

Manufacturing and Testing of Edamame Washing Machine (Glycine max L. Merrill) Ozonated Water Circulation System Against Color Change of Glycine max L. Merrill

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ABSTRACT

*Edamame (Glycine Max L. Merrill) is a type of young soybeans which is still in the pod that comes from Japan's Sakura Country. In the edamame washing process, the usual way is to clean the edamame by soaking the edamame in clean water that has been mixed with chlorine. However, continuous use of chlorine can also result in bad things for human health and a negative impact on the environment. Therefore, a new technology is needed to wash edamame without endangering human health. The edamame washing machine with ozone technology has dimensions of 68 cm long, 45 cm wide and 57 cm high. Equipped with one main washing tube with a diameter of 40 cm and a height of 55 cm with a washing basket inside, and one water storage tube with a diameter of 25 cm and a height of 50 cm. And there is an ozone generator with an ozone output of 24 g where the ozone generator is a device that can convert oxygen into ozone. The edamame washing machine can accommodate ± 5 kg of edamame. From the results of the RGB to L^*a^*b color conversion, it was found that washing edamame using a washing machine with ozone technology did not change the color due to the use of ozone solution during washing.*

Keywords: Edamame Wash, Ozone Technology, Color Change.