Chapter 1

Introduction

1.1 Background

Generally, flour-based food products such as biscuit or cookies often seen as an unhealthy snacks. This is due to its ingredients that are usually contain an abundant amount of sugar, fat and less fiber. Based on the solubility, dietary fiber is classified into two categories, soluble and insoluble. This two kinds of dietary fiber can be found on plants. In the plants itself, the fibers mostly present in the composition amount mixture of both.

The soluble and insoluble dietary fiber also distinguished by their technological and physiological properties. An adequate intake of fiber is important due to its ability to bring positive impact to the body. It has been proven that people who consume enough or more dietary fiber have less chronic disease including type 2 diabetes, cardiovascular disease, and colon cancer (Acad, 2015). According to a research conducted by Puslitbang Gizi Depkes RI in 2001, the average fiber consumptions of the Indonesian is 10.5 grams per day, means that they only meet their fiber needs around 1/3 of the recommended daily intake. This number shown that the Indonesian population did not fulfill the suggested diary intake of 30 grams of fiber per day (Departemen Gizi dan Kesehatan Masyarakat Fakultas Kesehatan Masyarakat Universitas Indonesia., 2007). Although in Indonesia there were many types of plants that contain fiber.

Inulin is a natural dietary fiber that can be found in garlic, shallot, bananas, wheat, tuber, artichokes and most commonly found in chicory root. Inulin is one of the many substances that is flexible, meaning there are wide variations of foods that can be fortified with inulin and the concentrations of the mix is also vary from 0.75 to 50 percent depends on the type of food (González-Herrera *et al*., 2015). Inulin is also used as prebiotic, for example in Indonesia where inulin is added into instant milk powder products as prebiotic agents. However, cookies products that are added with inulin are still rarely found in the market.

1.2 Objectives

The objective of this current study was to develop a high fiber cookies through substituting sugar with inulin that has acceptable level of physicochemical and sensory properties, and similar level perceive sweetness compared to cookies in general.

1.3 Benefits of the study

The findings of this study are expected to provide benefits to the other such as a new innovation in food industries, building public awareness of the importance of dietary fiber and can increase the consumption level of fiber based food products.