CV. NAGUNA JAYA ABADI
General Contractor, Distribution and Supplier
Jl. Elang 1 Diana Mansion, Blok D-02, Sawah Lama, Ciputat, Tangerang Selatan, Banten. 15411

Product Knowledge
Dragon Blood/Dracohordin (Daemonorops Draco)

Dragon's Blood Powder is a type of forest product obtained from a type of rattan from the Daemonorops genus (Matangaran et al., 2012). The Daemonorops genus has around 115 species (Rustiami et al., 2004). The fruit of the Daemonorops rattan can produce a red resin called Dragon's Blood Powder.

(Waluyo, 2008), in the trade world it is often called dragon's blood (Pearson, 2002). The resin is obtained from the fruit of the female Dragon's Blood Powder (Asra et al., 2012) or from the hermaphrodite Dragon's Blood Powder. Dragon's blood resin is obtained from Daemonorops draco Blume, Daemonorops didymophilla Becc, Daemonorops brathystachys Furtado, Daemonorops draconcellus Becc, Daemonorops mattanensis Becc, Daemonorops propincua Becc, and Daemonorops micracantha (Grift) Matt (Januminro, 2000). Dragon's blood resin is also obtained from the cells, tissues, and other organs of the Dragon's Blood Powder Daemonorops draco Blume (Gupta et al., 2008).

Dragon's Blood Powder is used in industry as a dye for ceramics, marble, stone tools, wood, paper, and pharmaceuticals. Extracted from the sap of the Dragon's Blood Powder tree, it can be used as an antibacterial, antifungal, wound healing agent, anti-inflammatory, stomach medicine, antitumor, and antioxidant. It is even used in shamanic practices in some places. Due to its numerous industrial uses, Dragon's Blood Powder sap is highly valued in trade.

The high price drives farmers to rush to harvest the Dragon's Blood Powder. The potential production of Dragon's Blood Powder sap is declining and even becoming increasingly scarce due to unsustainable production patterns and the expansion of plantation development. Furthermore, the population of Dragon's Blood Powder rattan is decreasing year after year due to the lack of optimal natural regeneration and the harvesting of fruit by felling the trees (Sulasmi et al., 2012).

In recent years, Dragon's Blood Powder production from the forest has tended to decline. This is due to the massive clearing of land for oil palm plantations by plantation companies. This has resulted in a decline in the sustainability of Dragon's Blood Powder plants in the forest. However, observations show that not many people grow Dragon's Blood Powder in their gardens. Therefore, research is needed to determine the community's perception of the sustainability of Dragon's Blood Powder in their area. The purpose of this study is to determine the availability of Dragon's Blood Powder, its use, the obstacles faced by Dragon's Blood Powder gatherers, Dragon's Blood Powder harvesting, and Dragon's Blood Powder preservation.

Dragon's Blood Powder resin is obtained from the skin of Dragon's Blood Powder through extraction. The extraction method used by Dragon's Blood Powder flour producers in Aceh is wet extraction. According to Gafar (2010), wet extraction is superior to dry extraction because it contains fewer impurities than dry extraction. The extraction process involves several steps. First, the fruit is air-dried for several days, then pounded traditionally with a Jingki (traditional pestle) (Figure 2A). The result of the pounding becomes bran and is then soaked in water for 1 hour to separate the resin and dirt deposits.

The color of the Dragon's Blood Powder resin powder obtained is red. The resin obtained from the red Dragon's Blood Powder fruit is a hard resin in the form of a shiny, clear, or dull solid, with a pungent odor, and melts when heated (Waluyo, 2013; Coppen, 1995).

People in North Aceh also use Dragon's Blood Powder for medicine. Usually they use it as a stomach medicine and wound medicine. Dragon's Blood Powder can also be used as a wound medicine, toothache medicine, and used as a postpartum medicine (Yetty et al., 2013). There are around 36 important chemical compounds found in Dragon's Blood Powder resin that have the potential as bioactive ingredients, including dracorhodin, nordracorhodin, nordracorubin, dracorubin, dracoflavan A, Abietic Acid (Gupta et al., 2008). The chemical compound dracorhodin (2H-1-benzopyran-7-one) is a characteristic of Dragon's Blood Powder resin (Waluyo, 2013). The chemical elements dracorhodin and dracorubin have the potential to be antimicrobial Staphylococcus aurius, Klebsiella pneumoniae, Mycobacterium smegmafis, and Candida albicans (Rao et al., 1982). The extract of Dragon's Blood Powder with n-hexane solvent on Dragon's Blood Powder Daemonorops draco and Daemonorops melanocahetes has antimicrobial properties against Bacillus subtilis bacteria and Candida albicans fungi. Meanwhile, the extract of jernang with ethyl acetate solvent acts as a wound healing drug (Waluyo and Pasaribu, 2015). The chemical compounds in Dragon's Blood Powder also have the potential to be anti-viral, anti-tumor, increase cytotoxic activity (Xia et al., 2006), and activate antioxidant enzymes (Ran et al., 2014).

Health Benefits:

- Rich in fiber: Dragon's Blood Powder flour is rich in fiber, which can help improve digestive health and prevent constipation.
- Anti-inflammatory: Dragon's Blood Powder flour has anti-inflammatory properties that can help reduce inflammation and pain.
- Antioxidant: Dragon's Blood Powder flour contains antioxidants that can help protect the body from damage caused by free radicals.
- Supports heart health: Dragon's Blood Powder flour can help lower cholesterol and triglyceride levels in the blood, reducing the risk of heart disease.
- Supports bone health: Dragon's Blood Powder flour is rich in minerals such as calcium and phosphorus, which can help improve bone health and prevent osteoporosis.

Cosmetic Benefits:
- Brightens skin: Dragon's Blood Powder flour can help brighten the skin and reduce dark spots.
- Reduces wrinkles: Dragon's Blood Powder flour is rich in antioxidants that can help reduce wrinkles and fine lines on the skin.
- Moisturizes skin: Dragon's Blood Powder flour can help moisturize the skin and maintain its natural moisture.
- Reduces skin inflammation: Dragon's Blood Powder flour has anti-inflammatory properties that can help reduce skin inflammation and acne.
- Anti-aging: Dragon's Blood Powder flour is rich in antioxidants that can help protect the skin from damage caused by free radicals and reduce signs of aging.

With these benefits, Dragon's Blood Powder flour can be a natural and beneficial ingredient for health and beauty.

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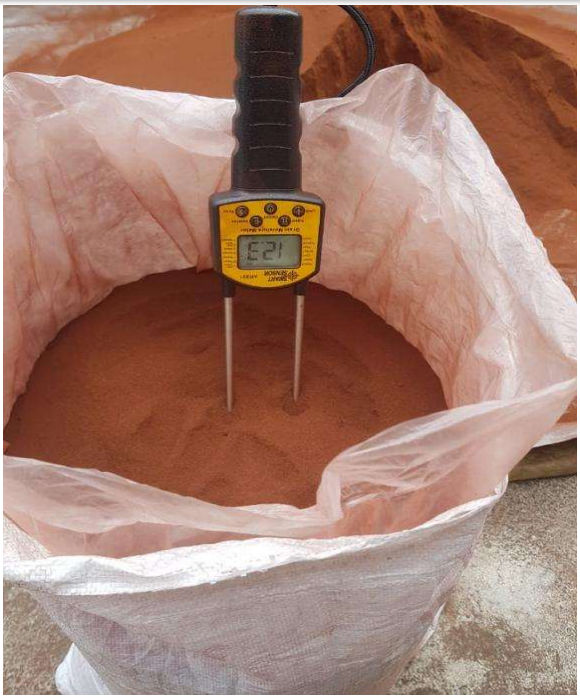
Dragon's Blood Powder Production Documentation

1. Dragon's Blood Powder Harvesting Process

Dragon's Blood

3. Dragon's Blood Powder Extraction Process

4. Dragon's Blood Powder that has been extracted



5. Checking the quality of Dragon's Blood Powder

6. Dragon's Blood Powder has been packed in sacks

检测报告

Inspection Report

样品名称/Sample Name	血竭/ DRACONIS SANGUIS
送检人/Applicant	L ZX
样品数量/Quantity Received	30g*1package
报告编号/Report No	[redacted] / 2024/02
样品形状/ Sample appearance	粉末/Powder
检测日期/ Test date	05-02-2024

检测项目 Test items	检测结果 Results	计量单位 Unit
血竭素 Dracorhodin	3.43	%
醇不溶物 Alcohol-insoluble substances	32.63	%
灰份 Ash	6.20	%
苏丹红 Magdala red I、II、III、IV	苏丹红 I 未检出 苏丹红 II 未检出 苏丹红 III 未检出 苏丹红 IV 未检出	——
808 猩红 Scarlet red	未检出	——
松香酸 Abietic acid	未检出	——

依据《中国药典》2015 年版一部
血竭项下 Guangzhou JNU

7. Laboratory Test Result

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报告书编号	YW009180601	检品名称	血竭小样
规　格	饮片	批　号	——
供样单位	质量部QA	原厂批号	20180528
收验日期	2018年5月28日	报告日期	2018年6月1日
包　装	-------	检品数量	40g
生产单位或产地	印度尼西亚		
检验依据	《血竭检验操作规程》（SOP-QC-YW-009-08）		

检验项目	标准规定	检验结果
【性　状】	应具标准规定的性状特征	具标准规定的性状特征
【鉴　别】	（1）应符合规定。	符合规定
	（2）应符合规定。	符合规定
	（3）应符合规定。	符合规定
【检　查】		
总灰分	不得过6.0%	4.7%
松香	石油醚层不得显绿色	符合规定
醇不溶物	不得过25.0%	7.5%
苏丹红I、苏丹红IV、808猩红、松香酸	应符合规定。	符合规定
二氧化硫残留量	应不得过150mg/kg	0mg/kg
【含量测定】		
血竭素（$C_{17}H_{14}O_3$）	不得少于1.0%	1.3%

结果判定：本品按《血竭质量标准》（STP-QA-YW-009-06）检验上述项目，结果符合规定。

吉林省长源药业有限公司
物料检验报告书
文件编号：SMP-QC-TY-012-R01-01

检验人　　复核人　　审核人