

PC-023

Quality Characteristics of Black Soybean Sediments by Adding Low Sugars

Young Eun Song^{1*}, So Ra Cho¹, Hyun Ah Han¹, Song Yee Lee¹, So Hee Shin¹, Suk Ju Kwon¹

¹Jeollabuk-Do Agricultural Research & Extension Services, Iksan, 54591, Korea

[Introduction]

Soybeans which are rich in nutrients contain protein, fat, mineral, vitamin and have isoflavones, which are used as health functional materials. In recent years, there is a high risk of adult diseases due to excessive consumption of sugar, which is a tendency to avoid sugar. For this reason, products with adding low sugar as substitute sweeteners, instead of sugar have been preferred in the market. This study investigated quality characteristics of black soybean sediments by adding with low sugars.

[Materials and Methods]

The soybean used in this study was purchased from Dooremael in Kimje. The black soybean sediments is prepared adding with fructo oligosaccharide, maltitol and concentration of them was set by 0, 30, 50%, respectively. The quality characteristics on black soybean sediments have been evaluated soluble solid content, chromaticity, total polyphenol content according to different low sugars.

[Results and Discussions]

Black soybean sediments containing low sugars, fructo-oligosaccharide and maltitol were prepared, and their ratio was added by 30%, 50%(w/w) of total sugar weight, respectively. The moisture content and crude protein of black soybean sediments with adding low sugars were increased from 52.9% to 56.4%, and from 22.6% to 24.6%, respectively. Black soybean sediments with increasing low sugars concentration were decreased both soluble solid content and calorie. The whiteness of black soybean sediments was increased with adding of increasing low sugars concentration. The anthocyanin content of black soybean sediments with addition of increasing low sugars concentration was decreased from 357.6 to 281.7 μ g/g. The total polyphenol content of black soybean sediments with addition of increasing low sugars concentration was decreased from 2.12 to 2.04 mg/g, but total flavonoid content of it was ranged from 0.93 to 0.95 mg/g. The antioxidant activity of black soybean sediments with addition of increasing low sugars was decreased compare to control. From this result, adding ratio of low sugars for black soybean sediments is proper at 50% fructo oligosaccharide.

*Corresponding author: Tel. +82-63-290-6042, E-mail. sjm964@korea.kr