ARTEMISIA ANNUA

NutraMedix

APPLICATIONS

- Microbial Support
- Joint Support
- Antioxidant Support

INTRODUCTION

NutraMedix's Artemisia annua is made from the aerial parts of *Artemisia annua*, a plant that belongs to the Asteraceae/Compositae family and is commonly known as sweet wormwood or sweet annie.[1]

The main constituent of *Artemisia annua* is the sesquiterpene lactone artemisinin. Other constituents include monoterpenes, sesquiterpenes, flavonoids, and polyphenolic acids. Polysaccharides are also a key constituent, and may enhance artemisinin's bioavailability.[1–3]

Artemisia annua has been used in traditional Chinese health practices for centuries, with the first known written mention dating back to the *Shen Nong Ben Cao Jing* in the second century C.E.[4] In China, *Artemisia annua* is generally known as *qing hao*, though it is also called *huang hua hao*.[5]

NutraMedix's Artemisia annua extract 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 NutraMedix's 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 (cGMPs), as do our suppliers.

MICROBIAL SUPPORT

Artemisia annua may help with a diverse range of microbial support.*[3,6] The essential oils alpha-pinene, beta-pinene, 1,8-cineole, and camphene; the sesquiterpenes artemisinin and arteannuin B; and the phenolic compounds caffeic acid, quercetin, rutin, apigenin, and chrysosplenetin may all help with microbial support.*[6] The flavonoids eupatorin, chrysoplenol-D, and cirsilineol may help enhance artemisinin's microbial support.*[3]

JOINT SUPPORT

Artemisia annua may help with joint support.* In a controlled trial, 159 participants were randomly assigned to either standard treatment or to standard treatment plus *Artemesia annua* extract. Assessments were conducted at baseline and at 12, 24, and 48 weeks. Compared to the standard treatment control group, the standard treatment plus *Artemisia annua* group experienced significant support for joint comfort on palpation and on a health-assessment questionnaire at 24 weeks.* There were also fewer adverse effects in the *Artemisia annua* plus standard treatment group.[7]

In a pilot clinical trial, 42 participants were randomly assigned to one of three groups: *Artemisia annua* extract 150 mg, *Artemisia annua* extract 300 mg, or a placebo, twice per day for 12 weeks. Compared to both the placebo group and the 300 mg group, the 150 mg group had significant support for joint comfort in hip and knee.[8] In an open-label extension to this study, participants were offered the opportunity to continue with 150 mg of *Artemisia annua* extract twice per day, and 34 participants accepted. The joint support from the first half of the study was maintained during the study extension.*[9]

ANTIOXIDANT SUPPORT

Artemisia annua may help with antioxidant support.* This may be attributed to the constituent phenolic compounds, particularly chrysoplenol D.*[3,6,10,11]

In an in vitro study using RAW 264.7 macrophages, researchers examined the effects of an ethanol extract of *Artemisia annua* (aerial parts), four fractions, and five specific compounds. Compared to the fractions and compounds, the researchers found that the crude extract had the strongest support for maintaining nitric oxide (NO) levels already within the normal range.*[10]

In a mouse study, researchers found that an aqueous ethanol extract of *Artemisia annua* helped maintain serum levels of malondialdehyde already within the normal range.*[11]

SAFETY AND CAUTIONS

Artemisia annua is generally well tolerated, though gastrointestinal effects such as nausea are possible.[12] There is a potential for allergy in those sensitive to other members of the Asteraceae/Compositae family such as ragweed.[1]

Artemisia annua may alter the plasma levels and therapeutic effects of drugs metabolized by CYP2B6 and CYP3A4 substrates.[1,13–15] When taken concurrently with hepatotoxic drugs, it may theoretically have additive hepatotoxic effects.[1] Individuals with liver disease or who are taking potentially hepatotoxic medications should avoid *Artemisia annua*.[1]

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.**

REFERENCES

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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 a day or as directed by physician. Do not use if pregnant or nursing. Stop use if adverse reactions develop. Keep out of reach of children.

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ARTEMISIA ANNUA

MICROBIAL SUPPORT†

Dietary Supplement

2 fl oz. (60 mL)

Supplement Facts
Serving Size 30 drops
Servings Per Container 40

Amount Per Serving	
Sweet Annie herb extract	1.5 mL*

*Daily Value not established

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

V360430

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Lot #
Exp.

PROFESSIONAL USE ONLY