

Effect of heat treatment on physicochemical properties of Bambang (Mangifera pajang) fruit juice

ABSTRACT

Bambang (Mangifera pajang) is an indigenous fruit that merely cultivated in Borneo Island. This fruit has great potential to be commercialized particularly in food applications such as production of juice and ingredient for functional foods. In this study, the effect of different heat treatment on the physicochemical properties of bambang fruit juice (BFJ) was evaluated. The BFJ was subjected to three different heat treatment conditions: sterilization at 121°C for 3 min, mild temperature long time (MTLT) pasteurization at 65°C for 15 min, and high temperature short time (HTST) pasteurization at 90°C for 1 min. After heat treatment, the BFJ samples were further analyzed for their physicochemical properties including moisture content, color, total soluble solid, pH and vitamin C. It was found that heat treatment could decrease the BFJ moisture content. Heat treatment has changed the color of juice in terms of lightness (L^*), green to red (a^*), and blue to yellow (b^*). The total soluble solid was increased with heat treatment, but decreased in vitamin C, and no changes in pH. The results provide important information on the physicochemical characteristic of BFJ in different heat treatment conditions.

Keyword: Bambang fruit; Bambang fruit juice; Heat treatment; Physicochemical properties