Profile No.: 33 **NIC Code: .....**

MEDICINAL GRADE OIL: MUSTARD OIL

1 INTRODUCTION

Consumption of edible oil is substantial throughout the country. All Indian households use it every day. Various types of edible oils are available in the country e.g. Groundnut, cottonseed, rapeseed, sunflower, mustard etc.

Edible oils are made from respective oil seeds by extraction process and there are some national as well as regional brands. **The North-East region of the country including Meghalaya consumes mustard oil in large quantity.**

2 PRODUCT AND ITS APPLICATION

2.1 Applications

Edible oil is an integral part of the Indian palate since long. India is perhaps the largest producer and consumer of different types of edible oils. Preference for the type of edible oil differs from state to state, e.g. People from Western India prefer groundnut or cottonseed oil whereas North-East States like mustard oil. Hence this note is confined to mustard oil.

2.2 Compliances and quality standards

Compliance with PFA Act is necessary whereas registration under AGMARK is advisable. BIS has specified quality standards vide 546 IS 546:1975.

3 DESIRED QUALIFICATION FOR PROMOTER

The promoter should ideally be having formal qualifications in the field of food processing. Short term training in relevant field would also do.

4 MARKET POTENTIAL AND MARKETING ISSUES, IF ANY

Due to peculiar food habits and preparation methods, Indians use large quantities of edible oils every day. With growing population, demand is increasing every year and the country is importing semi-processed edible oils since long.

As per our preliminary survey, Mustard oil is preferred as a cooking medium by the people of Meghalaya. As per one estimate, there are some oil mills in Meghalaya but even then mustard seeds are sold to other states and mustard oil produced in other states is sold in Meghalaya in ample quantity. Thus, good quality mustard oil produced locally can be sold in the market.

5 RAW MATERIAL REQUIREMENTS

The all-important raw material shall be mustard seeds. The average recovery of oil is considered to be 30%. Hence to produce 72 tons of edible oil per year at 100% capacity utilisation, mustard seeds to the extent of 240 tons shall be required. In view of production of mustard seeds in excess of 75,000 tons every year, no difficulty is envisaged in procurement.

Other materials in small quantities like additives and purifying agents shall be available easily. Packing materials like tins, jars or plastic pouches shall be required for which prior arrangement is advisable.

6 MANUFACTURING PROCESS

The process of manufacture is well established and conventional. To begin with, dry mustard seeds are fed to Table Ghani or oil extractor wherein about 90% of the oil is extracted.

Further processing in expeller results in additional extraction of oil. Liquid oil and solid portion is then separated in filters. The solid portion known as oil cake is sold as cattle feed. Edible oil is packed either in tins, jars or food grade plastic pouches.

The oil contents depend upon quality of seeds but the average recovery of oil from seeds is in the range of 30% to 34%.

7 MANPOWER REQUIREMENTS

The manpower requirement is estimated as below

Particulars	**Nos.**	**Monthly Salary (Rs)**	**Total Monthly Salary (Rs)**
Skilled Worker	2	2,070	4,140
Semi-skilled Workers	2	1,725	3,450
Helpers	2	1,380	2,760
Salesman	1	2,875	2,875
		Total	**13,225**

8 IMPLEMENTATION SCHEDULE

Sr. No	Activity	Time
1	Preparation of Project profile	
2	E M Registration & approval from Director of Ayurveda	One month
3	Financial/Loan from Banker or Financial Institutions	Two months
4	Power connection/Building construction Six months	One month
5	Machinery procurement & Trial run.	Two months
6	Recruitment of Staff & Labour	One month
7	Actual commercial production	One month

9 COST OF PROJECT

The total cost of project is estimated as below:

Sr. No.	Particulars	Rs in lakhs
1	Land and Building	5.50
2	Plant and Machinery	2.70
3	Miscellaneous Assets	0.55
4	P&P Expenses	0.40
5	Contingencies @ 10% on Land & Building and Plant and Machinery	0.80
6	Working Capital Margin	1.35
	Total	**11.30**

10 MEANS OF FINANCE

Sr. No.	Particulars	Rs in lakhs
1	Promoters' Contribution @ 25 %	2.80
2	Loan from Bank/FI	8.50
3	**Total**	**11.30**
4	Debt Equity Ratio	1.96 : 1
5	Promoters' Contribution	25%

11 WORKING CAPITAL CALCULATION

Sr. No.	Particulars	Duration	Estimated cost (Rs. Lacs)
1	Raw materials/ Packing materials	1 month	**1.70**
2	Working expenses	1 month	**1.00**
3	Finished goods	15 days	**1.00**
4	Receivable	7 days	**0.80**
		Total	**4.50**

12 LIST OF MACHINERY REQUIRED

Keeping in mind, the demand potential and economic viability of the project, it is advisable to install machinery to produce 72 tons of mustard oil every year at 100%capacity. In this industry, plant is operated for about 210-220 days per year due to seasonal availability of oil seeds.

To have this rated production capacity, following machines are needed.

Sr. No.	Particulars	Qty.	Price (Rs)
1	Table Ghani	1	70,000
2	Oil Expellers	2	80,000
3	Filter Press	1	60,000
4	Other Support Equipments, electric motor and testing facilities	--	60,000
		Total	**2,70,000**

13. PROFITABILITY CALCULATIONS

8.1 Production Capacity and Build up

Production capacity at 100% would be 72 tons of mustard oil considering working of about 220-230 days every year. It is assumed that the plant would be operated at 60% and 75% respectively during first 2 years.

8.2 Sales Revenue at 100%

Product	Qty. (Tons)	Selling Price (Rs)	Sales (Rs. In lakhs)
Mustard Oil	72	78,000	56.16
De-oiled Cake	80	6,000	4.80
		Total	**60.96**

Profitability Projections

Particulars	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Capacity utilisation (%)	**60**	**75**	**80**	**80**	**80**
Sales	36.60	45.75	48.80	48.80	48.80
Expenses	28.80	37.00	39.00	39.00	39.00
Gross profit	7.80	8.75	9.80	9.80	9.80
Profit to Sales (%)	21.00	19.00	20.00	20.00	20.00

Note: The profitability basis and projections are indicative and on approximate basis only.

14 BREAKEVEN ANALYSES

FC X 100: 11.00 X 100 = 1100

FC + Profit : 12.00 +9.00=

BEP = 52.00 %