

Sparga™

Applications

- Detoxification Support



Introduction

NutraMedix Sparga™ is a hydro-ethanol extract from **asparagus stem** (*Asparagus officinalis*), which is also consumed as a garden vegetable. Asparagus has a long history of use, dating back at least as far as ancient Egypt, Greece, and Rome, where it was used for food and health support.¹ Both Dioscorides and Pliny the Elder discussed the cultivation and preparation of asparagus for food in the 1st century CE.² In the 17th century, asparagus was re-established as a culinary delicacy by Louis XIV, the Sun King, who is credited for its nickname as the “King of Vegetables.”³

The word asparagus comes from the Greek *asparagos*, meaning shoot or sprout.⁴ There are almost 300 species of asparagus, worldwide.⁴ *A. officinalis* is native to parts of Africa, Asia, Australia, and Europe.⁴ *A. officinalis* belongs to the Asparagaceae family, and is also known as *A. longifolius* and sparrow rass.⁵

The macronutrient content of asparagus stem is primarily carbohydrate, along with protein, dietary fiber, and a small amount of fat.⁴ The micronutrient content includes minerals such as potassium (202 mg per 100 g serving), phosphorus, calcium, magnesium, selenium, iron, sodium, zinc, and copper; fat-soluble vitamins such as K, A, and provitamin A carotenoids; water-soluble B vitamins such as folate (52 mcg per 100 g serving), choline, thiamin (B1), riboflavin (B2), niacin (B3), and pyridoxine (B6); and the water-

soluble vitamin C.⁶ Asparagus stem also contains amino acids, predominantly aspartic acid and glutamic acid.⁷

Asparagus stem (*A. officinalis*) also contains steroidal saponins, flavonoids, alkaloids, fructo-oligosaccharides, steroidal glycosides, tannins, sulfur compounds, nitrogen compounds, and acetylenic compounds.^{4,8} Specific constituents found in asparagus stem include inulin, asparagusic acid, aldehyde, thiophene, thiazole, ketone vanillin, asparoffins A-D, asparenyol, and asparanin A; as well as the sulfur compounds glutathione, N-acetylcysteine, and cysteine.^{4,8,9}

NutraMedix Sparga is made in 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 (cGMP), as do our suppliers.

Antioxidant Support

Asparagus stem (*A. officinalis*) may support antioxidant activity per ABTS[•] and DPPH,³ superoxide anion and erythrocyte hemolysis,¹⁰ and FRAP and CUPRAC free radical scavenging assays.¹¹ Antioxidant support has been attributed

to the constituent polyphenols, flavanols, flavonoids, tannins and ascorbic acid.¹¹ When consumed as a vegetable, boiling may decrease flavonol content by as much as 43%.¹² According to HPLC-MS/MS analysis, specific constituents relevant to antioxidant support include phenolic acid, quercetin-3-rutinoside, quercetin, isorhamnetin, and kaempferol.³ In mice, ethanol and aqueous extracts of asparagus helped maintain healthy levels of superoxide dismutase (SOD) and total antioxidant capacity (TAC) levels already within the normal range.¹³ While there are currently no human studies with asparagus and antioxidant support, a human study with broccoli sprouts, also containing glutathione, helped maintain total antioxidant capacity (TAC), total antioxidant status (TOS), oxidative stress index (OSI), and malondialdehyde (MDA) already within the normal range.¹⁴

Detox Support

The primary systems involved in detoxification are the liver, kidneys, and intestines. **Asparagus stem** (*A. officinalis*) may help with healthy detoxification through antioxidant support for the liver and kidneys. When consumed as a vegetable with dietary fiber, asparagus stem may help maintain healthy bile acid binding for normal intestinal excretion.

Glutathione is an important endogenous antioxidant for healthy detoxification and may be supported through dietary and supplemental means. In a study examining the glutathione content of sulfur-rich vegetables and fruits, asparagus contained the highest amount of glutathione, followed by avocado and spinach. Asparagus also contained the highest amount of N-acetylcysteine (NAC) and significant levels of cysteine, second only to red pepper.⁹ NAC and cysteine are glutathione precursors, with cysteine availability the rate-limiting step in endogenous glutathione production.¹⁵ Glutathione helps with antioxidant support, helps maintain normal liver and detoxification, and helps support the normal excretion of the body's natural toxins.¹⁵⁻¹⁷

Liver Detox Support

Asparagus stem (*A. officinalis*) may help with liver detox through antioxidant support. Its constituent antioxidant glutathione is essential for healthy liver detoxification.¹⁵ Glutathione may contribute direct antioxidant support or act as a

cofactor for antioxidant enzymes. It may support antioxidant activity for free radicals resulting from Phase 1 liver detoxification, and in Phase 2 liver detoxification, may support the conjugation of Phase 1 intermediates to a water-soluble form for urinary excretion.¹⁵

Asparagus stem may support normal ethanol metabolism and help maintain alcohol dehydrogenase and aldehyde dehydrogenase already within the normal range. Consequently, it may help support hepatocyte health.¹⁸ In mice, both ethanol and aqueous extracts of asparagus helped support liver health by maintaining serum levels of alanine transaminase (ALT) and aspartate transaminase (AST) already within the normal range.¹³ In rats, asparagus stem extract supported healthy hepatocytes and maintained levels of AST, ALT, ALP and bilirubin already within the normal range.¹⁹

Kidney Detox Support

Asparagus stem (*A. officinalis*) may help with kidney detox support through glutathione antioxidant support. In Phase 2 liver detoxification, the constituent glutathione supports the conjugation of Phase 1 intermediates, rendering them water soluble and available for renal excretion.¹⁵ In rats, asparagus stem extract helped support healthy glomeruli, maintaining levels of urea and creatinine already within the normal range.¹⁹

Intestinal Detox Support

Asparagus stem (*A. officinalis*), when consumed as a vegetable, contains dietary fiber that may help with intestinal detox support through the binding of bile acids.^{20,21} Steaming (vs. boiling) supports bile acid binding ability, which may help maintain healthy excretion through stool.^{20,21}

Safety and Cautions

Asparagus stem (*A. officinalis*) is considered safe in amounts found in foods. In some individuals, asparagus can contribute a distinctive odor to the urine, though not all individuals experience this, nor do all individuals perceive this when it occurs.²² Some individuals have had allergic reactions to asparagus, both orally and topically, and caution should be used in those with allergies to onions and garlic, due to the potential for cross-allergenicity.⁵

In a mouse study with NutraMedix Sparga, performed at the Universidad de Guayaquil in Ecuador, no adverse effects were noted with administration of *A. officinalis* extract at approximately 626 times the human dose, daily over a 14-day period. Researchers concluded that according to OECD TG 423 guidelines, the product is considered innocuous for humans.²³

Asparagus should be avoided in pregnancy as a related species, *A. pubescens*, has been shown to have contraceptive effects in mice, rats, and rabbits, inhibiting fetal implantation.^{5,24} Asparagus


may have additive effects with potassium-wasting diuretic medications such as furosemide and hydrochlorothiazide, potentially increasing the risk of hypokalemia. When taken with pharmaceutical lithium, asparagus may decrease lithium excretion, resulting in elevated lithium levels.⁵

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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SHAKE WELL BEFORE EACH USE:
Put 10 drops in 4 oz (120mL) of water and wait one minute before drinking. May be taken several times per day as needed or as directed by your physician. Do not use if pregnant or nursing. Stop use if adverse reactions develop.

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



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SPARGA™

DETOX SUPPORT †

Dietary Supplement

1 fl oz. (30mL)

Supplement Facts

Serving Size 10 drops
Servings Per Container 60

Amount Per Serving	
Asparagus leaf and stem extract	0.5 mL*

*Daily Value not established

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

NutraMedix

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V384461
Lot #
Exp.