

# MEGA GUARD™



MegaGuard™ is a novel digestive aid that combines clinically studied and highly concentrated licorice polyphenols, scientifically validated extractions of artichoke, and high potency ginger to promote normal digestion, regulate stomach acid, balance H. pylori levels, and reduce occasional digestive discomforts such as gas, bloating, and indigestion. When used in combination with other Microbiome Labs products, MegaGuard™ offers complete gastrointestinal support from the stomach all the way to the colon.

With the power of these three herbs combined, MegaGuard™ provides unique and comprehensive digestive support, bowel regularity, and gastric protection.



#### SUPPLEMENT FACTS

Serving Size: 2 Capsules  
Servings Per Container: 30

Amount Per Serving	% Daily Value
Artichoke leaf extract	320mg †
Gutgard® licorice flavonoids	75mg †
Ginger root extract (20%)	30mg †

† Daily values not established.

**OTHER INGREDIENTS:** Cellulose, vegetable capsule (cellulose and water).



**ARTICHOKE LEAF EXTRACT** 320 mg

Stimulates bile production and balances cholesterol levels



**GUTGARD® LICORICE FLAVONOIDS**

75 mg

Protects gastric mucosa and balances H. Pylori levels



**GINGER ROOT EXTRACT (20%)**

30 mg

Accelerates gastric emptying and soothes nausea



### GUTGARD® LICORICE FLAVONOIDS | 75 mg

Licorice (*Glycyrrhiza glabra*) has a long history of use for treating digestive discomforts.<sup>1</sup> In Ayurvedic and Traditional Chinese Medicine, licorice is well-known for its ability to protect the gastric mucosa and modulate everyday inflammation. However, most supplements contain deglycyrrhinated licorice (DGL) because large amounts of glycyrrhizin have been associated with serious adverse side effects like elevated blood pressure and lowered potassium levels. Gutgard® licorice flavonoids are entirely different from DGL with respect to chemistry, composition, manufacturing, and mechanisms of action. While a classical extract of DGL does not contain any significant quantity of flavonoids, Gutgard® is standardized to contain more than 10% total flavonoids and less than 0.5% glycyrrhizin to avoid undesirable effects. More than 50 flavonoids have been identified in Gutgard® which have been shown to have beneficial activity for digestive complaints.<sup>2</sup> In fact, Gutgard® licorice flavonoids have been shown to protect the stomach lining and balance *Helicobacter pylori* levels much more effectively than regular DGL extracts.<sup>3</sup> Gutgard® licorice can also relieve occasional indigestion, bloating, and stomach pain at 150mg/day.



### ARTICHOKE LEAF EXTRACT | 320 mg

Artichoke (*Cynara scolymus*) leaf extract (ALE) has also been used in traditional medicine as a digestive aid. The bitter compounds, particularly cynaropicrin, are responsible for the digestive benefits of artichoke. ALE has been shown to increase bile production, protect the liver, balance blood lipids, and act as an antispasmodic.<sup>4-10</sup> In 2003, German researchers demonstrated that 640mg/day of artichoke leaf extract significantly improved digestive symptoms like bloating and fullness as well as quality of life in 244 patients with functional dyspepsia. Though the study was conducted over 6 weeks, the majority of the treatment group saw relief of their digestive symptoms in the first week.<sup>11</sup>



### GINGER ROOT EXTRACT (20%) | 30 mg

Ginger (*Zingiber officinalis*) has been used as a digestive aid in Eastern medicine for generations. Studies have demonstrated that ginger accelerates gastric emptying and can relieve occasional bouts of nausea and vomiting.<sup>12-13</sup> Gingerols and shogaols, the active polyphenolic compounds in ginger, appear to be responsible for such effects by weakly inhibiting cholinergic M3 and serotonergic 5-HT3 receptors, whose temporary dysfunction is responsible for nausea, vomiting, and hypomotility.<sup>14-15</sup> Ginger extracts with a higher gingerol content (20-30% gingerols) are stronger and more effective at relieving digestive discomforts. In 2015, an Italian study of 126 patients found that the daily combination of 40 mg of ginger extracts (25-30% gingerols) with 200 mg of artichoke leaf extracts reduced the severity and frequency of common digestive symptoms like nausea, bloating, early satiety, and abdominal pain 17% more effectively than just artichoke leaf extract alone.<sup>16</sup> While most ginger extracts only contain 5% gingerols, MegaGuard™ contains 60 mg of high potency ginger root extract (20% gingerols) for maximum strength.

#### References:

- 1) Wittschier N, et al. Aqueous extracts and polysaccharides from liquorice roots (*Glycyrrhiza glabra* L.) inhibit adhesion of *Helicobacter pylori* to human gastric mucosa. *Journal of Ethnopharmacology*. 2009;125(2): 218-223.
- 2) Omar HR, et al. Licorice abuse: time to send a warning message. *Therapeutic Advances in Endocrinology and Metabolism*. 2012;3(4): 125-138.
- 3) Asha MK, et al. Effect of Flavonoid-Rich Extract of *Glycyrrhiza glabra* on Gut-Friendly Microorganisms, Commercial Probiotic Preparations, and Digestive Enzymes. *J Diet Suppl*. 2017;14(3):323-333.
- 4) Gebhardt R, Fausel M. "Antioxidant and hepatoprotective effects of artichoke extracts and constituents in cultured rat hepatocytes. *Toxicology in Vitro*. 1997; 11(5):669-672.
- 5) Gebhardt R. Inhibition of hepatic cholesterol biosynthesis by artichoke leaf extracts is mainly due to luteolin. *Cell Biology and Toxicology*. 1997;13:58.
- 6) Brown JE, Rice-Evans CA. Luteolin-rich artichoke extract protects low density lipoprotein from oxidation in vitro. *Free Radical Research*. 1998;29(3):247-255.
- 7) Perez-Garcia F, et al. Activity of artichoke leaf extract on reactive oxygen species in human leukocytes. *Free Radical Research*. 2000;33(5): 661-665.
- 8) Rechner AR, et al. Caffeic acid derivatives in artichoke extract are metabolised to phenolic acids in vivo. *Free Radical Research*. 2001;35(2):195-202.
- 9) Ishida K, et al. Effects of artichoke leaf extract on acute gastric mucosal injury in rats. *Biological and Pharmaceutical Bulletin*. 2010;33(2):223-229.
- 10) Emendorfer F, et al. Antispasmodic activity of fractions and cynaropicrin from *Cynara scolymus* on guinea-pig ileum. *Biological and Pharmaceutical Bulletin*. 2005;28(5): 902-904.
- 11) Holtmann G, et al. Efficacy of artichoke leaf extract in the treatment of patients with functional dyspepsia: a six-week placebo-controlled, double-blind, multicentre trial. *Ailment Pharmacy Ther*. 2003;18:1099-1105.
- 12) Committee on Herbal Medicinal Products. Assessment report on *Zingiber officinale* Roscoe, rhizome. European Medicines Agency. 2011; EMA/HMPC/577856.
- 13) Wu KL, et al. Effects of ginger on gastric emptying and motility in healthy humans. *Eur J Gastroenterol & Hepatol*. 2008; 20(5): 436-440.
- 14) Ford AC, et al. The Rome III criteria for the diagnosis of functional dyspepsia in secondary care are not superior to previous definitions. *Gastroenterology*. 2014;146(4):932-940.
- 15) Haag S, et al. Symptom patterns in functional dyspepsia and irritable bowel syndrome: relationship to disturbances in gastric emptying and response to a nutrient challenge in consulters and non-consulters. *Gut*. 2004; 53(10): 1445-1451.
- 16) Giacosa A, et al. The effect of Ginger (*Zingiber officinalis*) and Artichoke (*Cynara cardunculus*) Extract Supplementation on Functional Dyspepsia: A Randomized, Double-Blind, and Placebo-Controlled Clinical Trial. *Evidence-Based Complementary and Alternative Medicine*. 2015;2015:1-9.