Abstract:

Advanced glycation end products (AGEs) which are the final products of glycation, have a major role in diabetic complication and neurodegenerative disorders. Accumulation of AGEs in various tissues has been known to speed up the developmental rate of chronic diabetes. In this study, the effect of acetoacetate on AGEs formation by glucose from the human serum albumin (HSA) was studied at physiological conditions after 35 days of incubation in the presence or absence of acetoacetate, by different techniques such as UV/Vis, fluorescence and circular dichroism (CD) spectroscopy. The secondary and third structures of all sample proteins were determined by far UV circular dichroism (CD) spectroscopy and fluorescence. The results show that acetoacetate Cause increase the AGEs. and secondary and third structural changes of HSA incubated by acetoacetate and glucose more than of sample that incubation by alone glucose.

Key words: Acetoacetate, Human serum albumin, Advanced glycation end products, Diabetes,Ketone body.

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The Thesis Submitted for the Degree of M.Sc
(In the Field of Organic Chemistry)

The effect of acetoacetate ketone body on the fluorescent advanced glycation end products of human serum albumin

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October 2015