Abstract

Beef spoilage happened by microoganisms and cause beef not edible. To slow down spoilage, done by put it in airtight container. In beef storage need to do regular checkup to know beef condition. Checkup done by see directly and smell the beef. However, direct checkup hard to do when human sense of smell decreases by anosmia. To overcome this, done by aply elcetronic nose that is array of gas sensor for measure gas produced by beef by returning resistance value. Signal processed using k-nearest network (KNN) algorithm for spoiled beef classification. This research aim to implement electronic nose by using array of gas sensor metal-oxide semiconductor (MOS) type to detect beef spoilage. System test by putting a piece of beef under sensor in 12 hours and matching classification 50 times. Test result obtained from spoiled beef clasification in accuracy, precision, and recall are 94%, 97%, and 94% respectively. MOS sensor manage to detect gas produced by beef spoilage process. So that system can be used for spoiled beef detection in household or industry.

Keywords: ***electronic nose*****, KNN, MOS.**