

**PROJECT PROFILE
ON MEDICINAL
HERBAL
JUICE/CHURN
MAKING UNIT**

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INTRODUCTION

India system of classical system of medicines Ayurveda, Yunani, Siddha, etc. is concurrently undergoing a change. Mainly medicinal plants and herbs are the raw materials of traditional health care medicines. In India there are about 6500 of herbal species are found. People are now becoming health conscious and using herbal products for their sickness and fitness.

The transformation of Indian classical health care practices increasingly depending upon ready to use commercially prepared herbal formulations on one hand, and the resurgence of global interest in herbal-based wellness on the other is directly dependent on uninterrupted supplies of medicinal plants. Whereas some medicinal plants have been brought under commercial cultivation, major diversity of medicinal plants continues to be sourced from forests. Indian states like Rajasthan, Madhya Pradesh, Chhattisgarh, Uttarakhand, Odisha, Kerala, Tamil Nadu, Maharashtra, West Bengal are the main producers of herbal plants.

PRODUCTS AND ITS APPLICATION

- Herbal juice used as syrup or medicine.
- Herbal juice is also useful as immunity booster
- It is also used for healthcare and beauty products.

DESIRED QUALIFICATION FOR PROMOTER

Indian households from the ancient times produce herbal juices. It is known as *kadha*. However, for the hygienic herbal juice production requires proper skills and technology know-how.

INDUSTRY OUTLOOK/TREND

Herbal juices are exported in many parts of the world from India. The export volume grows at 8% rate. Main exporters of herbal juices are USA, UK, Russia, Brazil, Australia, European countries, South Africa, etc.

HS Code: 3004

Year	Exports Value in Rs. Lakhs
2021-22 (April-June)	4,192,394.78
2020-21	12,919,598.82
2019-20	10,358,245.49
2018-19	9,293,683.95

Source: Ministry of Commerce & Industries, Govt. of India

MARKET POTENTIAL AND MARKETING ISSUES, IF ANY

Herbal medicines are the most natural way of treating a wide range of medical conditions. Recently there has been a shift in universal trend from synthetic to herbal medicine, which we can say 'Return to Nature'. Besides, present lifestyle, stress, increase the lifestyle diseases. On the other hand, due to increasing pollution causes many lungs diseases. After the outbreak of Covid 19, people are relying more on herbal medicines. They are effective, safe, and free from any side effects. The demand for plant-based medicines, health products, pharmaceuticals, food supplement, cosmetics etc are increasing in both developing and developed countries, due to the growing recognition that the natural products are non-toxic, have less side effects and easily available at affordable prices. For example, Cough syrup produced from herbal juices gives a relief by soothing the inflamed tissue around the throat and suppress the cough reflexes. There is a wide range of products produced by Indian Herbal medicine companies. In India, there are about 14 well-recognized and 86 medium scale manufactures of herbal drugs. Other than this, about 8,000 licensed small manufactures in India are on record. In addition, thousands of Vaidyas also have their own miniature manufacturing facilities. Herbal drug sector is one of the fast-growing sectors in India. Marketing of herbal produce is not a problem in India.

RAW MATERIAL REQUIREMENTS

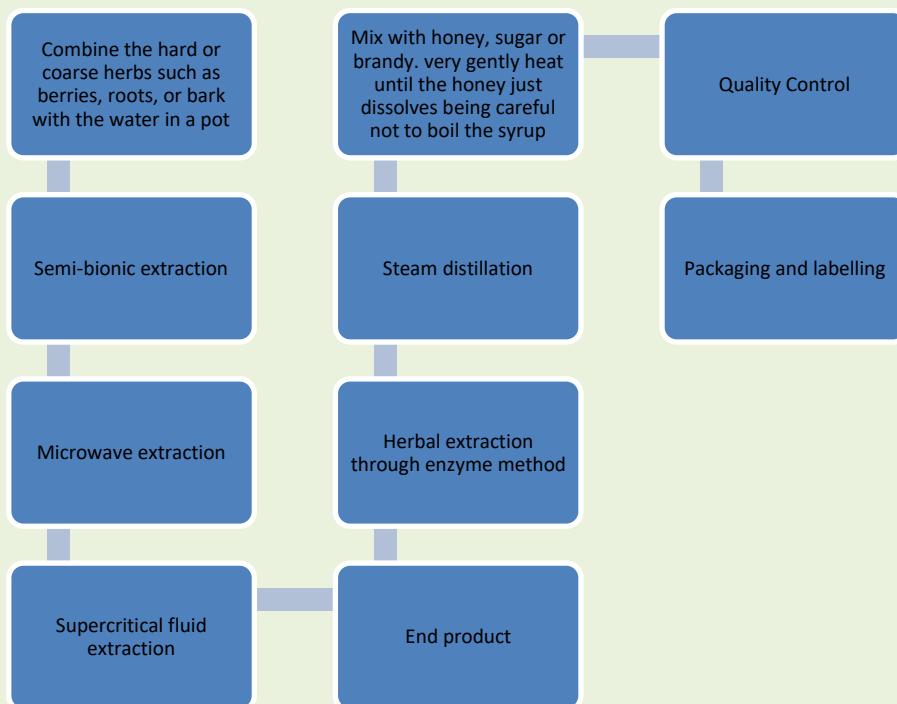
Raw herbs, honey, sugar, brandy, are the main ingredients for the syrup.

Raw materials requirement (per month)

Particulars	Qty.	Rate (Rs.)	Value (Rs.)
Raw materials, different parts of plants drugs from animal origin, etc. are available indigenously and consumables including.	2000 Kg	200	4,00,000
Sugar	10000	40	4,00,000
Minerals & Salts, Honey, Ghee etc.	550	300	1,65,000
Packing materials like glass bottles etc.	Lumpsum		35,000

MANUFACTURING PROCESS

Process flow chart of preparation of herbal juices:



Following are the test parameters for powder:

Sl. No.	Test Parameter for syrup	Test Parameter for powder (churnam)
1	Description	Description
2	Colour	Colour
3	Odour	Odour
4	Taste	Microscopic characters
5	Viscosity	Particle size
6	<i>ph</i>	Total ash
7	Total solids	Acid- insoluble ash
8	Reducing sugars/non-reducing sugars	<i>pH</i> (5% aqueous extract)
9	Total sugar	Water- soluble extractive
10	Specific gravity at 25 ⁰ C	Alcohol -soluble extractive
11	TLC/HPTLC/HPLC/LC-MS (any one or all)	Loss on drying at 105 ⁰ C/ Moisture content
12	Test for heavy/toxic metals Lead, Cadmium, Mercury, Arsenic (Limits as per ASU Pharmacopoeia)	Tap Density Flow Density (angle of repose)
13	Pesticide residue Organo chlorine pesticides, organophosphorus pesticides, pyrethroids (Limits as per ASU Pharmacopoeia)	TLC/HPTLC/HPLC/LC-MS /Moisture content
14	Microbial contamination Total viable aerobic count Enterobacteriaceae Total fungal count (Limits as per ASU Pharmacopoeia)	Test for heavy / toxic metals Lead, Cadmium, Mercury, Arsenic, (Limits as per ASU Pharmacopoeia)
15	Test for specific pathogen Escherichia coli, Salmonella spp., Staphylococcus aureus,	Test for metals/non metals Magnesium, Carbonate, Aluminium, Iron and Chloride

	Pseudomonas aeruginosa (Limits as per ASU Pharmacopoeia)	
16	Aflatoxins (Limits as per ASU Pharmacopoeia) (Bi,B2,Gi G2)	Pesticide residue Organochlorine pesticides, organophosphoras pesticides, Pyrethroids (Limits as per ASU Pharmacopoeia)
17	Shelf life: Usually the shelf life of the syrup is 2 years.	Microbial contamination Total bacterial count Total fungal count (Limits as per ASU Pharmacopoeia)
18		Test for specific pathogen <i>Escherichia coli</i> , <i>Salmonella</i> spp., <i>Staphylococcus aureus</i> , <i>Pseudomonas aeruginosa</i> (Limits as per ASU Pharmacopoeia)
19		Shelf life: Usually the shelf life of the powder is 2 years.

MANPOWER REQUIREMENT (PER MONTH)

Type	Number	Cost (Rs.)
Manager cum chemist	1	25,000
Clerk cum storekeeper	1	15,000
Labour (skilled)	7	70,000
Labour (semi-skilled)	4	32,000
Analytical Chemist	1	23,000
Accountant	1	17,000
Helper cum peon	1	8,000
Salesperson	2	30,000
Total per month	8	2,20,000
Total per annum		26,40,000

LAND

Particulars	Units	Value (in Rs. Lakh)
Land	1000 Sq. Ft.	40.00
Covered area, building	600 Sq. Ft.	60.00
Total		100.00

MACHINERY SPECIFICATIONS

Sl. No.	Description	Rate (Rs.)	Qty. (Nos.)	Price (Rs.)
1.	S.S.Vat, 1,500 Kg. Capacity	1,00,000	1	1,00,000
2	S.S.Vat, 750 Kg. Capacity	70,000	1	70,000
3	Fermenter 500 lit Cap.	60,000	1	60,000
4	Sintered Glass Crucible	10,000	10	1,00,000
5	Disintegrator with 7.5 H.P. size 22" with sieves of different mesh sizes	2,00,000	1	2,00,000
6	Micro pulverizer with 5 H.P. and 2.5 H.P. Motor	1,50,000	1	1,50,000
7	Tablet making machine	1,00,000	1	1,00,000

8	Bottle filling machine	5,00,000	1	5,00,000
9	Bottle sealing machine	20,000	1	20,000
10	S.S Pastle and motor	20,000	1	20,000
11	S.S Mixing vessel with motor 200 Litre capacity	1,50,000	1	1,50,000
12	Distillation unit 500 Lt. Cap. Electrically heated fitted with pipeline made of stainless steel AISI 316.12 kW	5,00,000	1	5,00,000
13	Water treatment plant 100 liters cap	3,00,000	1	3,00,000
14	Filtering unit fitted with paper and cloth	50,000	1	50,000
15	Furnace	50,000	2	1,00,000
16	Weighing scale 100 Kg. cap.	40,000	1	40,000
17	Weighing scale 10 Kg. Cap	35,000	1	35,000
18	Glass jars with stopper 25 liters. Cap	1,000	20	20,000
19	Glass jars with lid 3 kg. Cap	500	20	10,000
20	Vessel covered 100 Litres	10,000	5	50,000
21	Air oven with 12 trays with 2.5 HP motor	50,000	1	50,000
22	Bottle washing machine	1,50,000	1	1,50,000
23	Bottle dryer	1,50,000	1	2,50,000
24	Aluminium container for storage of powder etc.	3,000	50	1,50,000
25	Testing equipment			8,50,000
26	Water, ETP, Clean room, generator		LS	15,00,000
27	Electrification and Installation @ 10%			6,42,000
28	Furniture and office equipment			5,00,000
29	Pre-operative expenses			5,00,000
Total				71,67,000

* No objection certificate may be obtained from the concerned State Pollution Control Board

Utilities

Item	Total Amount (Rs.)
Power	25,000
Fuel	15,000
Water	5,000
Total	45,000

Other Contingent Expenses

Particulars	Total Amount (Rs.)
Postage/Stationery	3,000
Travelling expenses and transport charges	50,000
Repair/Maintenance.	12,000
Sales Expenses	15,000
Advertisement/Publicity	25,000
Insurance	20,000
Consumable Stores	15,000
Total	1,40,000

Working Capital (per month)

Particulars	Total Amount (Rs.)
Staff and labour	2,20,000
Raw material	10,00,000
Utilities	45,000
Other contingent expenses	1,40,000
Total	14,05,000
Working Capital (for 3 Months)	42,15,000

TOTAL CAPITAL INVESTMENT

Fixed capital (machinery + Building)	Rs. 1,71,67,000
Working capital (for 3 months)	Rs. 42,15,000
Total	Rs. 2,13,82,000

IMPLEMENTATION SCHEDULE

Project Stages	Months.....						
	1	2	3	4	5	6	7
Acquisition of Land	Yellow	Yellow					
Ordering of Machinery	Green	Green					
Delivery of Machinery			Pink	Pink	Pink		
Term/Wkg Loan Sanction	White	Blue	Blue				
Installation of Machinery				Brown	Brown		
Commissioning of Plant						Red	
RM/Inputs Procurement						Purple	
Manpower Appointments				White	Dark Purple		
Commercial Production							Orange

INSTALLED CAPACITY & CAPACITY UTILIZATION

The installed capacity of the plant is 6000 bottle per year. The capacity utilization of 40%, 80% and 90% has been considered during first, second and third year onwards respectively.

FINANCIAL ANALYSIS

Cost of Production (per annum)	(Rs)
Total recurring expenditure	1,68,60,000
Depreciation on building @10%	10,00,000
Depreciation on machinery and equipment @ 10%	6,67,000
Depreciation on furniture office 20%	1,00,000

Interest on total investment @ 12%	25,66,000
Total	2,11,93,000
Or Say	2,11,93,000

SALES CALCULATION

Total Sale (per annum)				Sales (Rs)
Ashokarishta	6000 Bottles	750 ml.	@60	36,000
Lakhibilas Ras (N)	400 Kgs.	10 gm.	@60	24,00,000
Bhaskarlavan	12000 Kgs.	100 gm.	@90	1,08,00,000
Sitopaladi Churan	6000 Kgs.	100 gm.	@90	54,00,000
Chyavan Prash	6000 Kgs.	100 gm.	@60	36,00,000
Mritasanjivani	6000 Kgs.	300 gm.	@120	24,00,000
Gandhkadi Malham	300 Kgs.	10 gm.	@60	18,00,000
Total				2,64,36,000

PROFITABILITY CALCULATION (per annum)

Rs. 2,64,36,000 - Rs. 2,11,93,000 = Rs. 52,43,000

Rate of Return

Net profit per year	----- × 100
Total investment	
= Rs. 52,43,000	
	----- × 100
2,13,82,000	
24.52%	

Net Profit Ratio

Profit per year	----- × 100
Turn over per year	
= Rs. 52,43,000	
	----- × 100
2,64,36,000	
19.83%	

Break-even Point

Fixed Cost	(Rs)
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Depreciation on machinery and equipment @ 10%	6,67,000
Depreciation on building @ 10%	10,00,000
Furniture and office equipment @ 20%	1,00,000
Interest 12% p.a.	25,66,000
Staff and labour @ 40%	10,56,000
Miscellaneous @ 40%	6,72,000
Total	60,61,000

B.E.P	Fixed cost × 100

	Fixed cost + profit
	= Rs. 60,61,000 × 100

	Rs. 6061000 + 52,43,000
	Rs. -----x100
	Rs. 1,13,09,000
	53.6%

References

- General Guidelines For Clinical Evaluation Of Ayurvedic Interventions Publication- Central Council for Research in Ayurvedic Sciences Ministry of Ayush, Government of India New Delhi
- Video link- <https://youtu.be/X2Of2UL1ICU>

Addresses of Raw Material and Plant Machinery Suppliers

- M/s. Modern Mechanical Works
1501, Qsim Jon Street,
Delhi-110006.
- M/s. Associated Instrument Manufacturers Pvt. Ltd.
26, Asaf Ali Road,
New Delhi-110006.
- M/s. Amar Engineering works
W-28, Raja Garden,
New Delhi-110027.
- M/s. Emkay (India) Trading Co.
286, Garhiaya, Jama Masjid,
New Delhi-110006.
- M/s. Rank and Co.
A-95/3, Wazirpur Industrial Estate,
New Delhi-110052.

- M/s. Juta Biotech
215, Syndicate House,
3, Old Rohtak Road, Inderlok,
Delhi-110035.
- M/s. International Machinery Manufacturing Co.
3259, Farhat Ullah Street,
Kucha Pandit,
Lal Kuan,
Delhi-110006
- M/s. Brintex Sales Corporation
Electrical Division,
55, Tagore Garden,
New Delhi-110027
- M/s. Harrisons Pharma Machinery (P) Ltd.
4648/21, Shedumal Building,
Darya Ganj,
New Delhi-110002
- M/s. Techmac Engineering Works
310, Usha Kiran Building,
Commercial Complex,
Azadpur, Delhi-110033.
- M/s. Bio Products Pvt. Ltd.
221, Patparganj Industrial Area,
Delhi.
- M/s. Engineers Syndicate
A-2, F.F. Ring Road,
Rajouri Garden,
New Delhi-110027.
- M/s. Co-operative Drug Factory of Ranikhet
Ranikhet,
Uttarakhand

ADDRESSES OF SOME DEALERS IN MEDICINAL PLANTS/ PLANTING MATERIAL

- Indian Institute of Integrative Medicine,
Canal Road,
Jammu Tawi-180001
- High Altitude Plant Physiology Research Centre,
HNB Garhwal University,

Shrinagar, Garhwal-246174

- Institute of Himalayan Bioresource Technology,
Post Office Box No.6,
Palampur-176 061
- Central Institute of Medicinal and Aromatic Plants,
Near Kukrail Picnic Spot,
Lucknow-226015
- North east Institute of Science & Technology,
Jorhat-785006 (Assam)
- National Botanical Research Institute,
Rana Pratap Marg,
Lucknow-226001
- Institute of Minerals & Materials technology,
Bhubaneswar-751013
- Advanced Materials & Processes Research Institute,
Hoshangabad Road, Near Habibganj Naka,
Bhopal-462064
- Forest Research Institute (ICFRE)
Dehradun-248006
- NBPGR,
Pusa Campus,
New Delhi-110012
- NBPGR, Regional Station,
Bhowali-263132
District Nainital
- NBPGR, Regional Station,
Phagli,
Shimla-171004
- Cedmap,
60, Jail Road, Jahangirabad,
Bhopal (M.P.)
- Tropical Botanical Garden and Research Institute,
Karimancode, P.O. Palode,
Thiruvananthapuram-695562 (Kerala)
- KRD Musli Farm,10/47, Station Road, Rau,
Indore-453331 (M.P.)
- Mittal Musli Farm and Research Centre,

- Jamod, Jalgaon (Maharashtra)
- Jeevan Herbs & Agro Farms
178, Keshav Ganj, Sagar (M.P.)
 - SSS Biotic.com
C/o biosourcing.com (P)Ltd.
A-41, Janpath, Ashoknagar
Bhubaneswar (Orissa)
 - Kasiraj Exports,
37, Santhai Road,
Tuticorin (TN)
 - A.Y. Agritec Private Limited
16-7-382/18, Azampura Masjid,
Hyderabad (A.P.)
 - Raj and Company
Contact: Mr. Vijay Kumar Jain
Behind Katju Market Near Parsi Mandir,
Neemuch 458441
Tel: 07423-221600
Fax: 07423-225341
E-mail: rajspice@bom4.vsnl.net.in
 - Manvir Pharma Supply
E-2, P&T Colony 6, Patel Colony, Jamnagar
Tel: 0288-2750015
Fax: 0288-2750015
 - Suman Trading Co.
10-2-32/1, Pamuvari Street Ramaraopet, Kakinada 533004
 - Silpa Agro Farms Private Limited
Flat No. 204, 2nd Floor, Firdous Kaveri Court, T
aranaka Road, Metuguda
Secundrabad 500017
Tel: 27820291/08451-288319
E-mail: silpaagro@onebox.com
 - Atulya Herbs
Rajiv Juyal Road, Majra,
Dehradun 248 171
Tel: +91 135 2620488
Fax: +91 135 3124102

E-mail: asian@nde.vsnl.net.in; paritoshgulati@yahoo.com; drmadanlal@sancharnet.in

Website: <http://rajugulati.ebigchina.com>

- VEG Trading Company

106/12, Prakasam Street, Erode 638 001

Tel: +91 424 2223846

Fax: +91 424 2218041

E-mail: vegnet@tastefoods.com

STATUTORY/ GOVERNMENT APPROVALS

There is statutory requirement of FSSAI license for setting up of food processing industry. Moreover, MSME & GST registration, IEC Code for Export of end products and local authority clearance may be required for Shops and Establishment, for Fire and Safety requirement and registration for ESI, PF and Labour laws may be required if applicable. Entrepreneur may contact State Pollution Control Board wherever it is applicable.

DISCLAIMER:

This is an indicative illustration of project profile; the above calculation can vary with the locations. Only few machine manufacturers are mentioned in the profile, although many machine manufacturers are available in the market. The addresses given for machinery manufacturers have been taken from reliable sources to the best of knowledge and contacts. However, no responsibility is admitted, in case any inadvertent error or incorrectness is noticed therein. Further, the same have been given by way of information only and do not carry any recommendation.

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