

THESIS INFORMATION

Title: **PRODUCTION OF PROTEIN ISOLATE, PROTEIN CONCENTRATE FROM PEANUT (*Arachis hypogaea* Linn.)**

Major: **Food and Beverage Technology**

Major code: **62.54.02.01**

PhD student: **NGUYEN THI HIEN**

Advisors: **Prof. LE VAN VIET MAN**

University: **Bach Khoa University, Vietnam National University – Ho Chi Minh City**

The objective of the study is to apply advanced techniques to protein extraction and purification from defatted peanut meal; determine chemical composition, properties of the peanut protein preparation and evaluate potential use of this preparation in food production for contribution to textural characteristics of the product.

New contributions of the thesis

- Ultrasonic, enzymatic or combined ultrasonic and enzymatic treatment of defatted peanut meal significantly reduced the size of material particles, which highly increased the protein yield in comparison with the conventional extraction.
- The ultrafiltration efficiently removed phytate and carbohydrate from the peanut protein extract and the purity of the protein preparation was up to 92.2%; cake formation was identified as the main reason for membrane fouling during the ultrafiltration.
- The rheological properties of the peanut protein preparation have been identified for subsequent applied studies.
- The peanut protein preparation can be used to substitute soy protein preparation in the sausage manufacturing process for contribution to textural characteristics of the product.

Scientific supervisor

(Sign, stating the full name)

PhD student

(Sign, stating the full name)

Prof. LE VAN VIET MAN

NGUYEN THI HIEN