

**BỘ NÔNG NGHIỆP VÀ PHÁT TRIỂN NÔNG THÔN**  
**TRƯỜNG ĐẠI HỌC NÔNG - LÂM BẮC GIANG**



**THS. ĐỖ THỊ HUYỀN (Chủ biên)**  
**CN. NGÔ THỊ HOÀNG ANH (Cộng sự)**

**BÀI GIẢNG**

**TIẾNG ANH**  
**CHUYÊN NGÀNH**  
**CÔNG NGHỆ THỰC PHẨM**  
**(Lưu hành nội bộ)**

**BẮC GIANG, 2018**

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*(Tài liệu dùng cho bậc Đại học)*

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## LỜI NÓI ĐẦU

“Bài giảng Tiếng Anh chuyên ngành Công nghệ Thực phẩm” (*Lessons on English for Food Technology*) là bài giảng được biên soạn làm tài liệu giảng dạy, học tập và tham khảo cho giảng viên và sinh viên Khoa Công nghệ Thực phẩm, trường Đại học Nông - Lâm Bắc Giang.

Học phần Tiếng Anh chuyên ngành Công nghệ Thực phẩm được giảng dạy khi sinh viên đã kết thúc các học phần Tiếng Anh trong chương trình Tiếng Anh cơ bản, có vốn từ vựng và ngữ pháp nhất định. Bên cạnh đó sinh viên cũng có kiến thức chuyên ngành về Công nghệ Thực phẩm. Do đó, bài giảng được biên soạn với mục đích chính là giúp sinh viên sử dụng được vốn từ vựng, thuật ngữ chuyên ngành và các mẫu câu liên quan đến lĩnh vực công nghệ thực phẩm như: thiết bị thí nghiệm, thiết bị phản ứng, vệ sinh và an toàn thực phẩm, sản xuất bia, các sản phẩm từ thịt và cá, chế biến cà phê, chế biến rau, các sản phẩm từ sữa.

Chúng tôi hy vọng rằng bài giảng này sẽ là một tài liệu hữu ích đối với các giảng viên và các em sinh viên.

Mặc dù đã rất cố gắng trong quá trình biên soạn, nhưng chắc chắn khó tránh được những hạn chế nhất định. Rất mong nhận được những ý kiến phản hồi và bổ sung của quý thầy cô, các em sinh viên và tất cả bạn đọc để cuốn bài giảng này được hoàn thiện hơn trong những lần tái bản sau.

Trân trọng cảm ơn!

**Nhóm tác giả**

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## Unit 1. CHEMICAL LABORATORY EQUIPMENT

### 1.1. Reading

#### Pre-reading questions

- 1) How often do you work in the laboratory?
- 2) What procedures do you usually perform in the laboratory?
- 3) Can you name any laboratory glassware in English?

Laboratories have now become indispensable in schools, factories and research institutes to test, confirm, or demonstrate on a small scale, phenomena and processes which occur in nature or which may find application in industry or be of importance to science.

The equipment of chemical laboratory varies according to the nature of the work, which is to be carried out. It may be intended for the student to put the test his theoretical knowledge/ school laboratory, for the technician/ technologist to verify and check processes to be employed in the factory/ works laboratory or to help the scientist and research worker to discover or confirm scientific facts/ research laboratory.

Every chemical laboratory should be provided with running water, gas and electricity. The water supply is conducted from the mains by means of pipes, the piping terminating in taps under, which there are sinks to take away waste water and other non - objectionable liquids. When one needs water one turn on the taps and stops it flowing by turning the tap off.

Similarly a system of pipes is attached to the gas main from where gas reaches the various kinds of burners. They serve for producing flames of different intensity, the Bunsen burner being the most common type used.

Apart from a gas supply, there is electricity which serves for lighting and as a driving power. For operating electricity, switches or switch buttons are employed. That is why we talk about switching on the light or switching it off.

The laboratory is also equipped with a large variety of apparatus and devices. One of them, a desiccator, is used for drying materials. Ovens, furnaces or kilns serve for generating high temperatures. Where harmful vapor and undesirable odorous develop during the operation, a hood with suitable ventilation has to be provided for their escape.

Of primary importance are glass and porcelain vessels. Glass vessels for chemical processes are made of special materials. They have to resist sudden changes in temperature, to withstand very high temperature: refractory glass, and be affected by few substances as possible. The necessary assortment of laboratory glassware includes test tubes, beakers, various flasks, watch glasses, funnels, bottles, and cylinders.

Porcelain articles consist of various kinds of dishes, basins and crucibles of various diameters. A grinding mortar with a pestle, desiccating dishes and stirrers are also generally made of porcelain.

At present, also plastic materials are finding increasing use in laboratories,

many of them being chemically resistant, unattacked by alkalis or acid - or alkali - proof/ and unbreakable. Containers made of them are especially suitable for storing stock solutions.

The analytical balance, which is used for accurate weighing of samples, is usually kept in a separate room.

(Taken from "The language of Chemistry, Food and Biological Technology in English" by Hien, N.T.)

### **1.1.1. Reading comprehension**

*Answer the following questions*

1. What is the function of laboratories?

.....  
.....

2. Why is it important and necessary for you as students of chemistry to make experiments in your school laboratories?

.....  
.....

3. Which properties should the glass be used for making chemical vessels?

.....  
.....

4. What does the necessary assortment of laboratory glassware include?

.....  
.....

5. What do porcelain articles usually consist of?

.....  
.....

6. What are the advantages of polyethylene bottles?

.....  
.....

7. What are plastic containers suitable for?

.....  
.....

8. What do burners serve for?

.....  
.....



### 1.1.2. True/ False statements

Decide whether the following statements are true "T" or false "F". Correct the false statements

1. _____	Hot glass looks the same as cold glass.
2. _____	All chemicals in the lab are to be considered dangerous.
3. _____	Return all unused chemicals to their original containers.
4. _____	Work areas should be kept clean and tidy.
5. _____	Pipets are used to measure and dispense small amounts of liquids. You should draw the liquid into the pipet using your mouth.
6. _____	Laboratory work can be started immediately upon entering the laboratory even if the instructor is not yet present.
7. _____	Never remove chemicals or other equipment from the laboratory.
8. _____	Chipped or cracked glassware is okay to use.
9. _____	Read all procedures thoroughly before entering the laboratory.
10. _____	All unauthorized experiments are prohibited.
11. _____	You are allowed to enter the chemical preparation/storage area any time you need to get an item.
12. _____	Laboratory aprons should be worn during all lab activities.
13. _____	It's okay to pick up broken glass with your bare hands as long as the glass is placed in the trash.
14. _____	Never leave a lit burner unattended.
15. _____	Always mix acid into water.
16. _____	It's ok to wear sandals in the lab.
17. _____	Dispose of unused chemicals in the sink.
18. _____	Return unused chemical to the reagent bottle it came from.
19. _____	It's ok to lift up your goggles to talk to your lab partner.
20. _____	If someone catches their clothes on fire blow on it.
21. _____	Know the location of all safety equipment and how to use it.
22. _____	Report all problems to the teacher.
23. _____	Drink from a beaker if you get thirsty.
24. _____	Pick up large pieces of broken glass on the floor immediately with your hands.
25. _____	Always mix water to acid.

26. _____	Graduated cylinders accurately measure liquid volumes.
27. _____	Mortar and pestle is a flat plate with multiple "wells" which are used as small test tubes.
28. _____	Forceps are used to pick up or hold small items.
29. _____	Beakers are used to hold liquids, has narrow neck to prevent splashes.
30. _____	A grinding mortar with a pestle, desiccating dishes and stirrers are also generally made of plastic materials.

### 1.1.3. Increasing your vocabulary

a. Give the name of the following chemical laboratory equipments



1. ....



2. ....



3. ....



4. ....



5. ....



6. ....