

Functional properties of pectin from dragon fruit (*Hylocereus polyrhizus*) peel and its sensory attributes

ABSTRACT

This study was aimed to add value to the disposed dragon fruit peel from the juice industry. Pectin was extracted from the fruit peel and functional properties of pectin and its application in jam processing were investigated. Hunter L^* , a^* and b^* values of the dragon fruit peel pectin were 39.95, 34.87 and 20.18 respectively, which showed light red in colour compared to the commercial apple and citrus pectin. In terms of textural properties, the dragon fruit peel pectin showed several characteristics which were similar to apple and citrus pectin. Water holding capacity of the pectin was similar to apple pectin which was 5.50 and 5.45 g/g respectively. Its oil holding capacity and swelling capacity also showed no significant difference ($p > 0.05$) from that of citrus pectin. It was successfully applied in pineapple jam but at a high percentage of up to 2% to make it well set. For sensory attributes, no significant ($p < 0.05$) differences were observed between the mean scores of the jam produced using dragon fruit peel pectin and apple pectin except for the colour attribute. It is therefore recommended to use this pectin as a thickener in food products such as low viscous food and beverages.

Keyword: Dragon fruit peel pectin; Functional properties; Hydration properties; Sensory attributes