



## **PRODUCT SHEET**

### *Sangre de Drago (Croton lechleri L.)*

**Family** : Euphorbiaceae

**COMMON NAMES:** "Dragon´s blood". **SPANISH** : "Sangre de Drago", "Sangre de Grado"; **Peru** ; **Ecuador** "Sangre de Drago", "Sangre de Grado", "Palo de grado" **Italian:** "SANGUE DI DRAGO"

**DESCRIPTION:** **Habit:** Sangre de grado is a medium-sized to large tree that grows from 10–20 m high in the upper Amazon region of Peru, Ecuador, and Colombia. Although tall, the trunk is usually less than 30 cm in diameter and is covered by smooth, mottled bark. **Leaves:** It has large, heart-shaped, bright-green leaves **Flowers:** greenish-white flowers on long stalks.

**ORIGIN AND DISTRIBUTION:** Sangre de grado's red sap or latex (and also its bark) has a long history of indigenous use in the rainforest and in South America. For centuries, the sap has been painted on wounds to staunch bleeding, to accelerate healing, and to seal and protect injuries from infection. The sap dries quickly and forms a barrier, much like a "second skin." It is used externally by indigenous tribes and local people in Peru for wounds, fractures, and hemorrhoids, internally for intestinal and stomach ulcers, and as a douche for vaginal discharge.

**PARTS USED:** Bark, resin/sap

**PROPERTIES:** kills bacteria, kills viruses, cancer-preventive factor, reduces inflammation, relieves itching, kills germs, stops bleeding, heals wounds.

**PHYTOCHEMICALS:** Sangre de grado resin or sap is a storehouse of phytochemicals including proanthocyanidins (antioxidants), simple phenols, diterpenes, phytosterols, and biologically active alkaloids and lignans. Scientists have attributed many of the biologically active properties of the sap (especially its wound-healing capacity) to two main "active" constituents: an alkaloid named taspine, and a lignan named dimethylcedrusine.

The main plant chemicals in sangre de grado include: alpha-calacorene, alpha-copaene, alpha-pinene, alpha-thujene, beta-caryophyllene, beta-elemene, beta-pinene, betaine, bincatriol, borneol, calamenene, camphene, catechins, cedrucine, crolechinic acid, cuparophenol, D-limonene, daucosterol, dihydrobenzofuran, dimethylcedrusine, dipentene, eugenol, euparophenol, gallocatechin, gamma-terpinene, gamma-terpineol, hardwickiic acid, isoboldine, korberin A & B, lignin, linalool, magnoflorine, methylthymol, myrcene, norisoboldine, p-cymene, proanthocyanidins, procyanidins, resin, tannin, taspine, terpinen-4-ol, and vanillin.