

大学英语泛读

第4册

刘谋宏 濮宏魁 主编

苏州大学出版社

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前 言

《大学英语教学大纲》(修订本)指出:“阅读是掌握语言知识,打好语言基础,获取信息的重要渠道。阅读能力是大部分大学生今后工作所需的重要技能。”在我国已经加入世界贸易组织的今天,全面提高大学生的英语应用能力,特别是阅读能力,已成为大学英语教学的重点。我院的大学英语教师长期以来一直孜孜追求,在努力教学的同时,投入了大量时间和精力,多方收集和精心选编了许多适合当代大学生阅读的文章,以满足大学英语教学的需求。

经过长期酝酿和精心的准备,并在我院外语系领导的大力支持和与苏州大学出版社联手合作下,《大学英语泛读》第1-4册终于与广大教师和学生见面了。我们精选了许多当代大学生普遍感兴趣而且难易适中的文章。还由教学经验丰富的大学英语教学骨干负责撰写了相关的配套练习,以供学生读后检测之用,并附有部分答案,以供读者参考。

本教程所含文章大多选自国内外最新出版的书刊和杂志。教程分四册,每册一学期,可供大学英语教学四学期使用。为便于学生阅读,我们对文章中部分语言点作了注释。

我们相信我们所做的各项工作将有助于学生提高自己的阅读能力。对相关部门和个人对我们出版、发行和使用该教程提供的许多便利和支持,我们表示由衷的感谢,并希望在使用过程中提出宝贵意见,以便在再版时修正。

编 者

2002年9月

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Reading Passage One

Called gene splicing or recombinant DNA (deoxyribonucleic acid), it is a way to re-design the genetic composition of an organism. This new technology has devised methods to produce insulin for diabetics, enzymes to dissolve blood clots, and gene transplants to combat genetic disorders.

DNA is the blueprint of any organism and is made up of genes that are strung together to form the DNA chain. In human beings, for example, one gene may determine the color of the eyes and another the shape of a person's nose.

Every living organism has DNA, which determines the growth and function of the cells. Each organism has its own distinctive genetic composition.

In gene splicing, scientists use specific enzymes to break a DNA molecule apart at specific place between genes. At the specific place, the scientist may or may not remove a gene. The next step is to add a new gene or group of genes from some other organism. After the new set of genes is added, the molecule is put back together. The new DNA molecule now functions with new instructions and begins to reproduce itself.

Because scientists still do not completely understand the total effect of gene splicing, they conduct most experiments on organism such as bacteria. A one-celled germ found in the colon, *E. coli*, is frequently used in gene splicing experiments.

Some valuable discoveries have resulted from gene splicing. Besides those already mentioned in the first paragraph, one recent discovery was a hormone (human growth hormone) used to treat dwarfism. Interferon, a protein produced by the body to fight infection of diabetes, has been reproduced through gene splicing. Some scientists hope that it will be useful in treating cancer. Because quantities are limited, however, interferon is still very expensive, so its use is limited.

Some scientists believe that nutritive value of plants could be improved by the injection of new genes. Others feel that the same could be done with livestock. In industry, bioengineers are developing special genes to use against pollutants in water or to help

extract crude oil from exhausted wells.

Some people are critical of gene splicing. They are afraid that gene splicing is unethical because it changes the blueprint for life. Other critics believe it is possible that gene splicing will create “monster”—type substances.

The answers to the concerns of the critics cannot be given because DNA is still in its early stages. Basically, the issue is social in nature. Science seeks to be pure, while the applications of a scientific discovery are social, governed by the attitudes of people.

Words and Expressions

splice 嫁接,剪接

genetic 基因的,遗传的

organism 生物体,有机体

devise 设计,想出

insulin 胰岛素

diabetic 糖尿病患者

enzyme 酶

clot 凝块,血块

transplant 移植组织,移植体

combat 与……斗争

blueprint 原型;型板

string 用线串,串起;把……连在一起

distinctive 特殊的

molecule 分子

germ 微生物;病菌;细菌

colon 结肠

hormone 激素,荷尔蒙

dwarfism 侏儒症

interferon 干扰素(一种由受病毒侵袭的细胞所产生的抗病毒蛋白质)

protein 蛋白质

diabetes 糖尿病

nutritive 有关营养的

pollutant 污染物;污染源

extract 取出;抽出

crude oil 原油,石油
exhausted 枯竭的
unethical 不道德的
monster 怪物;[噬菌体]畸形体

Notes

1. gene splicing: the recombination of genetic material; production of recombinant DNA
基因剪接
2. DNA(deoxyribonucleic acid): 脱氧核糖核酸
3. recombinant DNA: 重组 DNA
4. A one-celled germ found in the colon, E.coli, is frequently used in gene splicing experiment. 在结肠中发现的单细胞细菌——大肠杆菌常用于基因剪接的实验。

Reading Comprehension

1. Gene splicing is a way to _____.
A. overcome cancer in living things
B. change the color of a human's eyes or hair
C. change the genes of a living thing
D. create "monsters"
2. A chain of _____ makes up the DNA molecule.
A. enzymes B. genes C. molecules D. hormones
3. After a molecule is broken apart, _____.
A. it grows back together in a different way
B. new genes from some other organism are added to it
C. crude oil is extracted
D. special enzymes are used in the DNA
4. Gene splicing can be used for all of the following except _____.
A. to combat water pollution B. to treat dwarfism
C. to treat blindness D. to treat diabetes
5. The main idea of this passage is _____.
A. scientists are discovering ways to change DNA
B. scientists do not completely understand DNA
C. gene splicing can be useful for plants and animals

D. some people are critical of DNA

Translation

1. The new DNA molecule now functions with new instructions and begins to reproduce itself.
2. Because quantities are limited, however, interferon is still very expensive, so its use is limited.

Short Answer Questions

1. What is a gene?
2. Why do scientists conduct most experiments on organism such as bacteria?
3. Why is interferon not widely used?
4. Gene splicing is criticized by some people because _____.
5. What have been governed by the attitudes of people?

Reading Passage Two

If the canning industry can claim to be 150 years old, with its main advance during the past forty years, the quick freezing industry can point with justifiable pride to a meteoric rise in as short a period as thirty years. The foundation of this industry rests on the work of Clarence Birdseye in the U.S.A. who first marketed quick frozen foods in 1929, and its success can be measured from the figure for the annual production of quick frozen foods in the United States, which is now more than two million tons. The development of quick freezing industry in the United Kingdom was interrupted by the Second World War, but is now in full stride. In its earlier years attention was given chiefly to the freezing of vegetables, the annual production of which in the United Kingdom is now 30,000 to 35,000 tons, and rising rapidly. The industry quickly freezes about 25,000 tons of peas annually, which compares with about 40,000 to 45,000 tons for the longer established canning industry. It takes about 90,000 tons of whitefish annually, giving a net weight of over 40,000 tons when packaged. Figures are not available for production of frozen meat, poultry and prepared foods in the United Kingdom, but these products are rapidly gaining popularity.

The essential feature of "quick" freezing is that the time taken for the temperature of the food to fall from 32°F to 25°F—technically known as the "zone of maximum crystal formation"—should be short. Rapid passage through this zone results in the formation of small ice crystals, which cause less damage to the structure of the food than the larger crystals formed during slower freezing. There are several ways of freezing foods, but the commonest are blast freezing in air tunnels, and plate freezing. In the former the food is generally passed through the tunnel on trolleys, either in packages or on open trays. In plate freezing the packages are brought into contact with plates through which the refrigerant passes. In both cases the temperature used is generally about -30°F.

The first drying of foods, other than by the sun's rays or by heating over a fire, is said to date from 1795, the same year as that in which Appert first learnt how to preserve

foods by means of heat, when two other French experimenters dried sliced vegetables in a stream of air at 105°F. Since then a host of methods have been used, some requiring static driers, others rotary or belt driers, some requiring atmospheric pressures, others reduced pressures. The quality of many of the products dried by these older methods was not good enough to attract the civilian consumer, but the advantage of dried foods to the armed forces in saving shipping space made such products indispensable during wartime. Recent great technical advances have altered this situation materially, and it is estimated that about 50,000 tons of vegetables are now dehydrated each year in the United Kingdom, much of which goes to the civilian consumer.

Powders such as milk and coffee, and products of small particle size, such as soup and potato flakes, have an established market and, in some cases, an expanding one. A new method of drying citrus juices under a very high vacuum and at a relatively low temperature has resulted in powders which reconstitute very rapidly and compare favourably with the corresponding frozen concentrates.

The most striking advances in recent years have been in vacuum drying and freeze drying. Developments from Danish work led to a thorough study of vacuum-contact-drying at the Ministry of Agriculture, Fisheries and Food's Research Establishment and Experimental Factory at Aberdeen. In this process the food is placed between hot plates in a vacuum chamber, contact of the upper and lower surfaces of the food with the plates being maintained throughout the drying operation by closing the gap between the plates as the food shrinks. The temperature of the plates falls during the drying cycle from 212°F to about 140°F. The studies made in vacuum-contact-plate-drying have led to the development known as accelerated-freeze-drying, which represents the most advanced method of food dehydration known today. In this technique the food is frozen and then placed in the vacuum drying chamber (or it may be frozen *in situ* by evaporative cooling under vacuum) and it is then heated by contact with plates above and below. The ice inside the food passes directly from the solid to the vapor phase and is removed from the chamber. By this method meat can be dried in as short a time as five hours, and the products treated in this way reconstitute more rapidly and satisfactorily, with more natural flavor and better stability on storage than is possible by any method used up to now.

So far as can be ascertained at present, the cost of these products should not be more than that of equivalent quantities of quick frozen foods, and they have the advantage of not requiring low-temperature storage. The process is extremely versatile and can be applied

to meat and fish in steak or fillet or minced form, and also to a wide range of vegetables and fruits.

Words and Expressions

canning 罐头食品制造

justifiable 无可非议的

meteoric 流星似的;迅速的

market (在市场上)销售

annual 每年的;年度的

poultry [总称]家禽

formation 形成;构成

trolley 装有脚轮的台车

refrigerant 制冷剂,冷冻剂

host 许多

static 静态的

rotary 旋转的

indispensable 必不可少的

materially 极大地

dehydrate 使脱水

powder 粉,粉末

expand 扩大

citrus 柑

vacuum 真空

reconstitute 恢复(脱水食物)的水分

concentrate 浓缩物

represent 代表

evaporative (使)蒸发的

stability 稳定

ascertain 弄清,确定

versatile 有多种用途的,多功能的,万用的

fillet 带,片

mince 切碎;绞碎

Notes

1. It takes about 90,000 tons of whitefish annually, giving a net weight of over 40,000 tons when packaged. 速冻食品加工业每年要加工 9 万吨左右的白鲑(或白鲸),生产出净重 4 万吨以上的盒装食品。
2. the "zone of maximum crystal formation": 最大结晶区
3. blast freezing in air tunnels: 风管式(鼓风)冷冻法
4. plate freezing: 平板式冷冻法
5. Developments from Danish work led to a thorough study of vacuum-contact-drying at the Ministry of Agriculture, Fisheries and Food's Research Establishment and Experimental Factory at Aberdeen. 由丹麦人研制的食品干燥技术导致了英国农业部、渔业部以及阿伯丁食品研究机构和实验工厂对接触板式真空干燥法的广泛深入的研究。
6. vacuum-contact-plate-drying: 接触板式真空干燥法
7. accelerated-freeze-drying: 速冻干燥法
8. *in situ*: (拉丁语)在原地,在原来位置

Reading Comprehension

1. The quick freezing industry has developed rapidly over the past _____ years.
A. 150
B. 30
C. 40
D. Not mentioned.
2. Which of the following is NOT true?
A. Dehydrated vegetables attracted the civilian consumer.
B. The products dried by the older methods did not attract the civilian consumer.
C. The first drying of food was conducted by three French experimenters.
D. The armed forces liked the dried foods during wartime.
3. By a new method, citrus juices have been dried _____.
A. under a very high vacuum
B. at a relatively low temperature
C. with the corresponding frozen concentrates
D. both A and B
4. The fifth paragraph tells us about _____.
A. the process of vacuum-contact-drying
B. the advantages of accelerated-freeze-drying
C. the most striking advances in vacuum-drying and freeze-drying
D. how meat is dehydrated
5. From the last paragraph we can assume that the author prefers _____.
A. quick frozen foods
B. canned meat and fish
C. low-temperature storage
D. the technique of accelerated-freeze-drying to other techniques in food preservation

Translation

1. The development of quick freezing industry in the United Kingdom was interrupted by the Second World War, but is now in full stride.
2. The most striking advances in recent years have been in vacuum drying and freeze drying.

Short Answer Questions

1. What does the foundation of canning industry rest on?
2. According to the Passage, who first marketed frozen foods in 1929?
3. What is the essential feature of "quick" freezing?
4. According to the passage, what is the most advanced method of food dehydration today?
5. In the sentence, "By this method meat can be dried in as short a time as five hours," the word "this" refers to _____.

Reading Passage Three

European scientists have created the world's first genetically modified malaria mosquito that could one day help to rid the world of the disease that kills an estimated 2.7 million people each year.

By inserting a marker gene into the species of mosquito that carries malaria, researchers at Imperial College London and the European Molecular Biology Laboratory in Heidelberg, Germany, have come up with a step closer to creating a mosquito to stop the spread of the disease.

"With what we have available it is theoretically possible to construct in the laboratory a mosquito which is resistant to malaria," Dr. Andrea Crisanti, of Imperial College, told Reuters.

The scientists inserted an extra gene that produces a green fluorescent protein, which distinguishes the transgenic insect from other mosquitoes and makes it visible under ultra-violet light.

The achievement means scientists may soon be able to substitute other genes that could make the malaria-carrying *Anopheles* mosquito produce antibodies to the malaria parasite or a resistance to it.

They may also be able to change the mosquito's behavior so it feeds on animals instead of humans.

"We think that within six years a mosquito will be created that is stable, safe and physically unable to transmit the malaria-causing parasite," Crisanti, a molecular entomologist added.

Major Breakthrough

The research reported in the science journal *Nature* has been hailed as a breakthrough in the battle against malaria, which infects up to 500 million people a year.

"The announcement of stable germ line transformation of *Anopheles* mosquitoes represents a major breakthrough in the field of molecular entomology," Dr. Carlos Morel, a