

# SANGRE DE GRADO RESIN

“Dragon’s Blood”



2 Fluid Ounces (60 ml)

Retail price: \$21.95

A pure natural resin extracted from the sangre de grado tree (*Croton lechleri*) which is also called “dragon’s blood.” Sangre de grado resin is a storehouse of plant chemicals including proanthocyanidins (antioxidants), simple phenols, diterpenes, phytosterols, and biologically active alkaloids and lignans. Scientists have attributed many of the biologically active properties of the resin to two main “active” constituents: an alkaloid named taspine, and a lignan named dimethylcedrusine.\* For more complete information on this unique rainforest plant, please see the Raintree Nutrition internet website and the online [Tropical Plant Database](#).

**Traditional Uses:**\* to stop bleeding and to seal, and heal wounds, burns, cuts, tooth extractions; for herpes virus ulcers (taken internally and applied topically); for skin fungi, rashes, and dermatitis; for insect bites, poison ivy and other itchy or allergic skin reactions; for stomach ulcers, ulcerative colitis, dysentery and diarrhea

**Ingredients:** 100% pure sangre de grado resin (*Croton lechleri*).

**Suggested Use:** Take 15 drops in water 1-2 times daily. Use topically by applying liberally to affected area of skin. Avoid contact with eyes.

**Contraindications:** Not to be used during pregnancy or while breast-feeding.

**Drug Interactions:** None reported.

**Other Observations:** Will stain clothing and other textiles.

**Clinical Documentation and Research:**\* This Raintree product has not been the subject of any clinical research. Available third-party documentation and clinical research on sangre de grado can be found at the Raintree website or [PubMed](#). A partial listing of published research on sangre de grado is shown below:

## Anticancerous & Cytotoxic Actions:

Gonzales, G. F., et al. “Medicinal plants from Peru: a review of plants as potential agents against cancer.” *Anticancer Agents Med, Chem.* 2006 Sep; 6(5) :429-44.

Rossi, D., et al. “Evaluation of the mutagenic, antimutagenic and antiproliferative potential of *Croton lechleri* (Muell. Arg.) latex.” *Phytomedicine.* 2003 Mar; 10(2-3): 139-44.

Sandoval, M., et al. “Sangre de grado (*Croton palanostigma*) induces apoptosis in human gastrointestinal cancer cells.” *J. Ethnopharmacol.* 2002; 80(2-3): 121–9.

Chen, Z. P., et al. “Studies on the anti-tumour, anti-bacterial, and wound-healing properties of dragon’s blood.” *Planta Med.* 1994; 60(6): 541–45.

Pieters, L., et al. “Isolation of a dihydrobenzofuran lignan from South American dragon’s blood (*Croton sp.*) as an inhibitor of cell proliferation.” *J. Nat. Prod.* 1993; 56(6): 899–906.

Itokawa, H., et al. “A cytotoxic substance from sangre de grado.” *Chem. Pharm. Bull.* 1991; 39(4): 1041–42.

## Wound Healing, Neuromuscular, & Antioxidant Actions:

Frum, Y., et al. “In vitro 5-lipoxygenase and anti-oxidant activities of South African medicinal plants commonly used topically for skin diseases.” *Skin Pharmacol. Physiol.* 2006; 19(6): 329-35.

Rollinger, J. M., “Taspine: bioactivity-guided isolation and molecular ligand-target insight of a potent acetylcholinesterase inhibitor from *Magnolia x soulangiana*.” *J. Nat. Prod.* 2006 Sep; 69(9): 1341-6.

Dong, Y., et al. “Enhancement of wound healing by taspine and its effect on fibroblast.” *Zhong. Yao. Cai.* 2005; 28(7): 579-82.

Dong, Y. L., et al. “Effect of taspine hydrochloride on skin wound healing in rats and its mechanism.” *Zhong. Xi. Yi. Jie. He. Xue. Bao.* 2005 Sep; 3(5): 386-90.

Lopes, M. I., et al. "Mutagenic and antioxidant activities of *Croton lechleri* sap in biological systems." *J. Ethnopharmacol.* 2004 Dec; 95(2-3): 437-45.

Jones, K. "Review of sangre de drago (*Croton lechleri*)--a South American tree sap in the treatment of diarrhea, inflammation, insect bites, viral infections, and wounds: traditional uses to clinical research." *J. Altern. Complement. Med.* 2003 Dec; 9(6): 877-96.

Desmarchelier, C., et al. "Effects of sangre de drago from *Croton lechleri* Muell.-Arg. on the production of active oxygen radicals." *J. Ethnopharmacol.* 1997; 58: 103-8.

Phillipson, J. D. "A matter of some sensitivity." *Phytochemistry.* 1995 Apr; 38(6): 1319-43.

Chen, Z. P., et al. "Studies on the anti-tumour, anti-bacterial, and wound-healing properties of dragon's blood." *Planta Med.* 1994; 60(6): 541-45.

Porrás-Reyes, B. H., et al. "Enhancement of wound healing by the alkaloid taspine defining mechanism of action." *Proc. Soc. Exp. Biol. Med.* 1993; 203(1): 18-25.

Vaisberg, A. J., et al. "Taspine is the cicatrizant principle in sangre de grado extracted from *Croton lechleri*." *Planta Med.* 1989; 55(2): 140-43.

Macrae, W. D., et al. "Studies on the pharmacological activity of Amazonian Euphorbiaceae." *J. Ethnopharmacol.* 1988; 22(2): 143-72.

### **Pain-relieving & Anti-inflammatory Actions:**

Xiangming, L., et al. "Effects of dragon's blood resin and its component loureirin B on tetrodotoxin-sensitive voltage-gated sodium currents in rat dorsal root ganglion neurons." *Sci. China C. Life Sci.* 2004 Aug; 47(4): 340-8.

Tsacheva, I., et al. "Complement inhibiting properties of dragon's blood from *Croton draco*." *Z. Naturforsch.* 2004; 59(7-8): 528-32.

Jones, K. "Review of sangre de drago (*Croton lechleri*)--a South American tree sap in the treatment of diarrhea, inflammation, insect bites, viral infections, and wounds: traditional uses to clinical research." *J. Altern. Complement. Med.* 2003 Dec; 9(6): 877-96.

Risco, E., et al. "Immunomodulatory activity and chemical characterisation of sangre de drago (dragon's blood) from *Croton lechleri*." *Planta Med.* 2003; 69(9): 785-94.

Miller, M. J., et al. "Inhibition of neurogenic inflammation by the Amazonian herbal medicine sangre de grado." *J. Invest. Dermatol.* 2001; 117(3): 725-30.

Perdue, G. P., et al. "South American plants II: Taspine isolation and anti-inflammatory activity." *J. Pharm. Sci.* 1979; 68(1): 124-26.

### **Antimicrobial Actions:**

Gurgel, L. A., et al. "*In vitro* antifungal activity of dragon's blood from *Croton urucurana* against dermatophytes." *J. Ethnopharmacol.* 2005; 97(2): 409-12.

Williams, J. E. "Review of antiviral and immunomodulating properties of plants of the Peruvian rainforest with a particular emphasis on Una de Gato and Sangre de Grado." *Altern. Med. Rev.* 2001; 6(6): 567-79.

Sidwell R., et al. "Influenza virus-inhibitory effects of intraperitoneally and aerosol-administered SP-303, a plant flavonoid." *Chemotherapy.* 1994; 40(1): 42-50.

Chen, Z. P., et al. "Studies on the anti-tumour, anti-bacterial, and wound-healing properties of dragon's blood." *Planta Med.* 1994; 60(6): 541-45.

Rao, G. S., et al. "Antimicrobial agents from higher plants. Dragon's blood resin." *J. Nat. Prod.* 1982 Sep-Oct; 45(5): 646-8.

### **Anti-ulcer & Anti-diarrhea Actions:**

Tran, C. D., et al. "The role of Amazonian herbal medicine Sangre de Grado in *Helicobacter pylori* infection and its association with metallothionein expression." *Helicobacter.* 2006 Apr; 11(2): 134-5.

Paula, A. C., et al. "The gastroprotective effect of the essential oil of *Croton cajucara* is different in normal rats than in malnourished rats." *Br. J. Nutr.* 2006 Aug; 96(2): 310-5.

Fischer, H., et al. "A novel extract SB-300 from the stem bark latex of *Croton lechleri* inhibits CFTR-mediated chloride secretion in human colonic epithelial cells." *J. Ethnopharmacol.* 2004; 93(2-3): 351-7.

Jones, K. "Review of sangre de drago (*Croton lechleri*)--a South American tree sap in the treatment of diarrhea, inflammation, insect bites, viral infections, and wounds: traditional uses to clinical research." *J. Altern. Complement. Med.* 2003 Dec; 9(6): 877-96.

Miller, M. J., et al. "Treatment of gastric ulcers and diarrhea with the Amazonian herbal medicine sangre de grado." *Am. J. Physiol. Gastrointest. Liver Physiol.* 2000; 42: G192-200.  
Gabriel, S. E., et al. "A novel plant-derived inhibitor of cAMP-mediated fluid and chloride secretion." *Am. J. Physiol.* 1999 Jan; 276(1 Pt 1): G58-63.

This product is sold through health practitioners, retail stores, and [Raintree Nutrition](#). 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.

**Manufactured By:**  
**Raintree Nutrition, Inc.**  
**3579 Hwy 50 East, Suite 222**  
**Carson City, Nevada 89701**  
**(800) 780-5902 (775) 841-4142**  
[www.RaintreeNutrition.com](http://www.RaintreeNutrition.com)



\* The statements contained herein have not been evaluated by the Food and Drug Administration.  
This product is not intended to treat, cure, or prevent any disease.