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The Functional Properties and Structural Characteristics of Deamidated and Succinylated Wheat Gluten

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Highlights

- Succinylation was carried out on the basis of deamidated WGP, and an acylation level of 73.64 % produced the optimal properties.
- Combined deamidation and succinylation resulted in a significant improvement in functional properties of WGP compared to unmodified WGP: EAI improved by 208.35 %, WHC improved by 233.50 %, and NSI improved by 1099.55 %.
- Structural analysis, surface visualization and thermal stability determination were carried out with FTIR, SEM and DSC.
- The modified WGP was able to reduce the amount of butter in pound cake up to 20 %.

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