Abstract

Population of the earth is soaring day by day but the resources are limited. To fulfill the need of food the farmers continuously strive to increase the production of crops not only by natural fertilizers but also with the help of artificial chemical fertilizers and pesticides. Chemical fertilizers, pesticides, and herbicides are used to protect the crops from any kind of harm caused by pests, insects and fungi. These may lead to the increase in production but in turn degrade the quality of food. Due to excessive use of fertilizers and pesticides these chemicals enter the food chain and ultimately cause biomagnifications. We are ingesting the same products and they adversely affect our health. Hence we need a portable device which can analyze the organic components of the eatable substance. This research focuses on determining the organic as well as inorganic components of the eatable so that the consumer may know whether the eatable is fit for consumption or not. This research comprises of an electronic device which would detect chemicals present with the help of infrared light. The device would show the ratio of organic components to inorganic components. The consumer can use this ratio as a benchmark to buy the eatables fit for consumption.
References

1. Sarvesh Rustagi and Pravesh Kumar 2013 Biosensor and It’s Application in Food Industry
12. Rodrigues, Dasciana 2011 Determination of insecticide residues in vegetal fruits in Chromatography Research International

Index Terms

Computer Science  
Artificial Intelligence
Keywords

Microcontroller PIC18F452, Infrared sensor, ADC, LCD, Photodiode