

Spice Oleoresins – Export Oriented Unit

1. Introduction:

Spice oleoresins are the most concentrated viscous liquid form of the spice and reproduce the character of the respective spice and spice oil fully. They are obtained by the solvent extraction of the powdered dried spices with subsequent removal of solvent. The oleoresins are used mainly as a flavouring agent in the food processing industry. They are more economical to use, are easier to control for quality and are cleaner than the equivalent ground spices. Their distinct advantage over the equivalent essential oils is that they are more stable when heated.

The main products in a spice oleoresin plant are oleoresins of chilli, pepper, ginger and turmeric. The co-products are corresponding spice oils, which are widely used in food and pharmaceutical industries. Spent meals of spice powders after oleoresin extraction are by-products and are devoid of essential oils, pungent principles, fixed oils and resinous matter for which the spices are valued. This may be considered for incorporation in animal feed formulations, as spent meal is rich in carbohydrate and cellulose.

2. Market Potential:

India is one of the largest producer and exporter of spice oleoresins. In spite of this domestic market for this product is virtually nil/very limited. The main spice oleoresins/oils produced and exported from India are pepper, ginger, cardamom, chilly, turmeric, celery, etc. USA, Canada and West Europe are the major markets to where about 80% of the total production of India is exported. As per the International survey, the estimated demand of spice oleoresins except paprika is about 1800 MT. India has a share of roughly 50% in this. At present there are about 12 manufacturing and exporting units in India. They are not utilizing their full capacity as the utilisation mainly depends upon export demand. In this context, it would be advisable to go in for market tie-ups to ensure sales and to get a share in the existing and future demands for various items. In global terms, consumption of oleoresins rose fastest during the period 1965-75, slowed down considerably thereafter and today continues to rise slowly but steadily.

3. Raw materials & packing materials:

Dry chillies, pepper, turmeric, ginger etc. are available in large quantity from the state of Maharashtra, Andhra Pradesh, Karnataka, Kerala and Tamilnadu.

4. Principal equipment:

Principal plant and equipments: Pulverizes, steam distillation unit, driers, batch wise solvent extraction units, miscella collection tanks, solvent distillation unit, pulverization unit etc.

Auxiliary equipments: boiler, weighing scales, solvent storage tank etc.

5. Process in Brief:

The volatile oil is distilled out from the ground spices. The wet powdered spice/s free from volatiles are dried and then extracted with suitable solvent systems to remove the fixed oil and resinous/gummy materials. The solvent is removed from the miscella, dried and the extract is mixed with the dry spice oil to the required level and the product is suitably packed in containers.

6. Capacity:

To process 2 Tons raw materials / day (pepper/ginger/chilli/turmeric)
Working – 300 days / annum

7. Brief project economics:

a) Estimate of for a model unit

Project cost		Rs. '000
a. Land and land development – 5000 Sq. M		150.00
b. Building and civil construction - 600 Sq. M		1800.00
c. Plant and machinery		12500.00
d. Auxiliary items		1250.00
e. Other Fixed Assets		800.00
f. Pre-operative and Preliminary expense		1500.00
g. Working capital margin		2500.00
Total project cost		20500.00
Total short term funds required		5000.00
Means of finance*		
Promoter's contribution	7500.00	
Long term loan	13500.00	