

SPIRO EXTRACT



4 fluid ounces (120 ml)

Retail price: \$32.00

A synergistic formula of 6 rainforest botanicals which are traditionally used in South America for syphilis (a type of spirochete bacteria) and other bacterial conditions.* For more complete information on these unique rainforest plant ingredients, please see the Raintree Nutrition internet website and the online [Tropical Plant Database](#).

Ingredients: A proprietary blend of chanca piedra whole herb (*Phyllanthus niruri*), Bellaco caspi bark (*Himatanthus sukuuba*), tamamuri bark (*Brosimum acutifolium*), matico leaf (*Piper aduncum*), huacapu bark (*Minuartia guianensis*), and ajos sacha bark & leaf (*Mansoa alliacea*) extracted in distilled water and 40% ethanol.

Suggested Use: Take 60 drops (2 ml) 2-3 times daily or as directed by a health professional.

Contraindications: None reported.

Drug Interactions: None reported.

Other Observations:

- All of the plants in this formula have demonstrated antimicrobial effects in laboratory studies. Supplementing the diet with probiotics and digestive enzymes is advisable if this formula is used for longer than 30 days.

Clinical Documentation and Research:

This proprietary Raintree product has not been the subject of any clinical research. Available third-party documentation and research on each ingredient in this formula can be found at the [Raintree website](#) or on PubMed. A partial listing of third-party published research on each of these plant ingredients is shown below:

[Chanca Piedra \(*Phyllanthus niruri*, *amarus*\)](#)

Subeki, S., et al. "Anti-babesial and anti-plasmodial compounds from *Phyllanthus niruri*." *J. Nat. Prod.* 2005; 68(4): 537-9.

Mazumder, A., et al. "Antimicrobial potentiality of *Phyllanthus amarus* against drug resistant pathogens." *Nat. Prod. Res.* 2006; 20(4): 323-6.

Okigbo, R. N., et al. "Antimicrobial effects of *Piper guineense* 'Uziza' and *Phyllanthus amarus* 'Ebe-benizo' on *Candida albicans* and *Streptococcus faecalis*." *Acta Microbiol. Immunol. Hung.* 2007 Dec; 54(4): 353-66.

Farouk, A., et al. "Antimicrobial activity of certain Sudanese plants used in folkloric medicine. Screening for antibacterial activity (I)." *Fitoterapia* 1983; 54(1): 3-7.

Kloucek, P., et al. "Antibacterial screening of some Peruvian medicinal plants used in Calleria District." *J. Ethnopharmacol.* 2005 Jun; 99(2): 309-12.

[Bellaco Caspi \(*Himatanthus sukuuba*, *lancifolius*\)](#)

Souza, W., et al. "Antimicrobial activity of alkaloidal fraction from barks of *Himatanthus lancifolius*." *Fitoterapia.* 2004 Dec; 75(7-8): 750-3.

Tundis, R., et al. "Biological and pharmacological activities of iridoids: recent developments." *Mini. Rev. Med. Chem.* 2008; 8(4): 399-420.

Little, J., et al. "Plumericin; an antimicrobial agent from *Plumeria multiflora*." *Arch. Biochem.* 1951; 30(2): 445-52.

Persinos-Perdue, G., et al. "South American plants. III. Isolation of fulvoplumierin from *Himatanthus sukuuba* (Apocynaceae)." *J. Pharm. Sci.* 1978; 67: 1322.

Wood, C. A., et al. "A bioactive spirolactone iridoid and triterpenoids from *Himatanthus sukuuba*." *Chem. Pharm. Bull.* 2001; 49(11): 1477-1478.

De Silva, J. R., et al. "Triterpenic esters from *Himatanthus sukuuba* (Spruce) Woodson." *Quimica Nova* 1998; 21(6): 702-704.

Castillo, D., et al. Spirolactone iridoids might be responsible for the antileishmanial activity of a Peruvian traditional remedy made with *Himatanthus sukuuba* (Apocynaceae)." *J. Ethnopharmacol.* 2007 Jun; 112(2): 410-4.

[Tamamuri \(*Brosimum acutifolium*\)](#)

Herforth, A., et al. "Amazonian Women's Medicine: Treatments for Mycoses." Poster: Society for Economic Botany 2002 vol 56(4).

Herforth, A., et al. "Antifungal plants of the Peruvian Amazon: A survey of ethnomedical uses and biological activity." Cornell University Publication 2002

Takashima, J., et al. "Brosimacutins J-M, four new flavonoids from *Brosimum acutifolium* and their cytotoxic activity." *Planta Med.* 2005; 71(7): 654-8.

Takashima J, et al. "Mururins A-C, three new lignoids from *Brosimum acutifolium* and their protein kinase inhibitory activity." *Planta Med.* 2002; 68(7): 621-5.

[Matico \(*Piper aduncum*\)](#)

Orjala, J., et al. "New monoterpene-substituted dihydrochalcones from *Piper aduncum*." *Helv. Chim. Acta* 1993; 76(4): 1481-1488.

Kloucek, P., et al. "Antibacterial screening of some Peruvian medicinal plants used in Calleria district." *J. Ethnopharmacol.* 2005 Jun; 99(2): 309-12.

Lemos, T. L. G., et al. "Antimicrobial activity of essential oils of Brazilian plants." *Phytother. Res.* 1990; 4(2): 82-84.

Lentz, D. L., et al. "Antimicrobial properties of Honduran medicinal plants." *J. Ethnopharmacol.* 1998; 63(3): 253-263.

Trillini, B., et al. "Chemical composition and antimicrobial activity of essential oil of *Piper angustifolium*." *Planta Med.* 1996; 62(4): 372-373.

Orjala, J., et al. "Cytotoxic and antibacterial dihydrochalcones from *Piper aduncum*." *J. Nat. Prod.* 1994; 57(1): 18-26.

Orjala, J., et al. "Three new prenylated benzoic acid derivatives and molluscicidal sesquiterpenoids from *Piper aduncum* leaves." *Planta Med. Suppl.* 1992; 58(1) A714-.

Orjala, J., et al. "Five new prenylated p-hydroxybenzoic acid derivatives with antimicrobial and molluscicidal activity from *Piper aduncum* leaves." *Planta Med.* 1993; 59(6): 546-551.

Orjala, J., et al. "Aduncamide, a cytotoxic and antibacterial beta-phenylethylamine-derived amide from *Piper aduncum*." *Nat. Prod. Lett.* 1993; 2(3): 231-236.

[Huacapu \(*Minquartia guianensis*\)](#)

Rashid, M. A., et al. "Absolute stereochemistry and anti-HIV activity of minquartynoic acid, a polyacetylene from *Ochanostachys amentacea*." *Nat. Prod. Lett.* 2001; 15(1): 21-26 .

El-Seedi, H. R., et al. "Triterpenes, lichexanthone and an acetylenic acid from *Minquartia guianensis*." *Phytochemistry.* 1994; 35 (5): 1297-1299.

Jovel, E. M., et al. "An ethnobotanical study of the traditional medicine of the Mestizo people of Suni Mirano, Loreto, Peru." *J. Ethnopharmacol.* 1996; 53: 149-156.

Rasmussem, H. B., et al. "Absolute configuration and antiprotozoal activity of minquartynoic acid." *J. Nat. Prod.* 2000; 63(9): 1295-1296

[Ajos Sacha \(*Mansoa alliacea*, *Adenocaymma alliaceum*\)](#)

Canapaty, S., et al. "Composition of leaf oil from *Adenocalymma alliaceum* and its antimicrobial activity." *Indian Perfumer* 2004; 48(3): 323-329.

Rao, A. M., et al. "Antimicrobial activity of the leaf extract of *Adenocalymma alliaceum*." *Indian Drugs.* 1985; 22(7): 364-365.

Rana, B. K., et al. "Antifungal activity of an aqueous extract of leaves of garlic creeper (*Adenocaymma alliaceum* Miers.)." *Pharmaceutical Biol.* 1999; 37(1):. 13-16.

Singh, U. P., et al. "A rapid method for detecting fungi-toxic substances." *World Journal of Microbiology and Biotechnology.* 1996; 12(3): 301-302.

Khurana, S., et al. "Effect of plant extracts on the activity of three papaya viruses." *J. Gen. Appl. Microbiol.* 1970; 16: 225-230.

Ushamalini, C., et al. "Management of charcoal rot of cowpea using biocontrol agents and plant products." *Indian Phytopathol.* 1997; 50(4): 504-507.

Ushamalini, C., et al. "Suppression of charcoal rot and wilt pathogens of cowpea by botanicals." *Plant Disease Research* 1997; 12(2): 113-117.

This product is sold through health practitioners and Raintree Nutrition. It is not available in retail stores. Please contact a health professional concerning other observations and/or effects of this product and/or if you have any disease, condition, or illness for which you are seeking treatment or products for.

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This product is not intended to treat, cure, or prevent any disease.