

CHAPTER I

1.1 Background

Banana is a popular edible fruit, that are grown and harvested all year round. Although banana only grows in tropical countries, it has been widely exported worldwide since late 1900. Since Indonesia is a tropical country, there are different kinds of banana we can find easily in our local markets with fairly affordable price. Banana consumers must be familiar that banana fruit is a good source of carbohydrate and dietary fiber. It is also enriched with magnesium, vitamin C, vitamin B6 and high in antioxidants to protect from free radicals.

Little do they know, banana peel is just as beneficial as its fruit. Banana peel is a rich source of potassium and contain more soluble and insoluble fiber than their flesh. Banana peel also contain tryptophan, which can affects mood by increasing our body's serotonin levels. Further, banana skin contains lutein, a powerful antioxidant that protects the eye from free radicals and harmful frequencies of UV radiation from the sun.

Eating banana along with its peel is not a common thing to do, other than in India. The Indian has been taking advantages of its nutritional value for decades. Many of the majority consumers does not understand the nutritious content hidden in the banana peel. And even if they do, the rubbery texture and unpleasant taste of raw banana peel is unconvincing.

Turning bananas peel's from into powder helps eliminating both unpleasant taste and texture of the banana peel. Compared to other form such as liquid or paste, powder form of banana peel generally has longer shelf life, and is easier to store. By using the powder form, it is more possible to introduce and popularize banana peel as not just edible, but a very beneficial food waste that can generally boost human health.

1.2 Objectives

Banana peel has rubbery texture and pleasant taste that makes it uncommon for the society to consume despite its nutritional value. By converting raw banana peel into powder form with freeze drying method, it helps eliminate unpleasant taste and texture of banana peel. Freeze drying method is also used to maintain the nutritional value as much as possible. The freeze dried banana peel powder has longer shelf life and is easier to consume than the raw form.