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Nutritional Analysis of Purple Corn Husk Extract

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[Abstract]

Seakso 5, a maize hybrid, was applied for variety in 2021 by Gangwon Agricultural Research and Extension Services in Korea. This variety was bred to produce a purple extract of corn husk. It shows purple color in the husk and cob and contains abundant anthocyanins. In this study, to obtain basic data on purple corn 'Seakso 5' husk extract (PCHE), a husk extract was prepared and the contents of vitamins, amino acids and fatty acids were analyzed. The Seakso 5 husks were extracted with 30% alcohol and concentrated, after adding dextrin to the concentrate, it was spray-dried to prepare an extract. The PCHE were analyzed for vitamins, amino acids, and fatty acids by referring to the Food Code. As a result, three types of vitamins were detected, and their contents were vitamin B₁ 0.14 mg/100g, vitamin B₂ 2.30 mg/100g, and vitamin C 11.32 mg/100g. A total of 15 amino acids were detected in the PCHE, including aspartic acid and glutamic acid, and the content of aspartic acid was the highest at 3.02 mg/g. Simultaneous analysis of fatty acids Among 37 types, saturated fatty acids were palmitic acid (C16:0), stearic acid (C18:0), monounsaturated fatty acids were oleic acid (C18:1(n-9)), polyunsaturated fatty acids were linoleic acid(C18:2(n-6)c) and α-Linolenic Acid (C18:3(n-3)) were detected. Among the detected fatty acids, the content of palmitic acid was the highest at 40.75 mg/100g. In the future, These analysis results will be used as reference data for temporary food ingredient applications by the Ministry of Food and Drug Safety.

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