ABSTRACT

Many experiments had been done to determine the glucose and ethanol levels in foods and beverages, such as wine, energy drinks, bread, fruit juices and etc. To date, no research had been conducted on ‘fruit enzyme’. The first aim of this research was to determine the glucose level using Glucose Hexokinase (HK) Assay kit and spectrophotometric determination. The second aim of this research was to determine the alcoholic level in each of the tested sample using spectrophotometry. The third aim of this research was to analyse the effect of ‘fruit enzyme’ in digestion of carbohydrate, lipid and protein. Glucose (HK) Assay kit and spectrophotometry were used to determine the glucose concentrations in each ‘fruit enzyme’, whereas the alcohol concentrations were determined using spectrophotometry. Benedict’s test and iodine test were performed to confirm starch digestion; Phenol red was used as pH indicator in fat digestion; Biuret test was performed to confirm protein digestion. By using Glucose (HK) Assay kit and spectrophotometry, the glucose content in each sample resulted the highest glucose content was found in ‘Commercial’ sample, whereas the lowest glucose content was found in ‘Fresh’ sample. Under the assay of alcoholic determination, the highest alcohol content was found in ‘Fresh’ sample, whereas the lowest alcohol content was found in ‘1 week’ sample. Besides, for the assay on digestion of carbohydrate, lipid and protein by various samples, the results showed that there were no any enzyme activity occurred in each home-made ‘fruit enzyme’ in general. In conclusion, the ‘fruit enzyme’ or enzymatic drink was not suitable to be termed as ‘enzyme’ since they had no pure enzyme but a mixture of organic compounds.