DISPOSABLE EXAMINATION GLOVES
(from Rubber Latex)

PRODUCT CODE	: 22199 (NIC Code)
QUALITY AND STANDARDS	: IS 15354 : 2018
PRODUCTION CAPACITY	: 6,00,000 pairs per annum.
Value	: Rs. 36,00,000/-
PROJECT COST	: Rs. 15,10,000/- Fixed Capital – Rs. 12,10,000/- Working Capital – Rs. 3,00,000/-
EMPLOYMENT	: 7
MONTH AND YEAR OF PREPARATION	: June, 2020
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1. INTRODUCTION

Disposable Examination Gloves are medical safety accessories that ensure sanitary hospital conditions by limiting patients' exposure to infectious matter. They also serve to protect health professionals from disease through contact with body fluids. Latex Gloves are highly flexible and comfortable to wear. Latex material is known to have very high elasticity thereby the gloves can stretch well to allow easy donning.

2. MARKET POTENTIAL

The growing awareness of health and safety measures that have to be employed in order to stop spread of diseases have lead to the increasing need for gloves globally. The healthcare and the medical industry is growing at a fast rate thus increasing the growth of examination gloves market as it is the staple product required in this industry.

3. BASIS AND PRESUMPTIONS

i. It is presumed that the unit will run 8 hours (single shift) per day and 300 days in a year.

ii. The rate of interest has been taken 13% on an average both for fixed investment and working capital.

iii. To achieve full production 1 to 2 months trial production required.

iv. The salaries and wages, cost of raw material, utilities, rent of the shed etc. are based on prevailing rates in and around local region at the time of preparation and are subject to necessary changes from time to time based on local conditions.

4. IMPLEMENTATION SCHEDULE

The approximate time required for various activities is given below. However, it may vary from place to place depending upon the local circumstances and enthusiasm of the entrepreneur:

Name of Activity	**Period**
Scheme preparation	2 weeks
Sanction of loan	2-3 months
Placement of orders for delivery of machinery	1 month
Installation of machinery	2 weeks
Recruitment of staff and workers	2 weeks
Trail Run	2 weeks

Due to overlapping of some activities, normally 2-3 months are required to implement the project.

5. TECHNICAL ASPECTS

5.1. Process of Manufacturing

In manufacturing of gloves, the ammonia content of the latex is first reduced to about 0.1% by blowing air and by treating with formaldehyde. The dispersion of various additives viz., zinc oxide, sulphur, accelerators, anti-oxidants, etc. is prepared by milling in pot mill. Measured quantity of chemical dispersion prepared is mixed with Centrifuged latex in a mixer to get the latex compound. Ceramic dipping formers (moulds) are dipped in the coagulant solution and then into the latex compound. After withdrawal, the mould is rotated to assure even distribution of latex film deposits. The next operations are leaching, drying and preliminary finishing operations such as beading. Finally, the gloves are cured in hot air oven at 105°C for 30 minutes, packed and marketed.

5.2. Quality Control and Standards

Disposable Examination Gloves made from Rubber Latex has to comply with IS 15354 : 2018.

5.3. Production Capacity

This scheme envisages manufacturing of 6,00,000 pairs of Disposable Examination Gloves per annum.

6. FINANCIAL ASPECT

6.1. Fixed Capital

6.1.1. Machinery and Equipments

Description	Rate (Rs.)	Nos.	Total Price (Rs.)
Pot mill with 1.5 HP motor & 6 Nos. of Porcelain Pots	1,25,000	1	1,25,000
Mixer with 0.5 HP motor	20,000	1	20,000
De- ammoniation vessel 0.5 HP motor	2,50,000	1	2,50,000
Electrically operated Hot air oven	75,000	1	75,000
Dipping Vats (400 Liters)	80,000	2	1,60,000
Coagulation tank (400 Liters)	75,000	1	75,000
Ceramic Moulds	1,200	250	3,00,000
Testing equipment / auxiliary items			50,000
		Total	**10,55,000**

Electrification and installation	Rs. 1,00,000
Office equipments and furnitures (L.S.)	Rs. 30,000
Pre-operative expenses	Rs. 25,000
Total Fixed Capital	**Rs. 12,10,000/-**

6.2. Working Capital (per annum)

6.2.1. Land & Building

Building on Rent	Rent per month (Rs.)	Amount (Rs.)
Covered area for production, office, stores etc. 2500 sq. feet	**20,000**	**2,40,000**

6.2.2. Personnel

Description	Nos.	Salary/month (Rs.)	Total (Rs.)
Supervisor (Chemist)	1	20,000	2,40,000
Skilled Workers	2	13,000	3,12,000
Helpers	4	11,000	5,28,000
		Total	**10,80,000**

6.2.3. Raw Material

Description	Quantity (kg)	Rate (Rs./kg)	Total (Rs.)
Centrifuged Latex 60% DRC	3600	83	298,800
Vulca stabiliser-20%	72	150	10,800
Zinc oxide	500	115	57,500
Sulphur	475	14	6,650
Accelerator	200	180	36,000
Antioxidant	140	240	33,600
Casein	28	275	7,700
Dispersant	28	300	8,400
Calcium Nitrate	1000	24	24,000
Packing Material			10,000
		Total	**4,93,450**

6.2.4. Utilities

Power & Water charges: @ Rs. 10,000/- per month **Rs. 1,20,000**

6.2.5. Other Contingent Expenses **Rs. 60,000**

6.2.6. Total Recurring Expenditure **Rs. 19,93,450/-**

6.2.7. Working Capital requirement:

Working Capital		Amount (Rs.)
Raw Material	1 Month	41,121
In Process	1 Week	13,469
Finished Goods	2 Weeks	79,738
Receivables	1 Month	166,121
	Total	**3,00,449**
	Say	**Rs. 3,00,000/-**

6.3. Total Capital Investment

Fixed Capital		Rs. 12,10,000
Working Capital		Rs. 3,00,000
	Total	**Rs. 15,10,000/-**

7. FINANCIAL ANALYSIS

7.1. Cost of Production (per annum)

S.No.	Description	Amount (Rs.)
1	Total Recurring Cost per year	19,93,450
2	Total Depreciation (Machinery & Equipment @ 15%, Moulds @ 30%, furniture and fittings @ 10%)	2,06,250
3	Interest on Total Capital Investment @ 13%	1,96,300
	Total	**23,96,000/-**

7.2. Turnover (per annum)

S. No.	Item	Qty.	Rate (Rs./pair)	Value (Rs.)
1	Disposable Examination Gloves	6,00,000 pairs	6	36,00,000
			Total	**36,00,000/-**

7.3. Net Profit (per annum)

= Turnover – Cost of Production

= Rs. 36,00,000 – 23,96,000

= **Rs. 12,04,000/-**

7.4. Net Profit Ratio

$$= \frac{\text{Net profit per year}}{\text{Turnover per year}} \text{ X } 100$$

$$= \frac{12,04,000}{36,00,000} \text{ X } 100$$

$$= \mathbf{33.4}\ \%$$

7.5. Rate of Return

$$= \frac{\text{Net profit per year}}{\text{Total Capital Investment}} \text{ X } 100$$

$$= \frac{12,04,000}{15,10,000} \text{ X } 100$$

$$= \mathbf{79.7}\ \%$$

7.6. Break-even Point

S.No.	Description	Amount (Rs.)
1	Fixed Cost	17,22,550
2	Variable Cost	6,73,450
3	Contribution (Turnover – Variable Cost)	29,26,550

B.E.P

$$= \frac{\text{Fixed Cost}}{\text{Contribution}} \text{ X } 100$$

$$= \frac{17,22,550}{29,26,550} \text{ X } 100$$

$$= \mathbf{58.9}\ \%$$

Addresses of Machinery Suppliers

1. M/s Asia Engineering & Fabrication, No. 268, M. T. H Road, Subbiah Complex, SIDCO Industrial Estate, Ambattur, Chennai
2. M/s Orient Ceramics, Industrial Estate, Virudhachalam, Cuddalore, Tamil Nadu
3. M/s Omkar Engineers Mira Road East, Thane, Maharashtra
4. M/s Nobel Procetech Engineers, No. 3, Gunjan Plaza, Ram Nagar, Pathardi Phata, Nashik
5. M/s Aslam Equipments, No. 61/9, Kamarajar 4th Street, SIDCO Industrial Estate, Ambattur, Chennai

Raw Material Suppliers

1. M/s Plantation Corporation of Kerala Ltd., Chemparathimoottils, Nagampadam, Kottayam
2. M/s Kerala Rubbers, Industrial Estate, Ollur, Thrissur
3. M/s Thomson Rubbers India Private Ltd., IX/18- C, Kurisungal, Kanjirapally
4. M/s R. K. Polymer, No. 196/5, Govindappa Naicken Street, Chennai
5. M/s Welcome Chemicals, J-101, Sonam Pushp Building Phase 1, Mira Bhayander Road, Mumbai