Title Effect of different cold storage temperature on the quality of roselle (*Hibiscus Sabdariffa* L.) pickles

Author Roshita Ibrahim, Nor Afifah Fatihah Mazuki

Citation Abstracts of 7th International Postharvest Symposium 2012 (IPS2012). 25-29 June, 2012. Putra World Trade Centre (PWTC), Kuala Lumpur, Malaysia. 238 pages.

Keywords roselle; storage

Abstract

Roselle (*Hibiscus sabdariffa* L.) from the family of Malvaceae is normally reffered to the calyces which have brilliant red color and unique flavor that makes it a valuable food product commonly used to make preserves, jams and beverages. This study was conducted to determine the physico-chemical characteristics and sensory acceptability of roselle pickles made from roselle calyces stored at different cold storage temperatures; 5± 1°C, -19±1°C, -80±2°C for 7 days and fresh roselle was used as control. The physico-chemical characteristics studied were texture, colour, total soluble solids, titratable acidity, ascorbic acid and anthocyanins contents. Whereas the sensory evaluation involved the acceptability test on the attributes of colour, texture, aroma, taste and overall acceptability. The analyses done on the roselle pickles showed that pickles made from frozen roselles (-80±2°C and -19±1°C) showed significantly higher L * values followed by fresh roselles and roselles stored at 5±1°C. In addition, pickle made from fresh roselle showed significantly the firmest in texture and had significantly the highest a*, b* values and anthocyanins content followed by pickles made from roselle stored at 5±1 °C, -80±2°C and -19±1°C. Mean while for ascorbic acid content, pickle made from fresh roselle also showed the highest value followed by roselle stored at -80±2°C, -19±1 °C and the lowest was roselle stored at 5± 1°C. For the sensory acceptability, roselle pickle made from fresh and stored calyces at 5±1 °C showed to be significantly more acceptable in terms of texture and overall acceptability as compared to the other treatments. In conclusion, pickle made from fresh roselle had almost all the preferred physico-chemical qualities and sensory acceptability as compared to the chilled and frozen roselles.