

PRE-FEASIBILITY REPORT FOR THE PRODUCTION OF SILICA GEL

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1. Introduction of Technology/Process/Product:

Name of Technology/Process/Product: **Silica** gel is a glossy material used mostly as a regenerative desiccant in industries. It is also used as catalyst in various chemical reactions occurring in Petroleum refineries as well as carrier for insecticides. At present silica gel is being produced in various shapes and sizes. The important among these is granular as well as spherical form. In industries both the transparent and self-indicating silica gel finds extensive use.

2. Main Parameters of Technology/Process/Product:

The process essentially of mixing the dilute acid with dilute sodium silicate in a reactor equipped with an efficient agitator. It is allowed to gel followed by washing the gelled mass in order to free it from acid and salt. The washed gel is then dried in a dryer. The dried mass is sieved and packed.

Main Feature

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Input (Raw materials with specifications)

Sodium silicate

Sulphuric acid

Output (Products, byproducts with specifications) Silica Gel**Applications/Uses** pharmaceutical, Transformer, Glass industries**Trial Results** Absorption Capacity 32%**Technical data (Proposed capacity, Production time per batch, packing size)-****Production process****Flow diagrams** attached**Equipment layout diagrams** Can be provided on demand**Machinery required with specifications** Can be provided on demand**Standards specifications & test methods** Can be provided on demand**Quality control equipment with specifications** PH meters, Hygro Meter,
Titration metic apparatus**Environmental impact** The product is environment friendly**Availability of technical support** Available**Available Brochures/Pamphlets** Available**Status of registration/Patent/Trade Mark** N.A**3. Estimation of Fixed Capital Investment (PKR):****Land** Depends on location**Building** Depends on location**Furniture & Fixture (Office/Factory)** Depends on location**Plant & Machinery** Depends on capacity**Technology Transfer Fee** (Negotiable)**Total Fixed Cost of the Project** -**Add: Working Capital** -**Total Project Cost:** -

4. Marketing Aspects:

Total industry and annual growth	N.A
Current demand	Demand can be increased through publicity and awareness
Local production facilities	Pilot Plant is running
Imports	Chinese silica gel being imported
Major users	Pharmaceutical, Transformer, Glass industries

Marketing strategy

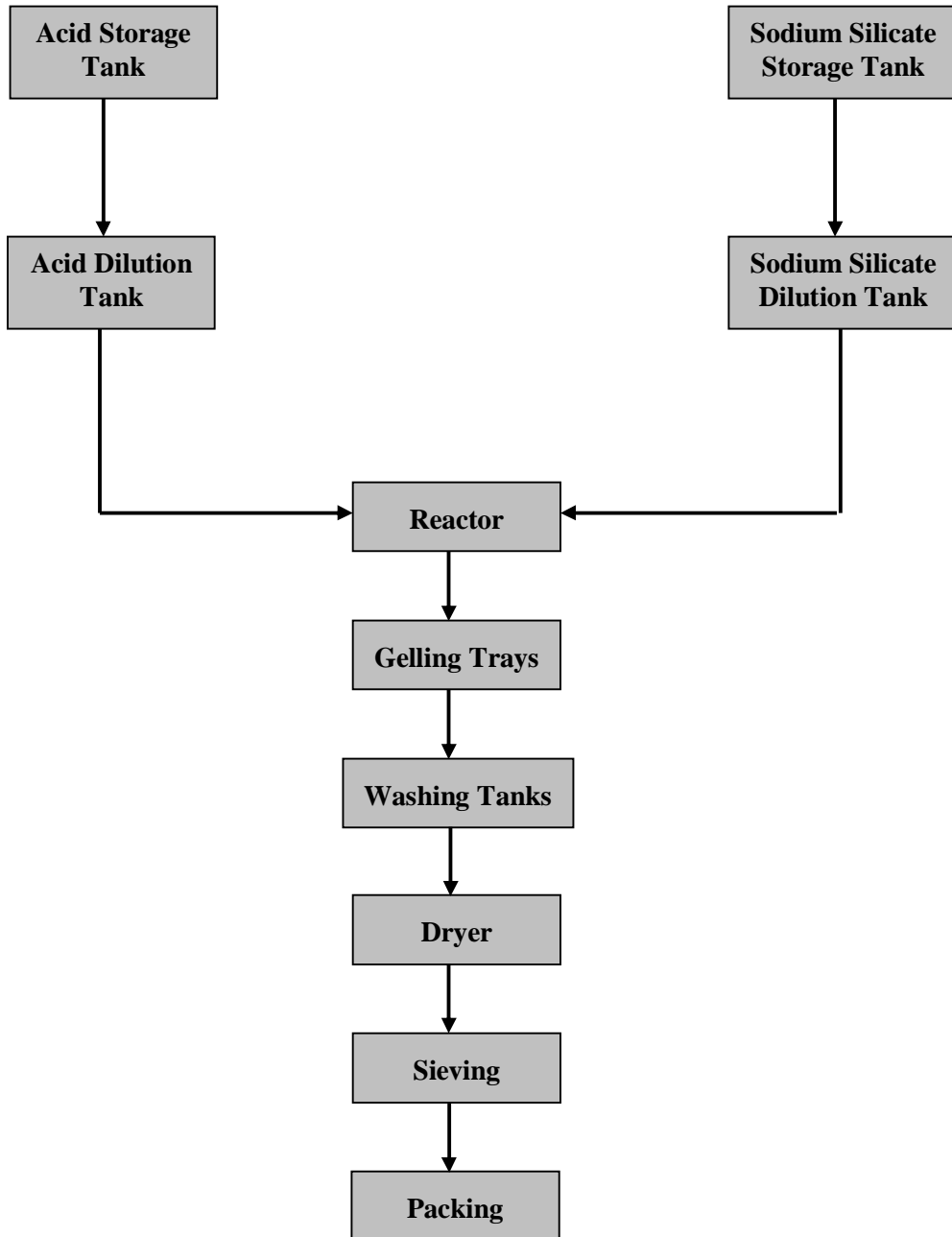
- Hold regional exhibitions & seminars
- Publicity through electronic & multi media

5. Details of Costs:

Direct production Costs (for production of 100 Kg. per day)

Raw materials cost per unit:	Rs.3000/day
Direct Wages Cost per unit:	Rs.20,000/Month
Production overheads cost per unit:	-
Admin & Selling Expenses:	
Salaries & Benefits per month:	Rs.30, 000/- Month
Utilities charges per month:	Rs.1700/- day
Communication expenses per month:	-
Other expenses per month:	-
Publicity and advertisement expenses per month:	-

Flow Diagram



PCSIR LABORATORIES COMPLEX, LAHORE

PRE-FEASIBILITY REPORT PROFORMA

Name of Product / Activity	Silica Gel
Capacity	100 kg / day
Annual Production (300 Working days)	30 M. Tons
Packing Size	25 kgs / Bag

ESTIMATION OF FIXED CAPITAL INVESTMENT		
Sr. #	Item	Total Price (Rs.)
1-	Land (Area) / Size of Building (2 Kanal)	Depends on Location
2-	Cost of Furniture & Fixture	300,000/-
3-	Equipment Machineries	35,00,000/-
4-	Raw Material	9,00,000/-
5-	Total Fixed Investment (Approx.) Except Building & Land Price	47,00,000/-

DIRECT PRODUCTION COST		
A-RAW MATERIAL PER BATCH		
Sr. #	Description	Total Cost (Rs.)
1-	Cost of Raw Material for 100 kg Product	3,000/-

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B- OPERATING COST / LABOUR COST / DAY				
Sr. #	Description	Employees Required	Charges per Day (Rs.)	Total Cost/Month (Rs.)
1-	Technologist	1	1000/-	30,000/-
2-	Unskilled Person	4	200/-	20,000/-

C- UTILITIES		
Sr. #	Description	Total Cost (Rs.) / Day
1-	Electricity / Water / Gas	1700

D- INDIRECT PRODUCTION COST / DAY			
Sr. #	Description	Dep. Cost (Rs.) / P.A	Depreciation per Day
1-	Depreciation of Machineries % of Total Cost	60,000/-	200/-

E- PACKING CHARGES / DAY		
Sr. #	Description	Total Cost (Rs.) / Day
1-	Cost of Packing Material	Rs. 1 per kg

Sr. #	Equipment	
1-	Reactor (S.S)	2 No's
2-	Gelling Tray	15 No's
3-	Washing Tanks	16 No's
4-	Dryer	1 No's
5-	Drying Tray	1000 No's
6-	Weighing Balance	1 No's
7-	Vibrating Sieve Shaker	1 No's
8-	Gloves Asbestos	4 No's
9-	Long Rubber shoes	6 No's
10-	pH Meter	

Total Cost (Per Month)

Sr. #		Cost / Month (Rs.)	Cost / Day (Rs.)
1-	Raw Material	75,000/-	3,000/-
2-	Operating Cost	50,000/-	2,000/-
3-	Utilities	42,500/-	1700/-
4-	Depreciation	5,000/-	200
5-	Packing Charges	2,500/-	100

Calculation of Gross Profit Per Month

	<u>Rs.</u>	<u>Rs.</u>
Selling Price @ Rs. 90 for 2500 kg		2,25,000
Cost of Raw Material	75,000	
Salary + Labour	50,000	
Elec / Gas / Water	42,500	
Depreciation	5,000	
Packing Charges	2,500	1,75,000
G.P		50,000

