

# The issues faced in product feasibility commerce essay



This chapter will discuss the proposed product of the proponents. It includes a product description which highlights the special features, benefits and advantages of the product. A detailed product specification will be discussed to better describe the proposed product of the proponents. It will also include the raw materials, equipments and technology to be used in the production process.

## **Product Description**

Product Name: ZILI Plus

ZILI Plus is an herbal food supplement made from grinded cayenne pepper. Cayenne pepper is one of the most powerful herbs in the world because of its benefit to human body. It is made out of vegetable capsules which has the highest concentration of Capsaicin among other pepper herbs. Capsaicin, a compound found in Cayenne pepper, stimulates blood circulation and digestion. It contains Vitamins A and B complex as well as Vitamin C and K. The herb contributes significantly to a healthy heart and strong peripheral circulation.

It contains mineral compounds that promote systemic cleansing, increase peripheral circulation, and promote overall health and well-being.

The health-related history of cayenne pepper began with traditional Indian Ayurvedic practitioners and was later used in Asian countries like China, Japan and Korea. The vitamins, minerals, and compounds found in cayenne pepper work to cleanse the system and promote overall health and well-being.

## **N-S-P-P-USP MODEL**

### **Need:**

General: Treatment for health conditions such as poor circulation, weak digestion, chronic pain, sore throats, headaches and toothaches.

Digestion: used to reduce weight, stimulates body metabolism, stomach cramps, acidity, reflux and gas, and helps regulate digestion of carbohydrates, used as a remedy for constipation

Circulation: maintain blood sugar levels, improve blood circulation, improve heart functions and prevent heart diseases.

Muscle pains: Provides relief to rheumatic, joint, and arthritis pains

External uses: use as a powerful coagulant (stops bleeding), wound-healing, disinfectant,

### **USP (Unique Selling Proposition):**

It contains highly concentrated capsaicin found in no other herbal products; Used in cleansing the digestive tract and helps peripheral blood circulation.

### **ZILI Plus as a Food Supplement:**

Maintains a healthy digestive system

Cayenne pepper stimulates digestive system function. It helps to cleanse the digestive tract and to reduce gas buildup. Cayenne also stimulates gastric juice output and acts as a natural digestive agent.

Maintains healthy circulation

Cayenne pepper helps support healthy circulation and in particular, cayenne pepper helps to increase peripheral circulation. Cayenne pepper contains vitamin E which acts as an antioxidant that keeps the heart healthy. It also contains Vitamins C and K. These nutrients are associated with healthy blood circulation.

#### Enhances metabolic efficiency

ZILI Plus is made up of Capsaicin, an important alkaloid in cayenne pepper. It helps boost energy released by the body and therefore increases metabolism rate.

#### Strengthens the immune system

Cayenne pepper is one of the best sources of vitamin C and is often used to stimulate intense sweating. Cayenne pepper also contains folic and Para-benzoic acids, plus vitamins A and B-complex.

#### Enhances the efficacy of other herbal and nutritional supplements

Cayenne pepper is a catalyst for other herbs, primarily due to its oleoresin content, transporting them quickly to where they are needed most.

Source: [http://www. becomehealthynow. com/php/article/suppsvitb/385/](http://www.becomehealthynow.com/php/article/suppsvitb/385/)

## **SUPPLEMENT FACTS**

### **Table 1. 1**

#### **Serving Size 1 Capsules**

Amount Per Serving

%Daily Value

Cayenne (*Capsicum frutescens*) (fruits)

450 mg

Other Ingredients:

Plant Cellulose, Vegetable Magnesium Stearate

## **Side Effects of ZILI Plus**

### **Gastrointestinal Side Effects**

Substance of cayenne pepper can cause stomach irritation in some individuals if taken. Anyone who is prone to heartburn is advised to talk to their doctors before taking cayenne pepper capsules. People with irritable bowel syndrome or stomach or intestinal ulcers may not be able to safely consume cayenne pepper supplements.

### **Moisture Effects**

The body of the user may react to effects of capsaicin stimulation by producing extra moisture. A person taking cayenne pepper capsules may experience sweating, flushing, watery eyes, and a runny nose.

### **Allergic Reaction**

Some individuals may experience an allergic reaction to cayenne pepper. Signs include difficulty breathing, chest pain, tightness in the throat or chest, a skin rash, hives, and itchy or swollen skin. An allergic reaction to cayenne pepper capsules should be considered a medical emergency.

## **Kidney and Liver Issues**

Consuming too much capsaicin can cause kidney and liver damage. People should not exceed recommended doses, and anyone with kidney or liver problems should not take cayenne pepper capsules.

Source: <http://www.livestrong.com/article/121540-side-effects-cayenne-pepper-capsules/>

## **Table 1. 2**

### **B-A-F Matrix**

Benefits to Customers

Advantages V. S Competitors

Features of the Product

Food supplements

Preserves nutritional integrity

Easy to take

Healthy lifestyle

Cheaper than other health supplement

3 benefits in 1 capsule

Prevents diseases

All natural made

Bottle used is push and twist.

Best choice for diet

We use capsule to prevent the real taste of the cayenne

Easy to store. Can be put it anywhere

Health heart, Stimulates digestion, healthy circulation

Information is printed in the bottle

## **Functions of Cayenne Pepper**

Cayenne or most commonly known as “chili,” is a popular spice used by various countries not only for cooking but also for medicinal purposes for thousands of years now. Capsaicin, the key ingredient which gives all kinds of pepper their heat, is the main natural chemical component of cayenne. Peppers are measured according to their heat, and usually, a pepper contains 0-15% of capsaicin. A pepper’s heat degree determines its usage and value. This means that the hotter the pepper, the more capsaicin it contains which also means that it has more usage and value. Capsaicin not only gives heat to the pepper, it also acts to reduce platelet stickiness and also relieves pain. Other elements of cayenne are vitamin E, vitamin C, and carotenoids.

C: Users\APRIL\Documents\EXPROJ\IMAGES\foodchart. php. jpg

Source: [http://www. healingdaily. com/detoxification-diet/cayenne. htm](http://www.healingdaily.com/detoxification-diet/cayenne.htm)

## **Health Benefits**

Cayenne pepper, not only adds heat and spice to the food but also an excellent source of vitamin A carotenoids including beta-carotene. Beta-carotene is highly important in our body for it helps in reducing the symptoms of asthma, osteoarthritis, and rheumatoid arthritis. Also, because of cayenne pepper contains antioxidant, it is very helpful in the prevention of free radical damages that can ultimately lead to atherosclerosis, colon cancer, and diabetic complications, nerve damage and heart diseases.

Source: <http://www.whfoods.com/genpage.php?tname=foodspice&dbid=140>

## **Cardio Vascular Benefits**

Cayenne and other red chili peppers are known to reduce blood cholesterol, triglyceride levels, and platelet aggregation. They are also known to increase the body's ability to dissolve fibrin, a substance essential for the formation of blood clotting. Cayenne peppers are very helpful in reducing the risk of having heart attack, stroke, and pulmonary embolism. According to research studies, people who are accustomed to eating hot peppers like cayenne, has a lower rate or possibility to have such diseases.

## **Prevent Stomach Ulcers**

Cayenne peppers does not cause ulcers, instead they help prevent such disease by killing the bacteria that you might have ingested in your body. While doing such, it also stimulates the cell lining in the stomach to help secrete protective buffering juices that would prevent ulcer formation.



## Product Specification

This product comes in vegetable membrane capsules. Contained in a white round medicine plastic bottles that can accommodate 60 capsules of ZILI Plus

### Table 1.3

#### Empty vegetable Capsule Physical Specifications

SIZE

OUTER DIAMETER (mm)

HEIGHT OR LOCKED LENGTH (mm)

CAPACITY

(mg)

12

15.3

40.5

450 mg

## Vegetable Capsules

Vegetable capsules are made from natural plant cellulose unlike gelatin capsules. It has the same function as gelatin capsules. Vegetable capsules are starch-free, gluten free and it does not contain preservatives. These

capsules are made so that the demand of vegetarian and special cultural lifestyle would be met.

Vegetable capsules are from HMPC (hydroxyl, propylm, methyl cellulose) which is comprised of plant cellulose. It has been widely used in food, cosmetics and pharmaceuticals all over the world. These capsules can also be coloured by natural edible colorants and can be imprinted with natural printing inks. Also vegetable capsules run smoothly on all kinds of high speed and semiautomatic filling machines.

Source: <http://www.ecvv.com/product/2168952.html>

## **Illustration 1. 1**

### **Capsule Specification**

40. 5 mm/ 4. 05 ml

**\*Scoville Units refer to the capsaicin level in a specific pepper or pepper product. The degree of “ heat” in a particular pepper is directly proportional to the capsaicin level.**

### **BOTTLE:**

Height : 7. 5cm or 2. 95 inches

Length: 5. 5cm or 2. 16 inches

Width: 5. 5 cm or 2. 16 inches

ZILI Plus Bottle

Sizes: ZILI Plus bottle= 2. 95×2. 16×2. 16 inches

<https://assignbuster.com/the-issues-faced-in-product-feasibility-commerce-essay/>

Weight: 27, 000 mg per bottle

Shape: Round

Color Scheme: White

Brand Name: ZILI Plus

The proponents have decided to use ZILI Plus as our brand name because the product is made up of 100% natural spice herb with 3-in-1 health benefit. The name ZILI gives emphasis that the product is made up of spice herb particularly Cayenne Pepper. This gives us a competitive advantage because Singaporeans will be attracted to our brand name because of its “ Plus” health benefits.

Labeling:

Direction for use:

Take twice a day before meal.

Do not exceed recommended doses to avoid complications.

Best Before: 2 years from manufacturing. See bottom of bottle (DDMMYY)

DOH logo: Recognized by DOH and BFAD that it is proven safe to use

Manufactured by: ZILI Company Corp. 2111 MM Ave. Binan Laguna Ph,  
Economic & Technical Developing Zone of Philippines

Imported by: ZILI Corporation Philippines

For more information: TEL. NO. 744-33-21/744-3322 or 1800-10-4546259

## **Production Process**

Production Process Flow Chart

### **Note:**

Receiving of raw materials: Every month – General Manager

Quality checking of raw materials: Upon delivery – General Manager

#### **STEP 1: Grinding**

The dried peppers are ground into fine powder using a fine spice mill.

### **Illustration 1.3**

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#### **STEP 2: Encapsulation**

Capsule filling machine will be used to fill the vegetable capsules with 4. 5ml of grounded cayenne powder. Capsules will be fed into the machine, the filler then align, opens and accurately fills each capsule and recloses. Fillers generate minimum dust with lowest level of product loss. Non-separated, double loaded capsules and improperly inserted capsules are automatically rejected by machines to maintain the consistency in the quality of product.

## **Illustration 1. 4**

### **Capsule Filling Machine**

#### **Table 1. 4**

#### **Machine Specification**

##### SPECIFICATION

##### CAPSULE INSPECTION MACHINE

##### Capacity

160, 000 pcs/hr

##### Machine size LxWxH (cm)

119mm X 126 mm X 223 mm

##### Net Weight

1800 kg

##### STEP 3: Capsule Inspection

This inspection machine is designed and used for inspecting capsule or tablet which is spotty, broken, or not standard by vision through mechanically rotating the capsule over 360 degrees or turning the tablet from one surface to the other surface. The inspector can easily take out any bad capsule or tablet and collect together.

## **Illustration 1. 5**

### **Capsule Inspection Machine**

#### **Table 1. 5**

#### **Machine Specification**

##### **SPECIFICATION**

##### **CAPSULE INSPECTION MACHINE**

Capacity

160, 000 pcs/hr

Machine size LxWxH (cm)

110x40x140

Net Weight

130 kg

<http://www.kwangdah.com/kdi-1.htm>

#### **Step 4: Bottling**

Machines count out capsules and drop them into empty bottles standing like soldiers at attention on another conveyor belt. The bottles then move beneath a laser, which seals a protective liner over the bottles' tops.

## **Illustration 1. 6**

### **Bottling Machine**

main\_bottle\_capsule\_counter. jpg

## **Table 1. 6**

### **Bottling Specification**

SPECIFICATION

BOTTLING MACHINE

Capacity

60 bottles/minute

No. of counting channels

16

Dimension

1980x1870x1740 mm

Net Weight

130 kg

Step 5: Capping

Capping machines will be used to secure caps onto medicine bottles. This semi-automatic capping machine allows a single operator to perform routine activities quickly and accurately.

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## **Illustration 1. 7**

bottle\_auto\_capper\_rotary\_main. jpg

### **Table 1. 7**

#### **SPECIFICATION**

##### **BOTTLING MACHINE**

Capacity

60 bottles/minute

Cap diameter

10-60 mm

Bottle diameter

15-100 mm

Bottle height

50-150 mm

Machine dimension

2400x1000x1900 mm

Weight

700 kg

Step 6: Labeling

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The fully-automatic, single-side labeling machine is an ideal machine for labeling round, oval, flat and square bottles. It can also be used for wrap-around labels.

### **Illustration 1. 8**

bottle\_labeler\_single\_sided\_main. jpg

### **Table 1. 8**

#### **SPECIFICATION**

#### **BOTTLING MACHINE**

Capacity

60 bottles/minute

Bottle diameter

15-100 mm

Bottle height

50-150 mm

Machine dimension

2400x1000x1900 mm

Weight

700 kg

### Step 7: Putting manufactured and expiration date

Manual Stamping of manufacturing date and expiration date will be done by the employees. Expiration date will be 2 years after the manufacturing date.

### Step 8: Final Inspection

A final inspection will be made to check the overall quality of the product. Check if the bottles are properly sealed and there are no cracks and stuffs. The quality control staff would use any or all of their five senses to examine and check the product.

### Step 9: Export Packing

After passing final quality standard checks, products will be carefully packed in a carton box. It will be marked accordingly to ensure proper handling of the product. Sealed with packing tape, it will be then be fitted into a wooden crate which is mounted on a pallet for loading convenience.

## **CARTON BOX**

22. 44 inches

14. 37 inches

11. 22 inches

The dimension of the carton is 14. 37×22. 44×11. 22 (inches). In 1 carton there will be 200 ZILI Plus bottles.

Computation to know how many ZILI Plus bottles will be placed in a carton :

$(14.37 \times 22.44 \times 11.22 = 3618.03) / (3.50 \times 2.16 \times 2.16 = 16.33) = 221.55$

OR 200 boxes The excess space is for the divider inside the box.

The box must contain the following labels:

Company name: ZILI PLUS

Product name: ZILI Plus: Cayenne Pepper Capsules

Batch Number

Bar Code

Precautions measures for handling

Country of origin

Volume content: 5, 400, 000 ( 27, 000mg x 200) or 54 kilograms

Gantt ChartC: UsersAPRILDocumentsEXPROJIMAGESganttt-revised. jpg

## **Maximum Daily Production: 2, 100 Bottles**

**60 Capsule per bottle**

**450mg per capsule**

**27, 000 mg per bottle**

**56, 700, 000 mg or 56. 7kg in 2100 bottles**

**126, 000 capsule in 2100 bottles**

### **Analysis:**

#### **From 8: 00 am to 8: 25 am**

The Grinding Machine will grind 56, 700, 000 mg or 56. 7kg of dried cayenne pepper in to powder. This is will take 25 minutes.

#### **From 8: 25 am to 9: 15 am**

Encapsulation Machine will have output of 126, 000 capsules. This will take 50 minutes.

#### **From 9: 15 am to 10: 05 am**

Capsule Inspection machine can inspect 126, 000 capsules. This will take also 50 minutes.

#### **From 10: 00 am to 10: 30 am**

There will be 1 batch of worker will take 15 minutes break and another batch will be for the next 15 minutes, so the machine will not shut down, the machine will work continuously.

**From 10: 05 am to 10: 40 am**

Bottling Machine will put the capsule in the bottle and ready for capping. This will take 35 minutes.

**From 10: 40 am to 11: 15 am**

The Capping Machine will cap the bottles that came from Bottling. This will take 35 minutes.

**From 11: 15 am to 11: 50 am**

The Labeling Machine will put sticker of the label in the bottle. This will take 35 minutes.

**From 11: 50 pm to 1: 30 pm**

The workers will put manufacturing and expiration date in the bottle manually. This will take 1hr and 40 minutes.

**From 12: 00 pm to 2: 00 pm**

The will be also divided in two batch, 1st batch will eat lunch from 12: 00 pm to 1: 00pm and another batch will take their lunch from 1: 00 pm to 2: 00 pm. So there will be no stoppage or shut down of machine.

**From 1: 30 pm to 3: 15 pm**

The product will have a final inspection of the capping whether it is cap well, labeling whether the sticker is put in the bottle orderly and lastly the inspect in the every bottle whether there is manufacturing and expiration date.

**From 3: 00 pm to 3: 30**

There will be another break of 15 minutes per batch of workers, and will have a total of 30 minutes for 2 batch of workers.

**From 3: 30 pm to 5: 00 pm**

The worker will put all bottles in the boxes manually, 100 bottles per box, so there will be a total of 21 boxes in a daily.

Estimated Production capacity

**Table 1. 9****Production Estimates**

Kg

Capsules

Bottles

Daily

56. 7

126, 000

2, 100

Weekly

340. 2

756, 000

12, 600

Monthly

1, 360. 8

3, 024, 000

50, 400

Annually

16, 329. 6

36, 288, 000

604, 800

### **Production Process Estimates:**

**Amount of grounded cayenne pepper per day = 56, 700, 000**

**Amount of grounded cayenne pepper per capsule= 450 mg**

**Total no. of capsules produced in a day = 2, 100 capsules**

**Total no. of capsules in a bottle = 60 capsules**

Gantt Chart of Shipping

Month

Year

January

February

March

April

May

June

July

August

September

October

November

December

2012

2013

2014

2015

2016

Twice a Month



20ft Container

$(232.28 \times 92.52 \times 94.09 = 2,022,045.436) / (14.37 \times 22.44 \times 11.22 = 3618.03) = 558.88$  or 558 Boxes

111,600 Bottles

Need 2 Months and 2 day to Fill the 20ft Container

200 Bottles per Box

1st Year (LCL)

157 Boxes Every Shipping

31,400 Bottle

2nd and 3rd Year (LCL)

315 Boxes Every Shipping

63,000 Bottle

4th and 5th Year (FCL)

472 Boxes Every Shipping

94,400 Bottles