	900	150	8	2.3*	45	11
31-50 y	1,000	700	420	4*	55	35*	900	150	8	2.3*	45	11
51-70 y	1,000	700	420	4*	55	30*	900	150	8	2.3*	45	11
> 70 y	1,200	700	420	4*	55	30*	900	150	8	2.3*	45	11
<b>Females</b>												
9-13 y	1,300	1,250	240	2*	40	21*	700	120	8	1.6*	34	8
14-18 y	1,300	1,250	360	3*	55	24*	890	150	15	1.6*	43	9
19-30 y	1,000	700	310	3*	55	25*	900	150	18	1.8*	45	8
31-50 y	1,000	700	320	3*	55	25*	900	150	18	1.8*	45	8
51-70 y	1,200	700	320	3*	55	20*	900	150	8	1.8*	45	8
> 70 y	1,200	700	320	3*	55	20*	900	150	8	1.8*	45	8
<b>Pregnancy</b>												
14-18 y	1,300	1,250	400	3*	60	29*	1,000	220	27	2.0+*	50	12
19-30 y	1,000	700	350	3*	60	30*	1,000	220	27	2.0+*	50	11
31-50 y	1,000	700	360	3*	60	30*	1,000	220	27	2.0+*	50	11
<b>Lactation</b>												
14-18 y	1,300	1,250	360	3*	70	44*	1,300	290	10	2.6*	50	13
19-30 y	1,000	700	310	3*	70	45*	1,300	290	9	2.6*	50	12
31-50 y	1,000	700	320	3*	70	45*	1,300	290	9	2.6*	50	12

## Acceptable Macronutrient Distribution Ranges

Macronutrient	Range (percent of energy)		
	Children, 1-3 y	Children, 4-18 y	Adults
Fat	30 - 40	25 - 35	20 - 35
n-6 polyunsaturated fatty acids* (linoleic acid)	5 - 10	5 - 10	5 - 10
n-3 polyunsaturated fatty acids* (α-linolenic acid)	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2
Carbohydrate	45 - 65	45 - 65	45 - 65
Protein	5 - 20	10 - 30	10 - 35

\* Approximately 10% of the total can come from longer-chain n-3 or n-6 fatty acids.



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