CHAPTER I
INTRODUCTION

1.1 Background

Indonesia is very rich in natural sources, specially for the tropical forests that are composed of various types of flora and fauna. According to Barr et al. (2006), the total forest in Indonesia is estimated at between 90 and 100 million hectares. It is predicted that Indonesia has 25% of the flower-plant species or the seventh biggest number (20,000) of species in the world. However, the potential genetic of those natural sources have not been known entirely. Only a small part of plant species had been analyzed for its genetic sources, specially for species that had been developed for commercial purpose (Kusmana & Hikmat, 2010).

Matoa (*Pometia pinnata*) is an endemic local plant from Papua as of *Pometia sp.* genus that is included in *Sapindaceae* family. Compared to the other location, *Pometia pinnata* in Papua has more excellence in the term of fruit production since it has a sweet taste and thicker aryl. The typical sweet taste from Papua’s matoa fruit is quite alike as the combination of rambutan, *lengkeng* (longan), and durian. People commonly called it as *lengkeng Irian*. There are several cultivars of matoa in Papua, with the most favorites are matoa *kelapa* and matoa *papeda*. *Matoa kelapa* has a chewy texture and larger size compared to matoa *papeda*. The physical characteristic of its skin is silky, with green color for the unripe fruit and brown-black color when ripened. Matoa fruits are commonly consumed in fresh condition (Suharno & Tanjung, 2011).
Matoa tree is one of the highest valuable trees found in Papua. The wood is commonly used for building material and firewood. This logging of tree brings such a disadvantage since it will decrease matoa fruit production, make it rare, unpopular, and hard to deliver out of Papua island, and so therefore it also create research limitation regarding to matoa fruit (Kabelen & Warpur, 2009). Due to that reason, the researcher is aimed to analyze the physicochemical properties and flavor description of matoa fruit and its potency as processed products (jam, jelly and fruit in syrup) in order to introduce and deliver basic characteristic information and its acceptance as processed products. The result of this research hopefully will be able to support further analysis and promote the potential usage of matoa fruit to increase the realization of matoa plant conservation.

1.2 Research problem

The study of matoa fruit is still very limited. There is scarce number of literature source that give information regarding matoa’s physical characteristics, chemical composition, sensory analysis, and its application as processed products. The constraint of matoa analysis is based on the fruit availability, rarity, distribution, and unpopularity of the fruit.

1.3 Objective

The general objective of this research is to obtain technical database regarding physicochemical properties and flavor description of matoa cultivar kelapa fruit and its potency to become processed products (jam, jelly, and fruit in syrup) to support further research and product development relating to this material.
The specific objectives of this analysis are:

1) Obtain the information regarding characterization of physicochemical and flavor description (Quantitative Descriptive Analysis) of matoa cultivar *kelapa* fruit.

2) Study the potential of matoa cultivar *kelapa* fruit as processed products (jam, jelly, and fruit in syrup).