

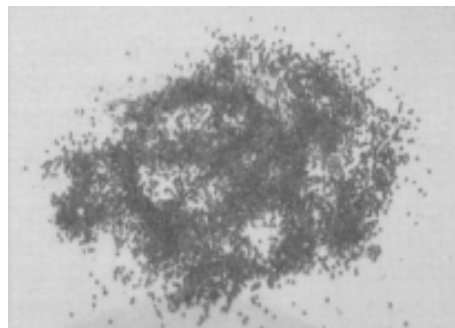
# COMPOUNDED ASAFOETIDA

QUALITY AND STANDARDS : PFA specifications

PRODUCTION CAPACITY : 42 tpa

## 1.0 PRODUCT AND ITS APPLICATIONS

Hing (*Ferula alliacea*) and Hingra (*Ferula asafoetida*) are the two varieties of asafoetida known and recognized in India. Compounded asafoetida powder/tablets find use in India in culinary preparations for flavouring purpose. Pure asafoetida is generally not preferred for use in view of the high concentration. It is, therefore, sold in compounded form.



## 2.0 MARKET POTENTIAL

There is a good demand for quality compounded asafoetida in the domestic as well as in export market. India has been exporting asafoetida to UK, Yemen, Belgium, Kenya, Malaysia, Oman, Switzerland, United Arab Emirates and other countries. It is estimated that about 3500 tonnes of asafoetida is processed for domestic/export markets.

## 3.0 BASIS AND PRESUMPTIONS

- a) The unit proposes to work at least 300 days per annum on single shift basis.
- b) The unit can achieve its full capacity utilization during the 2nd year of operation.
- c) The wages for skilled workers is taken as per prevailing rates in this type of industry.
- d) Interest rate for total capital investment is calculated @ 12% per annum.
- e) The entrepreneur is expected to raise 20-25% of the capital as margin money.
- f) The unit proposes to construct own building.
- g) Costs of machinery and equipment are based on average prices enquired from machinery manufacturers.

## 4.0 IMPLEMENTATION SCHEDULE

Project implementation will take a period of 8 months. Break-up of the activities and relative time for each activity is shown below:

❖ Scheme preparation and approval	:	01 month
❖ SSI provisional registration	:	1-2 months
❖ Sanction of financial supports etc.	:	2-5 months
❖ Installation of machinery and power connection	:	6-8 months
❖ Trial run and production	:	01 month

## 5.0 TECHNICAL ASPECTS

### 5.1 Location

The main factors for the location of the unit are nearness to market, availability of cheap labour and availability of infrastructure facilities.

### 5.2 Availability of Raw Material

The basic raw material comes mainly from Iran and Afghanistan and processed into powder and tablet for domestic and export markets.

### 5.3 Process of Manufacture

The technology is available at CFTRI, Mysore. The technique for the preparation of good quality compounded asafoetida provides retention of flavour characteristics and longer shelf-life. The pasty mass of asafoetida is soaked in water. The other ingredients are mixed in required proportion in a mixer, to which the slurry of the soaked asafoetida is added and mixed well. The compounded asafoetida is powdered in a mill and then packed. Commercial asafoetida, owing to its high moisture content, often develops moulds on the surface, especially when packed in polyethylene bags and its quality varies from lot to lot. The quality of asafoetida depends on its volatile oil content, which provides it characteristic odour. A simple method is also available to determine the flavour strength in asafoetida. The improved method of manufacture provides a standard product and employs minimum quantity of water which ensures long life.

### 5.4 Quality Control and Standards : PFA specifications

## 6.0 POLLUTION CONTROL

There is no major pollution problem associated with this industry except for disposal of waste which should be managed appropriately. The entrepreneurs are advised to take "No Objection Certificate" from the State Pollution Control Board.

## 7.0 ENERGY CONSERVATION

No fuel like coal or LDO is used in this process.

## 8.0 PRODUCTION CAPACITY

Quantity	:	42 tonnes
Value	:	Rs. 126 lakh
Installed capacity	:	60 tpa or 200 kg/day
Working days	:	300/annum
Optimum capacity utilization	:	70%
Manpower	:	20

### Utilities

Motive Power	:	20 kW
Water	:	5 kL/day

## 9.0 FINANCIAL ASPECTS

### 9.1 Fixed Capital

#### 9.1.1 Land & Building Amount (Rs. lakh)

Land 400 sq.m.	:	0.50
Built up Area 150 sq. m.	:	4.50
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Total cost of Land and Building	:	5.00

#### 9.1.2 Machinery and Equipment

Description		Amount (Rs. lakh)
Mixer, milling unit, tableting machine	:	4.00
Erection & electrification @ 10% cost of machinery & equipment	:	0.40
Office furniture & fixtures	:	0.60
Total :		-----
		5.00

#### 9.1.3 Pre-operative Expenses

Consultancy fee, project report, deposits with electricity department etc.	:	1.00
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#### 9.1.4 Total Fixed Capital : 11.00

(9.1.1+9.1.2+9.1.3)

### 9.2 Recurring expenses per annum

#### 9.2.1 Personnel

Designation	No.	Salary Per month	Amount (Rs.lakh)
Factory Manager	1	10000	1.20
Chemist	1	7000	0.84
Supervisors	2	6000	1.44
Office assistant	2	5000	1.20
Skilled workers	4	3000	1.44
Unskilled workers	10	2000	2.40
			8.52
Perquisites @15%			1.28
			-----
Total :	16		9.80

**9.2.2 Raw Material including packaging materials**

<b>Particulars</b>	<b>Qty.(MT)</b>	<b>Rate</b>	<b>Amount (Rs. lakh)</b>
Raw materials	-	-	77.80
Packaging materials	-	-	06.20
			-----
Total:			84.00

**9.2.3 Utilities**

	<b>Amount (Rs. lakh)</b>
Power 20 kW	1.49
Water 1500 kL	0.01
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Total:	1.50

**9.2.4 Other Contingent Expenses**

	<b>Amount (Rs. lakh)</b>
Repairs and maintenance@10%	0.95
Consumables & spares	0.95
Transport & Travel	
Publicity	
Postage & stationery	
Telephone	
Insurance	0.10
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Total:	2.00

**9.2.5 Total Recurring Expenditure**

	<b>Amount (Rs. lakh)</b>
(9.2.1+9.2.2+9.2.3+9.2.4)	97.30

**9.3 Working Capital**

Recurring expenditure for 3 months

**9.4 Total Capital Investment**

	<b>Amount (Rs. lakh)</b>
Fixed capital (Refer 9.1.4)	11.00
Working capital (Refer 9.3)	24.30
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Total:	35.30

## 10.0 FINANCIAL ANALYSIS

10.1 Cost of Production (per annum)	Amount (Rs. lakh)
Recurring expenses (Refer 9.2.5)	97.30
Depreciation on building @5%	00.25
Depreciation on machinery @10%	00.44
Depreciation on furniture @20%	00.12
Interest on Capital Investment @12%	04.24
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Total:	102.35

### 10.2 Sale Proceeds (Turnover) per year

Item	Qty. (MT)	Rate	Amount (Rs.lakh)
Compounded asafoetida	42	300/kg	126.00

### 10.3 Net Profit per year

= Sales - Cost of production

= 126 - 102.35

= Rs. 23.65 lakh

### 10.4 Net Profit Ratio

=  $\frac{\text{Net profit} \times 100}{\text{Sales}}$

=  $\frac{23.65 \times 100}{126}$

= 18.8%

### 10.5 Rate of Return on Investment

=  $\frac{\text{Net profit} \times 100}{\text{Capital Investment}}$

=  $\frac{23.65 \times 100}{35.30}$

= 67%

<b>10.6 Annual Fixed Cost</b>	<b>Amount (Rs. Lakh)</b>
All depreciations	0.81
Interest	4.24
40% of salary, wages, utility, contingency	5.35
Insurance	0.10
	<hr/>
Total:	10.50

### **10.7 Break even Point**

$$= \frac{\text{Annual Fixed Cost} \times 100}{\text{Annual Fixed Cost} + \text{Profit}}$$

$$= \frac{10.5 \times 100}{10.5 + 23.65}$$

$$= \frac{1050}{34.15}$$

$$= 31.00\%$$

## **11.0 ADDRESSES OF MACHINERY AND EQUIPMENT SUPPLIERS**

Armstrong Smith Ltd.  
Brady House  
12/14, Veer Nariman Road,  
P.B. No. 185, Mumbai – 400 021

Gansons Ltd.  
207, Kakad Chambers  
Dr. Annie Besant Road, Worli  
Mumbai – 400 018

Jayems Engineering Co.  
Great Western Building  
130/132, Apollo Street, Mumbai – 400 023

K-Sons Pvt. Ltd.  
29/1, Jaraganhall  
10<sup>th</sup> km, Kanakapura Road  
Bangalore – 560 078