Screening the antiglycation properties of Cat's whisker tea (*Orthosiphon aristatus*) and Laurel clock vine tea (*Thunbergia laurifolia*) in model systems

ABSTRACT

Glucose (Glu), Fructose (Fru), Glycine (Gly), and Lysine (Lys) were prepared at 0.5 M using phosphate buffer pH 7.39 as the solvent. Four model systems were prepared as Fructose-Lysine and Glucose-Lysine at the ratio 1:2, while Fructose-Glycine and Glucose-Glycine were prepared at the ratio 1:1. Cat's whisker tea (C) and Laurel Vine Tea (L) were prepared at 0.5, 0.75 and 1.0% (w/v) by steeping dried tea in 100 ml of 90°C water for 15 minutes. Brewed tea was added into the model system at the ratio of 1:1, and then all models were heated at 60°C for 7 hours. Samples were sampling every 1 hour to measure the browning at OD 420 nm compared with control models. As the results, the best anti-glycation property was 1.0% C and 0.5% L for Fructose-Glycine model, 0.5% C for Glucose-Glycine model, 1.0% C and 1.0% L for Fructose-Lysine model, and 0.75% C and 0.5% L for Glucose-Lys model. All the best condition of each model systems were investigated the 5-hydroxymethylfurfural (HMF) content and sugar content compared with control using HPLC analysis. The results concluded that the best condition to retard glycation was 0.5% C for both Fructose-Glycine and Glucose-Glycine model, 1.0% L for Fructose-Lysine model, and 0.75% L for Glucose-Lysine model.