



Biotech Consortium India Limited

Butter derived from the mango seed kernel

TECHNOLOGY AVAILABLE FOR TRANSFER

UNMET NEED & OPPORTUNITY

Vegan diet offers multitude of health benefits, it helps to maintain weight and protects against many lifestyle diseases like Type II Diabetes, Hypoglycemia, Cardiovascular diseases. It maintains vitamins, magnesium and fiber level adequately in body. Thus, by consuming vegan butter, consumers will not have to compromise on their taste and health. It will serve as an alternative source of butter for consumers who are intolerant towards lactose or dairy products.

The price of butter from Cocoa increases annually due to limited sources, high plant growth dependence on climatic conditions, region-specific cultivation, and tempering difficulties. Therefore, mango kernel serves as an economical and easily available source that has similar properties like cocoa butter. It has other wide applications like cosmetic, pharmaceutical, functional food due to its anti-oxidant activity and healthy fatty acids.



Healthy |Tasty| No Allergy

TECHNOLOGY

This invention is related to butter extraction from Mango kernel followed by complete characterization of its Physico-chemical parameters. Its properties were similar to cocoa butter, with respect to palmitic, oleic, and stearic acids, and it had the ability to substitute cocoa butter in dark chocolate preparation. This cocoa substitute has the potential to address the global problem of cocoa butter scarcity, which is being exacerbated by rising population and improving economies.

Comparison of Physico-Chemical Properties of Mango Butter & Cocoa Butter

Parameters	Mango butter	Cocoa butter
Saponification value (mg KOH/g fat)	179.52±1.23	190.74± 2.01
Iodine value (g iodine/100g fat)	41.9± 0.75	35.56± 0.83
Acid value (%)	4.48± 0.10	2.24± 0.21
Fatty acid composition (%)		
C16	2.88± 0.24	2.97± 0.33
C18:0	36.22± 0.41	37.31± 0.50
C18:1	34.81± 0.32	33.21± 0.28

UNIQUE SELLING PROPOSITION

- There is a huge demand for the suitable **substitute** of Cocoa butter for application in Nutraceuticals, foods industry.
- It is made from Mango Seed Kernel which is **cost effective**.
- **Dairy free** as free from animal source.
- **Simple** method for production.
- **Shelf-Life** is more than existing product

INTELLECTUAL PROPERTY

- Patent Application filed in India in 2020
- Technology Know-how with Institute

LICENSING OPPORTUNITY

STAGE OF DEVELOPMENT

- Proof of Concept is established in lab setup
- In-house Lab Validation Completed

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BCIL is looking for a suitable industrial partner for Commercialization of Butter derived from the mango seed kernel.