

## SUMMARY INFORMATION OF NEW CONTRIBUTIONS OF THE THESIS

Name of thesis: **Le Quoc Khanh**

Major: **Theoretical Chemistry and Physical Chemistry** Code: 9.44.01.19

Name of PhD candidate: **study on the effect of oxygen content on corn kernels quality during hermetic storage.**

Instructor's full name:

**1. Assoc. Prof. Dr. Do Tra Huong**

**2. Assoc. Prof. Dr, Le Xuan Que**

Training base: Vietnam Institute of Industrial chemistry

### **Summary of the new contributions of the thesis:**

- The thesis assesses the effect of oxygen content on the quality of kernel corn during preservation qualitatively according to standards, especially through quantitative analysis during the preservation of 3 main nutrients, protein, lipids and starch.
- Determined the functional correlation between nutrient impairment (protein, lipid and starch) with storage time in the form of first-order kinetic equations, as a scientific basis for estimating performance and time proper storage.
- Applied the above experimental results or preserving commercial maize during 12 months; the obtained results meet the industry standard 10 TCN 513-2002 with preservation performance higher than 97%, and for preservation of maize seed - result meets National regulations QCVN on germination and quality of sapling.
- Identified the superiority of the FOCOAR oxygen-poor preservation method compared to the most commonly used 56% Qickphos fumigation method: the sensory quality and quantitative are superior, while storage doubled to 12 months; more technically easy to deploy, non-toxic to health and the environment.

*Ha Noi, dd month year*

Instructor of scientific researching

PhD candidate

**Assoc. Prof. Dr, Le Xuan Que**

**Le Quoc Khanh**

