GAODENG XUEXIAO ZHUANYE JIAOCAI

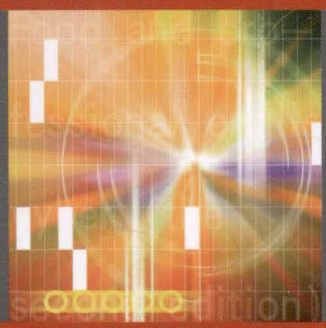
• 高等学校专业教材 •

食品专业英语文选

（第二版）

许学勤　主编 • 夏文水　主审

SELECTED ENGLISH WRITINGS FOR FOOD SPECIALTY (2ND EDITON)



中国轻工业出版社

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图书在版编目（CIP）数据

食品专业英语文选/许学勤主编. —2 版. —北京：中国轻工业出版社，2010.9

高等学校专业教材

ISBN 978-7-5019-7665-2

Ⅰ.①食… Ⅱ.①许… Ⅲ.①食品工业－英语－高等学校－教材 Ⅳ.①H31

中国版本图书馆 CIP 数据核字（2010）第 093913 号

责任编辑：张 靓 责任终审：张乃柬 封面设计：锋尚设计
版式设计：王超男 责任校对：李 靖 责任监印：马金路

出版发行：中国轻工业出版社（北京东长安街 6 号，邮编：100740）
印 刷：三河市世纪兴源印刷有限公司
经 销：各地新华书店
版 次：2010 年 9 月第 2 版第 1 次印刷
开 本：787×1092 1/16 印张：24
字 数：548 千字
书 号：ISBN 978-7-5019-7665-2 定价：40.00 元（含光盘）
邮购电话：010-65241695 传真：65128352
发行电话：010-85119835 85119793 传真：85113293
网 址：http://www.chlip.com.cn
Email：club@chlip.com.cn
如发现图书残缺请直接与我社邮购联系调换
090351J1X201ZBW

第二版序言

随着我国社会、经济的发展，特别是加入 WTO 以后，各行各业与国际交往的范围、内容日益扩大、加深，食品行业也不例外。语言是交流的桥梁，而英语是国际交流的主要语种之一。利用英语进行专业交流需要有专业英语的能力。食品专业英语已经成为全国高等学校食品专业的必修课程之一。

高福成主编的《食品专业英语文选》（第一版）自 1991 年出版发行以来，被我国众多高校的食品专业英语课程用做教材。然而，由于国内外食品工业和食品专业技术已经发生了较多变化，且我国食品行业国际交流范围也有很大拓展，因此，作为食品专业教材用书，《食品专业英语文选》的内容和范围同样需要更新、拓展，以跟上行业和专业的发展需要。为此，我们编写了《食品专业英语文选》（第二版）。

本书共有 34 课，内容包括：1. 食品工业，2. 水，3. 碳水化合物，4. 蛋白质，5. 脂质，6. 维生素和矿物质，7. 食品添加剂，8. 食品微生物学，9. 发酵，10. 食品的物理性质，11. 食品分散体，12. 食品保藏，13. 食品加工，14. 食品加工单元操作，15. 食品包装，16. 热处理与热加工，17. 食品浓缩，18. 食品脱水与干燥，19. 食品冷冻，20. 挤压蒸煮，21. 膜分离，22. 肉与肉制品，23. 乳与乳制品，24. 家禽与蛋，25. 焙烤原理，26. 糖果与巧克力制品，27. 果汁，28. 饮料，29. 食品安全，30. 危害分析与关键控制点，31. 良好操作规范，32. 食品工厂卫生，33. 食品质量，34. 食品货架期。内容大致可分为四部分：基础部分Ⅰ（第 1～9 课）、基础部分Ⅱ（第 10～21 课）、制品部分（第 22～28 课）和食品质量安全部分（第 29～34 课）。每课具有独立性，作为授课教材，可以选择使用。

本书基本保留了第一版的格式和风格，分设英文正文（Text）、疑难句剖析（Notes）、参考译文、阅读材料（Reading Material）和专业词汇表（Glossary）。每课英文内容均选自较新版本的英文原著，考虑到教材的特点，每课正文篇幅一般控制在四页左右。疑难句及专业词汇在课文和阅读材料中分别用斜体和黑体形式标注，以便读者查找。“阅读材料”为新增的栏目，其内容与课文正文内容相关，也选自英文原著，可作为课文内容的巩固训练和补充阅读之用。此外，作为新的尝试，本书配有每课英语正文及词汇的朗读光盘一张，读者可以此作为专业英语听力训练工具，也可以跟着朗读。全书最后附有总词汇表、食品专业相关的主要国际机构组织、国外高校院系及国外英文期刊的名称和网址，可方便读者查阅。本书除作为高校食品类专业的教材外，还可作为食品行业工程技术人员及相关从业人员的参考用书。

参与本书编写的老师有：江南大学许学勤、姜启兴、刘小鸣等，内蒙古农业大学杨军，河北农业大学檀建新，仲恺农业工程学院张宏康，哈尔滨商业大学杨春瑜。全书编写

分工如下：第1课、第14～21课由许学勤编写；第2～4课由刘小鸣编写；第5～9课、附录Ⅰ～Ⅲ由姜启兴编写；第10～13课由杨军编写；第22～25课由檀建新编写；第26～28课、第34课由张宏建编写；第29～33课由杨春瑜编写。此外，王海鸥、陶谦、张国农、龚凌燕、许昕等也参与了本书部分内容的编写和整理工作。英文课文及词汇由刘小鸣配音录制。全书由许学勤副教授统稿，夏文水教授主审。

本书在编写期间，得到了编者所在院校相关部门及师生的关心与帮助，在此表示由衷感谢。

由于编者水平有限，书中难免错误与不当之处，恳请读者批评指正。

编者

第一版序言

据估计，全国设有食品专业的高等院校有 140 余所，招生人数每届达 5000 人以上。这些食品专业或其相关专业在其教学计划中均设有食品专业英语课，课程内容不一，取决于各自专业的特定方向以及任课教师的主观随意性。同时，讲授方法也不甚相同。据调查，讲授方法基本上有三种：以讲课为主的方式，课堂指导与课余自学相结合的方式，课余辅导为主的方式。方法多变、各显神通。一般认为，专业英语课采取以讲课为主的方式对高年级大学生似无必要。而采取课余辅导为主的方式又往往流于形式。因此一般认为，采取课堂指导与课余自学相结合的方式似较合适。

按照专业教学计划程序，专业英语课属后期课程，一般有大学基础英语课作先导。因此在授课前，学生已基本具备基础英语语法和一般词汇的基础。专业英语课的主要任务是引导学生进入专业英语文献的阅读。要完成这一步，根据我们的教学经验，学生的第一个困难是专业词汇的贫乏。尤其是我们这样的一个包罗万象的食品专业，光是各种各样水果、蔬菜和鱼类的名称，就足使学生望而生畏。更何况经过加工之后的形形色色食品的名称，使学生眼花缭乱，目不暇接。至于科技文献的语法，学生一般没有什么特殊的困难，食品科技文献并不例外。不过，由于食品行业的复杂性、行业历史的悠久性、食品与人们日常生活的相关性，因此长期形成的通俗行家语言的表达方式时有出现，这可能也是造成学生阅读时困难的原因之一。

基于上述原因，我们组织了有关专业英语课程的任课教师与英语专业教师，合作编写了这部教科书，取名《食品专业英语文选》，它取材范围广，共 32 课，囊括了大食品专业中各行业的大量专用词，以丰富学生的专业英语词汇。每课的篇幅较大，适合于在自学基础上进行课堂指导的教学方式。各课备有译文，以便自学。有了译文作对照，注释中对大多数一般专用词便不重复加注了。部分词的注释着重在词的引申转译、词义的具体化和抽象化、词的搭配和词量的增减等方面。另外，有了译文对照，句的注释便着重在复杂难句的句子成分的分析、行家习惯语句的分析，以及特殊疑难结构的分析上。

必须指出，32 课略为多些，目的是提供选用余地。在采用本书作为教材时，必须根据各自食品专业的方向和内容，作出适当的取舍。

因为是初步尝试，又限于时间和水平，错误难免，敬请读者多赐指正。

高福成

1991

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Lesson 1

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Food Industry

The **food industry** is the complex, global collective of diverse businesses that together supply much of the food energy consumed by the world population. Only **subsistence** farmers, those who survive on what they grow, can be considered outside of the scope of the modern food industry.

1.1 Production

Food is traditionally obtained through **farming**, **ranching** and **fishing** with **hunting**, **foraging** and other methods of subsistence locally important. More recently, there has been a growing trend towards more **sustainable agricultural practices**. This approach, which is partly fueled by consumer demand, encourages **biodiversity**, **local self – reliance** and **organic farming methods**. Major influences on food production are international organizations (e. g. the **World Trade Organization** and **Common Agricultural Policy**), national government policy (or law) and war.

1.2 Preparation

While some food can be eaten raw, many foods undergo some form of **preparation** for reasons of safety, **palatability**, or **flavor**. At the simplest level this may involve **washing**, **cutting**, **trimming** or adding other foods or **ingredients**, such as **spices**. It may also involve **mixing**, **heating** or **cooling**, **pressure cooking**, **fermentation**, or combination with other food. In a home, most food preparation takes place in a kitchen. Some preparation is done to **enhance** the **taste** or **aesthetic appeal**; other preparation may help to **preserve** the food; and others may be involved in **cultural identity**. A **meal** is made up of food which is prepared to be eaten at a specific time and place.

1.3 Food processing

Food processing is the methods and techniques used to transform **raw ingredients** into food for human consumption. Food processing takes clean, **harvested** or **slaughtered** and **butchered** components and uses them to produce marketable food products. There are several different ways in which food can be produced.

All food processing involves a combination of procedures to achieve the intended changes to the raw materials. These are conveniently categorized as **unit operations**, each of which has a specific, identifiable and predictable effect on a food. Unit operations are grouped together to form a **process**. The combination and sequence of operations determines the nature of the final product.

1.4 Food manufacture

Packaged foods are manufactured outside the home for **purchase**. This can be as simple as a butcher preparing meat, or as complex as a modern international food industry. Early **food processing techniques** were limited by available food preservation, **packaging** and transportation. This mainly involved **salting**, **curing**, **curdling**, **drying**, **pickling**, fermentation and **smoking**. Food manufacturing arose during the industrial revolution in the 19th century. This development took advantage of new **mass markets** and emerging new technology, such as **milling**, preservation, packaging and **labeling** and transportation. It brought the advantages of pre－prepared time saving food to the bulk of ordinary people who did not employ domestic servants.

At the start of the 21st century, a two－tier structure has arisen, with a few international food processing giants controlling a wide range of well－known food brands. There also exists a wide array of small local or national food processing companies. Advanced technologies have also come to change **food manufacture**. Computer－based control systems, **sophisticated processing** and packaging methods, and **logistics** and **distribution** advances, can enhance **product quality**, improve **food safety**, and reduce costs.

1.5 Marketing and retailing

Food **marketing** brings together the producer and the consumer. *It is the chain of activities that brings food from "farm gate to plate".* [1] The marketing of even a single food product can be a complicated process involving many producers and companies. *For example, fifty－six companies are involved in making one can of chicken noodle soup.* [2] These businesses include not only chicken and vegetable processors but also the companies that transport the ingredients and those who print labels and manufacture cans. The food marketing system is the largest direct and indi-

rect non – government employer in the United States.

In the pre – modern era, the sale of surplus food took place once a week when farmers took their wares on market day, into the local village marketplace. *Here food was sold to grocers for sale in their local shops for purchase by local consumers.* [3] With the onset of industrialization, and the development of the food processing industry, a wider range of food could be sold and distributed in distant locations. Typically early grocery shops would be **counter – based shops**, in which purchasers told the shop – keeper what they wanted, so that the shop – keeper could get it for them.

In the 20th century supermarkets were born. Supermarkets brought with them a self service approach to shopping using **shopping carts**, and were able to offer quality food at lower cost through economies of scale and reduced staffing costs. In the latter part of the 20th century, this has been further revolutionized by the development of vast warehouse – sized, out – of – town supermarkets, selling a wide range of food from around the world.

Unlike food processors, food retailing is a **two – tier market** in which a small number of very large companies control a large proportion of supermarkets. The supermarket giants wield great purchasing power over farmers and processors, and strong influence over consumers. *Nevertheless, less than ten percent of consumer spending on food goes to farmers, with larger percentages going to advertising, transportation, and intermediate corporations.* [4]

1.6 Wholesale and distribution

A vast global transportation network is required by the food industry in order to connect its numerous parts. These include **suppliers**, **manufacturers**, **warehousing**, **retailers** and the end consumers. There are also those companies that, during the food processing process, add vitamins, minerals, and other necessary requirements usually lost during preparation. ***Wholesale markets for fresh food products have tended to decline in importance in OECD countries as well as in Latin America and some Asian countries as a result of the growth of supermarkets, which procure directly from farmers or through preferred suppliers, rather than going through markets.*** [5]

The constant and uninterrupted flow of product from distribution centers to store locations is a critical link in food industry operations. Distribution centers run more efficiently, throughput can be increased, costs can be lowered, and manpower better utilized if the proper steps are taken when setting up a material handling system in a warehouse.

1.7 Food industry technologies

Sophisticated technologies define modern food production. They include many areas. Agricultural machinery, originally led by the tractor, has practically eliminated human labor in many areas of production. **Biotechnology** is driving much change, in areas as diverse as **agrochemicals**, plant breeding and food processing. Many other areas of technology are also in-