Investment Opportunities Map

Jordan Investment Board

Surgical Gloves Project

Pharmaceutical Sector

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The Project at a Glance	
Project Name	Surgical Gloves
Project Production Capacity	8 Million pairs/year
Manpower	56
Total Investment Cost	US$ 3,051,000
Initial Working Capital	US$ 95,000
Internal Rate of Return (IRR)	19 %
Breakeven Point	37 % of Production Capacity

Surgical Gloves Project

1. Introduction

1.1 Product Uses and Description

The necessity of surgical gloves in the operations theater is very well known. One of their advantages is their disposability after use, in addition to being cheap, safe and ready for immediate use.

Surgical gloves are not only used by surgeons and medical teams in hospitals, but also widely used in labs, clinics, industry and for household purposes.

Surgical gloves are made of specially compounded latex, which replaced the rubber solution in most modern techniques of the dipping process.

The gloves should have the property of elasticity, flexibility and impermeability to both liquids and air. In general, the gloves are packed in cardboard boxes containing 8, 50, or 100 pairs. The average weight of the pair is 25 gm.

1.2 Potential Consumers

Hospitals are the major consumers of surgical gloves, but they are also used by:

- Medical & chemical laboratories.
- Medical clinics.
- Chemical industry.
- Food industry
- Households for protection purposes.

2. Market Aspects

2.1 Imports and Local Demand

In the absence of sizeable exports and re-exports, the local annual market size is represented by the average total annual imports of surgical gloves during the years 1999-2003, which was 127 tons at a value of about US$ 431 thousand.

Table (1)
Imports of Surgical Gloves
(US $ thousand)

Year	1999	2000	2001	2002	2003	Average
US$ Thousands	722	207	438	624	117	432
Tons	196	76	147	183	35	127

Source: Department of Statistics

The average annual consumption of 127 tons is equivalent to about 5 million pairs of surgical gloves, which represent the estimated current demand.

2.2 Forecasted Future Demand

Taking into consideration

- The annual population growth rate of 2.8 %.
- The growth of health expenditures and the improvement of health care levels.
- The growth of the chemical and food industries.

It is expected that the consumption of surgical gloves in Jordan will increase at an average rate of 5 % per year (Table 2).

Table (2)
Forecasted Future Demand
(Thousand Tests)

Year	2005	2010	2015
Million Pairs	5.5	7.0	9.0

Demand on surgical gloves is expected to reach about 9 million pairs by the year 2015.

2.3 Competition

Most of Jordan's imports of surgical gloves come from Malaysia. There is no domestic production in Jordan nor in most neighboring countries. Based on actual demand in Jordan, the estimated annual demand in the regional countries should amount to more than 1000 tons.

2.4 Project Capacity

The proposed annual capacity of the project is 200 tons, which is equivalent to 8 million pairs of surgical gloves.

The project annual production size is expected to progress as follows:

Table (3)
Production Size Development

Year	Capacity Utilization	Million Units
1	50 %	4
2	75 %	6
3+	100 %	8

2.5 Projected Sales Revenues

The current sales price of imported surgical gloves is about US$ 10-12 / box of 50 pairs.

The project's price of surgical gloves is proposed to be US$ 9 / box (50 Units).
The estimated project revenues in the first year are therefore about US$ 720,000 (Table 4).

Table (4)
Projected Sales Revenues

Year	1	2	3+
US$	720,000	1,080,000	1,440,000

3. Technical Aspects

3.1 Project Location

The location of the surgical gloves project is preferred to be in one of the industrial cities in either the middle or the north provinces due to the following factors:

- Major clients of the project products are located in these areas.
- Availability of the needed packaging requirements.
- Adequacy of the infrastructure in industrial zones.
- Close to the expected export points.
- Availability of required skilled manpower.

3.2 Manpower

Table (5)
Manpower Requirements

Job	Required No.
General Manager	1
Administrative Clerk	7
Engineer	4
Technician	12
Laborer	32
Total	**56**

The total annual salaries and wages of the above employees (including fringe benefits), in addition to overhead and administrative expenses are estimated at US$ 200 thousands.

3.3 Land & Buildings

Table (6)
Land and Buildings Cost

Item	Area m^2	Cost US$
Land (Industrial cities)	3,000	85,000
Buildings	1,500	320,000

3.4 Raw Materials

The required raw material is natural latex which is a mixture containing 60 % of dry matter. It is imported mostly from the Far East countries (Malaysia and Thailand).

The current average price of latex is about US$ 1100 / ton.

3.5 Technology.

A major source of machinery and equipment is South Korea.

4. Financial Aspects

Basic Assumptions

The financial analysis and indicators are based on the following assumptions:

1. Project operational life is 10 years.
2. Internal Rate of Return (IRR) is calculated at 100% equity ratio.
3. Income tax is calculated at 15% on net taxable income.
4. Net Present Value (NPV) is calculated at 12% discounted annual rate.
5. Initial working capital is based on the operating expenses needed for two months.
6. Operating expenses comprise raw materials, labor cost and overheads, utilities and other expenses.
7. Pre -operating expenses consist of studies fees, capital issue, licensing, training, trial operations and other similar expenses.

4.1 Project Investment Cost

Table (7)
Total Investment Cost

Item	US$
Land	85,000
Buildings	320,000
Machinery & Equipment	2,000,000
Transport means	100,000
Sub- Total (Fixed Assets)	**2,505,000**
Contingency, (10%)	251,000
Pre – Operating Expenses	200,000
Initial Working Capital	95,000
Total Investment Cost	**3,051,000**

4.2 Financial Indicators

- ROI = 14.8 %
- IRR = 19 %
- NPV = 972 Thousand US$
- BEP = 37 % of Production Capacity
- Payback Period = 5 Years.