

## CHAPTER II

### LITERATURE REVIEW

#### 2.1 Ingredients Review

##### 2.1.1 Japanese Yellow Pumpkin



**Figure 2. 1** Kabocha Pumpkin

Japanese yellow pumpkin/kabocha can be used as an alternative to fulfill the nutrition because Kabocha is a type of pumpkin that contains a lot of fiber and also contains more beta-carotene compared to the parang-type pumpkin. In addition, this type of pumpkin is also high in antioxidants, rich in vitamins A, B, and C, and contains iron, calcium, potassium, and magnesium. The complete nutritional content of pumpkin can be a very potent source of nutrition and the price is very affordable

In 100 grams of kabocha flesh there are approximately 10 grams of carbohydrates, 0.50 grams of fat, and 1.70 grams proteins. The pumpkin flesh is also contain a variety of secondary metabolites compared to the seeds. The ethanol extract of pumpkin flesh contained 0.2770.004 g/100 g of phenol, 0.2460.013 g/100 g of flavonoids, 0.010.006 g/100 g of tannins,al (Erwiyani et al., 2022).

So far, the use of pumpkin has been lacking, because it is only used as a consumption material such as vegetables, kolak, a mixture

of MPASI, etc. Therefore, more extensive pumpkin processing is needed.

### 2.1.2 Japanese Yellow Pumpkin Seeds



**Figure 2. 2** Pumpkin Seed

Information about the benefits of pumpkin seeds has grown rapidly in recent years, especially the benefits of pharmaceutical, nutraceutical, and cosmetic. Pumpkin seeds are rich in unsaturated fats which are beneficial for preventing disease and maintaining health. The pumpkin seeds, like other seeds, are rich in functional components. They are high in vitamin E (tocopherols), carotenoids, provitamins, pigments, pyrazine, squalene, saponins, phytosterols, triterpenoids, phenolic compounds and their derivatives, coumarins, unsaturated fatty acids, flavonoids and proteins. Pumpkin seeds also contain phytoestrogen compounds to prevent hyperlipidemia and osteoporosis and have anticancer effects. Vitamin E is also found in abundance contained in pumpkin seeds. (Dotto, 2020).

Pumpkin seeds can be consumed as a snack, salads, or cereals, they can also be added as an ingredient in bread or cakes. Furthermore, pumpkin seeds are also being developed as vegetable oil that is rich in benefits (Lestari & Meiyanto, 2018). Pumpkin seeds are also known as a source of essential amino acids such as histidine, isoleucine, leucine,

methionine, phenylalanine, threonine, and valine (Kim, *et al.*; Dotto, 2020), minerals such as zinc, phosphorus, iron, potassium, magnesium, sodium and calcium.

In 100 grams of pumpkin seeds it contains 1866 kj, 19.4 grams of fat, 18.55 grams of protein, 53.75 grams of carbohydrates. Moreover, pumpkin seeds are good source of magnesium, potassium, phosphorus, as well as other minor minerals such as zinc, manganese, iron, calcium, sodium, and copper.

## **2.2 Product Review**

- The advantage of this product is that is a gluten-free snack, and this snack contains a lot of fiber because it uses pumpkin flour.
- Cannot be stored for a long time because the ingredients used do not contain preservatives.

## **2.3 Process Review**

The process review of kabocha crispy is first dehydrate the pumpkin flesh and seed 70 °C and when the pumpkin flesh and seeds is already dry blend the pumpkin flesh and separate the pumpkin seed using nail clipers. After the pumpkin flesh is smooth, mix all the ingredients and put into the mold then bake 100°C for 25-30 minutes.