

P6-21

홍화 분말 첨가 유과의 관능적·기계적 특성 비교

박금순*, 이계순, 신영자¹. *대구가톨릭대학교 가정관리학과, ¹성덕대학 호텔조리과

홍화는 경북 의성지방에서 많이 재배하는 약용식물로 혈중 콜레스테롤 저하작용, 고지혈증의 개선 및 동맥경화 예방, 뼈와 골다공증에 좋다고 알려져 있다. 이에 전통한과인 유과와 홍화 분말을 첨가시켜 관능적, 기계적 특성을 비교하여 홍화유과의 기능성에 대해 연구하였다.

관능 검사에서 홍화분말을 첨가한 유과의 기호도는 외관의 기호도, 맛의 기호도, 전반적인 기호도에서 1% 첨가군이 가장 좋게 평가되었고, 물성 측정에서는 경도와 부서짐성은 대조군이 가장 높았으며, 응집성, 탄력성과 겹침성은 홍화분말 첨가군이 높게 나타났다. 그리고 관능검사와 기계적 검사의 상관관계 결과 유과의 경도와 부서짐성이 높을수록 선호도가 높음을 알 수 있었다.

따라서 본 연구에서는 홍화분말을 첨가한 유과의 관능적·기계적 특성 비교 결과 홍화분말 1% 첨가군이 가장 좋게 평가되었다.

P6-22

Complex Polysaccharides Isolated from Ginseng Fiber: Physicochemical Comparison between Extrusion and Acid Extraction

MoonJung Choi^{1*}, Seung-Hwa Yoo², Hyun-Soo Lee¹, Keun Na¹, Jung-Mi Yun¹ and Jae-Kwan Hwang¹.
¹Bioproducts Research Center, Yonsei University, ²Department of Food Science, Sunmoon University

Ginseng fiber (GF), a fibrous by-product of ginseng extract processing, was solubilized by a twin-screw extruder. GF was extruded under 9 different operating conditions: moisture content 35-45% and screw speed 290-490 rpm. Water solubility index (WSI) of GF without extrusion was 21.49%, while WSI of extruded GF was 23.35-44.01%. Intrinsic viscosity of extruded GF was 23.8-39.6 ml/g compared to 30.6 ml/g of GF without extrusion. Soluble dietary fiber (SDF) of extruded GF also increased with extrusion, which in turn decreased the content of insoluble dietary fiber (IDF). Two extruded GF (GF-3 and GF-9) was selected according to WSI for the further analysis such as water soluble polysaccharide (WSP), neutral sugar composition, anhydrogalacturonic acid (AGA), molecular weight and ion exchange chromatography analysis. Extrusion process for GF conferred the higher yield of WSP than hot acid extraction. GF-9, extruded at higher screw speed and lower moisture content, contained higher free neutral sugar content, which indicates that severe extrusion condition resulted in disintegrating relatively large amount of non-pectinous cell wall materials. WSP of GF contains glucose, galactose, arabinose and rhamnose as major sugar constituents. Proper selection of extrusion conditions can result in GF with enhanced WSI and SDF content. This research suggests that extrusion is a potential tool to effectively disintegrate and solubilize the rigid cell wall of GF.