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MONITORING THE EFFECTS OF ULTRAVIOLET AND VISIBLE LIGHT ON Rb AND VITAMIN A IN MILK

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Abstract

In this study, changes induced in milk processed at ultra high temperature (UHT) were investigated following exposure to UV and white-light, by employing fluorescence spectroscopy. Two important indicators, namely Riboflavin (Rb) and vitamin A, were monitored to evaluate the light-induced damage in milk. It was noticed that the photo-degradation of Rb is due to the photochemical decomposition and photosensitization. Moreover, it was found that the wavelength of the exposure light has a great impact on the degree of Rb photo-degradation, white-light being most harmful compared to UV-light. Also, vitamin A is mostly sensitive to UV-light, compared to white-light.

Key words: fluorescence spectroscopy, milk, photo-degradation, Riboflavin, vitamin A

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