CHARACTERIZATION OF SPECTRAL ABSORBANCE FOR DETERMINATION OF PROTEIN CONTENTS’ REDUCTION IN COW’S MILK DUE TO HEATING PROCESS

Name : Novia Dwi Irianti
NRP : 2406 100 062
Department : Engineering Of Physics
Supervisor : Dr.rer.nat. Ir. Aulia MT Nasution, M.Sc

Abstract

Milk is one of daily food with high protein content that important for the health and metabolism of human body. The milk processing will affect its protein content, which is known as proteins denaturation. Spectrophotometric method is an optical method for analyzing the characteristics of a material by identify the spectrum produced by materials. This final project was done to characterize the spectral absorbance of cows milk after subjected to various treatment. Analysis that performed using the Ultraviolet (UV) spectrophotometric method to determine the proteins content that are denatured due to heating treatment. Spectral derivative technique used for analysis of spectral absorbance that obtained. The result shown that protein denaturation will occurs with increasing of temperature and heating time. The analysis of spectral absorbance data can be use for determining the reduce of protein content by heating treatment.

Keyword : protein, denaturation, spectrophotometry, spectral absorbance, spectral derivative technique.