

Research Article

Food Additives Course Teaching Reform and Construction

Shengjun Wu

School of Marine Science and Technology, Huaihai Institute of Technology, 59 Cangwu Road, Xinqu, 222005, China, Tel.: +86 518 85895427; Fax: +86 518 85895428

Abstract: Food additives course is a professional course in undergraduate specialty of food science and engineering. In order to improve the food additives course teaching and students' experimental ability, the food additives teaching is confronted with new tasks, i.e., establish the corresponding experimental course, in which the modern means and methods were used to develop a new experimental teaching and stimulate the students' interests and the spirit of innovation.

Keywords: Food additives, teaching reform

INTRODUCTION

The primary objective of higher education is to cultivate innovation talents and stimulate the students' innovation spirit. Practical ability is the key to cultivate innovation talents in universities (Qian *et al.*, 2013). Laboratory of higher education improves the students' practical ability, cultivate innovation ability, implements quality education and improves the teaching quality. For food additive and food technology experiment courses teaching reform of food science and engineering, the feasibility and advantages of the merge of food technology experiment and food additives courses into a course teaching were discussed.

TEACHING STATUS

Food additives course and food technology experiment course are important courses opened of the colleges in food science and engineering. The main of food additives course is to introduce the source of food additives, types, physical and chemical properties, security and specific use in various foods (Sun, 2000). However, at present, food additives course lacks practical training and should be strengthened. Food technology experiment course is one of the important professional courses of food science and engineering in professional college. It is a highly comprehensive curriculum based on the practical theory of food technology experiment course. The purpose of food technology experiment is not only to learn how to make a particular product, but more importantly is to train students to integrate theory with practice, analyze problems and improve problem-solving ability (Ma and Liu, 2011).

THE FEASIBILITY OF COMBINING TEACHING OF TWO COURSES

Teaching purpose: Food additive course deals with reasonable use of food additives in foods, while the purpose of food technology experiment course is to learn how to make a particular product. In addition, many food processing involves the use of food additives and therefore, the purpose of the two courses is similar, i.e., maintaining or improving food quality, extending the shelf life of food and improving processes.

Teaching content: From the course content point of view, the teaching of food additive and food technology experiment courses can be well combined. In the production process, such as tofu, it is necessary to select different coagulants according to the types of tofu. Preservation and storage of varying foods, preservatives should be reasonably selected according to the nature of the food, especially the pH and nutrient content of food. In the process of sweet and sour drink production, the appropriate sour and sweet agents should be chosen based on the type of beverage. From the perspective of food additives point of view, food additives are the natural or synthetic substances added to foods for improving food color, smell and taste as well as to meet the needs of preservation or processing of foods. For example, MSG can enhance the flavor of food, but MSG should be reasonably added at the appropriate processes on the basis of the nature and food processing technology.

Teaching combination feasibility: Therefore, the two courses are similar based on the content. The content of food additive has been included in food technology

experiment course. Since the purpose and content of the two courses are the same, a combination of the teaching of the two courses is feasible.

THE ADVANTAGES OF COURSE TEACHING COMBINATION

Optimizing the teaching content and training students' comprehensive ability: Integrating, condensing and featuring of the two course contents are curriculum teaching reform attempts to broaden the curriculum content, optimize curriculum and can decrease the duplicate teaching contents and increase the professional knowledge.

The integrated curriculum should not be the mechanical patchwork of the original course content, but an organic and innovative combination. Based on keeping relative stability of basic knowledge, theories and principles of the course content, coherence, advance and scientific nature should be reflected. Food additives course content penetrates the basic process of food warehouse, while food technology experiment course content may be regarded as the carrier subjects of food additive course. Such teaching can train students to think and increase overall interest and thus improve teaching effectiveness.

Comply with the requirements of cultivating compound talent: Currently, all colleges and universities are devoted to personnel training mode reform. In essence, the goal of the reform of the training model is mainly to meet the social demands for the quality of talent and trains high quality talents with a solid foundation, wide knowledge and strong ability. Achieve such goal of training talents involves many aspects, e.g., education idea, guiding principle, teaching plan, teaching staff construction and so on. To achieve

the training objectives of the specialty of food science and engineering, teaching plan should be supported by the optimization of curriculum system. Therefore, optimizing curriculum system, improving teaching reform and combining the two courses teaching are the specific measures to broaden the student knowledge and improve students' learning ability and practical ability and also are one of the ways to realize the goal of cultivating talents of the specialty of food science and engineering of Higher School.

CONCLUSION

In conclusion, combined teaching of food additive and food technology experiment is feasible and operable and has the advantage. In teaching reform we can try to combine food additives course with food technology experiment courses for teaching.

ACKNOWLEDGMENT

This research was supported by A Project Funded by the Priority Academic Program Development of Jiangsu Higher Education Institutions.

REFERENCES

- Ma, L.Z. and J.F. Liu, 2011. Food Technology Experiment. Chemical Industrial Press, Beijing.
- Qian, Q.Z., X.K. Cao, Q. Wang, D. Ma and G.Y. Zheng, 2013. Nutrition and food hygiene experimental teaching reform and construction. Lect. Notes Electr. En., 226: 517-523.
- Sun, B.G., 2000. Food Additives. Chemical Industrial Press, Beijing.