OptiCleanse™ GHI
Support for Gastrointestinal System, Hepatic Function, and Cytokine Balance*

Clinical Applications

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

OptiCleanse™ GHI is a comprehensive, fructose-free, low-allergy—potential dietary supplement designed to support gastrointestinal (GI) function and balanced detoxification. It features VegaPro™, XYMOGEN’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, OptiCleanse GHI addresses GI and hepatic function as well as eicosanoid balance and cytokine metabolism. This formula is suitable for vegans.*

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 xenoenstrogens. 5-methyltetrahydrofolate (5-MTHF), methylcobalamin, betaine, and methylsulfonylmethane (MSM) are present to support methylation and detoxification. 5-MTHF supports healthy folate nutrition, especially in those with variations in folate metabolism. In OptiCleanse GHI, 5-MTHF is provided as Quatrefolic® for enhanced stability, solubility, and bioavailability.*

Preventium®, a patented form of potassium hydrogen d-glucarate, supports glucuronidation. Sulfuration is supported by MSM and sodium sulfite. Acetylation is supported by d-calcium pantothenate, pyridoxal-5’-phosphate, and magnesium. Several minerals in OptiCleanse GHI are provided as Albion® mineral chelates and TRAACS® mineral amino acid chelates for enhanced gastrointestinal absorption and bioavailability.*

Antioxidant Support and Cytokine Balance
Bioflavonoids, quercetin, rutin, and curcumin support antioxidant activity, counter free radicals, and support healthy eicosanoid and cytokine metabolism.[13,14] Curcumin has a long history of use for its support of a normal, healthy response to inflammation.[15] N-acetyl-cysteine (NAC) stimulates glutathione synthesis, enhances glutathione-S-transferase activity, and promotes detoxification.[16]

Selenium glycinate provides support for glutathione metabolism and antioxidant protection.*

OptiCleanse GHI provides an array of nutrients that supports gastrointestinal health; detoxification and antioxidant mechanisms; and a normal, healthy response to inflammation and cytokine balance. This formula is designed to be used as part of a step-approach cleanse in conjunction with a modified elimination plan.*

Discussion

OptiCleanse™ GHI 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**

VegaPro is XYMOGEN’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 including 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.[5,11]

**Detoxification Support**

Ellagic acid (from pomegranate extract) prevents over-induction of CYP1A enzymes, works at the gene level to induce synthesis of glutathione-S-transferases and other phase II activities, binds directly to toxins, and protects DNA and hepatocytes.[5,8] Watercress is a rich source of beta-phenylethyl isothiocyanate (PEITC)—a versatile compound found to inhibit phase I enzymes and induce the phase II enzymes associated with biotransformation and excretion of toxins. Watercress was found to contain even stronger phase II inducers known as 7-methylsulfinlyheptyl and 8-methylsulfinlyoctyl isothiocyanates as well.[7,8]

Green tea catechins not only support antioxidant activity but also appear to act as modulators of phase I and phase II detoxification.[9] Choline is present to support lipid metabolism in the liver and can be converted to betaine, a methyl donor.[10]

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*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.
### OptiCleanse™ GHI Vanilla Delight Supplement Facts

<table>
<thead>
<tr>
<th>Serving Size: 2 Scoops (about 58 g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Servings Per Container: About 14</td>
</tr>
<tr>
<td>Amount Per Serving</td>
</tr>
<tr>
<td>Calories</td>
</tr>
<tr>
<td>Calories from Fat</td>
</tr>
<tr>
<td>Total Fat</td>
</tr>
<tr>
<td>Saturated Fat</td>
</tr>
<tr>
<td>Total Carbohydrate</td>
</tr>
<tr>
<td>Dietary Fiber</td>
</tr>
<tr>
<td>Sugars</td>
</tr>
</tbody>
</table>

** Protein 26 g |
- Vitamin A (as natural beta-carotene) 2500 IU | 50% |
- Vitamin C (as sodium ascorbate) 250 mg | 417% |
- Thiamin (as thiamine HCl) 15 mg | 1000% |
- Riboflavin (as riboflavin 5-phosphate sodium) 5 mg | 294% |
- Niacin (as niacinamide and niacin) 40 mg | 200% |
- Vitamin B6 (as pyridoxal 5-phosphate) 5 mg | 250% |

** Tocopherol (as alpha-tocopherol acetate, natural mixed tocopherols) 200 mg | 200% |
- Vitamin B12 (as methylcobalamin) 50 mcg | 833% |
- Biotin 150 mcg | 50% |
- Panthenoic Acid (as d-calcium pantothenate) 35 mg | 350% |
- Calcium (as DimCal® di-calcium malate and ingredients with naturally occurring calcium) 240 mg | 24% |
- Iron (naturally occurring) 7 mg | 38% |
- Iodine (as potassium iodide) 60 mcg | 4% |
- Magnesium (as as Albion® di-magnesium malate) 140 mg | 35% |
- Zinc (as TRACCS® zinc bisglycinate chelate) 10 mg | 67% |
- Selenium (as as Albion® selenium glycine complex) 100 mcg | 143% |
- Manganese (as TRACCS® manganese bisglycinate chelate) 2 mg | 100% |
- Chromium (as TRACCS® chromium nicotinate glycinate chelate) 60 mcg | 50% |
- Molybdenum (as TRACCS® molybdenum glycinate chelate) 35 mcg | 47% |
- Sodium (naturally occurring) 490 mg | 20% |
- MeadowPure® Stabilized Flaxseed Complex 5.6 g ** |
- Alpha-Linolenic Acid 1.28 g ** |
- Linoleic Acid 3.92 g ** |
- Pomegranate Extract (Punica granatum)( hull)(40% ellagic acid) 400 mg ** |
- Betaine (trimethylglycine) 160 mg ** |
- Lemon Bioflavonoid Complex (Citrus × limon) (fruit peel) (25% bioflavonoids) 250 mg ** |
- Quercetin (as quercetin dihydrate from Sophora japonica) (potassium d-glucarate) 50 mg ** |
- Quercetin (as quercetin dihydrate from Sophora japonica) (potassium d-glucarate) 250 mg ** |
- Rutin (from Sophora japonica) (potassium d-glucarate) 250 mg ** |
- Green Tea Aqueous Extract (Camellia sinensis)(leaf)(80% polyphenols, 6% catechins, 30% EGCG, 6% caffeine) 82 mg ** |

### Additional references available upon request.

Due to the evolving nature of interactions and contraindications, it is advised that practitioners consult a current database for new information.

### References


### Typical Amino Acid Profile Per Serving:

<table>
<thead>
<tr>
<th>Amino Acid</th>
<th>mg</th>
</tr>
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<tbody>
<tr>
<td>Alanine</td>
<td>1,129</td>
</tr>
<tr>
<td>Arginine</td>
<td>2,260</td>
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<tr>
<td>Aspartic Acid</td>
<td>3,049</td>
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<tr>
<td>Cysteine</td>
<td>248</td>
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<tr>
<td>Glutamic Acid</td>
<td>4,450</td>
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<tr>
<td>Glycine</td>
<td>1,578</td>
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<tr>
<td>Histidine</td>
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<tr>
<td>Isoleucine</td>
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<tr>
<td>Leucine</td>
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<tr>
<td>Lysine</td>
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<tr>
<td>Methionine</td>
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<tr>
<td>Phenylalanine</td>
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<tr>
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<tr>
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<tr>
<td>Threonine</td>
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<tr>
<td>Tryptophan</td>
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<tr>
<td>Tyrosine</td>
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<tr>
<td>Valine</td>
<td>1,317</td>
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</tbody>
</table>

** Percent Daily Values are based on a 2,000 calorie diet.

** Daily Value not established.