In the name of God

Pre-feasibility study form

Plan Name: Waffle Production

Project Owner: Gholam Ali Soltani-Gaz Ferdows

Consulting Company: Kavosh Consultants Co.

Project Address: Shahrekord Industrial Estate

Initial date: 2019

Update 2021

SUMMARY OF THE FEASIBILITY STUDY

General Specification
Name of The Project: Feasibility studies of Waffle
Project Capacity: 5000 ton per year
Personnel Number: 36 people
Working Days: 288 Days
Product Usage: Food
Marketing
Product Global Price: 7 $ per kg
Domestic Demand: 8000 ton
Domestic Production: 5000 ton
Import: 12000 Kg
Export: 2000 ton
Technical Study
Land Area: 10000
Building Area: 3805
Main Raw Materials: Flour - Oil - Egg - Additives ...
Supplying Place of Raw Materials: Local
Power Requirement: 1,000,000 (kwh)
Water Requirement: 60000(m^3)
Fuel Requirement: 1,160,000 (m^3)
Economical & Financial Study
Fixed Investment Cost (Rail's& other Currencies): 145512 Million Rials- 551600 Euro
Working Capital: 10797 Million Rials- 40929 Euro
Total Investment Cost: 156309 Million Rials- 592528 Euro
Annual Sale: 200000 Million Rials- 758150 Euro
Net Present Value(NPV): 130258 Million Rials- 493776 Euro
Break Even Point(BEP): 3829.26 Million Rials- 14515 Euro
Internal Rate of Return(IRR): 33%
Investment Return Period: 3 Years
Investment Sources Ratio Equity: 30 % Finance: 70%

CONTENTS	PAGE
INTRODUCTION	5
1- PRODUCT INTRODUCTION	5
1-1-PRODUCT NAME AND CODE (ISIC 3)	8
1-2-CUSTOMS TARIFF NUMBER	8
1-3-IMPORT AND EXPORT CONDITIONS	8
1-4- REVIEW AND PRESENTATION OF STANDARDS (NATIONAL OR INTERNATIONAL)	8
1-5- REVIEWING AND PROVIDING NECESSARY INFORMATION ON DOMESTIC AND GLOBAL PRODUCTION PRICES AS WELL AS GLOBAL PRODUCT PRICES	9
1-6- EXPLAIN THE USES OF THE PRODUCT	9
1-7-EXAMINE ALTERNATIVE PRODUCTS AND ANALYZE THEIR EFFECTS ON PRODUCT CONSUMPTION	9
1-8-STRATEGIC IMPORTANCE OF GOODS IN IRAN AND COUNTRIES OF THE REGION	9
1-9-MAJOR MANUFACTURING AND CONSUMER COUNTRIES	10
2- SUPPLY AND DEMAND SITUATION IN IRAN AND COUNTRIES IN THE REGION	12
2-1-AN EXAMINATION OF EXPLOITATION CAPACITY AND PRODUCTION PROCESS FROM THE BEGINNING OF THE THIRD DEVELPOMENT PLAN TO NOW	12
2-2-CHECK THE STATUS OF NEW PROJECTS AND ONGOING DEVELOPMENT PLANS	12
2-3-REVIEWING THE PROCESS OF PRODUCT IMPORTATION	13
2-4-MONTORING CONSUMPTION TRENDS	13
2-5-INVESTIGATE THE EXPORT AND THE POSSIBILITY OF ITS DEVELOPMENT	13
2-6- PRODUCT REQUIREMENT CHECK WITH EXPORT PRIORITY	14
3-OVERVIEW OF TECHNOLOGY AND METHODS OF PRODUCTION AND	14

SUPPLY IN THE COUNTRY AND COMPARISON WITH OTHER COUNTRIES	
4-DETERMINING THE STRENGTHS AND WEAKNESSES OF CONVENTIONAL TECHNOLOGIES IN THE PRODUCT MANUFACTURING PROCESS	17
5- INVESTIGATE AND DETERMINE THE MINIMUM ECONOMIC CAPACITY, INCLUDING ESTIMATING THE VOLUME OF FIXED INVESTMENT IN RIAL AND FOREIGN CURRENCY	20
6-THE AMOUNT OF RAW MATERIAL NEEDED ANNUALLY AND WHERE IT IS SUPPLIED	25
7-RISK ANALYSIS OF PROJECT IMPLEMENTATION	25
8- HUMAN RESOURCES AND NUMBER OF JOBS	25
9- CHECK AND DETERMINE THE AMOUNT OF WATER, ELECTRICITY, FUEL AND ...	26
10- CONDITIONS OF ECONOMIC AND COMMERCIAL SUPPORT	27
10-1- CUSTOMS TARIFF SUPPORT (PRODUCTS AND MACHINES) WITH GLOBAL TARIFFS	27
10-2- FINANCIAL SUPPORT (EXISTING UNITS AND PLANS) OF BANKS - INVESTOR COMPANIES	27
11-ANALYZING AND PRESENTING FINAL CONCLUSIONS AND PROPOSALS FOR THE CONSTRUCTION OF NEW UNITS	28

Introduction

Feasibility studies are expert studies that are carried out prior to the implementation of economic investment plans. In these studies, from the market, technical, financial and economic point of view, the plan is analyzed and its results used as a basis for investor decision making.

The present report is a feasibility study of Waffle production. These studies have been prepared in the framework of feasibility studies methodology and according to the above methodology, the economic capacities and volume of investments required to execute the project will be estimated and presented so that investors and interested stakeholders can obtain all the information needed. Earn money and start investing in open-ended, open-minded economic investment. It is hoped that these auxiliary studies, however small, will contribute to the development of our country.

1 -Product Introduction

Waffle is the name of a kind of crisp and sweet bread that looks very similar to biscuits and is produced in both traditional and industrial ways with flour, sugar, oil, and eggs, and sometimes yogurt. Of course waffles are made in different styles and tastes in different parts of the world, but in general, waffles can be found in "Waffle Crepe" (Thin Pancakes), Pancakes, Shrimp, French Toast (Fried Shrimp), Taiyaki , Summarized the stroop wafel, pizza and latte. Waffle is used throughout the world for breakfast and evening and is a combination of strawberry and cream. Of course, they usually serve and serve waffles with honey and butter and sometimes with jam and marmalade. The strawberry waffle is usually a good part of the hotel's breakfast.

The waffle is made from pouring the waffle paste between two window molds called the waffle maker. Traditionally, waffles were traditionally made in iron molds, but waffle makers nowadays have made it very easy. Food industry historians believe that the origin of waffle sweets goes back to ancient Greece. At that time, flat and flat cakes were baked by two metal plates, called Obelios. Of course, this cake was not sweet and was very different from modern waffles. However, some believe that this cake is the main ancestor of waffle sweets and has evolved over time with the changes it has made to modern waffles.

Slowly, honey, cream and butter were added to the dough, and the metal molds deepened and called waffle bread. Various European countries have adopted the recipe for this pastry and have created their own waffle by combining their personal taste. As a result, in the sixteenth century everyone was consuming waffles. Nowadays, waffle sweets are consumed all over the world, especially the Belgian country, and there are many varieties available. You can even buy a ready-made version from the store right now, and with just a few minutes to warm up a delicious and delicious waffle.

Belgian waffle

Belgians love waffles and have made a variety of waffles, so many people consider waffles a type of Belgian pastry or bread. Today, the Belgian waffle recipe is the most common form of waffle and there are many countries on the breakfast menu. This type of waffle is thinner, toasted and crispy and usually served with honey and served as dessert. In Brussels, waffles are usually made rectangular and larger than American waffles. Zinc wafers are often decorated with powdered sugar, chocolate sauce and cream mixed with a variety of seasonal fruits such as strawberries, bananas and nuts.

American Waffle

Baking powder is used to make American waffle paste, unlike Belgian waffle paste. American waffles in sweet form with sugar or sweet additives or in salty form with ingredients like smoked salmon, chickens and so on. Served.

LIÈGE WAFFLE

Liege is the name of a city in Belgium that produces its own waffle. In fact, Waffle Liege is the second most widely consumed waffle in Belgium, and many even believe that the original Waffle origin is in the city. While the Brussels waffle is very crunchy and toasted with sweet and cutlery, the waffle is smaller and is usually eaten by hand and similar to donuts and donuts. Yeast is also used in yeast and the color is golden and the texture of the waffle is softer and thicker and the caramelized sugar is poured on it. Sometimes waffles are flavored with vanilla or cinnamon.

Waffle Pie

The waffle pie is also a creative type of waffle that comes with a multi-layer waffle topped with chocolate sauce and more. In some versions, the waffle pastries are mixed with nectar and syrup, honey, and different fruits. Some even divide the waffle pastry into small pieces and make an innovative and delicious salad with tomatoes, chili peppers, corn and cheese.

Hong Kong Waffle

Another type of waffle is made in Hong Kong and is often sold as street food. These waffles are usually decorated with peanut butter and sugar or fruit. The Hong Kong waffle, also known as egg waffle, has a very soft texture, often fruity, and wraps one side of the waffle. Sometimes these waffles are rolled and funneled.

Waffle Cone

Everybody knows funnel ice cream and they eat it from a kid and an adult. This ice cream cone is actually a type of waffle! It is said to be the first time a creative chef has waffled a funnel so his sales associate can pour the ice cream into it. This creativity was greatly welcomed by the people, and funnel ice cream was created.

What is a waffle maker?

Pour the waffle batter into a baking sheet and bake in a few minutes. The traditional waffle maker was actually two iron molds that were attached to each other by a hinge and (often) wooden handle and were made on fire. Today waffle makers are made of Teflon and non-stick molds.

Different waffle flavors

Waffles can be served in different ways and with different ingredients. Waffles are usually eaten sweet, but in some countries salty varieties can also be found.

Notela Waffles and Strawberries: These waffles can be considered the most beautiful and elegant type of waffle used in many promotional photos. When the waffle is still hot and fresh, pour chocolate on it and then decorate it with strawberry slices.

Waffle Banana and Caramel: To make this waffle flavor, decorate it with vanilla ice cream, banana, whipped cream and caramel nectar.



1-1-Product Name and Code (ISIC 3)

According to information obtained from the Ministry of Industry, Mining and Commerce, the ISIC code is 1541412346.

1-2-Customs Tariff Number

According to the Export and Import Regulations Book of 2019 and the Chamber of Commerce, Industries, Mines and Agriculture website, this plan contains the Customs Tariff Code 19053200 .

1-3- IMPORT AND EXPORT CONDITIONS

Basic salaries include customs duties, taxes, patents, types of duties and other remuneration received from imported goods and are equivalent to 4% of the customs value of the goods. In sum, this is the income received from the business determined by the Board of Ministers in accordance with the relevant rules.

Heading Subheading No.	Description	SUQ	Input rights
19053200	Waffles and Wafers	Kg	55

1-4- REVIEW AND PRESENTATION OF STANDARDS (NATIONAL OR INTERNATIONAL)

The national standards associated with the title of this plan are as follows:

Standard Name	Standard Numb	Description
National standard	592	Wafer - Test Properties and Methods
National standard	6113	Wafer-ritual production work
National standard	A1-592	Wafer - Test Properties and Methods (Amendment 1)

International standards related to the title of this project are as follows:

Standard Name	Standard Number	Description
ISO	22000	Food Safety Management

HACCP	-	Risk assessment and critical control points

1-5- REVIEWING AND PROVIDING NECESSARY INFORMATION ON DOMESTIC AND GLOBAL PRODUCTION PRICES AS WELL AS GLOBAL PRODUCT PRICES

Overseas production cost per kilogram is about $7 per kilogram. Inside the country there are about 35,000 per kg.

1-6- EXPLAIN THE USES OF THE PRODUCT

Waffle is used by many people today. It is often served as a dessert or breakfast. Hotels also usually welcome waffles for their meals. In general: general, food, confectionery, cake and pastry industries, etc.

1-7-EXAMINE ALTERNATIVE PRODUCTS AND ANALYZE THEIR EFFECTS ON PRODUCT CONSUMPTION

The closest product to a waffle is a wafer, but usually the use of the two is very different. Wafers are more of a biscuit and cannot be considered a good substitute for waffles.

1-8-STRATEGIC IMPORTANCE OF GOODS IN IRAN AND COUNTRIES OF THE REGION

Considering the extensive investments made in the agricultural and food conversion industries in the country in the past decade, especially by the private sector, as well as looking at the country's advantages in terms of supplying domestic needs and exporting products to others.

Countries, such as bread, biscuit, confectionery, chocolate and similar products, can be considered as one of the major food industry groups which has enjoyed a great growth in production and export investment in recent years. Given the strength of the country's artisans, a bright future can be drawn for this industry, especially in the export sector, and the creation of food and conversion industries in developing countries has multiplied value added. The cheapness of raw materials, low value for money, cheap labor force are all factors that justify the conversion industries. The economic structure of Iran is such that the agricultural and conversion industries have always had a special place in the economic, social and political development process of the country. Economics including the relative superiority of investment in this sector

and the value of the capitalists and economic structure of production and deprivation justify the potential of this land for the development of agriculture and the launch of the conversion and food industries.

Waffle makers appear to be one of the few fast-food providers to benefit from a healthier diet. Food preparations and packaging usually have a high amount of fat and sugar that eliminating or even reducing them can make the taste of the product so serious that the consumer is no longer interested in buying. But in the case of waffles and wafers, not only is it possible to reduce the amount of sweet and salty fat used without a drastic change in taste, even sugar-free varieties with useful ingredients recommended by doctors are easily produced in the industry. Using bran or cereals other than wheat with higher nutritional value and fewer calories, along with producing salty snacks and biscuits, are some of the most useful yet useful foods that can attract many customers.

1-9-MAJOR MANUFACTURING AND CONSUMER COUNTRIES

According to the authoritative website www.statista.com, reputable companies are the leading manufacturer of waffle and similar products such as wafer and so forth in 2019 as follows:

Mondelez International Inc.

The Campbell Soup Company

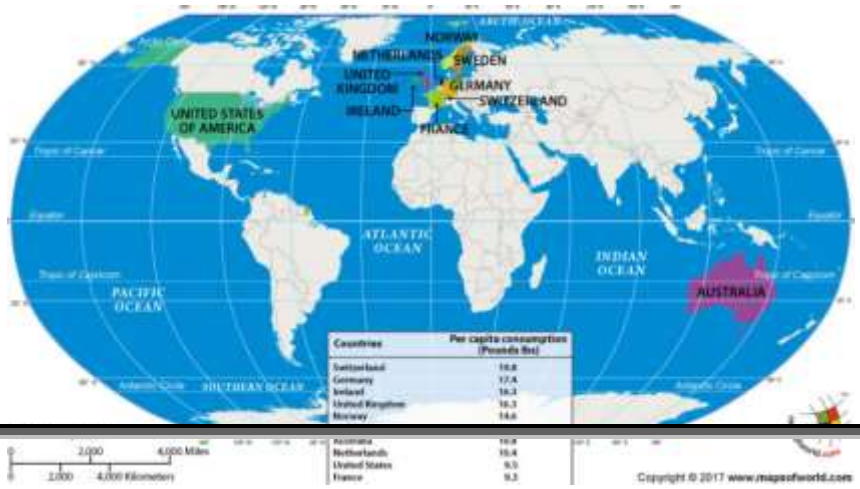
Yildiz Holding AS

Britannia Industries Limited

The Kellogg company

The names of the domestic companies active in this industry are given in the next section.

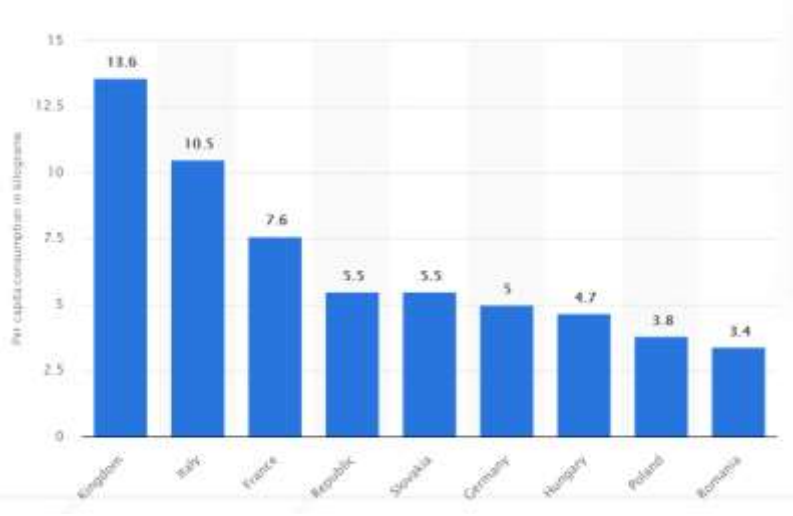
The largest consumer countries for waffles and similar industries, such as wafers, etc. are as follows:



Top Manufacturers & Exporters in 2019:

COUNTRY	(US$)	PERCENT
Germany	$787.1 million	9.8%
Netherlands	$736.4 million	9.2%
Mexico	$700.5 million	8.7%
Belgium	$586.9 million	7.3%
Great Britain	$419.4 million	5.2%
Poland	$369.1 million	4.6%
Canada	$350.4 million	4.4%
Turkey	$333.6 million	4.2%
France	$304.1 million	3.8%
Italia	$290.9 million	3.6%

Biggest Consumers in 2019:



Source: https://www.statista.com/

2- SUPPLY AND DEMAND SITUATION IN IRAN AND COUNTRIES IN THE REGION

2-1-AN EXAMINATION OF EXPLOITATION CAPACITY AND PRODUCTION PROCESS FROM THE BEGINNING OF THE THIRD DEVELPOMENT PLAN TO NOW

The following table presents the specifications and capacities of Wafel production units based on statistics from the Ministry of Industry, Mining and Trade:

Row	Name	State	Capacity (Ton)
1	Kaleh	Tehran	20
2	Lop Lop	Alborz	90
3	Maz Maz	Markazi	300
4	Razavi	Alborz	100
5	Melika	Tehran	150
6	Fard Tehran	Tehran	100
7	Solico	Alborz	50

Source: Ministry of Industry, Mining and Commerce - Statistics and Information Center

2-2-CHECK THE STATUS OF NEW PROJECTS AND ONGOING DEVELOPMENT PLANS

Refer to the Industrial Data Bank of the Ministry of Industry, Mining and Commerce, status and specifications of new projects that are creating waffle production, and are listed in the table below:

Row	Name	State	Capacity (Ton)
1	Fard Tehran	Tehran	100
2	Aris Amol	Mazandaran	1000
3	Pishbord Emarat Kavir	Yazd	400

Source: Ministry of Industry, Mining and Commerce - Statistics and Information Center

2-3-REVIEWING THE PROCESS OF PRODUCT IMPORTATION

According to the information in the book "Export and Import Regulations of the Islamic Republic of Iran, the title of this plan is Customs Tariff Schedule 19053200 ". Is as follows:

Year	2015	2016	2017	2018	2019
Weight (kg)	73,783	394,074	695,237	122,054	0
Rial value	3,302,450,207	20,614,649,503	47,724,286,222	13,408,682,971	0
Euro value	93,260	562,788	1,169,995	281,031	0

Explanation: In the table above, the waffle product is similar to products such as wafers, etc.

2-4-MONTORING CONSUMPTION TRENDS

The best way to determine the amount of waffle consumed is to use supply and demand balances. So that the amount of domestic consumption is estimated to be the result of the difference in supply (total domestic production and imports) and exports. According to the latest statistics, in 2018 we had about 12,000 kilograms of imports and in 2019 there were no imports in this field and we had about a thousand tons of production. Consumption of this product has

been increasing in recent years due to the industrial development of the country and is expected to reach 20,000 tons in the near future.

2-5-INVESTIGATE THE EXPORT PROCESS OF THE PRODUCT AND THE POSSIBILITY OF ITS DEVELOPMENT

The amount of exports in the last 5 years plus the value of the rial and the dollar according to the announcement of the Chamber of Commerce, Industries, Mines and Agriculture as follows:

Year	2015	2016	2017	2018	2019
Weight (kg)	11,101,200	14,238,524	13,531,477	22,670,930	1,619,919
Rial value	627,612,688,276	861,071,671,090	897,061,501,750	2,604,769,808,944	178,758,296,421
Euro value	18,004,941	23,170,780	22,174,831	35,046,362	1,545,427

Explanation: In the table above, the waffle product is similar to products such as wafers, etc.

2-6- PRODUCT REQUIREMENT CHECK WITH EXPORT PRIORITY

The Waffle World Market is going through promising days and is expected to see sustained growth for at least another decade. Existing creativity and innovation are constantly evolving the market for this product in a positive direction. The market is expected to reach $ 125 billion by the end of 2022. The new flavors, flavors and grains, the shape and packaging and the creative delivery make people of every age group all over the world eager to consume this product. These innovations have been greatly assisted by manufacturers, especially in terms of supply and packaging. Studies show that packages that, after being opened, can keep the product fresh, healthy, and portable for a while, while at the same time economically cost-effective and do not increase product prices, can have a huge impact on a product. At the same time, given the public's concerns about the health of the products and materials used, it seems that any product that has a readable nutritional value tag that is both detailed and honest, is more likely to be selected by a potential buyer.

Factors affecting demand in the global Waffle market are varied, but such as increasing urbanization, increasing disposable income, and most importantly all the busy lives that necessitate easy and easy access to food. Waffles Although often in the food category, along with things like bread and pastries, biscuits, etc., have a higher nutritional value, especially in terms of carbohydrates, and can be an easy, affordable and affordable breakfast, regardless of calories. Provides the body with the nutrients it needs for at least part of the day. The market

diversification of this product, which was long considered a luxury product but is now consumed by all segments of the consumer community, is expanding day by day and demand is also fueled by a variety of marketing techniques, especially television research. Most, of course, as with other sectors, go to producers who produce healthier products, especially those with higher nutritional value. But like all other markets, there are limitations here. Rising commodity prices, especially recently, and with raw materials prices stagnant for years due to the adverse economic conditions of the world, are among the factors limiting the global market for the production of waffles. Taxes are also likely to increase as the world economy improves and as the crisis recedes, this may be another factor limiting the market.

3-OVERVIEW OF TECHNOLOGY AND METHODS OF PRODUCTION AND SUPPLY IN THE COUNTRY AND COMPARISON WITH OTHER COUNTRIES

Waffle production process

A) Preparation of waffle dough

Raw materials including flour, water, salt, oil, eggs and additives such as dye, ammonium bicarbonate and lecithin are poured into the mixer as required by the formulation. It is best to make flour sifted and coarse particles for uniform dough preparation. Also, to form a suitable emulsion, 20-30 ° C water and melted oil should be used. The mixers used were high speed to make the paste uniform and homogeneous.

The material is loaded manually into the mixer and the pump or manually can be used to remove the dough from the tank. The paste should be such that it is homogeneous and evenly spreadable on the oven plates and is easily separated on the plates after baking. And for this, the mixing time of the water and flour ratio as well as the amount of oil and sugar in the dough should be adequate. In a suitable formula the ratio of solids to water is about 1: 1.7. The volume of mixer used varies depending on the factory production.

B) Waffle baking stage

After preparing the dough is transferred to a small tank embedded in the oven. The pressure required to transfer the dough from this tank to the baking molds is supplied by a small pump. After the dough has been spread over the bottom of the mold, the top is placed as a supplement and the extra dough comes out of the mold edges. The mold is then heated through a rail to the inside of the oven and the next mold is ready for pulping. The oven has a pneumatic, wind-powered system that cleans the molds before pouring the dough and opening the mold into a mold through the thermal tunnel path by

camshaft mechanism and the waffle bread is separated from the mold by wind force. Baking time varies depending on the speed of the bar and the temperature of the bread, but be adjusted so that the bread reaches the desired crisp moisture and color, while also preventing it from browning and browning. The fuel used is diesel or natural gas oven that creates a temperature of about 250 degrees Celsius inside the oven. The resulting flame shines directly through the special nozzles and the dough is cooked. The dimensions of the bread vary according to the dimensions of the mold and the distance between them and the shapes have different shapes. Bread is usually about 2-3 mm thick and measures 50 x 30 cm and weighs about 60 grams. After the bread is pulled out of the molds by the wind, the bread is dropped into the bread collecting chamber and stored by the worker. Bread collecting sheets are kept in a chamber at a temperature of about 25 ° C to prevent bending and deflection. Bending in bread causes problems during breadworming operation, causing bread to break and thereby increasing waste significantly.

C) Preparation of waffle cream

For the preparation of the cream, the raw materials of oil, sugar, milk powder, essential oil, salt, lecithin and milled ingredients are added to the mixer as required and in accordance with the formulation. Sugar should be powdered to ensure that the mixing process is smooth and creamy texture. Stirring continues until a smooth paste is obtained. After the mixing is complete, the stirring is discontinued and the cream is transferred to the hopper. This is done manually. The design of worm-producing mixers is best designed to carry air bubbles into the worm. This causes the waffle cream to empty. After the cream has been prepared, the contents of the mixer are drained into a steel container and transferred to the female cream. The female worm has a funnel in which the worm is placed inside the worm's funnel of a mixer and keeps the worm uniform. Under the worm, two rollers rotate counterclockwise, causing the worm to slide out. At the front of the breadworm table, one by one, the worker arranged on the conveyor belt, and after passing the roller and placing a layer of cream on it, another bread was placed on it, and finally the bread was sandwiched to adhere to the cream and the thickness of the sandwich. Waffles pass under a roller at the end of the strip.

D) cooling waffles

The next cooling operation is to cool the cream and prevent slipping of the bread on the cream, which can be done by two continuous and non-continuous systems. In the continuous system, the waffle sandwiches are passed through the tunnel glaciers and At the end of the tunnel they are stacked by the worker. The speed of the bar and the temperature of the refrigerator should be chosen so that the cream eventually reaches the desired firmness and reaches the desired temperature. Refrigerator temperatures are generally around zero to 10 degrees Celsius and 10 to 25 meters long. The refrigerant gas is the refrigerator Freon 22, which is supplied by the compressor. Ventilators are used for air flow and

uniform distribution of cold throughout the tunnel and are also selected for better heat exchange for airflow with the opposite waffle sandwich. This system is very common and is used in many units and is more suitable for high capacity. The batch system uses a low temperature room where the waffle sandwiches are placed in the room for some time after collection. It eliminates the need to warm and lower the temperature for the next step of the room. This room looks like a refrigerator and is cooled by pipes through which the Freion gas flows. The pressure is supplied by the compressor, the residence time and room temperature must be such that the cream is firm enough at the end.

E) Cutting the waffle

At this point, large waffle sandwiches that are already chilled and stacked are cut into pieces of the desired size. This is done in two steps by the cutting machine. Cutting the length first and then cutting the cross. The movement of slices is done in two ways.

A) The movement of the rotating plate of a coil by an electric motor, which is controlled by several switches.

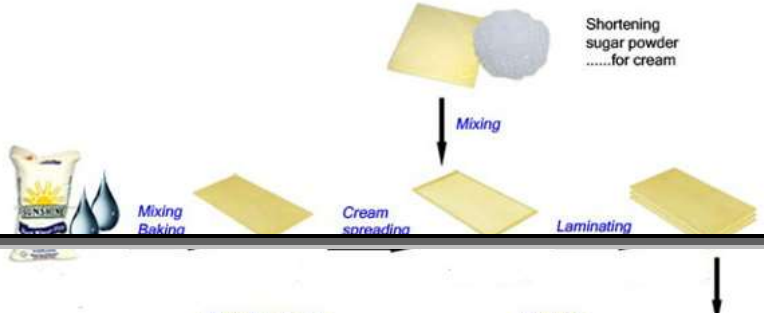
B) Air compression driven by the compressor and plates controlled by multiple discharge valves are used in both manufacturing plants, but the first method is easy to repair and maintain due to its simple repair and maintenance. In-house construction is also used more. The cut waffles are collected in the trays at the bottom of the cutting table and transferred to the laminate.

F) Waffle packaging

After the waffles are removed from the tunnel refrigerator is well tightened and ready for packaging. The speed of the packing machines varies depending on the unit capacity. Packaging cover Aluminum foil with plain paper or metallized polyethylene is a very different form of packaging that is more commonly used in the type of double-head press.

4-DETERMINING THE STRENGTHS AND WEAKNESSES OF CONVENTIONAL TECHNOLOGIES IN THE PRODUCT MANUFACTURING PROCESS

High efficiency, quality and ease of production of wafers are the most important advantages of these methods. Production of this product requires a rigorous quality management process, which is referred to below.



The growth and evolution of world industries is largely due to the competition between industrial units. In this regard, each industrial unit with increasing quality of its products, tries to gain more market share and this process has over time improved the quality of products and consequently the quality growth of industrial societies. Quality control is carried out to determine the accuracy of the production operation according to the technical specifications specified for the product. This operation prevents the loss of capital while reducing the cost of production while reducing the cost of production.

In general, the objectives of quality control can be summarized as follows:

• Maintaining set standards

• Detection and improvement of aberrations in the production process

• Detection and improvement of off-standard products

• Evaluating the efficiency of the unit personnel

In other words, quality control is the assurance of the production and production of goods and services in accordance with the standards.

Designated and inspected as an integral part of quality control to identify defects and provide the information needed for the quality control system in all industrial units.

The general inspection steps according to the status of each industry are as follows:

1) In the process of delivery of raw materials

2) At the beginning of production

3) Before the start of operations

4) Before the start of the irreversible operation

5)Before the start of operations that cause defects to be covered

6) In the final stage of work

Each of these inspection steps may be performed at the site of the operation or laboratory.

In this unit according to the characteristics of the industry, each of the essential steps of quality control and the location of these tests will be determined.

will be. As stated above, the quality control should be implemented in three stages.

1) Quality control of raw materials

2)control during production

3) ultimate control

1) Quality control of raw materials:

This part of the quality control should be pre-purchased by checking on the product sample to match the expected features.

These include the quality of wheat flour purchased for varieties, moisture content, lack of heterogeneous ingredients, and quality control of additives such as baking powder or cocoa powder.

2)Production control:

This part of the quality control covers all stages of production, including adding ingredients to a specified ratio flour, mixing

Flour with appropriate ratio of water, temperature and humidity control during dough baking, temperature setting for baking baking, etc., which will be controlled by the operator at each stage.

3) Ultimate control:

Pre-packaged products in terms of appearance, amount of roasting and baking, taste, moisture, sweetness ...

Also about how the packaging is made to ensure that it is kept in a wrapper or box.

Cardboard is another important point.

5- INVESTIGATE AND DETERMINE THE MINIMUM ECONOMIC CAPACITY, INCLUDING ESTIMATING THE VOLUME OF FIXED INVESTMENT IN RIAL AND FOREIGN CURRENCY

EXPLANATION: EXCHANGE RATE BASED ON NIMA SYSTEM - DATED 24/11/2021 - AMOUNT: 263800 RIALS

Project Investment Schedule:

Description	Cost (Million Rials)	Cost (Euro)
Land	9000	34116/76
Landscaping	2473	9374/526
Construction	24245	91906/75
laboratory equipment	87980	333510/2
Utilities	1500	5686/126
transportation	2420	9173/616
equipment and machinery	3840	14556/48
Office equipment	826	3131/16

Miscellaneous and unforeseen	13228	50144/05
Total	145512	34116/76

The ground specification of the project implementation is as follows:

Description	Area (m 2)	Unit Price (Rials)	Total (Million Rials)	Total (Euro)
Land	9000	1/000/000	9000	34116/76

The cost of landscaping is as follows:

Description	Area	Unit Price (Rials)	Total (Million Rials)	Total (Euro)
Digging and leveling	9000	150/000	1350	5117/513
Fencing	500	1/500/000	750	2843/063
Asphalt and pavement paving	650	450/000	293	1110/69
Green space and lighting	800	100/000	80	303/26
Total			2473	9374/526

Building Information:

Description	Building type	Area	Unit Price (Rials)	Total (Million Rials)	Total (Euro)
Production	Niches	2500	5/700/000	14250	54018/2
Raw materials and supplies	Niches	1000	5/700/000	5700	21607/28

Office building and services	Official	160	20/000/000	3200	12130/4
Utilities	Niches	120	6/000/000	720	2729/34
Guard		25	15/000/000	375	1421/531
Total		3805		24245	91906/75

Utilities:

Description	Cost (Million Rials)	Cost (Euro)
Power Supply	850	3222/138
Fuel	100	379/0751
Heating and cooling equipment	650	2463/988
Protective equipment and security system	320	1213/04
Compressed air supply	500	1895/375
Total	2420	9173/616

Transportation:

Description	Technical Specifications	Cost (Million Rials)	Cost (Euro)
Forklifts	3 ton	2400	9097/801
Pickup	Nissan	790	2994/693
Riding	Samand	650	2463/988
Total		3840	14556/48

Equipment and Machinery:

Manufacturing machinery is the most important part of industrial investment. The machinery of each manufacturing complex determines the quality and variety of products, production technology, raw materials, and many of the methods, costs of production, and even the finished product price. Machinery selection is a critical and influential factor in the macroeconomic indicators of the plan. The cost of producing the machinery and equipment of the production line is estimated on the basis of inquiries from major manufacturing companies or reputable agencies. It also calculates the cost of procuring machinery, including shipping, installation, customs duties, and so on.

The world's leading companies producing the main equipment for the Waffle production process can be listed as follows:

JUPITER, GTI Technologies, Coral, Gelgoog Intelligent Technology, Zhengzhou Hongle Machinery, …

The price range for all of these companies is about 10 percent. The price of machines for this process is given in the table below.

Number	Name	Required amou	cost (million rials)	Rial sum (million rials)
1	Mixer	2	7500	15000
2	Drain it	1	3200	3200
3	Save source	1	3300	3300
4	Feeder	1	3700	3700
5	Laminator	1	5200	5200
6	Former and waste separator	1	5900	5900
7	Salt Sprayer	1	2600	2600
8	Rotary Holding	1	4600	4600
9	Rotary Cutter	1	4300	4300
10	Tunnel oven	1	8600	8600
11	Conveyor	2	2900	5800
12	Come on	1	3400	3400
13	packing	1	3900	3900
14	Injection Depositor	1	7000	7000
15	Other cases	1	11480	11480
16				
Total (Million Rials)				87980
Total (Euro)				371570

laboratory equipment:

Number	Name	Currency (Euro)	Rial Cost (Million Rials)	Rial sum million) (rials
1	laboratory equipment	5686/126	1500	1500
Total		1500		

Office equipment:

Number	Name	The required amount	Rial cost per unit	Rial Cost (Million Rials
1	Management table with chair	1	15/000/000	15
2	Conference table and conference chair	1	45/000/000	45
3	Computer desk and chair	3	9/000/000	27
4	Office desk and chair	3	8/000/000	24
5	Secretary's desk and chair	1	7/000/000	7
6	Showcase	1	8/000/000	8
7	Library	1	8/000/000	8
8	Quad slider file	2	4/000/000	8
9	Waiting chair comfort	5	3/000/000	15
10	Dining table and chair	1 Series	9/000/000	9
11	Computer	5	45/000/000	225
12	Printer and Scanner	4	15/000/000	60
13	Fax	3	6/000/000	18
14	Telephone	8	2/000/000	16
15	kitchen appliances	1 Series	160/000/000	160
16	Fingerprint Attendance Device	1	85/000/000	85
17	Wireless and Internet equipment	1	6/000/000	6
18	Office stationery	4 Series	3/000/000	12
19	Central central system	1	70/000/000	70
Total (Million Rials)				826
Total (Euro)				3131/16

Working Capital Costs:

Name	Description	Cost (Million Rials)	Cost (Euro)
Raw materials and packaging	30 Days	9319	35326
salary	30 Days	1181	4476/876
Energy costs	30 Days	161	610/3108
revolving fund	15 Days	136	515/5421
Total		10797	40928/73

Production costs:

Description	Cost (Million Rials)	Cost (Euro)
Cost of raw materials and packaging	111825	423900/7
Salary Cost	14171	53718/73
Energy costs	1926	7300/986
Cost of maintenance	10722	40644/43
Unforeseen cost of production	1333	5053/071
Administrative and sales costs	1400	5307/051
Costs of financial facilities	1272	4821/835
Insurance costs	4377	16592/12
Depreciation cost	500	1895/375
Depreciation expense before operation	731	2771/039
Total	148257	562005/3

6-THE AMOUNT OF RAW MATERIAL NEEDED ANNUALLY AND WHERE IT IS SUPPLIED

Number	Description	Consumption per unit product	Unit of consumption	Amount of Consumption Required for Total Capacity	Rial equivalent (per unit)	Place of supply	Cost (Million Rials)
1	Flour	0/4	Ton	2000	7/000/000	Internal	14000
2	Oil	0/1	Ton	1000	15/000/000	Internal	15000
3	Egg	0/2	Ton	1000	15/000/000	Internal	7500
4	Additives	0/2	Ton	1000	25/000/000	Internal	25000
5	Baking powder	0/1	Ton	500	9/000/000	Internal	45000
6	Others	0/1	Ton	500	21/300/000	Internal	5325
Total (Million Rials)							111825
Total (Euro)							**423901**

7-RISK ANALYSIS OF PROJECT IMPLEMENTATION

Studies show that in the next year the market will be in short supply and there will be a greater need for imports. So it can be said that the implementation of new projects in this field is not very risky because in addition to the domestic market there is very good potential for exporting this product to neighboring countries and if for any reason the applicant intends to do so. It should act cautiously and with the highest advantages of other industrial units in this regard and minimize project risk by examining further the strengths and weaknesses as internal factors as well as opportunities and threats as external factors.

8- HUMAN RESOURCES AND NUMBER OF JOBS

One important aspect of any industrial unit is its job creation, which is thoroughly examined in the market segment. Due to the nature of the industry and the need for 3 shifts to work, it has been attempted to select the number of personnel in a manner that addresses the production needs of the two shifts. It has also been tried to use related specialties in different parts of production.

To calculate the amount of annual salaries and benefits, three shifts and other benefits have been added to the annual salary. For this purpose, the annual salary is set at 16.4 months per year

.

Description	Gender	Number	Monthly salary per person (Million Rials)	Monthly salary (Million Rials)	Annual salaries (Million rials)	Annual salaries (Euro)
Managing Director	Man	1	41	41	672	2547/384
financial manager	Man	1	34	34	558	2115/239
Marketing Manager	Man	1	34	34	558	2115/239
Financial, sales and administrative personnel	Female	2	29	58	951	3605/004
warehouse keeper	Man	3	24	72	1181	4476/876
Line Administrator	Man	2	24	48	787	2983/321
skilled worker	Man	3	23	69	1132	4291/13
Semi-skilled worker	Man	4	22	88	1443	5470/053
worker	Man	12	21	210	4133	15667/17
Service	Female	2	21	42	689	2611/827
Guard	Man	2	21	42	689	2611/827
Driver	Man	1	21	42	689	2611/827

Secretary	Female	2	21	42	689	2611/827
Total		36			14171	53718/73

9- CHECK AND DETERMINE THE AMOUNT OF WATER, ELECTRICITY, FUEL AND ...

Description	Unit	annual consumption	Cost per unit in Rials	Total Cost (Million Rials)	Total Cost (Euro)
Power Consumption	KWh	1/000/000	648	648	2456/406
Water Consumption	Cubic meters	60/000	1973	118	447/3086
Gas	Cubic meters	1/160/000	1000	1160	4397/271
Total				1926	7300/986

10- CONDITIONS OF ECONOMIC AND COMMERCIAL SUPPORT

10-1- CUSTOMS TARIFF SUPPORT (PRODUCTS AND MACHINES) WITH GLOBAL TARIFFS

Customs tariff support consists of two parts: tariff import of machinery and materials required by the export tariff plan of exported products, which must be selected and applied for the growth of the industry. As with most industrial machinery, the input rights of foreign machinery required by the plan are about 10%, which is a reasonable tariff and does not impose a high cost on investors. On the other hand, in recent years, the government has provided incentives for products capable of competing in international markets and exporting them abroad and giving export bonuses to these units, which has led to the volume of non-oil exports. In recent years, the country has enjoyed good growth despite difficulties and obstacles. Therefore, government incentives can be used to produce quality wafers at a reasonable price.

10-2- FINANCIAL SUPPORT (EXISTING UNITS AND PLANS) OF BANKS - INVESTOR COMPANIES

Financial support for production units includes the provision of banking facilities and how to repay them, as well as tax breaks that, if appropriate, facilitate the implementation of the plan

and provide conditions for entrepreneurial individuals to invest. Some of these situations are discussed below.

- One of the important banking facilities for manufacturing units is the payment of bank loans up to 70% of fixed investment by state-owned banks. This value can also be increased for deprived areas.
- The interest rate on the Riyal facility in the industrial sector is 12%, which is subsidized by banks as subsidies to some of the cooperatives and establishments in areas deprived of part of the facility's profits.
- The repayment period of long-term banking facilities is up to 8 years depending on the nature of the production plan, the type of technology and the possibility of exporting the product. It is also possible to use a one to two year installment repayment period.
- Another important banking facility is short-term bank loans (6 to 12 months) for use as working capital needed to carry out production processes, which provide up to 70% of the bank network. Obtaining short-term facilities to this extent is subject to the confidence of operating banks and a good track record in repaying previous facilities.
- In addition to the banking facilities available for the construction of new production units, tax exemptions are provided to encourage investors and guide them to the establishment of factories:
  - Tax exemption for up to 10 years to implement the project in deprived areas
  - Tax exemptions of up to 4 years for implementation of projects in industrial estates
  - Tax for ordinary areas, 25% of gross profit is defined.

11-ANALYZING AND PRESENTING FINAL CONCLUSIONS AND PROPOSALS FOR THE CONSTRUCTION OF NEW UNITS

- Based on the detailed studies, it can be concluded that the creation of new units for the production of this product is justified, the causes of which are as follows:
- - The market situation in the future is estimated shortage of supply.
- - Some of the country's needs are supplied through imports annually.
- - In the past years, exports have had a good upward trend, so it is expected that, given the relative advantage of our country over some countries in the region, exports will continue to increase in the coming years.
- - Manufacturing technology is available from within the country.
- The plan is to start operating at 60 percent capacity in the first year and increase below capacity in the following years, respectively.

Year	First Year	Second Year	third year	forth year	Fifth year
Capacity(%)	60 %	75 %	90 %	100 %	100 %
Production capacity (ton)	3000	3750	4500	5000	5000

prime cost	29 million rials/Per ton- 110 Euro
Selling prices of products	40 million rials/Per ton- 152 Euro
Total Sales	200/000 Million Rials- 758150 Euro
Percentage of sales at the point head to head	76
Profit	55/000 Million Rials- 208491 Euro
Gross Value Added	84916 Million Rials- 321895 Euro
Net Value Added	73463 Million Rials- 278480 Euro
Ratio of gross value added to total sales	0/42
Ratio of net added value to total sales	0/37
Ratio of gross value added to investment	0/54
Net Present Value(NPV)	130258 Million Rials- 493776 Euro
Return of capital	3