



اَوْنِفُوْرَسِيْتِيْ بِاَتِيْكَوْلُوْ كِيْ بِمَارَا  
UNIVERSITI  
TEKNOLOGI  
MARA

**TECHNOLOGY ENTREPRENEURSHIP**

**(ENT 600)**

**TECHNOLOGY BLUEPRINT**

**DOSHI BOX**

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# CHAPTER 1

## 1.0 PRODUCT DESCRIPTION

### 1.1 Introduction

- The team is inventing a Doshi Box.
- The Doshi Box functions like a portable food warmer and mini fridge and maintain the freshness of the food.
- The Doshi Box can be used by anybody who want to bring food to school, workplace or along their journey.
- The product has two compartments which are cold and warm compartment.
- It is equipped with a switch to turn on/off the when it is not used.
- The bag uses rechargeable batteries to keep the food fresh. It also has a built-in plug that will allow the batteries to charge and keep the freshness of the food for more than 8 hours.

### 1.2 Purpose of Development

- To keep the freshness of food or drinks for a limited time.

### 1.3 Product Concept

- The product is designed for anybody to bring food to schools, workplaces or even long distance trips.

### 1.4 Application

#### 1.4.1 Functions

- Thermoelectric cooler (TEC) – to keep the compartment cool for a certain period.
- Nichrome wire – to maintain the warm condition in the compartment.
- Push button – to turn on/off the cooling or heating of the compartment.
- Rechargeable batteries – to give electric supply.
- Built-in plug – to charge the batteries.

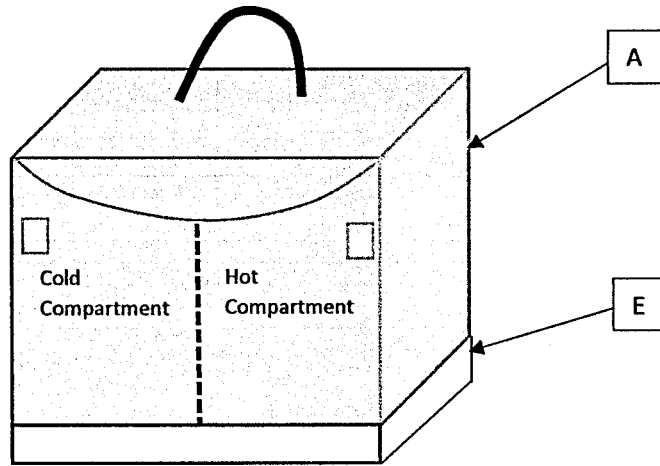
### 1.5 Unique Features

- The bag has 3 different sizes which are small, medium and large.
- The material of the bag contains cushion that can absorb shock.
- Battery can last up to 8 hours.

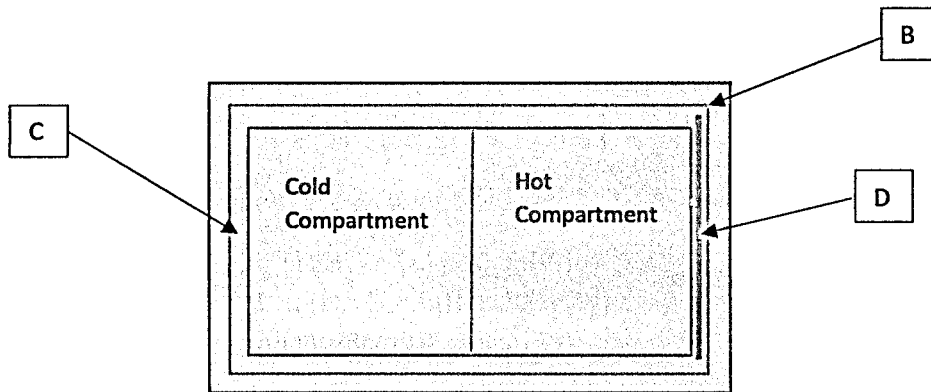
## CHAPTER 2

### 2.0 TECHNOLOGY DESCRIPTION

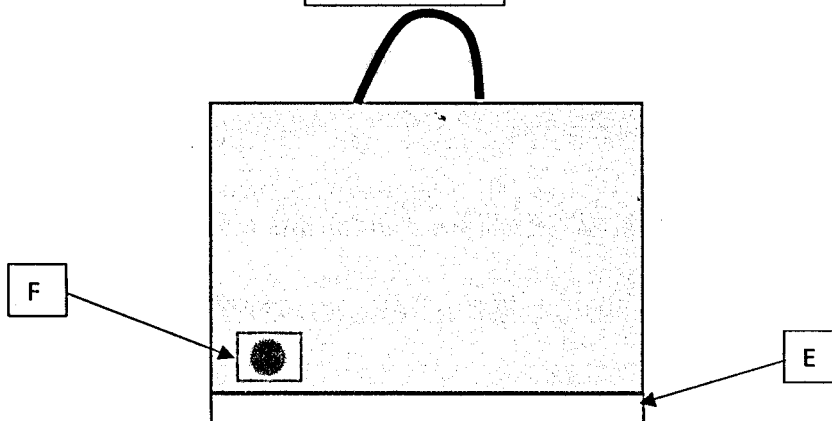
#### 2.1 Overview of the product prototype



Front View



Inside View



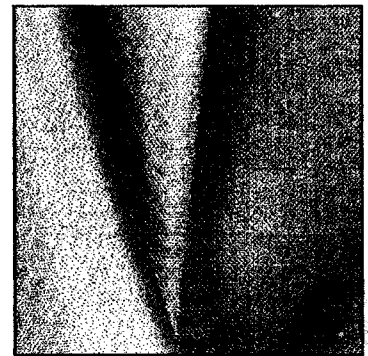
Back View

Label	Description
A	Cover bag
B	Stainless steel
C	Thermoelectric cooler (TEC)
D	Nichrome wire
E	Rechargeable battery
F	Plug
G	Push button

### 2.1.1 Cover bag (A)

#### Description:

- The cover for the lunch bag is made from Nylon Oxford fabric.
- Has a handle, lid and a hole for switch and plug.
- It can be removed and washed.
- The fabric is lightweight, soft and durable.
- It is very flexible as it is easily foldable, packable without wrinkling.



#### Specification:

- Size:
  - Small: 28cm(L) x 17cm(H) x 20cm(W)
  - Medium: 30cm(L) x 23cm(H) x 20cm(W)
  - Large: 35cm(L) x 28cm(H) x 25cm(W)
- Content: 100% Nylon
- Width: 58/60"
- Weight: 3.36 Oz Per Square Yard
- Country of Origin: Taiwan
- Care: Dry Clean Only

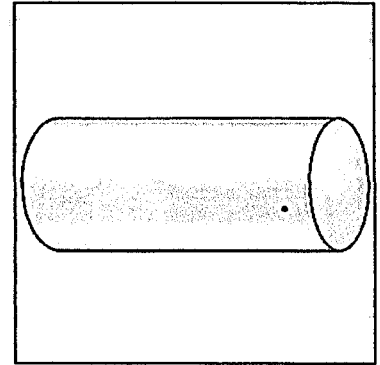
#### Target Supplier:

OnlineFabricStore from <https://www.onlinefabricstore.net/product-group-nylon.aspx?product=coated-nylon-oxford>

### 2.1.2 Stainless steel (B)

#### Descriptions:

- Stainless steel is a durable, low-maintenance material, often used in applications where corrosion resistance is critical.
- It has a high resistance to rust in many natural and man-made environments.
- It will resist at high temperatures and at cryogenic temperatures ( $< -150^{\circ}\text{C}$ ).



#### Specifications:

- Item: Rod Stock
- Type: Corrosion Resistant
- Material: Stainless Steel
- Alloy Type: 303
- Diameter: 1/4"
- Length: 6 Ft

#### Target Supplier:

Grainger, stainless steel rod stock from

<https://www.grainger.com/category/stainless-steel-rod-stock/stainless-steel/raw-materials/ecatalog/N-c24Z1yzsxkq>