Central Food Technological Research Institute

Mysore – 570 020

Preparation of Radical Scavenging Conserve From Tea Leaves (Pruned/ Coarse/ Normal)

1. Introduction:

India is one of the largest producers of tea. The coarse tea leaves are not plucked for tea making and are pruned in a periodic cycle for 2-3 years. These coarse/ purned tea leaves contain a good amount of polyphenols. Polyphenols are claimed to have several health benefits. The process know-how developed in this Institute and proposed for commercialization describes a process for recovering polyphenols from pruned/ coarse leaves, which is other wise disposed off as waste materials.

2. Use:

The conserve could be used in food, nutraceutical and pharmaceutical applications. the intermediate product, 'Green tea' could be used in the same manner as that of traditional green tea in the preparation of conserve from fresh normal tea leaves, industrially used for the manufacture of various types of tea for use in the beverage preparation.

3. Raw material:

Fresh pruned/ coarse tea leaves, Ethyl alcohol, Ethyl acetate

4. Process in brief:

Coarse/pruned tea leaves → Drying& grinding → Green tea powder → De-solventization → Extraction → Chilling & filtration → Purification → Filtration

5. Plant and Machinery:

Principal equipments: Combination dryer, Grinder, Primary extraction unit, Refrigerated tanks, Basket centrifuge, Mixing tank, Membrane Pre-concentration unit, Liquid-liquid extraction unit, Distillation unit, Vacuum shelf dryer, Steam Generator, Chilled water plant, Diesel generator

Auxiliary equipments: UV visible spectrophotometer, HPLC, Precision balance, General glass wares etc

5. Project Cost – Fixed Cost – Working Capital (Rs. '000): (Estimate for a model project)

a)	Land & Land development (1500 m^2)	750.00
b)	Building and civil works (360 m^2)	1800.00
c)	Plant and machinery	12165.00
d)	Auxiliary Equipments	400.00
e)	Other fixed assets	500.00
f)	Pre-operative expenses	1283.00
	Total Fixed Capital	**16898.00**
	Working capital margin	1469.00
	Total Project cost	**18367.00**

Means of Finance

- Promoter's contribution	6655.75
- Term loan	11711.25

6. Production Capacity-(estimate):

Suggested economic capacity:	2400 kg tea leaves/ 24 h/day/
Working:	300 working day/ annum

7. Technology / Manufacturing Process -Availability:

The technology for processing of **Preparation of radical scavenging conserve from tea leaves (Pruned/ Coarse/ Normal)** has been developed at CFTRI, Mysore using appropriate equipment optimal product recovery of right quality. The institute has the necessary expertise to provide technical assistance and guidance for setting up the project and implementation, under technical consultancy arrangements.