Investigation of the relationship between microorganism growth and electric conductivity of semi-pro

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ABSTRACT

No matter conservance of semi-processed foods at room temperature or lower temperature, may easily cause the quality decrement via microbial growth and corruption. Traditional microorganism examination can not promptly provides the information of food raw material. Our objectives this research are to: measure the electrical conductivity changes of foods raw material and evaluate the relationship between the data of microoganism growth and its electrical conductivity upon the duration of experiments in different food-preservation environments. Plug-in Probe is the cylinder shape, the section diameter 10 mm, inside cover a pair of titaniums metal electrode, the alternating current of the fixed voltage 15V by the power source supply. Before the expiration data of samples electrical conductivity and TBC were measured and analysed by statistical regression. The results show that the TBC of semi-processed foods rising with time indx in different preservation environments, and the highest growth rate relying on the moist one at room temperature; meanwhile, the changes of electrical conductivity has the same tendency. Statistical regression presents a positive relationship between TBC and its electrical conductivity, in which shows a sequentially potent for further quick quality examination.

Keywords : electrical conductivity、total plate counts

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