PROJECT PROFILE ON DISPOSABLE SYRINGE

PRODUCT	**:**	**DISPOSABLE SYRINGE**
QUALITY AND STANDARD	**:**	**As per drug control specification**
PRODUCTION CAPACITY (P.A.)	**:**	**Qty. a) 60 lakh Pieces of 2-5 ml**
		b) 12 lakh Pieces of 20-50 ml
Value (Rs)	**:**	**a) 1.35 Crore**
		b) *0.84 Crore*
		Total- 2.19 Crores
MONTH & YEAR OF PREPARATION	**:**	**March 2011**
PREPARED BY	**:**	**Micro Small Medium Enterprises Development Institute, Plot No. 11-1, IDC, Near ITI, Kunjpura Road, Karnal-132001 (Haryana) Ph 0184-2231862 (Telefax) 0184-2230882**

A. INTRODUCTION:

Disposable Syringes are being used by doctors to inject medicines through intravenous or intramuscular ways for the treatment of diseases & also by research & development personnel. Disposable syringes are made of plastic material and are used in the field of medical and veterinary science. Due to their availability in sterilized condition, ready to use, and cost effectiveness, disposable syringes are fast replacing the age-old glass syringes. Moreover, the horror of AIDS worldwide has almost dispensed with the reuse of syringes and the demand of disposable syringes has increased phenomenally. Disposable syringes are mostly injection moulded from polypropylene. Syringes are available in sizes of 1 ml, 2 ml, 5 ml and 10 ml, 50ml in a variety of designs and consist of either two or three components construction. The number and size of injection moulding machines required depend upon syringe construction, number of mould cavities, annual production.

B. MARKET

Disposable syringe has a wide market potential. The age-old glass syringes are very fast becoming obsolete. In the Eastern region of the country there is no unit manufacturing this product. Some of the units manufacturing this product are in other parts of the country.

(1) Steryware, Faridabad (2) Cadilac (3) Dispovan, Faridabad (4) Cadilac hospital product, Ahmedabad (5) Surgiplus, Ahmedabad (6) Transplastic, Pondicherry (7) Albert David, M.P. (8) Manoj Surgical, Indore . Some of these units are 100% export-oriented units. Disposable syringes are very common product being used by hospitals. Govt is also a very big buyer of syringes. In view of the fast expanding market, the prospects of disposable syringe are very bright.

C. BASIS AND PRESUMPTION

1. The scheme is based on single shift (8 hours) basis and 300 working days per annum.
2. The estimates are drawn for a production capacity generally indicated techno economically viable for model type of activity.
3. Cost in respect of land and building, machinery and equipments, raw-materials and the selling prices of the finished products etc. are those generally obtained at the time of preparation of the project profile and may vary depending on various factors.
4. The time period for achieving full/envisaged capacity utilization is three years.
5. The interest rates considered are those which are presently charged by state financial institutions.
6. The labour wages are considered as per the prevailing rates. They may vary from place to place.

7. The margin money is 25% for fixed capital and working capital. The pay back period for the project is 3 years.

D. IMPLEMENTATION SCHEDULE

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

	NATURE OF ACTIVITIES	***ESTIMATED PERIOD***
1.	Market Survey & Preparation of project report	One Month
2.	Enterprise registration from DIC	Two weeks
3.	Sanction of loan from bank or state financial institution	One Month
4.	Approval from drug controller & Clearance from Pollution Control Board	Two Weeks
5.	Placement for order for delivery of Plant & machinery	One Month
6.	Installation of plant & machinery	Two Month
7.	Power connection	One Month
8.	Trial run	Two weeks
9.	Commencement of production	Eight Month onwards

TECHNICAL ASPECTS

Process of Manufacture:

Production of disposable syringe requires special injection moulding machines and special moulds. M/s DGP Windsor has introduced ferromatic injection moulding machine for this purpose. Raw material required is polypropylene. It is fed into the injection moulding machine and moulded in chilled condition to get better clarity. The moulded syringes is then assembled with the needle in automatic assembly machine. The whole assembly is then sterilized in sterilization plant using ethylene oxide. The completed syringe is then blister packed in automatic packing machine.

Quality Control:

The product should conform to drug control specification and drug license should be obtained for production of this item.

Production Capacity (per month)

2 ml -5 ml size- 60 lakh Pcs
20-50 ml size - 12 laks Pcs.

Pollution Control:

No special pollution control measures are needed for manufacture of this item.

Energy Conservation*:*

Proper maintenance of the power operated machines and judicial use of them will conserve energy.

FINANCIAL ASPECTS

A. *Fixed Capital Investment*

(i) Land & Building	Area Sq. mtrs.		(Rs)Per Month
Land	600	Rented	20,000
Built up area	400		

ii) Machinery & Equipments

	Description	Qty. (Nos)	Rate (in Rs.lakh)	Value (in Rs. Lakh)
	A) **PRODUCTION UNIT**			
1.	Zigma Injection Moulding Machine cap. 80 Ton	2	18	36.0
2.	Injection moulding machine cap. 120 Ton	1	24	24.0
3.	Sterilization Plant (Ethylene Oxide)	1	6	6.0
4.	Bilster Packing Machine	1	9	9.0
5.	Packing Machine	2	7	14.0
6.	Scrap Grinding Machine	1	1.5	1.5
7.	Air Compressor	1	1.5	1.5
8.	Water Pump	1	0.2	0.2
9.	Chilling Plant	1	2.0	2.0

10.	Moulds of 2 ml, 5 ml, 10 ml, & 50 ml including Barrel & Plunger	-	Varies as per sizes	20.0
	Erection and Electrification @ 10%			11.4
	TOTAL			**Rs 125.6**
	Furniture & Fixture			80,000
	Pollution Control & lab. Equipments			80,000
	Pre-operative expenses			25000
	Total Fixed capital investment			**Rs 127.45**

WORKING CAPITAL (PER MONTH)

Raw Material:

	Name of the Raw Material	**Qty.**	**Rate per kg/pc**	**Value (Rs. Lakh**
1.	Polypropylene	4.5 tons	90/-	4.05
2.	Rubber Gaskets	6 lakh	0.50	3.0
3.	Needle	6 lakh	0.50	3.0
4.	Packing Material		lumsum	0.50
5.	Printing ink		lumsum	0.20
			TOTAL	**10.75**

Staff and Labour

Designation	Nos.	Salary (Rs.)	Total (Rs.)
Manager	1	8,000/-	8000/-
Mfg. Chemist	1	7000	7000/-
Analytical Chemist	1	7000	7000/-
Skilled Workers	4	5000	20000/-
Semi-skilled workers	3	4500	13500/-
Accountant	1	5000	5000/-
Sales Manager	1	5000	5000/-
Peon cum Chowkidar	1	3000	3000/-
			68500/-
Perquisites @ 15% of Salaries			10250/-
		Total	78750/-
		Or say	**79000/-**

iv) Other Expenses

Activity	**Amount (Rs)**
Electricity	10000
Water	1000
Telephone	1000
Transportation	6000

Rent	20000
Maintenance and Repairing	1000
Advertisement & Publicity	1000
Insurance	2000
Misc. Exp.	1000
	43000

Total Working Capital P.M = 10,75,000 +79000+43000 = **11.97 Lakh**

Working capital for 3 months = 11.97 x 3 = **35.91**

Total Capital Investment = Rs. 127.45 lakh + 35.91 lakh = **1.63 crore**

Cost of Production (PM)

	Description	Amount (Rs Cr)
1.	Recurring expenditure	1.44
2.	Depreciation on plant & machinery @ 10%	0.13
3.	Depreciation on furniture @ 20%	0.02
4.	Interest on T.C.I @ 13%	0.21
	Total	**1.78**

Turnover by sale of 60 lakh pcs of 2 ml to 5 ml on average
Sale price 2.25/- per piece = 1.35 crore

12 lacs pcs. of 20-50 ml @ 7/- per piece = 0.84 crore

TOTAL = 2.19 crore

Net Profit = 219 Lakh – 178 Lakhs **= *41 Lakh***

Percentage profit on sale = $\frac{41 \times 100}{219}$ = **17.52 %**

Percentrage profit on TCI = $\frac{41 \times 100}{163}$ = **25.15%**

FIXED COST

40% of Staff and Labour = 3.79 Lakh
40% 0f Other expenses = 2.06 Lakh
Total Depreciation = 13.0 Lakh
Intrest on Total Capital Investment = 21.0 Lakh
Rs. 39.85 Lakh

Break Even Point = $\frac{39.85 \times 100}{39.85+41.00}$ = **= 48%**

Addresses of Machinery and Equipment Suppliers:

1.	M/s D.G.P. Windsor India Ltd., E-6, U2 Road, Wogle Industrial Estate Thane Mumbai-400604.
2.	M/s Sunanda Industrial Machinery A Division of Mafatlal Marg Industries Ltd., 109, Standard House, 83, Maharishi Karup Road, Mumbai-400002.
3.	M/s Indian Hydraulic Ind. Pvt. Ltd., 70 Shivaji Marg, Industrial Area, New Delhi-110015.
4.	M/s Ferromatik Milacron India Ltd., Plot No. 92, Phase-I, GIDC Vatva, Ahmedabad-382445

Addresses of Raw Material Suppliers:

1.	M/s Indian Petrochemicals Corporation Ltd., P.O. Petrochemicals Township, Vadodara-391346
2.	M/s Reliance Industries Ltd., Swastik Mill Compound, V.N. Purav Marg, Chembur, Mumbai-400071.
3.	Gas Authority of India Ltd., 16 Bhikaji Cama Palace, R.K. Puram, New Delhi-110066.

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