

Effect of storage temperature on texture, polymorphic structure, bloom formation and sensory attributes of filled dark chocolate

ABSTRACT

The effects of 18 and 30°C storage temperatures on texture, polymorphic structure, bloom formation and sensory attributes of dark chocolate, stored for 8 weeks were studied. Results showed that storage at 18°C for 8 weeks, significantly retarded changes in filled chocolates; the chocolates were free from bloom during the storage period. In contrast, at 30°C there was an increase in the rate of fat migration and rate of change of C36 and C50, and also a decrease in texture and the polymorph structure in the coating changed to β and β' polymorphs. However, the chocolates bloomed in the third week of storage (2 cycles). Sensory evaluation indicated that, storage at 18°C is better than 30°C, and desiccated coconut gives a pleasant flavour to the chocolate.

Keyword: Storage temperature; Texture; Polymorphic structures; Bloom formation; Sensory attributes; Filled dark chocolate