

# CHAPTER 1

## INTRODUCTION

### 1.1 BACKGROUND OF THE STUDY

Nata de Coco is one of the famous topping for dessert in Indonesia. Originally, nata de coco was found in the Philippines. Since the Spanish colonization, Filipinos have been taught how to grow crops, one of which is the cultivation of nata de coco. This food is the result of fermenting coconut water. The word "nata" comes from Spanish which means "cream". Nata is translated into Latin as "nature" which means adrift. Nata can be made from coconut water, sugar cane and fruit juice. Currently, the Philippines is the best producer of nata in the world. Nata de coco from the Philippines is widely exported to Japan and various countries.

Nata de coco is cellulose (dietary fiber) produced from coconut water through a fermentation process, which involves microorganisms (microbes) which are now known as nata seeds. Nata is the result of fermentation of *Acetobacter xylinum* bacteria grown on media containing glucose.

*Acetobacter xylinum* is a Gram-negative bacterium capable of producing cellulose compounds. Cellulose produced by these bacteria has a high degree of purity and deserves to be developed as an alternative source of providing cellulose for various industrial fields that need it.

*Acetobacter xylinum* bacteria can form nata if grown in media that has been enriched with carbon (C) and nitrogen (N) through a controlled process. In such conditions, these bacteria will produce extracellular enzymes that can arrange sugars (glucose) into thousands of chains (homopolymers) or cellulose. From millions of micro-organisms that grow in the media, sheets of cellulose threads will be produced which eventually appear solid white to transparent, which is called nata.

Many Indonesians use nata de coco products for events, ahead of the fasting month and others. Therefore people nowadays need new innovations that can make other flavors so it doesn't make boring. In addition to taste, color is also the main aspect needed to make a product because before people taste the product, we must first see whether it is interesting to taste or not.

Melon is the main ingredient here because many people in Indonesia use melon just for casual fruits in buffet examples like melon, watermelon, papaya and etc. Besides that melon is just used for salad and juice. So therefore, innovation for new product with the main ingredient is melon is good too for Indonesian people, because they like and the market is quite good because it's the melon or the nata de coco.

Melon also has many benefits for the health of the body, including reducing blood pressure, good for bone health, controlling blood sugar, preventing dehydration, maintaining healthy skin, increasing immunity, launching the digestive system, maintaining eye health and others.

## **1.2 THE OBJECTIVE OF THE STUDY**

1. The development of this product mainly aims to be a source of knowledge for the community that there are other ingredients besides using coconut water that can be formed into nata de coco, namely by using melon juice.
2. Take many functions of melons to be used as new product innovations
3. Make nata de melon products a business field that is sold throughout Indonesia and can be exported

## **1.3 THE BENEFITS OF THE STUDY**

1. Can learn how to innovate new products that have never existed
2. Informing readers and consumers that there are a lot of food ingredients that can be processed to produce new food products