

TECH OFFER

Innovative Nutraceutical From Coffee Cherries



KEY INFORMATION

TECHNOLOGY CATEGORY:

Waste Management & Recycling - Food & Agriculture

Waste Management

Personal Care - Nutrition & Health Supplements

Foods - Ingredients

TECHNOLOGY READINESS LEVEL (TRL): **TRL9**

COUNTRY: **THAILAND**

ID NUMBER: **TO175247**

OVERVIEW

Coffee cherry is the fruit that encompasses the coffee beans. It is usually discarded after the extraction of coffee beans. The team has deployed advanced scientific methods to develop a nutraceutical product derived from coffee cherry. The technology is a sustainable process where minimal byproducts and greenhouse gases are produced. Clinically tested to be food safe and with high bio-efficacy, the nutraceutical being rich in antioxidants, promotes healthy high-density lipoprotein (HDL) cholesterol, supports cardiovascular health and reduces the risk of heart disease, stroke, and metabolic disorders. Additionally, it improves blood circulation, reduces oxidative stress, and enhances overall metabolic function. This innovation not only promotes human health but also contributes to environmental sustainability, making it a powerful solution for health conscious consumers coupled with ecofriendly production. The technology provider would like to license the technology to collaborate with food and beverage manufacturers and to work with institute of higher learning to research on other bioactive compounds found in coffee cherries.

TECHNOLOGY FEATURES & SPECIFICATIONS

1. Uses cutting edge innovation that transforms coffee cherry byproducts into a powerful nutraceutical.
2. It utilises advanced scientific methods to extract natural compounds that offer significant health benefits.
3. Is rich in antioxidants, which help reduce low density lipoprotein (LDL) cholesterol and triglycerides while boosting HDL cholesterol.
4. This product has been clinically tested for both safety and efficacy, ensuring reliable health outcomes.
5. It supports cardiovascular health, reducing the risk of heart disease, stroke, and metabolic disorders.
6. Improves blood circulation and reducing oxidative stress, and overall metabolic function.
7. The production process is sustainable, utilising coffee byproducts to reduce waste and lower greenhouse gas emissions, aligning with circular economy principles.
8. Its versatility allows it to be used in health supplements and ready to drink (RTD) beverages.

POTENTIAL APPLICATIONS

The technology can be applied across multiple industries, particularly in health, wellness, and sustainability sectors.

In the nutraceutical industry, it can be used in health supplements like capsules, tablets, and liquid shots, offering antioxidant and cardiovascular support. It also fits into the functional food and beverage industry, where it can be infused into ready to drink (RTD) beverages, smoothies, and snacks to enhance metabolic health.

The cosmetics and skincare industry can benefit from its antioxidant and anti-inflammatory properties, making it ideal for antiaging serums and skin treatments. In the pharmaceutical industry, it serves as a natural alternative to cholesterol lowering drugs or a therapy to metabolic conditions.

In sports nutrition, it can be used in recovery drinks and endurance supplements due to its ability to reduce oxidative stress.

In weight management, it can be used in supplements and meal replacements that support fat metabolism and energy levels.

Finally, the focus on sustainability also makes it suitable for environmental industries, promoting zero waste production and circular economy models.

MARKET TRENDS & OPPORTUNITIES

The global nutraceutical market, projected to reach \$722.5 billion by 2027, presents a significant opportunity for supplements and functional foods. As consumers become more health conscious, demand for natural, science backed ingredients will rise, particularly in managing cholesterol, cardiovascular health, and metabolic disorders.

The functional beverage industry, valued at \$110 billion, is another key market, as the nutraceutical product can be incorporated into ready to drink (RTD) health drinks. With the global demand for antioxidant rich, natural anti-aging skincare and wellness products, the cosmetics market potential continues to grow.

Increasing consumer demand for ecofriendly products, the products' zero waste production aligns with the circular economy, attracting environmentally conscious brands and consumers.

In sports nutrition, the sector is expected to reach \$34.5 billion by 2027 and lastly the pet health industry, projected to grow at 6.5% annually, offers potential for the nutraceutical supplements to target aging pets' metabolic and cardiovascular health.

UNIQUE VALUE PROPOSITION

The technology represents a significant improvement over the current "State of the Art" in the following ways:

1. Utilisation of Coffee Byproducts (Circular Economy)

Current nutraceutical and functional food technologies largely rely on primary ingredients, leading to waste. Leveraging on the byproducts of coffee cherries, transforming them into value added health beverages. This zero waste production model addresses both environmental concerns and resource efficiency, contributing to the circular economy—a key differentiator from traditional methods.

2. Scientific Proven, Natural Ingredients

Unlike many health supplements that use synthetic compounds, only natural bioactive compounds found in coffee fruit for the nutraceutical. It has been clinically tested for efficacy and safety in human trials, providing scientifically proven benefits for cardiovascular health, cholesterol reduction, and metabolic syndrome. This scientific validation distinguishes the nutraceutical from competitors that may lack extensive research or clinical evidence.

3. ISO22000 Standards & Novel Food Certification

The production process adheres to ISO22000 food safety standards, ensuring high levels of quality and safety. Additionally, it is certified as a novel food and FDA approved, making it a regulated and trusted product by consumers.

In short, the nutraceutical offers a dual value proposition: it promotes human health with proven antioxidant, anti-inflammatory, and cholesterol regulating benefits, while simultaneously supporting environmental sustainability through a zero-waste production process. In comparison to traditional supplements or functional foods, the nutraceutical combination of scientific backing, natural ingredients, sustainability, and compliance with stringent regulations make it a superior, innovative solution in the health and wellness market.