ABSTRACT

Meat is a food material that comes from animals with good nutrition for the body. The content contained in meat consists of calories, fat, saturated fat, trans fat, protein, calcium, iron, vitamin D, vitamin B6, vitamin B12, and magnesium. Currently, meat is increasing in Indonesia because it is cheap. Meat can be bought anywhere in supermarkets, modern markets, shops, etc. For the quality of the meat to be maintained properly, the meat should not be washed, and then you should immediately put it in the refrigerator or freezer. However, there is a problem with meat health. Meat is susceptible to spoilage and quickly contaminated with microbes. The microbial population can damage meat quality. Checking the quality of meat is usually done by looking at the texture of the meat traditionally. Microbial contamination can damage meat originating from when the livestock was still alive, namely when it was attached to the surface of the skin, as well as after being slaughtered. In the process of purchasing meat, consumers are less aware of the quality of the meat, whether it is fresh meat or less fresh meat. In this case, the determination of the quality of the meat requires the correct method to check the quality of the meat. Electronic Nose (E-Nose) by applying the Neural Network classification algorithm method using the Raspberry Pi can work in a structured manner on every component needed in determining meat quality. The results of testing using the Neural Network algorithm using an electronic nose dataset get results of 0.92 for Neural Network (MLPClassifier) classification and R^2 0.972, RMSE 0.032 for Neural Network (MLPRegressor) regression.

Keywords*: Meat, Neural Network, Microbial population, Electronic Nose, Raspberry PI.*