Abstract

Powdered drink is any kind of beverage in the form of “dry” or granules that utilizes the drying process in order to extend the shelf life of the products as well as reduce the quality loss of the product during handling, storage, and distribution. Among all types of powdered beverages, the fastest and largest growth is shown by the fruit-based flavored powder drink. As texture and taste plays an important role in determining consumer preference, the addition of carboxymethyl cellulose might enhance consumer’s drinking sensation and the appearance of the products. The significance of this topic lies in the investigation of the effect different CMC concentrations might have on both the physical and sensory properties of lychee drinks. The moisture content, pH, and viscosity show significant differences while the water activity and the sensory evaluation show no significant differences. The highest moisture content was obtained by the addition of 0% CMC (1.38%), the highest pH was obtained by the addition of 0.6% CMC (3.77), and lastly, the highest viscosity obtained by 0.6% CMC (285.8 mPa.s). In conclusion, the addition of CMC concentration affected the moisture content, pH, and viscosity of the lychee drink due to the hygroscopic nature of CMC. Therefore, CMC can be used to provide mouthfeel (sensory attributes) and enhance the physical properties (moisture content, pH, and viscosity) of lychee drinks.

Keywords: powder drink, CMC, carboxymethyl cellulose, physical properties, sensory properties