

Enula™

Applications

- Antioxidant Support
- Healthy Inflammatory Response Support
- Microbial Support
- Gastrointestinal Support



Introduction

NutraMedix Enula™ is a proprietary blend of hydro-ethanol extracts from **elecampane root** (*Inula helenium*) and **jalap root** (*Ipomoea purga*). *I. helenium* belongs to the Asteraceae family and *I. purga* belongs to the Convolvulaceae family.

Elecampane root (*I. helenium*) has been used in traditional Chinese health practices for gastrointestinal support, where it is known as *tu mu xiang*.¹ Elecampane root includes volatile oils such as alantolactone, isosalantolactone, alantol, alpha- and beta-bergamotene, beta-pinene, and anethole; amino acids such as aspartic acid, serine, threonine, and glutamic acid; sterols such as stigmasterol and beta-sitosterol; and thymol derivatives.²⁻⁴ Alantolactone and isosalantolactone are considered the main constituents.⁵ The main phenolic compounds that may help with antioxidant support are the phenolic acids (caffeic, dicaffeoyl quinic, chlorogenic, and hydroxybenzoic), terpenes (alantolactone and isosalantolactone), and flavonoids (epicatechin, catechin gallate, dihydroquercetin pentosyl rutinoside, quercetin-3-O-beta-glucopyranoside, ferulic acid-4-O-glucoside, and kaempferol-7-O-dipentoside).⁶ Elecampane root also includes dietary fiber from fructooligosaccharides and inulin.⁷

Jalap root (*I. purga*) is also known as *Ipomoea jalapa*, *Ipomoea schiedeana*, *Convolvulus officinalis*, *Convolvulus purga* and *Exogonium purga*.^{8,9} Jalap

root is a climbing vine that is native to Southern Mexico and Central America.¹⁰ The root is used in traditional health practices to support gastrointestinal regularity,¹¹ with other potential benefits under investigation.¹² Constituents of jalap root include convolvulin, jalapin, caffeic acid, scopoletin, valeric acid, starch, and tiglic acid.^{12,13}

NutraMedix Enula is made at our U.S. manufacturing facility using a specialized proprietary extraction process that optimizes the constituents of the herbs in their original, unprocessed state to obtain broad-spectrum concentration. Because our extracts are made in our own facility, we control all aspects of quality, including stringent ID testing, microbial testing, and heavy-metal testing. NutraMedix rigorously follows current good manufacturing practices (cGMP), as do our suppliers.

Antioxidant Support

Elecampane (*I. helenium*) may help with antioxidant support, as determined by DPPH, phosphomolybdenum, beta-carotene bleaching, ABTS, FRAP, and CUPRAC assays.^{7,14} Flavonoids are found in all plant parts, and the relevant phenolic compounds, concentrated in the root, are highly soluble in ethanol.¹⁵ The constituent alantolactone may help support levels of quinone reductase, glutathione S-transferase (GST), and glutathione reductase already within the normal range, in a dose-dependent manner.¹⁶ Antioxidant

support is attributed to jalap root's effects on PI3K and JNK signaling pathways, with support of Nrf2 already within the normal range.¹⁶

Healthy Inflammatory Response Support

Elecampane (*I. helenium*) and its sesquiterpene lactone isovalantolactone may help support a healthy inflammatory response.¹⁷ In vitro research has shown that isovalantolactone may help to maintain NF-kappa B already within the normal range.¹⁷ Alantolactone and isovalantolactone may help to maintain levels of IgE, TNF-alpha, and IFN-gamma already within the normal range.¹⁸ They may also help maintain IL-4, IL-5 and IL-13 already within the normal range.¹⁸ The sesquiterpene lactone igalan may also support a healthy inflammatory response.¹⁹

Other Support

Microbial Support

Elecampane (*I. helenium*) may help with microbial support, as determined by the agar-well diffusion method.^{14,20} It may also contribute support for organisms with hyphae.²⁰

Gastrointestinal Support

Jalap root (*I. purga*) has a long history of traditional use for supporting gastrointestinal health, peristalsis, and regularity.^{8,11,12}

References

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Safety and Cautions

Elecampane root (*I. helenium*) is generally well tolerated, though information is limited. Elecampane may cause allergic reactions in those with allergies to other plants in the Asteraceae family such as ragweed.²¹ Cases of contact dermatitis have been reported.²¹ Elecampane root may have additive effects with CNS depressants, and large amounts may cause vomiting and diarrhea.²¹

Jalap root (*I. purga*) may cause purgative effects, which are contra-indicated in pregnancy.^{8,22,23} Jalap root is contraindicated in gastrointestinal inflammation or infection.⁸ It contains cathartic glucosides which may intensify peristalsis, increasing water elimination.⁸ Jalap root is contraindicated in those taking stimulant laxatives as it may have additive effects, leading to dehydration and potential electrolyte imbalance.⁸ Jalap root may have additive effects with diuretic-induced potassium loss.⁸ Fluid and electrolyte imbalance may theoretically increase INR and risk of bleeding in those taking warfarin.⁸

Safety is not documented in breastfeeding or pregnant women, or in children under age 3, due to insufficient safety research.

*This statement has not been evaluated by the Food and Drug Administration. This product is not intended to treat, cure, or prevent any diseases.

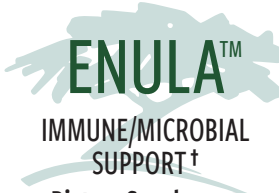
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NutraMedix. 

SHAKE WELL BEFORE EACH USE:

Put 1 to 30 drops in 4 oz (120 mL) of water and wait one minute before drinking. Start with 1 drop (30 min. before meals) increasing slowly up to 30 drops 2-4 times per day or as directed by your physician. Do not use if pregnant or nursing. Stop use if adverse reactions develop. Keep out of reach of children.

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ENULA™
**IMMUNE/MICROBIAL
SUPPORT †**

Dietary Supplement

1 fl. oz. (30mL)

Supplement Facts

Serving Size 30 drops
Servings Per Container 20

Amount Per Serving	
Proprietary Blend	1.5 mL*
Elecampane root extract,	
Jalap root extract	

*Daily Value not established

Other ingredients: water, ethanol (20-24%)

NutraMedix. 

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V384456

Lot #
Exp.

PROFESSIONAL USE ONLY