

1-18. Preparation and Characterization of Wild Silk Hydrolysates

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Recently, domestic silk fibroin (SF) hydrolysates have been studied intensively by several researchers. The functional properties of domestic SF hydrolysates depended on the hydrolysis method and the molecular weight of SF. However, the functional characteristics of wild SF hydrolysates have yet to be reported.

Therefore, we prepared wild SF hydrolysates, examined their characteristics, and tested functional properties of wild SF hydrolysates. The typical degummed wild silk cocoons, *Antheraea pernyi* and *Antheraea yamamai*, were hydrolyzed by hydrochloric acid and neutralized before desalting process. Wild SF hydrolysates powder was obtained after desalting and lyophilization. The average molecular weights of *A. pernyi* and *A. yamamai* SF hydrolysates were about 500. The heavy metal contents of wild SF hydrolysates were satisfactorily low that SF hydrolysates can be edible. Wild SF hydrolysates were fractionated into 2 parts by gel filtration chromatography. The fractionated wild SF hydrolysates showed characteristic amino acid compositions. What is interesting was that it was able to reduce blood glucose level and blood alcohol concentration.