



THAI FREEZE DRY
COMPANY LIMITED



Blue Butterfly Pea Vine - scientific name- *Clitoria ternatea*

Blue butterfly pea vine is noted for its bright blue edible flowers that have a shape similar to female genitalia from which it derives its scientific name. Aside from its many culinary uses, the blue butterfly pea vine has been used in Ayurveda as well as traditional Asian and Middle Eastern medicine and its health benefits are increasingly supported by modern science.

Ancient mysticism and spiritual significance: In Ayurveda the blue butterfly flower (*Aparajita flower or Shankupushpam* in Sanskrit) was a sacred healing plant used in rituals to symbolize perfect attachment to the Divine. Sri Aurobindo refers to aparajita as the personification of the absolute love of the Divine to all parts of our being from our highest spiritual level to the physical. Blue Butterfly was frequently grown in temples and used in Hindu rituals for the worship of the Goddess Durga and Lord Shiva (destroyer of evil). Its deep blue color was known as “Krisha light” created under Krishna consciousness. Aparajita was personified as a deity described as “She who cannot be conquered.” Today, throughout Asia the blue butterfly is grown in home gardens to give the home and its inhabitants an invincible aura in accordance with Feng-shui.

Sustainable Agriculture: The blue butterfly pea vine, indigenous to tropical Asia, is listed as a rare species by the International Union for Conservation of Nature and Natural Resources and has been selected by the U.S.A. Development Agency for immediate conservation. Thai Freeze Dry carefully sources our blue butterfly flowers from home gardens and practices meticulous ethical wild harvesting practices to preserve the perennial vines from which the flowers are collected. In addition we are vigorously promoting and supporting organic farming of blue butterfly pea vine flowers.

Our connection to the land is part of our corporate culture. “The Life of the Land is Perpetuated in Righteousness.” This is the state motto of Hawaii where Dan Foxman, Managing Director of Thai Freeze Dry resided for over 32 years during which time he developed an organic tropical fruit farm on the Hamakua Coast of the Big Island of Hawaii. Natural agriculture is in our blood.

Blue Butterfly Pea Vine is a legume that adds nitrogen to the soil. We feel the need to leave the soil better than we found it and Blue Butterfly does just that. It is a hearty vine that does not require synthetic chemical fertilizers or pesticides.

Health Benefits:

The deep blue pigments in the pedals of the blue butterfly flower contain anthocyanins known as “ternatins” which are subject to intense scientific evaluation. These anthocyanins similar to those found in blueberries, acai berry, mangosteen rind etc. are found in the skin or just below the skin to protect these plants from disease and free radical damage from internal and environmental stress. When you ingest blue butterfly flowers their effect is a remarkable reflection of the antioxidant effects of the plant as it exists in nature.

In addition to anthocyanins the flowers contain other natural antioxidants including phenolic acids, flavonoids (including quercetin and rutin), and other phenolic compounds including gallic acid, ferulic acid and sinapic acids.

- **Nootropic** – enhances cognitive functions including heightening intelligence and enhancing memory via acetylcholine localized to the hippocampus
- **Cognitive Health** – the traditional use in Ayurvedic medicine as a brain tonic is supported by modern science. Clitoria ternatea is being studied as a prospective brain drug to inhibit MAO (Monoamine Oxidase) to fight neurodegenerative disorders as well as reducing anxiety, stress and depression
- **Increases blood flow:** Relaxes smooth vascular muscle aiding blood flow
- **Analgesic** – helps to relieve pain to the extent it is used as a local anesthetic
- **Diuretic** – promotes excretion of water (urination) which decreases blood volume thereby lowering high blood pressure. Water loss is also a biological mechanism for fast but typically temporary weight loss
- **Anti-Asthmatic:** assessed by passive cutaneous anaphylaxis
- **Hepatoprotective** (supports Liver health): phenolic compounds with antioxidant properties support liver health
- **Anti-diabetic** activity by inhibiting glucose intake from the diet. Phytochemical plant extracts from blue butterfly administered for 14 days reduced blood glucose levels of diabetically induced animals with an anti-diabetic effect comparable to the standard anti-diabetic drug Glibenclamide.
- **Anti-cancer and anti-tumor** abilities resulting from cyclotides that cause cell death by disrupting cell membrane integrity

- **Antipyretic** –reduces fever by dilating the blood vessels just beneath the skin which increases blood flow near the surface of the skin where it can be more easily cooled by the air

Eye care: The presence of the anti-oxidant, proanthocyanidin, helps to improve eyesight by increasing blood flow in the capillaries of the eyes which also allows the eyes to adjust to changes in light and improves vision. The blue butterfly pea vine flowers have been shown to effectively prevent cataracts and glaucoma, correct blurred vision, and reverse retinal damage as well as soothing inflamed and tearing eyes.

Hair: The blue butterfly vine flower, rich in bioflavonoids, has been used traditionally to promote hair growth, thicken the hair and reduce greying of the hair.

Skin: Antioxidants in blue butterfly pea vine flowers stimulate collagen and elastin synthesis helping to rejuvenate the skin, reduce wrinkles and other effects of aging skin.

Aphrodisiac: traditionally used as an aphrodisiac particularly for women and used to treat problems associated with menstruation as well as leucorrhoea (white vaginal discharge).

Healthy Convenience: Thai Freeze Dry's blue butterfly pea vine tea is unique. Normally, if you can find this tea at all, it will be in the form of dried flowers. You will steep the tea and then throw away the flowers, drinking only the mildly infused water. You've just kept the bath water and thrown away the baby!

In this case you do not need to steep tea. This makes the product more convenient, more dramatic (you can mix it at the table and watch the water turn blue), and avoids the heat of steeping the tea which will decrease the quality of the thermo-sensitive bioactive ingredients.

You can add just a pinch of our Cellular Fraction-Line 6^u activated powder to either warm or cold water (even ice water) and the fine powder with porous particle structure will dissolve in the water with mild stirring to produce a beautiful bright blue herbal infusion ("Tisane") Thai Freeze Dry's blue butterfly pea vine tea is similar to matcha tea in the sense that you are ingesting the flowers.

Economical: Thai Freeze Dry's Blue Butterfly flower powder provides the benefits of this amazing flower in a naturally concentrated form. The flowers have a water content of approximately 88%. Simply by removing the water the blue butterfly flowers are concentrated approximately eight times. In this concentration the cost per serving is very reasonable. In this stable dry powder with shelf life of two years, you have availability of the highest quality all year round regardless of the flowering season. You do not need to steep tea that you later throw away and you don't need to store raw tea that will degrade, mold and need to be discarded.

Fun: You can watch the water turning a bright blue in front of your eyes. If you add a touch of

lemon or lime juice the color turns from bright blue to deep purple in a matter of seconds. This is even more fun as the tea changes color before your eyes.

Keep in mind the scientific name due to the uncanny resemblance of the blue butterfly pea vine flowers to the female genitalia and you have a wealth of material for the marketing gurus to exploit. Not only is the blue butterfly great on its own, but it also can act as a great base for mixed drinks, add to coconut water, yogurt, make gorgeous and healthy desserts etc. etc.

Cellular Fraction-Line Technology (CFL) -Well Preserved: Sun dried tea takes a long time to dry and may be subject to contamination as sits in the field or along the roadside to dry in the sun. Sun drying results in about 10% moisture content which presents the possibility of developing yeast, mold and microbial contamination.

Oven dried tea exposes the tea to excessive heat, the negative effects of which on its thermo-sensitive vital ingredients are well known.

Thai Freeze Dry dries the freshly harvested tea grown at our doorstep immediately upon harvest. This results in a highly bioactive product with a moisture level typically under 3% making it a stable product that will not mold or degrade. Freeze drying is the best way to preserve the value of the flowers and leaves of the blue butterfly pea vine and Cellular Fraction-Line Technology ™ is miles ahead of conventional freeze drying in terms of sustaining the synergistic intelligent cellular and molecular structure of the plant as closely as possible to how it exists in nature. For detailed information regarding Thai Freeze Dry's proprietary Cellular Fraction-Line Technology ™ please refer to our website: www.thaifreezedry.com.

The 10 best reasons to buy your blue butterfly pea vine flower powder from Thai Freeze Dry:

1. Harvested in Chiang Mai, directly at our doorstep, to provide fresh indigenous blue butterfly pea vine flowers.
2. Cellular Fraction-Line Technology (an evolutionary premium freeze-dry process) provides the strongest natural concentration while keeping the cellular and molecular structure of the blue butterfly flower intact. This provides a high level of bioactivity.
3. You are not drinking a mild infusion and then throwing the flowers away. You are ingesting the entire edible flowers to provide maximum benefits.
4. Aqueous ozone antimicrobial treatment reduces plate counts and kills microbes without damage to healthy ingredients.

5. Porous particle structure as a result of CFL creates blue butterfly flower powder that is highly soluble, dissolves fully and provides higher bioavailability.
6. Low moisture content keeps the dried powder stable -- 2 year shelf life.
7. High natural concentration of the flowers due to elimination of the water content provides benefits with a very small dose.
8. No loss of raw materials or steeped tea that might degrade and have to be thrown away (wasted).
9. Avoid exposure to excessive heat such as in boiling the flowers to steep the tea. Make in ice cold or warm (drinking temperature) water to preserve anthocyanin antioxidants and other vital thermo-sensitive ingredients.
10. Support sustainable agriculture that encourages bringing the blue butterfly back from the brink of extinction.

Scientific Support & Reference Citations

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Factory : 224 Moo 10, T.Banthi, A.Banthi, Lamphun 51180 Thailand
Head Office : 165/3 Moo 1, T. Changphueak, A.Muang, Chiang Mai 50300 Thailand

Phone : +66 (0)8 1764 4324 **Phone / Fax :** +66 (0)53 414 064 **E-mail :** info@thaifreezedry.com **www.thaifreezedry.com**