

## SUMMARY

ABUAD surgical gloves manufacturing firm is a standard and registered latex gloves manufacturing business that will be located in ABUAD in Ekiti state Nigeria. We have been able to lease a facility that is big enough to fit into the kind of standard latex gloves manufacturing company that we intend launching.

ABUAD surgical gloves manufacturing firm will manufacture two main types of medical gloves (examination gloves and surgical gloves). Our surgical gloves have more precise sizing with a better precision and sensitivity and are made to a higher standard. Our examination gloves are available as either sterile or non-sterile, while surgical gloves are generally sterile. We are aware that there are several latex gloves manufacturing companies, which is why we spent time and resources to conduct a thorough feasibility studies and market survey so as to be well positioned to favorably compete with all our competitors.

We will ensure that we continuously improve our products so as to suit the ever – changing trends in the healthcare industry. ABUAD surgical gloves manufacturing firm will ensure that all our customers are given first class treatment whenever they purchase any of our products. We have a CRM software that will enable us manage a one on one relationship with our customers no matter how large they may grow to. We will ensure that we get our customers involved in our product conception and also when making some business decisions.

ABUAD surgical gloves manufacturing firm will at all times demonstrate her commitment to sustainability, both individually and as a firm, by actively participating in our communities and integrating sustainable business practices wherever possible. We will ensure that we hold ourselves accountable to the highest standards by meeting our customers' needs precisely and completely whenever they patronize our products. ABUAD surgical gloves manufacturing firm is owned by ABUAD.

ABUAD surgical gloves manufacturing firm is in the latex gloves manufacturing industry to sell our products to a wide range of clients and of course to make profits, which is why we will design, develop and manufacture various types of latex gloves.

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## INTRODUCTION

- 1.1 General information
- 1.1.1 Management of the project

### Our Business Structure

ABUAD surgical gloves manufacturing firm knows the standards expected from companies that are into the manufacturing of latex gloves, hence the need for us to conform to industrial best practices. We will ensure that we hire people that are qualified,

honest, customer centric and are ready to work to help us build a prosperous business that will benefit all the stake holders.

As a matter of fact, profit-sharing arrangement will be made available to all our senior management staff and it will be based on their performance for a period of ten years or more. In view of that, we have decided to hire qualified and competent hands to occupy the following positions;

Chief Executive Officer (Owner)  
Production Manager  
Human Resources and Admin Manager  
Engineers (Production Engineers)  
Sales and Marketing Manager  
Accountants/Cashiers  
Customer Services Executive  
Job Roles and Responsibilities  
Chief Executive Officer – CEO:

#### 1.1.2 Roles and duties of each worker

Chief Executive Officer – CEO:

Increases management's effectiveness by recruiting, selecting, orienting, training, coaching, counseling, and disciplining managers; communicating values, strategies, and objectives; assigning accountabilities; planning, monitoring, and appraising job results  
Creating, communicating, and implementing the organization's vision, mission, and overall direction – i.e. leading the development and implementation of the overall organization's strategy. Responsible for fixing prices and signing business deals  
Responsible for providing direction for the business. Responsible for signing checks and documents on behalf of the company. Evaluates the success of the organization. Also reports to the board.

Admin and HR Manager:

Responsible for overseeing the smooth running of HR and administrative tasks for the organization. Maintains office supplies by checking stocks; placing and expediting orders; evaluating new products. Ensures operation of equipment by completing preventive maintenance requirements; calling for repairs. Defining job positions for recruitment and managing interviewing process. Carrying out staff induction for new team members. Responsible for training, evaluation and assessment of employees  
Responsible for arranging travel, meetings and appointments. Oversee the smooth running of the daily office activities.

#### Production Manager:

In charge of approving designs for the organizations. Responsible for managing the daily activities in the production facility. Ensure that the production facility is in tip top shape and goods are properly arranged and easy to locate. Interfaces with third – party suppliers (vendors). Control latex gloves manufacturing, distribution and supply chain inventory Supervise the workforce in the production facility.

#### Sales and Marketing Manager

Manage external research and coordinate all the internal sources of information to retain the organizations' best customers and attract new ones. Model demographic information and analyze the volumes of transactional data generated by customer purchases. Identify, prioritize, and reach out to new partners, and business opportunities and all. Identifies development opportunities; follows up on development leads and contacts. Responsible for supervising implementation, advocate for the customer's needs, and communicate with clients. Document all customer contact and information. Represent the company in strategic meetings. Help increase sales and growth for the company.

#### Accountant/Cashier:

Responsible for preparing financial reports, budgets, and financial statements for the organization. Provides managements with financial analyses, development budgets, and accounting reports. Responsible for financial forecasting and risks analysis. Performs cash management, general ledger accounting, and financial reporting. Responsible for developing and managing financial systems and policies. Responsible for administering payrolls. Ensuring compliance with taxation legislation. Handles all financial transactions for the organization. Serves as internal auditor for the organization.

#### Latex Gloves Production Engineers

Responsible for designing, fabricating, developing and manufacturing a variety of latex gloves. Responsible for maintenance of equipment and instruments in the production plant.

#### Client Service Executive

Ensures that all contacts with clients (e-mail, walk-In center, SMS or phone) provides the client with a personalized customer service experience of the highest level. Through interaction with customers on the phone, uses every opportunity to build client's interest in the company's products and services. Manages administrative duties assigned by the human resources and admin manager in an effective and timely manner. Consistently stays abreast of any new information on the organizations' products, promotional

campaigns etc. to ensure accurate and helpful information is supplied to customers when they make enquiries.

2.1 Economic Aspects

2.1.1 Demand and Supply

The table below shows the demand and supply of Nigeria in 2016, we are projecting this to be a base line for import and export when we start production.

Date	HS Code	Product Description	Foreign Country	Foreign Port	India Port	Value(INR)
3-May-2016	40151100	STERILE SURGICAL GLOVES-(ARTICLES OF APPAREL & CLOTHING ACCESSORIES) QTY.159000PAIRS)-Medium(NET CONTENT OF IMPORTED RA	Nigeria	Tincan Lagos	JNPT	5970460
3-May-2016	40151100	STERILE SURGICAL GLOVES-(ARTICLES OF APPAREL & CLOTHING ACCESSORIES) QTY.95000 PAIRS)-Large(NET CONTENT OF IMPORTED RAW	Nigeria	Tincan Lagos	JNPT	3567270
8-Jun-2016	40151100	STERILE SURGICAL GLOVES-(ARTICLES OF APPAREL & CLOTHING ACCESSORIES) QTY.93000 PAIRS)-Medium(NET CONTENT OF IMPORTED RAW	Nigeria	Tincan Lagos	JNPT	3530470
8-Jun-2016	40151100	STERILE SURGICAL GLOVES-(ARTICLES OF APPAREL & CLOTHING ACCESSORIES) QTY.55000	Nigeria	Tincan Lagos	JNPT	2087910

		PAIRS)-Large(NET CONTENT OF IMPORTED RAW				
16-Sep-2016	40151100	STERILE SURGICAL LATEX GLOVES GYNAECOLOGICAL(WE INTEND TO CLAIM REWARDS UNDER MERCHANDISE EXPORTS FROM INDIA SCHEME (MEI	Nigeria	Lagos	Cochin Air	908188
8-Feb-2016	90189099	PIONN PIONEER GLOVES (S) POWDER(SURGICAL ACCESSORIES)	Nigeria	Harcourt	Madras Sea	164800
8-Feb-2016	90189099	SURGI SURGICARE GLOVES 7.5 (SURGICAL ACCESSORIES)	Nigeria	Harcourt	Madras Sea	157761
8-Feb-2016	90189099	PIONE PIONEER GLOVES (M)(SURGICAL ACCESSORIES)	Nigeria	Harcourt	Madras Sea	126000
8-Feb-2016	90189099	SURGI SURGICARE GLOVES 7 (SURGICAL ACCESSORIES)	Nigeria	Harcourt	Madras Sea	78751
8-Feb-2016	90189099	SURGI SURGICARE GLOVES 7 (SURGICAL ACCESSORIES)	Nigeria	Harcourt	Madras Sea	65625.8
8-Feb-2016	90189099	SURGI SURGICARE GLOVES 8 (SURGICAL ACCESSORIES)	Nigeria	Harcourt	Madras Sea	39374.8

8-Feb-2016	90189099	SURGI SURGICARE GLOVES 6 (SURGICAL ACCESSORIES)	Nigeria	Harcourt	Madras Sea	39172.8
8-Feb-2016	90189099	SURGI SURGICARE GLOVES 6.5 (SURGICAL ACCESSORIES)	Nigeria	Harcourt	Madras Sea	26250.3
8-Feb-2016	90189099	SURGI SURGICARE GLOVES 6.5 (SURGICAL ACCESSORIES)	Nigeria	Harcourt	Madras Sea	13125.2
8-Feb-2016	90189099	SURGI SURGICARE GLOVES 7 (SURGICAL ACCESSORIES)	Nigeria	Harcourt	Madras Sea	13065.9
8-Feb-2016	90189099	PIONEER GLOVES (S)(SURGICAL ACCESSORIES)	Nigeria	Harcourt	Madras Sea	6299.92
8-Feb-2016	90189099	PIONE PIONEER GLOVES (L)(SURGICAL ACCESSORIES)	Nigeria	Harcourt	Madras Sea	3779.68

## 2.2 Marketing program

### MARKET ANALYSIS

#### 2.2.1 Market Trends

A latest trend shows that due to the increasing rate of latex allergy among health professionals, and in the general population, gloves made of non-latex materials such as polyvinyl chloride, nitrile rubber, or neoprene have become widely used. Chemical processes may be employed to reduce the amount of antigenic protein in Hevea latex, resulting in alternative natural-rubber-based materials such Vytex Natural Rubber Latex. However, non-latex gloves have not yet replaced latex gloves in surgical procedures, as gloves made of alternative materials generally do



not fully match the fine control or greater sensitivity to touch available with latex surgical gloves.

If you keep tabs with happening in the latex gloves manufacturers industry, you will agree that technological advances, the legislative expansion of healthcare access and the improving economy have stimulated demand for latex gloves over the last five years, and the aging Nigeria population has further contributed to revenue growth, due to the high incidence of health issues. So also, technological advances, expansion of healthcare and the improving economy have stimulated demand. Industry operators often have the weak hand in price negotiations and recent healthcare legislation has created a degree of uncertainty for latex gloves manufacturing companies.

Because of the bad publicity when it comes to the use of latex gloves, people have started looking for alternatives. However, fully artificial polyisoprene—rather than “hypoallergenic” cleaned natural latex rubber—is also the most expensive natural latex substitute available. Other high-grade non-latex gloves, such as nitrile gloves, can cost over twice the price of their latex counterparts, a fact that has often prevented switching to these alternative materials in cost-sensitive environments, such as many hospitals. Nitrile is a synthetic rubber. It has no latex protein content and is more resistant to tearing.

Also, it is very resistant to many chemicals and is very safe for people who are allergic to latex protein. Nitrile gloves are the most durable type of disposable gloves. Although nitrile gloves are known for their durability, extra care should be taken while handling silver and other highly reactive metals because those substances can react with sulfur, an accelerant in nitrile gloves.

### 2.2.2 Our Target Market

We have positioned our latex gloves manufacturing company to service businesses in the healthcare industry in and around Ekiti state – Ondo state and every other location where our distribution teams will be located. We have conducted our market research and feasibility studies and we have ideas of what our target market would be expecting from us. We are in business to design, develop and manufacture a wide range of latex gloves for the following customers;

Pharmaceutical stores

Hospital

Medical laboratories

Medical colleges

Dental clinics

Optical centers

Chemical labs

Nursing homes

Creches

### 2.2.3 Our Competitive Advantage

ABUAD surgical gloves manufacturing firm is launching a standard latex gloves manufacturing company that will indeed become the preferred choice for hospitals and other healthcare facilities in Nigeria. We will ensure that we work with some of our high – profile clients in designing, developing and manufacturing of customized latex gloves that suit their businesses.

Lastly, our employees will be well taken care of, and their welfare package will be among the best within our category in the industry meaning that they will be more than willing to build the business with us and help deliver our set goals and objectives. We will also give good working conditions and commissions to freelance sales agents that we will recruit from time to time.

### 2.2.4 Sales and Marketing Strategy

#### Sources of Income

ABUAD surgical gloves manufacturing firm is in business to design, develop and manufacture a wide range of latex gloves. We are in the industry to maximize profits and we are going to go all the way out to ensure that we achieve our business goals and objectives.

ABUAD surgical gloves manufacturing firm will generate income by selling the following products;

Examination latex gloves

Surgical latex gloves

### 2.2.5 Sales Forecast

We are set to go into the designing, developing and manufacturing of various types of latex gloves and we have put plans in in place that will help us always attract customers sales. We are well positioned to take on the available market in Nigeria and we are quite optimistic that we will meet our set target of generating enough income/profits from the first six month of operation and grow the business and our clientele base.

We have been able to examine the latex gloves manufacturing industry we have analyzed our chances in the industry and we have been able to come up with the following sales forecast. Below are the sales projections for ABUAD surgical gloves manufacturing firm it is based on the location of our business and other factors as it relates to latex gloves manufacturing company's start-up in Nigeria;

First Fiscal Year (FY1): ₦126,000,000

Second Fiscal Year (FY2): ₦198,000,000

Third Fiscal Year (FY3): ₦432,000,000

N.B: This projection was done based on what is obtainable in the industry and with the assumption that there won't be any major economic meltdown and there won't be any major

competitor manufacturing same latex gloves as we do within same location. Please note that the above projection might be lower and at the same time it might be higher.

### 2.2.6 Marketing Strategy and Sales Strategy

Before choosing a location for the ABUAD surgical gloves manufacturing firm we conducted a thorough market survey and feasibility studies in order for us to be able to penetrate the available market and become the preferred choice for hospitals, pharmaceutical stores and healthcare facilities in and around Ekiti state - Nigeria. We have detailed information and data that we were able to utilize to structure our business to attract the numbers of customers we want to attract per time and the number of products to be sold monthly.

We hired experts who have good understanding of the latex gloves manufacturing industry to help us develop marketing strategies that will help us achieve our business goal of winning a larger percentage of the available market in Nigeria.

In summary, ABUAD surgical gloves manufacturing firm will adopt the following sales and marketing approach to win customers over;

Introduce our business by sending introductory letters alongside our brochure to hospitals, pharmaceutical stores, dental clinics, optical centers, medical laboratories and key stake holders in Nigeria. Ensure that we design, develop and manufacture a wide range of latex gloves needed in the healthcare sector. Make use of attractive hand bills to create awareness and also to give direction to our show rooms. Position our signage / flexi banners at strategic places around Ekiti state – Ondo state. Create a loyalty plan that will enable us reward our regular customers. List our business and products on Newspaper advertisement sections. Leverage on the internet to promote our business. Engage in direct marketing and sales. Encourage the use of Word of mouth marketing (referrals). Join local chambers of commerce and industries to network and market our products. Publicity and Advertising Strategy

Despite the fact that our latex gloves manufacturing plant is well located, we will still go ahead to intensify publicity for the business.

ABUAD surgical gloves manufacturing firm has a long-term plan of exporting our latex gloves to other countries of the world, which is why we will deliberately build our brand to be well accepted in Ekiti state – Ondo state.

Here are the platforms we intend leveraging on to promote and advertise ABUAD surgical gloves manufacturing firm;

Place adverts on community-based newspapers, radio and TV stations.

Leverage on the internet and social media platforms like; YouTube, Instagram, Facebook, Twitter, LinkedIn, Snapchat, Google+ and other platforms to promote our business.

Ensure that our we position our banners and billboards in strategic positions all around Ekiti state – Ondo state.

Distribute our fliers and handbills in target areas in and around our neighborhood

Advertise our latex gloves in our official website and employ strategies that will help us pull traffic to the site

Brand all our official cars and vans and ensure that all our staff members and management staff wear our branded shirt or cap at regular intervals.

### 2.2.7 Our Pricing Strategy

We are aware of the pricing trend in the latex gloves manufacturing industry which is why we have decided to produce various sizes (packs) of latex gloves (examination gloves and surgical gloves).

In view of that, our prices will conform to what is obtainable in the latex gloves manufacturing industry but will ensure that within the first 6 to 12 months our products are sold a little bit below the average price in Nigeria. We have put in place business strategies that will help us run on low profits for a period of 6 months; it is a way of encouraging people to buy into our latex gloves brand.

#### Payment Options

The payment policy adopted by ABUAD surgical gloves manufacturing firm is all inclusive because we are quite aware that different customers prefer different payment options as it suits them but at the same time, we will ensure that we abide by the financial rules and regulation of Nigeria.

Here are the payment options that ABUAD surgical gloves manufacturing firm will make available to her clients;

Payment via bank transfer

Payment with cash

Payment via credit cards

Payment via online bank transfer

Payment via check

Payment via mobile money transfer

Payment via bank draft

In view of the above, we have chosen banking platforms that will enable our client make payment for all purchases without any stress on their part.

### 2.2.8 Sustainability and Expansion Strategy

Part of the plans we have in place to sustain ABUAD surgical gloves manufacturing firm is to ensure that we continue to make available different sizes of high – quality latex gloves, deliver quality services, improvise on how to do things faster and cheaper. We are not going to relent in providing conducive environment for our workers and also the required trainings that will help

them deliver excellent services at all times. We are quite aware that our customers are key component to the growth and survival of our business hence we are going to continuously engage them to give us ideas on how to serve them better and the products they want to see in our store.

We will not waste time in adopting new technology, best practices and diversifying our services. will make sure that the right foundation, structures and processes are put in place to ensure that our staff welfare are well taken of.

Our company's corporate culture is designed to drive our business to greater heights and training and retraining of our workforce is at the top burner. We know that if that is put in place, we will be able to successfully hire and retain the best hands we can get in the industry; they will be more committed to help us build the business of our dreams.

### 3.1 Product

Latex surgical gloves are a huge part of day to day activity at a hospital, protecting both patients and workers from transmission of diseases or other types of illness. Their manufacturing process is actually pretty simple, which helps make them affordable and disposable.

#### 3.1.1 The Manufacturing Process

First, latex must be collected from the rubber tree. Growing mostly in southeastern Asian countries, farmers will extract the latex sap from trees by tapping them, similar in process to how maple trees are tapped for their syrup. The difference is that rather than drilling a hole into the tree, strips of bark are removed in a downward spiral, which allows the sap to run into a collection bucket. Next, the sap is sent to a production facility for preparation.

Once delivered to a production facility, various compounds are added to the sap that add to the latex's ability to stretch, and to stabilize the material. It is at this time that liquid pigment dispersions can be added to color the latex to any color or shade. Chromatech has specially developed liquid pigment dispersions for latex, and are designed to be seamlessly added into the production process.

After the latex has been colored and prepared, the hand shaped molds must be cleaned and prepped for use. Manufacturers dip ceramic hand shaped formers into a water bath, and then into a bleach solution. This removes any residue that may be left over from the previous batch of gloves. Now that they've been cleaned, the formers are dipped into a calcium carbonate/calcium nitrate solution which helps the latex stick to the formers. Now that the preparation is complete, the formers are dipped into the latex bath, and varying the time that the formers are submerged controls the thickness of the glove.

The next step is to vulcanize the latex. Vulcanizing is crucial to the process as it is what gives latex its elasticity, and the gloves are also dried during this process. After drying, the gloves are rinsed with water to remove excess latex, which also gives the latex a softer texture.

At this point, the gloves are almost finished. If the gloves are meant to be powdered, they are dipped in a corn starch slurry, and then dried once more. For powder-free gloves, they are

chlorinated and then coated with a polymer that makes the glove smooth. Finally, either air pressure or man power is used to remove the gloves from the formers and then prepared for quality checks and packaging.

### 3.1.2 Plant size and production schedule

Refer to the utilities section

### 3.1.3 Machinery

Refer to the utilities section

### 3.1.4 Plant location

Refer to the utilities section

### 3.1.5 Plant layout

Refer to the utilities section

### 3.1.6 Structure

Refer to the utilities section

### 3.1.7 Raw materials

Medical gloves are disposable gloves used during medical examinations and procedures to help prevent cross-contamination between caregivers and patients. Medical gloves are made of different polymers including latex, nitrile rubber, polyvinyl chloride and neoprene; they come unpowdered, or powdered with corn starch to lubricate the gloves, making them easier to put on the hands.

Corn starch replaced tissue-irritating lycopodium powder and talc, but even corn starch can impede healing if it gets into tissues (as during surgery). As such, unpowdered gloves are used more often during surgery and other sensitive procedures. Special manufacturing processes are used to compensate for the lack of powder.

There are two main types of medical gloves: examination and surgical. Surgical gloves have more precise sizing with a better precision and sensitivity and are made to a higher standard. Examination gloves are available as either sterile or non-sterile, while surgical gloves are generally sterile.

Besides medicine, medical gloves are widely used in chemical and biochemical laboratories. Medical gloves offer some basic protection against corrosives and surface contamination. However, they are easily penetrated by solvents and various hazardous chemicals, and should not be used for dishwashing or otherwise when the task involves immersion of the gloved hand in the solvent.

became the chief nurse of the operating room when Johns Hopkins Hospital opened in 1889. When in the winter of 1889 or 1890 she developed a skin reaction to mercuric chloride that was used for asepsis, William Halsted, soon-to-be her husband, asked the Goodyear Rubber Company to produce thin rubber gloves for her protection. In 1894 Halsted implemented the use of sterilized medical gloves at Johns Hopkins.

### Glove materials

Latex

Neoprene

The first disposable latex medical gloves were manufactured in 1964 by Ansell. They based the production on the technique for making condoms. These gloves have a range of clinical uses ranging from dealing with human excrement to dental applications.

Criminals have also been known to wear medical gloves during commission of crimes. These gloves are often chosen because their thinness and tight fit allow for dexterity. However, because of the thinness of these gloves, fingerprints may actually pass through the material as glove prints, thus transferring the wearer's prints onto the surface touched or handled.

The participants of the Watergate burglaries infamously wore rubber surgical gloves in an effort to hide their fingerprints.

### Sizing

Generally speaking, examination gloves are sized in XS, S, M and L. Some brands may offer size XL. Surgical gloves are usually sized more precisely since they are worn for a much longer period of time and require exceptional dexterity. The sizing of surgical gloves are based on the measured circumference around the palm in inches, at a level slightly above the thumb's sewn. Typical sizing ranges from 5.5 to 9.0 at an increment of 0.5. Some brands may also offer size 5.0 which is particularly relevant to women practitioners. First-time users of surgical gloves may take some time to find the right size and brand that suit their hand geometry the most. People with a thicker palm may need a size larger than the measurement and vice versa.

Research on a group of American surgeons found that the most common surgical glove size for men is 7.0, followed by 6.5; and for women 6.0 followed by 5.5.

Powdered gloves

To facilitate donning of gloves, powders have been used as lubricants. Early powders derived from pines or club moss were found to be toxic. Talcum powder was used for decades but linked to postoperative granuloma and scar formation. Corn starch, another agent used as lubricant, was

also found to have potential side effects such as inflammatory reactions and granuloma and scar formation.

#### Elimination of powdered medical gloves

With the availability of non-powdered medical gloves that were easy to don, calls for the elimination of powdered gloves became louder. By 2016, healthcare systems in Germany and the United Kingdom had eliminated their use. In March 2016, the United States Food and Drug Administration (FDA) issued a proposal to ban their medical use and on December 19, 2016 passed a rule banning all powdered gloves intended for medical use. The rule became effective on January 18, 2017.

Powder-free medical gloves are used in medical cleanroom environments, where the need for cleanliness is often similar to that in a sensitive medical environment.

#### Chlorination

To make them easier to don without the use of powder, gloves can be treated with chlorine. Chlorination affects some of the beneficial properties of latex, but also reduces the quantity of allergenic latex proteins.

#### Alternatives to latex

##### Latex allergy

##### Nitrile powder free gloves

Due to the increasing rate of latex allergy among health professionals, and in the general population, gloves made of non-latex materials such as polyvinyl chloride, nitrile rubber, or neoprene have become widely used. Chemical processes may be employed to reduce the amount of antigenic protein in Hevea latex, resulting in alternative natural-rubber-based materials such as Vytex Natural Rubber Latex. However, non-latex gloves have not yet replaced latex gloves in surgical procedures, as gloves made of alternative materials generally do not fully match the fine control or greater sensitivity to touch available with latex surgical gloves. (High-grade isoprene gloves are the only exception to this rule, as they have the same chemical structure as natural latex rubber. However, fully artificial polyisoprene rather than "hypoallergenic" cleaned natural latex rubber is also the most expensive natural latex substitute available. Other high-grade non-latex gloves, such as nitrile gloves, can cost over twice the price of their latex counterparts, a fact that has often prevented switching to these alternative materials in cost-sensitive environments, such as many hospitals. Nitrile is a synthetic rubber. It has no latex protein content and is more resistant to tearing. Also it is very resistant to many chemicals and is very safe for people who are allergic to latex protein. Nitrile gloves are the most durable type of disposable gloves. Although nitrile gloves are known for their durability, extra care should be taken while handling silver and other highly reactive metals because those substances can react with sulfur, an accelerant in nitrile gloves.

#### Double gloving



Double gloving is the practice of wearing two layers of medical gloves to reduce the danger of infection from glove failure or penetration of the gloves by sharp objects during medical procedures (For people with HIV and Hepatitis, surgeons use antivirus glove). This should better protect the patient against infections transmitted by the surgeon. A systematic review of the literature has shown double gloving to offer significantly more protection against inner glove perforation in surgical procedures compared to the use of a single glove layer. But it was unclear if there was better protection against infections transmitted by the surgeon. Another systematic review studied if double gloving protected the surgeon better against infections transmitted by the patient. Pooled results of 12 studies (RCTs) with 3,437 participants showed that double gloving reduced the number of perforations in inner gloves with 71% compared to single gloving. On average ten surgeons/nurses involved in 100 operations sustain 172 single gloves perforations but with double gloves only 50 inner gloves would be perforated. This is a considerable reduction of the risk.

In addition, cotton gloves can be worn under the single-use gloves to reduce the amount of sweat produced when wearing these gloves for a long period of time. These under gloves can be disinfected and used again.

Table 1: Cost and return structure of rubber production per hectare

	<i>Ilushin Rubber Estate (IREL)</i>		<i>Waterside Rubber Estate (WAREL)</i>	
<i>Description</i>	<i>% of total cost</i>		<i>% of total cost</i>	
	<i>Output (tonne/ha/year)</i>	<i>2.5</i>	<i>2.7</i>	
<i>Price (N/tonne)</i>		<i>142,881.55</i>		<i>148,787.3</i>
<i>Revenue</i>		<i>357,203.88</i>		<i>401,725.71</i>
	<i>Variable Cost Items</i>			
<i>Fertilizer</i>	<i>4,000</i>	<i>2.22</i>	<i>4,500</i>	<i>2.39</i>
<i>Herbicide</i>	<i>3,500</i>	<i>1.94</i>	<i>3,700</i>	<i>1.97</i>
<i>Fungicide</i>	<i>1,900</i>	<i>1.05</i>	<i>2,000</i>	<i>1.06</i>
<i>Planting material</i>	<i>9,600</i>	<i>5.32</i>	<i>10,100</i>	<i>5.35</i>
<i>Coagulant/anticoagulant</i>	<i>1,800</i>	<i>1.00</i>	<i>1,850</i>	<i>0.98</i>
<i>Transportation</i>	<i>15,000</i>	<i>8.31</i>	<i>15,800</i>	<i>8.38</i>
<i>Labour</i>	<i>95,000</i>	<i>52.62</i>	<i>97,000</i>	<i>51.43</i>
<i>Total Variable Cost</i>	<i>130,800</i>	<i>72.45</i>	<i>134,950</i>	<i>71.54</i>
<i>Gross Margin</i>		<i>226,403.88</i>		<i>266,775.71</i>
	<i>Fixed Cost Items</i>			
<i>Land rent</i>	<i>20,000</i>	<i>11.08</i>	<i>22,000</i>	<i>11.66</i>
	<i>Depreciation:</i>			
<i>Tapping knife</i>	<i>2,100</i>	<i>1.16</i>	<i>2,200</i>	<i>1.17</i>
<i>Tank</i>	<i>8,000</i>	<i>4.43</i>	<i>8,000</i>	<i>4.24</i>
<i>Latex cup</i>	<i>1,646</i>	<i>0.91</i>	<i>1,720</i>	<i>0.91</i>
<i>File</i>	<i>4,900</i>	<i>2.71</i>	<i>5,130</i>	<i>2.74</i>

Bucket	6,000	3.32	6,120	3.24
Cup hanger	2,100	1.16	2,250	1.19
Spout	1,000	0.55	1,310	0.69
Farm boot	1,500	0.83	1,840	0.98
Cutlass	2,500	1.38	3,100	1.64
Total Depreciation Cost	29,746	16.48	31,670	16.79
Total Fixed Cost	49,746	27.55	53,670	28.45
Total Cost	180,546	100	188,620	100
Net Farm Profit	176,657.88		213,105.71	
			PMS	0.49 0.53
			RORI	0.98 1.13

Source: Computed from Field Survey Data, 2010

Table 2: Multiple regression results on determinants of rubber output

Variable	Coefficient	Standard error	t-ratio	Coefficient	Standard error	t-ratio
Constant	-38.25***	13.11	-2.9	-29.82***	4.42	-6.06
Labour	3.47**	1.54	2.25	2.51***	0.79	3.18
Fertilizer	0.136	0.39	0.34	0.0344	0.223	0.154
Maintenance Cost						
	0.40***	0.141	2.84	-0.139**	0.06	-2.3
Transportation Cost						
	0.782*	0.425	1.84	6.649***	0.236	2.76
Agrochemical	-1.27***	0.232	-5.5	-0.0171	0.089	-0.19
Age of Rubber Tree						
	1.17*	0.677	1.73	1.33***	0.319	4.18
Adjusted R2						0.72 0.95
F-value						9.35 58.89

\*\*\* implies significant at 1%, \*\* implies significant at 5%, \* implies significant at 10%

Source: Computed from Field Survey Data, 2010

### 3.1.7 Utilities

Our machine that we would use has the following characteristics so we can the power consumption and other factors to be considered for it to perform at optimum level.

Power(W): Three-phase

Dimension(L\*W\*H): 50-110m

Weight: 250kg

Condition: New

Production Capacity: 4000-30000pcs/hr

Place of Origin: Jiangsu, China

Brand Name: BLX

Model Number: BLX-MG

Voltage: 220V/380V

Certification: CE ISO

Capacity: 6000pcs/hr

After-sales Service Provided: Engineers available to service machinery overseas

Warranty: 1 Year

Supply Ability: 10 Set/Sets per Month

1 Adopt the most advanced gloves production technology and production process layout, product qualification rate is more than 98%, protein content is lower than 120 micrograms per gram;

2 TPU Coating technology

3 Imported surfactant solidifier, finished membrane is uniform, no powder mold release

4 The introduction of foreign advanced transmission main chain structure, chain little resistance during operation, Production of high speed, stable operation

5 A main motor drag, solve the drag, difficult to synchronize, fault point, difficult maintenance, and other issues

6 Adopt vertical hot air circulation drying oven, compared with other forms of hot air circulation, save energy consumption by almost 20%

7 Used for cleaning mold splitter six roller long hair scrub mould technology;

8 Mold directional, machine printing technology;

9, A variety of specifications of production, on the same edge automatic adjustment, the PU edge roller, long service life;

10 Can design according to the needs of customers of different length, height, cost models;

### 3.1.8 Waste disposal

This waste is mainly generated from glove dipping tanks and is referred as dipping tank coagulum (DTC). It is considered as scheduled waste which requires mandatory disposal by incineration, in compliance to the Scheduled Waste Regulations set by the Department of Environment. Work described in this study showed, DTC samples with a polymer content of >40%, both ash and calcium carbonate content of <10% and curatives <2% (Sulphur, antioxidants, accelerators and ZnO) when blended with virgin rubbers (SMR 10 and SMR 20) were found to be suitable for manufacturing value-added rubber products. DTC samples with polymer contents of <40% and lower in curatives could still be considered for recycling, by adding higher portions of virgin rubber for manufacturing products like shoe soles, carpet underlay and thermoplastic elastomer products. Glove manufacturers should ideally set up on-site DTC processing facilities at their factory premises equipped with crepers as well as space to 'air dry' the creped DTC samples. Creped samples could be sent to the Malaysian Rubber Board (MRB) for chemical analyses. Factory owners could also present the analytical results from MRB to the recyclers to obtain a good premium for their processed DTC samples to be used as raw materials.

### 4.1. Financial feasibility

#### Startup Expenditure (Budget)

Starting a standard latex gloves manufacturing company is indeed a capital-intensive business because the amount required to set up a plant is relatively on the high side when compared to similar business. The bulk of the capital will be sent on leasing or acquiring a facility and also in purchasing of equipment and machines and raw materials.

Aside from that, you are also expected to purchase and service your distribution trucks, pay your employees and utility bills. These are the key areas where we will spend our start-up capital;

The total fee for registering the business in Nigeria – ₦270,000.

Legal expenses for obtaining licenses and permits as well as the accounting services (software, P.O.S machines and other software) – ₦1,188,000.

Marketing promotion expenses for the grand opening of ABUAD surgical gloves manufacturing firm in the amount of ₦1,260,000 and as well as flyer printing (2,000 flyers at ₦14.4 per copy) for the total amount of ₦1,288,800.

The total cost for hiring Business Consultant – ₦900,000.

The total cost for payment of insurance policy covers (general liability, workers' compensation and property casualty) coverage at a total premium – ₦3,384,000.

The total cost for long – term leasing of a standard warehouse and showroom – ₦90,000,000.

The total cost for remodeling the production facility and showroom – ₦7,200,000.

Other start-up expenses including stationery (₦180,000) and phone and utility deposits – (₦900,000).

Operational cost for the first 3 months (salaries of employees, payments of bills and all) – ₦21,600,000

The total cost for Start-up inventory (purchase of production machines and equipment and the purchase of raw materials inclusive) – ₦90,000,000

The total cost for counter area equipment – ₦3,420,000

The total cost for store equipment (cash register, security, ventilation, signage) – ₦4,950,000

The total cost for the purchase and installation of CCTVs – ₦3,600,000

The cost for the purchase of office furniture and gadgets (Computers, Printers, Telephone, TVs, Sound System, tables and chairs and all) – ₦1,440,000.

The total cost of launching a Website – ₦216,000

Miscellaneous – ₦3,600,000

We would need an estimate of five hundred and fifty thousand dollars (₦198,000,000) to successfully set up our latex gloves manufacturing company in Ekiti state – Ondo state.

Generating Funds/Startup Capital for ABUAD surgical gloves manufacturing firm.

ABUAD surgical gloves manufacturing firm is a private registered business that is solely owned and financed by ABUAD ENTERPRISES. They do not intend to welcome any external business

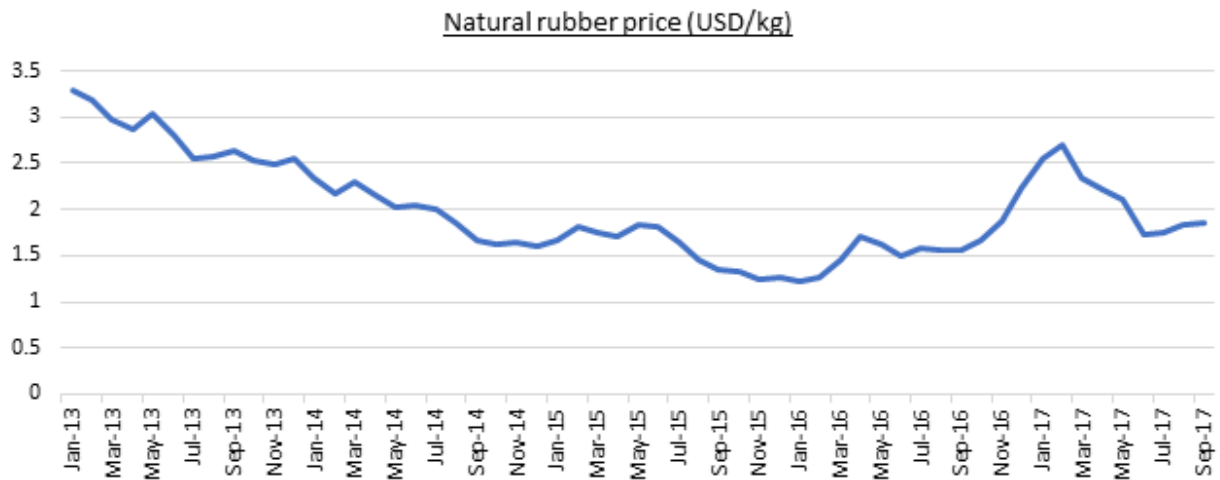
partner which is why he has decided to restrict the sourcing of the start-up capital to 3 major sources.

Generate part of the start-up capital from personal savings

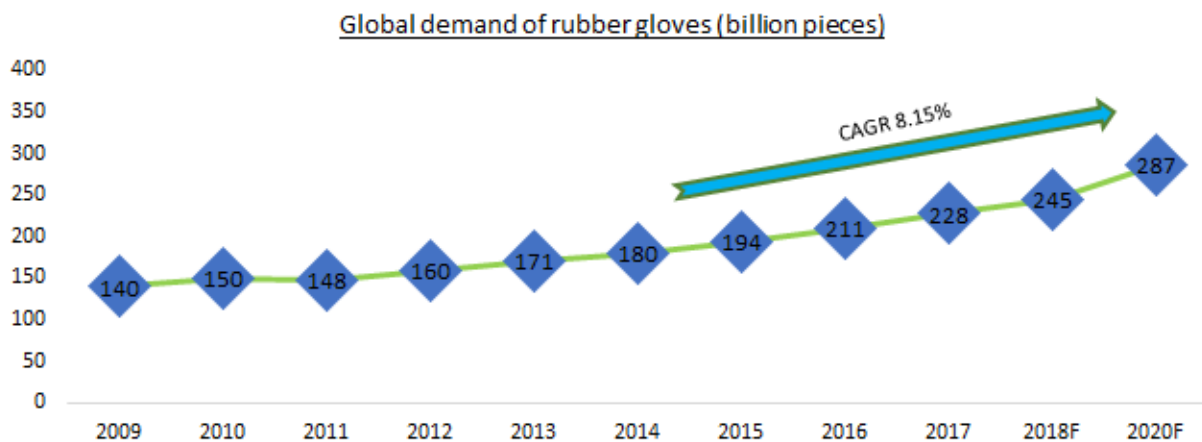
Source for soft loans from family members and friends

Apply for loan from the bank

N.B: We have been able to generate about ₦54,000,000 (Personal savings ₦360,000,000 and soft loan from family members ₦18,000,000) and we are at the final stages of obtaining a loan facility of ₦144,000,000 from our bank. All the papers and documents have been signed and submitted, the loan has been approved and any moment from now our account will be credited with the amount.



Source: Indexmundi



Source: Tevisory's Research and MARGMA