

CHAPTER II

LITERATURE REVIEW

2.1 Ingredient Review

2.1.1 Black Rice Flour



Figure 2.1 Black Rice Flour

Black rice (*Oryza sativa* L. Indica) is a type of rice that is black because the aleurone and endosperm produce anthocyanins at high intensity, giving them their color deep purple approaching black. Anthocyanins have several benefits for the body, including as antioxidants can prevent cancer, help maintain blood cholesterol levels, help removes toxic substances from the body, and prevents hardening of the arteries (Kristamtini, 2014). Black rice is one of the types of rice cultivated in Indonesia. The fiber content of black rice is reported to be higher than white rice. Black rice has a carbohydrate content of 76.9 g/100 g (Kristamtini et al., 2014) and a fiber content of 20.1 g/100 g (Nurhidajah et al., 2018).

Based on the planting system, black rice can be divided into organic and non-organic rice. Organic rice is rice grown with natural fertilizer (without chemicals) that is environmentally friendly (Sulistiyana et al., 2014). Rice grown using an organic system has a higher nutritional content than non-organic rice. Organic black rice is also usually sold in special places and is relatively more expensive than other rice. Black rice is still rarely consumed because it has a hard texture and requires a longer

cooking time (Nurhidajah et al., 2018). Black rice is generally processed into flour first so that it can be used to make various kinds of food products such as buns, muffins, flakes and traditional cakes.

2.1.2 Glutinous Rice Flour

Glutinous rice flour is a type of flour that comes from the glutinous rice variety of the rice (*Oryza sativa*) family gramineae and includes grains that are ground or pounded using a grinding machine (Damayanti, 2000 in Parayana et al, 2015). The amylopectin content in sticky rice is very high so it has a stronger adhesive power as a staple food for Indonesians. This amylopectin content makes sticky rice flour fluffier than other flours, so that some products containing sticky rice flour become more filling.

2.1.3 Gochujang

Korean Spicy Sauce (Gochujang) is a typical Korean cooking spice that comes from fermented chili paste with a dark red, slightly brownish appearance, which functions to add flavor to food to make it taste better while also helping the digestive system (Kwon, 2014). Korean Spicy Sauce (Gochujang) comes from the words gochu (chili) and jang (spice). So gochujang means chili seasoning or chili paste. In Indonesia, Korean Spicy Sauce (Gochujang) is widely sold and has a halal label from the MUI.

2.2 Product Review

Tteokbokki is a beloved Korean street food and comfort dish made with cylindrical rice cakes (tteok) stir-fried in a spicy, sweet, and savory sauce called gochujang. This a popular snack and meal enjoyed by people of all ages in South Korea and around the world. Black rice cakes, also known as “heungmi tteok” in Korean, are a type of rice cake made from black rice. Unlike the more common white or brown rice cakes, black rice cakes have a dark purplish-black color due to the pigments present in the black rice.

Black rice is known for its health benefits, as it contains antioxidants and nutrients like anthocyanins, which give it its distinctive color and have been linked to various health benefits. Adding black rice flour to a food product will provide variety and good nutritional value for a diet program.

2.3 Process Review

Steaming is a culinary technique that has been utilized for centuries across various cultures to prepare a wide range of dishes. Steaming is a cooking method that involves the use of steam to cook food. Unlike boiling, where food is submerged in water, steaming exposes food to steam generated by boiling water. This gentle cooking process helps retain the natural flavors, textures, and nutrients of the ingredients.

The primary principle behind steaming is the transfer of heat energy from steam to the food being cooked. As steam comes into contact with the surface of the food, it transfers its latent heat, causing the food to cook gradually and evenly. Since steam has a higher heat capacity than air or water, it can penetrate the food more effectively, resulting in faster cooking times.