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PHARMATROPIA

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A GUIDE TO DRAGON'S BLOOD



Dragon's Blood is a striking substance with botanical and mythical origins. Botanically, it's a red resin from various plant species, used in traditional medicine and as a dye. In folklore and fantasy, it's the supposed blood of dragons, often attributed with magical properties, serving various purposes from healing to casting spells. This fascinating duality contributes to the intrigue surrounding Dragon's Blood.

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GENERAL AND HISTORICAL BACKGROUND:

Dragon's Blood is a term with roots that stretch back through history, across continents, and into the very heart of human culture. The term refers to a red resin derived from several different types of plants, including those from the *Croton*, *Dracaena*, *Daemonorops*, and *Pterocarpus* genera. This resin, renowned for its vibrant color, has been a feature in human societies for millennia.

Historically, Dragon's Blood was used by the ancient Romans, Greeks, and Arabs for its vibrant color and medicinal properties. It was a valuable commodity along the Silk Road and other trade routes, where it was exchanged along with spices, silks, and other precious goods. The substance was used as a dye and pigment, in varnishes, and as a medicine. It was also employed in spiritual and ritualistic practices, reflecting the substance's mythical and symbolic associations.

In European alchemical traditions, Dragon's Blood was symbolically linked to the powerful, mythical creatures from which its name derives. The idea of a dragon, a creature often symbolizing power, wisdom, and transformation, lent a certain mystical allure to the substance, an allure that persists to this day in various forms.

The resin's association with dragons also carried over into folklore and literature, where Dragon's Blood was often depicted as a powerful and magical substance with the ability to heal, poison, or provide supernatural abilities. This mythical interpretation of Dragon's Blood has continued into modern fantasy literature and role-playing games.

From a botanical curiosity to a historical commodity to a mystical, narrative device, Dragon's Blood has, and continues to, occupy a unique place in human society. Its dual nature as a tangible, natural substance and a symbolic, mythical one has lent it a timeless relevance and fascination.



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THERAPEUTIC EFFECTS OF DRAGON'S BLOOD:

- **Antimicrobial Properties:** Dragon's Blood has been known to exhibit antimicrobial activity, making it potentially useful in preventing and treating infections.
- **Anti-inflammatory and Antioxidant Properties:** The resin has been used traditionally to help reduce inflammation and oxidative stress in the body.
- **Wound Healing:** It's commonly used as a topical treatment to promote wound healing due to its antimicrobial and anti-inflammatory properties.
- **Digestive Health:** In some cultures, Dragon's Blood has been consumed to help with digestive issues.
- **Pain Relief:** It has been used as a topical analgesic for conditions like arthritis and injuries.



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HEALTH ADVANTAGES OF DRAGON'S BLOOD:

- **Antimicrobial:** Prevents or treats certain infections.
- **Anti-inflammatory:** Potentially reduces inflammation in the body.
- **Antioxidant:** Helps combat oxidative stress, preventing cell damage.
- **Wound Healing:** Topical application promotes faster healing.
- **Pain Relief:** Traditionally used to alleviate pain from injuries or conditions like arthritis.
- **Digestive Health:** helps manage digestive issues.
- **Skin Health:** Its antimicrobial and anti-inflammatory properties benefit skin health.
- **Oral Health:** Can be used in oral care products to fight bacteria and inflammation.
- **Respiratory Health:** Traditional medicine uses it for respiratory conditions.
- **Anti-Diarrheal:** Has been used to treat diarrhea in traditional medicine.
- **Stomach Ulcers:** Practitioners are reporting it beneficial for stomach ulcers, ulcerative colitis, and Crohn's disease when taken internally.



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INTERESTING INFORMATION:

- **Ancient Use:** Dragon's Blood has been used since ancient times. The Greeks, Romans, and Arabs used it as a dye, medicine, and even in spiritual practices.
- **Violin Varnish:** Dragon's Blood was used in the 18th century as a varnish for Italian violins. Its application gave the instruments a distinct, beautiful color.
- **Silk Road Commodity:** Dragon's Blood was a valuable commodity along the Silk Road, exchanged along with spices, silks, and other precious goods.
- **Mythical Symbol:** In folklore and fantasy, Dragon's Blood often symbolizes power and mystique, thought to be the literal blood of dragons with magical properties.
- **Modern Pop Culture:** Dragon's Blood remains a popular element in modern fantasy literature and role-playing games, often used as a magical ingredient in spells and potions.
- **Traditional Medicine:** In various cultures, Dragon's Blood is used in traditional medicine, often associated with wound healing, anti-inflammatory properties, and antimicrobial benefits.
- **Endangered Species:** One source of Dragon's Blood, the Socotra dragon tree (*Dracaena cinnabari*), is considered vulnerable due to over-harvesting. Efforts are being made to protect this unique species and its habitat.



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DOSAGE:

Dragon's Blood is very safe in high doses with minimal side effects.

For internal use: 5-10 drops in water

For topical use: for wounds apply a few undiluted drops, for skin irritations gently rub into the affected area.



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RED RESIN OF MYSTERY, BOTANICAL WONDER, SYMBOL OF FANTASY

Dragon's Blood, a blend of the tangible and mythical, captivates with its vivid hues and versatile uses. With roots deep in history and branches reaching into the heart of modern fantasy, it is a constant source of fascination and inspiration. As we delve deeper into its secrets and potential, Dragon's Blood stands as a testament to the marvels of nature and the enduring enchantment of human imagination.



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RESOURCES & REFERENCES

Alonso-Castro AJ, Ortiz-Sánchez E, Domínguez F, et al. Antitumor effect of <i>Croton lechleri</i> Mull. Arg. (Euphorbiaceae). <i>J Ethnopharmacol.</i> 2012	140(2):438-442.22301443
Cai Y, Chen ZP, Phillipson JD. Clerodane diterpenoids from <i>Croton lechleri</i> . <i>Phytochemistry.</i> 1993	34(1):265-268.
Cai Y, Chen ZP, Phillipson JD. Diterpenes from <i>Croton lechleri</i> . <i>Phytochemistry.</i> 1993	32(3):755-760.
Cai Y, Evans FJ, Roberts MF, Phillipson JD, Zenk MH, Gleba YY. Polyphenolic compounds from <i>Croton lechleri</i> . <i>Phytochemistry.</i> 1991	30(6):2033-2040.
Chen ZP, Cai Y, Phillipson JD. Studies on the anti-tumour, anti-bacterial, and wound-healing properties of dragon's blood. <i>Planta Med.</i> 1994	60(6):541-545.7809208
Clay PG, Crutchley RD. Noninfectious diarrhea in HIV seropositive individuals: a review of prevalence rates, etiology, and management in the era of combination antiretroviral therapy. <i>Infect Dis Ther.</i> 2014	3(2):103-122.25388760
Cobb C, Goldwhite H, Fetterolf M. The Chemistry of Alchemy: From Dragon's Blood to Donkey Dung, How Chemistry Was Forged. Amherst, NY: Prometheus Books	2014.
Cottreau J, Tucker A, Crutchley R, Garey KW. Crofelemer for the treatment of secretory diarrhea. <i>Expert Rev Gastroenterol Hepatol.</i> 2012	6(1):17-23.22149578
De Marino S, Gala F, Zollo F, et al. Identification of minor secondary metabolites from the latex of <i>Croton lechleri</i> (Muell-Arg) and evaluation of their antioxidant activity. <i>Molecules.</i> 2008	13(6):1219-1229.18596648
Duke JA, Bogenschutz-Godwin MJ, duCellier J, Duke PK. Handbook of Medicinal Herbs. 2nd ed. CRC Press	2002.
Escobar JD, Prieto C, Pardo-Figueroa M, Lagaron JM. Dragon's blood sap: storage stability and antioxidant activity. <i>Molecules.</i> 2018	23(10):2641. doi:10.3390/molecules2310264130326562
Fayad W, Fryknäs M, Brnjic S, Olofsson MH, Larsson R, Linder S. Identification of a novel topoisomerase inhibitor effective in cells overexpressing drug efflux transporters. <i>PLoS One.</i> 2009	4(10):e7238.19798419
Frampton JE. Crofelemer: a review of its use in the management of non-infectious diarrhoea in adult patients with HIV/AIDS on antiretroviral therapy. <i>Drugs.</i> 2013	73(10):1121-1129.23807722
Froldi G, Zagotto G, Filippini R, Montopoli M, Dorigo P, Caparrotta L. Activity of sap from <i>Croton lechleri</i> on rat vascular and gastric smooth muscles. <i>Phytomedicine.</i> 2009	16(8):768-775.19406630
Gonzales GF, Valerio LG Jr. Medicinal plants from Peru: a review of plants as potential agents against cancer. <i>Anticancer Agents Med Chem.</i> 2006	6(5):429-444.17017852
Gupta D, Bleakley B, Gupta RK. Dragon's blood: Botany, chemistry and therapeutic uses. <i>J Ethnopharmacol.</i> 2008	115(3):361-380.18060708
Hornby PJ. Drug discovery approaches to irritable bowel syndrome. <i>Expert Opin Drug Discov.</i> 2015	10(8):809-824. doi:10.1517/17460441.2015.104952826193876
Itokawa H, Ichihara Y, Mochizuki M, et al. A cytotoxic substance from <i>Sangre de Grado</i> . <i>Chem Pharm Bull (Tokyo).</i> 1991	39(4):1041-1042.1893488
Jones K. Review of sangre de drago (<i>Croton lechleri</i>)--a South American tree sap in the treatment of diarrhea, inflammation, insect bites, viral infections, and wounds: traditional uses to clinical research. <i>J Altern Complement Med.</i> 2003	9(6):877-896.14736360



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Lopes MI, Saffi J, Echeverrigaray S, Henriques JA, Salvador M. Mutagenic and antioxidant activities of Croton lechleri sap in biological systems. J Ethnopharmacol. 2004	95(2-3):437-445.15507372
Martins CM, Hamanaka EF, Hoshida TY, et al. Dragon's blood sap (Croton lechleri) as storage medium for avulsed teeth: in vitro study of cell viability. Braz Dent J. 2016	27(6):751-756. doi:10.1590/0103-644020160098727982190
Montopoli M, Bertin R, Chen Z, Bolcato J, Caparotta L, Frolidi G. Croton lechleri sap and isolated alkaloid taspine exhibit inhibition against human melanoma SK23 and colon cancer HT29 cell lines. J Ethnopharmacol. 2012	144(3):747-753.23123266
Perdue GP, Blomster RN, Blake DA, Farnsworth NR. South American plants II: taspine isolation and anti-inflammatory activity. J Pharm Sci. 1979	68(1):124-126.758452
Pereira U, Garcia-Le Gal C, Le Gal G, et al. Effects of sangre de drago in an in vitro model of cutaneous neurogenic inflammation. Exp Dermatol. 2010	19(9):796-799.20698880
Pieters L, de Bruyne T, Claeys M, et al. Isolation of a dihydrobenzofuran lignan from South American dragon's blood (Croton spp.) as an inhibitor of cell proliferation. J Nat Prod. 1993	56(6):899-906.8350090
Pona A, Cline A, Kolli SS, Taylor SL, Feldman SR. Review of future insights of dragon's blood in dermatology. Dermatol Ther. 2019	32(2):e12786. doi:10.1111/dth.1278630556246
Porras-Reyes BH, Lewis WH, Roman J, Simchowicz L, Mustoe TA. Enhancement of wound healing by the alkaloid taspine defining mechanism of action. Proc Soc Exp Biol Med. 1993	203(1):18-25.8386382
Rossi D, Bruni R, Bianchi N, et al. Evaluation of the mutagenic, antimutagenic and antiproliferative potential of Croton lechleri (Muell. Arg.) latex. Phytomedicine. 2003	10(2-3):139-144.12725567
Rossi D, Guerrini Am Maietti S, et al. Chemical fingerprinting and bioactivity of Amazonian Ecuador Croton lechleri Mull. Arg. (Euphorbiaceae) stem bark essential oil: A new functional food ingredient? Food Chem. 2011	126(3):837-848. doi:10.1016/j.foodchem.2010.11.042
Sethi M. Inhibition of RNA-directed DNA polymerase activity of RNA tumor viruses by taspine. Can J Pharm Sci. 1977	12(1):7-9.833729
Styczynski J, Wysocki M. Alternative medicine remedies might stimulate viability of leukemic cells. Pediatr Blood Cancer. 2006	46(1):94-98.16047362
Vaisberg AJ, Milla M, Planas MC, et al. Taspine is the cicatrizant principle in Sangre de Grado extracted from Croton lechleri. Planta Med. 1989	55(2):140-143.2748730