

Effect of various Sugars and Amino acids on the Maillard Browning Reaction

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Abstract

The maillard reaction, also known as the reaction between reducing sugars and amino compounds or non-enzymatic browning, strongly affects food quality. The effect of various sugars and amino acids were investigated on the browning property of maillard reaction of sugar-amino acid mixture. The study was carried out to compare the maillard browning reaction of various sugars(glucose, fructose, lactose, galactose, sucrose) with amino acids(glycine, β -alanine, L-valine, L-tyrosine) heated for 120 minutes at 90 °C. The reaction was evaluated by absorbances at 420 nm for brown pigments. The color intensity of the browning mixture was the highest in β -alanine-galactose systems, and in order to glycine-galactose> glycine-fructose> L-valine-galactose> β -alanine-glucose>glycine-glucose> β -alanine-fructose> β -alanine-Lactose.

References

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