

CHAPTER I

INTRODUCTION

1.1 Background of the Study

Aloe vera jelly drinks have attracted the attention of the consumer market as an innovative product that combines health benefits with convenience of consumption. Aloe vera has long been known in natural medicine traditions for its diverse properties, including its ability to support digestive health, increase hydration, and provide a soothing effect on the skin. Aloe vera extract is rich in vitamins, minerals and enzymes making it an ingredient that has the potential to provide a variety of health benefits. In the context of the food and beverage industry, aloe vera is often used in the form of juices, gels, and supplements. One of the latest innovations is the creation of aloe vera jelly drinks. This product not only offers the health benefits of aloe vera, but also brings a unique texture and added pleasure to consumers.

Jelly drink is a semi-solid beverage product made by adding ripe fruit juice to sugar and can be consumed not only as a regular drink but also as a hunger suppressant drink. The desired consistency of jelly drinks is solid and easily destroyed when drunk through a straw, but the gel form can be felt in the mouth. One of the properties of compounds contained in jelly powder is the presence of components called hydrocolloids, which form colloids in water to prevent crystallization and function as thickeners (stabilizers). Making jelly drinks requires different gelling ingredients, including agar, locust bean sap, pectin, gelatin, and carrageenan.

In general, pasteurization uses photothermal energy to inactivate vegetative cells into microorganisms (pathogens and putrefactive substances). Pasteurization is a heat treatment process aimed at reducing the number of pathogenic microorganisms and increasing the shelf life of food. The process was first

developed by French scientist Louis Pasteur in the 19th century to prevent products such as wine and beer from spoiling. Today, pasteurization is a commonly used technique in the food industry to preserve products such as milk, juice, and canned food. The purpose of the pasteurization process is to reduce microorganisms (pathogens and spoilage) by 99.999% or 5 logs. There are generally two types of sterilization methods depending on the effect of heat treatment: heating methods and non-heating methods. The two main goals of pasteurization are removing pathogens from food to prevent disease and removing spoilage bacteria to improve preservation quality (Brennan, 2006). A method of heat sterilization process that utilizes heat energy using constant changes in temperature and time.

1.2 The Objectives of The Study

The objectives of this study are following below:

1. Creating jelly drinks from characteristic fixings such as betel leaf clears out could be a frame of product diversification that can pull in the consideration of shoppers who are seeking out for something modern and unique.
2. Bringing back the use of betel leaves which are well known in traditional culture into a product that is more modern and easily accepted by the wider community.