

VITALITY MIX

NORTH CENTURY PHARMACY

Clinical Applications

- Supports Natural Detoxification Mechanisms*
- Supports Gastrointestinal Health*
- Supports a Balanced Cytokine Profile*
- Lactose-Free Vegan Protein Source*

***Vitality Mix** is a comprehensive, monk-fruit-extract-sweetened, low-allergy-potential dietary supplement designed to support gastrointestinal (GI) function and balanced detoxification. It features Vegan Protein Blend, North Century Pharmacy's proprietary amino acid and pea/rice protein blend; Aminogen®, to facilitate protein absorption; phytonutrients; mineral amino acid chelates; and activated B vitamins, including Quatrefolic® and methylcobalamin. In conjunction with a modified elimination diet, Vitality Mix addresses GI and hepatic function as well as eicosanoid balance and cytokine metabolism. This formula is suitable for vegans.**

All North Century Pharmacy Formulas Meet or Exceed cGMP Quality Standards

Discussion

Vitality Mix is now sweetened with a natural sweetener extracted from monk fruit. This generally recognized as safe (GRAS) monk-fruit extract offers a high-quality sweetness and flavor without the bitter aftertaste associated with some natural sweeteners.

Like North Century Pharmacy's other Vitality Mix formulas, Vitality Mix Sugar- & Stevia-Free[†] contains macro- and micronutrients, as well as a host of ingredients (some patented or proprietary) that support fatty acid metabolism, gastrointestinal health, and healthy eicosanoid and cytokine metabolism. Activated cofactors support mitochondrial energy production needed for biotransformation and detoxification. This formula's ingredients help moderate phase I detoxification, upregulate and support phase II pathways, and provide antioxidant support as well.*

Protein Metabolism

Vegan Protein Blend is North Century Pharmacy's proprietary blend of pea protein isolate and rice protein concentrate, L-glutamine, glycine, and taurine. Generation of glutathione and sulfation cofactors—vital for phase II conjugation—requires an array of amino acids. The combination of pea protein and rice protein, containing a complement of amino acids, achieves an amino acid score of 100%. Glutamine, a conditionally essential and versatile amino acid with two nitrogen moieties, is crucial to nitrogen metabolism and helps maintain healthy liver tissue and function.^[1,2] The amino acid glycine is needed for bile synthesis, phase II detoxification, and glutathione production. Taurine, a derivative of the sulfur-containing amino acid cysteine, is also important for synthesis of bile salts and helps stabilize cell membranes.*

Gastrointestinal Support

Ginger root, included to support healthy digestion such as the release of bile from the gallbladder, acts at several sites to moderate PGE(2) production and support the normal response to inflammation.^[3] Fiber (from inulin and flaxseeds) supports production of short-chain fatty acids as well as a healthy intestinal flora. **MeadowPure™**, an organic flaxseed complex, possesses excellent oxidative stability, supports antioxidant activity, and provides lignins, soluble fiber, and omega-3 and omega-6 essential fatty acids.^[4] **Glutamine** plays a key role in healthy intestinal cell proliferation and gut barrier integrity, immune function, and normal tissue healing.*^[1,2]

Detoxification Support

Green tea catechins not only support antioxidant activity but also appear to act as modulators of phase I and phase II detoxification.^[5] **Choline** is present to support lipid metabolism in the liver and can be converted to betaine, a methyl donor.*^[6]

The active, bioavailable form of **B vitamins** (pyridoxal-5'-phosphate (B6), 5-methyltetrahydrofolate (folate), methylcobalamin (B12)) and glycine all support amino acid conjugation and are vital for the detoxification of xenobiotics and xenoestrogens. 5-methyltetrahydrofolate (5-MTHF), methylcobalamin, betaine, and **methylsulfonylmethane (MSM)** are present to support methylation and detoxification. 5-MTHF supports healthy folate nutrition, especially in individuals with variations in folate metabolism. In Vitality Mix, 5-MTHF is provided as Quatrefolic® for enhanced stability, solubility, and bioavailability.*^[7]

Preventium®, a patented form of potassium hydrogen d-glucarate, supports glucuronidation. Sulfation is supported by **MSM** and **sodium sulfate**. Acetylation is supported by **d-calcium pantothenate**, pyridoxal-5'-phosphate, and magnesium. Several minerals in Vitality Mix are provided as Albion® mineral chelates and TRAACS® mineral amino acid chelates for enhanced gastrointestinal absorption and bioavailability.*^[8]

Antioxidant Support and Cytokine Balance

Bioflavonoids, quercetin, rutin, and curcumin support antioxidant activity, counter free radicals, and support healthy eicosanoid and cytokine metabolism.^[9,10] Curcumin has a long history of use for its support of a normal, healthy response to inflammation.^[11] **N-acetyl-cysteine (NAC)** stimulates glutathione synthesis, enhances glutathione-S-transferase activity, and promotes detoxification.^[12] **Selenium glycinate** provides support for glutathione metabolism and antioxidant protection.*

***These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.**

Distributed By: North Century Pharmacy
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NORTH CENTURY
PHARMACY

VITALITY MIX

Vanilla Delight Sugar- & Stevia-Free†

Supplement Facts

Serving Size: 2 Scoops (about 53 g)
Servings Per Container: About 14

	Amount Per Serving	%DV		Amount Per Serving	%DV
Calories	210		Sodium (from ingredients with naturally occurring sodium, sodium sulfate anhydrous, and sodium ascorbate)	560 mg	24%
Total Fat	8 g	10% [†]	Potassium (from tripotassium citrate and ingredients with naturally occurring potassium)	455 mg	10%
Saturated Fat	2 g	10% [†]	Stabilized Flaxseed	5.6 g	**
Total Carbohydrate	10 g	4% [†]	Typical Alpha-Linolenic Acid Content	1.28 g	**
Dietary Fiber	4 g	14%	Typical Linoleic Acid Content	392 mg	**
Protein (from Pea Protein Isolate and Rice Protein Concentrate)	26 g		Pomegranate Extract (<i>Punica granatum</i>) (whole fruit) (30% punicalagins A+B and punicalins A+B)	400 mg	**
Vitamin A (as natural beta-carotene)	750 mcg	83%	Betaine Anhydrous (trimethylglycine)	250 mg	**
Vitamin C (as sodium ascorbate)	250 mg	278%	Lemon Bioflavonoid Complex (<i>Citrus × limon</i>) (fruit peel) (25% bioflavonoids)	250 mg	**
Thiamin (as thiamine HCl)	15 mg	1250%	Quercetin (as quercetin dihydrate from <i>Dimorphandra mollis</i>) (pod)	250 mg	**
Riboflavin (as riboflavin 5'-phosphate sodium)	5 mg	385%	Potassium d-glucuronate ^{S3}	250 mg	**
Niacin (as niacinamide and niacin)	40 mg	250%	Rutin (from <i>Sophora japonica</i>) (bud)	200 mg	**
Vitamin B6 (as pyridoxal 5'-phosphate)	5 mg	294%	Turmeric Extract (<i>Curcuma longa</i>) (rhizome) (95% total curcuminoids complex, including curcumin, curcuminoids, and volatile oils) (86% curcuminoids) (65% curcumin) ^{S4}	200 mg	**
Folate (as [6S]-5-methyltetrahydrofolate acid, glucosamine salt) ^{S1}	340 mcg DFE	85%	N-Acetyl-L-Cysteine	150 mg	**
Vitamin B12 (as methylcobalamin)	50 mcg	2083%	Ginger (<i>Zingiber officinale</i>) (rhizome)	150 mg	**
Biotin	150 mcg	500%	Methylsulfonylmethane (MSM)	120 mg	**
Pantothenic Acid (as d-calcium pantothenate)	35 mg	700%	Sodium Sulfate Anhydrous	100 mg	**
Choline (as choline bitartrate)	100 mg	18%	Green Tea Aqueous Extract (<i>Camellia sinensis</i>) (leaf) (80% polyphenols, 60% catechins, 30% EGCG, 6% caffeine)	82 mg	**
Calcium (as dicalcium malate ^{S2} and ingredients with naturally occurring calcium)	225 mg	17%			
Iron (naturally occurring)	5 mg	28%			
Iodine (as potassium iodide)	60 mcg	40%			
Magnesium (as di-magnesium malate) ^{S2}	140 mg	33%			
Zinc (as zinc bisglycinate chelate) ^{S2}	10 mg	91%			
Selenium (as selenium glycinate complex) ^{S2}	100 mcg	182%			
Manganese (as manganese bisglycinate chelate) ^{S2}	2 mg	87%			
Chromium (as chromium nicotinate glycinate chelate) ^{S2}	60 mcg	171%			
Molybdenum (as molybdenum glycinate chelate) ^{S2}	35 mcg	78%			

Other Ingredients: Sunflower oil, natural flavors (no MSG), medium-chain triglyceride oil, taurine, glycine, cellulose gum, xanthan gum, fungal proteases^{S5}, L-glutamine, monk fruit extract, guar gum, and silica.



S1. Quatrefolic® is a registered trademark of Gnosis S.p.A. Produced under US Patent 7,947,662.



S2. Albion®, DimaCal®, TRAACS®, and the Albion Gold Medallion® are registered trademarks of Albion Laboratories, Inc. Malates covered by US patent 6,706,904.



S3. Preventium® is a registered trademark of Applied Food Sciences, LLC. (US patents 4,845,123, 5,364,644, 5,561,160).



S4. BCM-95® is an exclusivity licensed registered trademark to Arjuna Natural Pvt Ltd. Protected under US patents 7,883,728; 7,736,679; and 7,879,373.

S5. AMINOGEN® is a registered trademark of Innophos Nutrition, Inc. AMINOGEN® is protected under U.S. patent 5,387,422.

Directions

Blend, shake, or briskly stir 2 level scoops (53 g) into 10-12 ounces chilled, pure water (or mix amount for desired thickness) and consume once daily, or use as directed by your healthcare professional.

Consult your healthcare professional prior to use. Individuals taking medication should discuss potential interactions with their healthcare professional. Do not use if tamper seal is damaged.

Formulated To Exclude

Wheat, gluten, yeast, soy, animal and dairy products, fish, shellfish, peanuts, tree nuts, egg, ingredients derived from genetically modified organisms (GMOs), artificial colors, artificial sweeteners, and artificial preservatives.

Typical Amino Acid Profile Per Serving:

Alanine	1,280 mg	Methionine	330 mg
Arginine	2,580 mg	Phenylalanine	1,630 mg
Aspartic Acid	3,400 mg	Proline	1,340 mg
Cysteine	300 mg	Serine	1,570 mg
Glutamic Acid	4,990 mg	Threonine	1,160 mg
Glycine	1,720 mg	Taurine	500 mg
Histidine	740 mg	Tryptophan	300 mg
Isoleucine	1,330 mg	Tyrosine	1,130 mg
Leucine	2,490 mg	Valine	1,490 mg
Lysine	2,120 mg		

†This formula is not a low-calorie dietary supplement. Please see the Supplement Facts panel for more details.

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