

**EFFECT OF CHICKPEA IN PRODUCTION OF CHICKPEA BISCUIT**

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## **ABSTRACT**

### **EFFECT OF CHICKPEA IN PRODUCTION OF CHICKPEA BISCUIT**

The study was carried out to determine the suitable amount chickpea to be added in the biscuit formulations. The chickpea biscuit was prepared with addition of raw chickpea with different formulation that consist of 5%, 10%, 15% and 20% of chickpea. Basic formulation of biscuit was developed without addition of chickpea. Evaluation of colour of biscuit was measured by using Minolta colorimeter CR-300. The high amount of chickpea was found to be the best formulation and it was agreed with appearance attributes in sensory evaluation results. Determination of texture by using texture analyzer TAXT2i indicated that there were textural changes in biscuit baked with addition of chickpea in formulation. The results showed that the fracturability of biscuit increased as the proportion of chickpea in formulation was increased. It was found that biscuit baked analysis and sensory evaluation with different amount of chickpea results texture of chickpea biscuit positively correlated with texture of sensory evaluation. The findings in this study revealed that, biscuit with the addition of chickpea was acceptable. This type of biscuit will increase the usage of chickpea and also could provide biscuit with high nutritional value.

## CHAPTER 1

### INTRODUCTION

Chickpea is known as *Cicer arietinum L.* Chickpea is ranked 5<sup>th</sup> that most important grain legume produced in the world (Uebersax and Ruengsakulrach, 1989). In some tropical and subtropical countries, chickpea is one of the oldest and mostly widely consumed legumes in the world (Reyes-Moreno *et al.*, 2004). Chickpea is a cool-season legume crop grown mainly for human consumption and it is a kind of annual herbage plant (Clemente *et al.*, 1998; Gil and Nadal, 1996; Poltronieri *et al.*, 2000; Singh, 1997; Singh and Subrahmanyam, 1991). Chickpea is a slightly irregular round legume, a bit larger than pea-sized. Chickpea have two types: the desi which is small dark seeds with rough coating and the Kabuli which is beige-colored and has larger seeds. Chickpea is a good source of protein and carbohydrate. A legume has been identified as low glycaemic index foods (Bornet *et al.*, 1997). Legume such as chickpea has good source of protein and starch (Neves and Lourenco, 1995; Tian *et al.*, 1999).

Chickpea is considered as a good starting material in the food industry because of its protein quality, which comparable with that of the soybean (Friedman, 1996). Chickpea can be added into biscuit to give it more nutritive value, improve texture, taste and flavour. Ground chickpea can be easier to chew or eat and digestible. Ground chickpea powder can be easily added processed food products. Biscuit is the most popular bakery