

МИНИСТЕРСТВО СЕЛЬСКОГО ХОЗЯЙСТВА РОССИЙСКОЙ ФЕДЕРАЦИИ
ФЕДЕРАЛЬНОЕ ГОСУДАРСТВЕННОЕ БЮДЖЕТНОЕ ОБРАЗОВАТЕЛЬНОЕ
УЧРЕЖДЕНИЕ ВЫСШЕГО ОБРАЗОВАНИЯ
«ГОРСКИЙ ГОСУДАРСТВЕННЫЙ АГРАРНЫЙ УНИВЕРСИТЕТ»

Ф.Б.КАЗИЕВА, Т.Х.ЦАЛЛАГОВА,
С.Б.ГУРИЕВА

**УЧЕБНО-МЕТОДИЧЕСКОЕ
ПОСОБИЕ
ПО АНГЛИЙСКОМУ ЯЗЫКУ**

для студентов факультета
технологического менеджмента

Учебно-методическое пособие

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Составители:

Казиева Ф.Б., Цаллагова Т.Х., Гуриева С.Б.

Рецензенты:

Е.В.Карсанова, доцент кафедры иностранных языков для неязыковых специальностей Северо-Осетинского государственного университета.

М.Д.Басаева, старший преподаватель кафедры иностранных языков Горского ГАУ.

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Рекомендовано Центральным учебно-методическим советом ФГБОУ ВО Горский ГАУ в качестве учебно-методического пособия (протокол № 1 от 10.09.2019 г.).

Учебно-методическое пособие состоит из оригинальных текстов, тематика которых соответствует указанной профилирующей специальности. Целью пособия является развитие умений и навыков устной речи, чтения и перевода текстов по специальности. Каждая тема снабжена конкретными заданиями для самостоятельной работы, даны методические указания. Учебно-методическое пособие предназначено для студентов, обучающихся по направлению подготовки «Технология производства и переработки сельскохозяйственной продукции». Данное издание подготовлено по дисциплине «Иностранный (английский) язык» в соответствии с Федеральным государственным образовательным стандартом высшего образования.

ВВЕДЕНИЕ

Иностранный язык является обязательным общеобразовательным предметом в Горском государственном аграрном университете.

Целью обучения иностранному языку в вузе является овладение навыком чтения литературы средней степени трудности с минимальным использованием словаря. Данное учебно-методическое пособие предназначено для бакалавров и специалистов отделения «Технология производства и переработки сельскохозяйственной продукции» факультета технологического менеджмента, изучающих английский язык.

Учебно-методическое пособие состоит из оригинальных текстов, тематика которых соответствует указанной профилирующей специальности. Целью пособия является развитие умений и навыков устной речи, чтения и перевода текстов по специальности. Каждая тема снабжена конкретными заданиями для самостоятельной работы, даны методические указания. Учебно-методическое пособие предназначено для студентов, обучающихся по направлению подготовки «Технология производства и переработки сельскохозяйственной продукции».

Пособие включает в себя тексты для чтения со словарем, к каждому из которых дается серия упражнений и заданий, а также словарный минимум, который должен быть усвоен студентом за время прохождения данной конкретной темы. Упражнения носят обучающий характер и направлены на развитие навыков раскрытия значения слова в словосочетании или в контексте с помощью словаря и на закрепление специальной лексики, включенной в словарь-минимум. Упражнения также преследуют цель раскрыть содержание абзаца или текста в целом. Конечным результатом работы над текстом для чтения со словарем является развернутое изложение его содержания.

Словарный минимум, приложенный к каждому тексту, отражает его тематику и подлежит активному усвоению, а также может служить ключом для самоконтроля.

Данное учебно-методическое пособие состоит из введения, определяющего цели и задачи издания, а также основной части, которая содержит 21 параграф.

В результате освоения дисциплины обучающиеся должны обладать следующими универсальными компетенциями, а также индикаторами достижения универсальной компетенции:

- способность осуществлять деловую коммуникацию в устной и письменной формах на государственном языке Российской Федерации и иностранном языке (УК-4);
- использование информационно- коммуникативных технологий при поиске необходимой информации в процессе решения стандартных коммуникативных задач на государственном и иностранном (-ых) языках (ИД-2УК-4);
- демонстрация умения выполнять перевод профессиональных текстов с иностранного (-ых) на государственный язык и обратно (ИД-5УК-4).

Данное издание подготовлено по дисциплине «Иностранный (английский) язык» в соответствии с Федеральным государственным образовательным стандартом высшего образования.

UNIT I. FROM THE HISTORY OF THE FOOD INDUSTRY

The food industry is a very ancient industry. Almost every branch of the food industry and particularly those dealing with grain and bread, meat and meat products, fish and fish products, was a well defined trade guild. The food industry developed from the experience of generations.

Milling and baking were well developed in ancient times. There were both private and public ovens for baking bread. Olive oil and honey were widely sold and bought. Cheese was manufactured thousands of years ago. Butter is also an ancient food.

The production of food, as an industry, actually has a history extending as far as the history of modern chemistry because it was considered a part of chemical technology. Thus the book “Chemical Technology” published in 1870 contained the following sections: starch, sugar manufacture, cane sugar, beet sugar, fermentation, wine making, beer brewing, bread baking, manufacture of vinegar, and essential oils.

Let’s take some examples. In 1747 Marggraf discovered crystals of sugar in the red beet and suggested that it might be possible to extract it on a commercial basis. Kirchoff suggested the use of starch for sugar production in 1811.

The food industry developed in full with the growth of the processing industries and with improvement in food machines, transportation, refrigeration, storage and packaging.

I. Прочтите и переведите слова, имеющие одинаковый корень в английском и русском языках:

industry, guild, public, olive, history, modern, chemistry, chemical technology, fermentation, wine, crystal, extract, machine, transportation, refrigerate.

II. Запомните произношение и значение следующих слов и словосочетаний (активная лексика):

food – пища
grain – зерно
milling – мукомолье

baking - хлебопечение
oven - хлебопекарная печь
olive oil - оливковое масло
honey - мед
starch - крахмал
cane - сахарный тростник
beet - свекла
wine making - виноделие
beer brewing - пивоварение
vinegar - уксус
essential oil - эфирное масло
commercial - промышленный
storage - хранение
packaging - упаковка
processing industry - перерабатывающая промышленность

III. Проверьте, помните ли вы следующие слова. Если нет, проверьте их значения по словарю:

bread, meat, fish, cheese, butter, sugar, to sell (sold, sold), to buy (bought, bought), to develop, to manufacture, ancient, to consider, thus, to discover.

IV. Прочтите и переведите следующие словосочетания:

an ancient industry, branches dealing with grain, a well defined trade guild, experience of generations, both private and public ovens, a history extending as far as the history of mankind, developed in full.

V. Найдите в тексте эквиваленты следующих слов и словосочетаний:

древние времена; пищевая промышленность; промышленность, имеющая дело с зерном, хлебом, мясом и рыбой; хлеб выпекали в общественных печах; история пищевой промышленности начинается с истории современной химии.

VI. Выберите нужную форму глагола:

1. Milling and baking (developed, were developed) in ancient times.
2. The food industry (developed, was developed) from the experience of generations.
3. The production of food (considered, was considered) a part of chemical technology.
4. The book published in 1870 (contained,

was contained) many sections of food production.
5. Marggraf (discovered, was discovered) crystals of sugar in the red beet.
6. Crystals of sugar (discovered, were discovered) in the red beet.
7. Kirchhoff (suggested, was suggested) the use of starch for sugar production.
8. Starch (suggested, was suggested) for sugar production by Kirchhoff.

VII. Ответьте на вопросы:

1. What branches of the food industry were a well defined trade guild?
2. How did the food industry develop?
3. What branches of the food industry were well developed in ancient times?
4. Was food technology considered as a part of chemical technology? What proves that?
5. Who discovered crystals of sugar in beets?
6. When did he discovered it?
7. Who suggested the use of starch for sugar production?
8. What influenced the development of the food industry in full?

Литература: 1,5,8,16,20.

UNIT II. THE PRESENT DAY FOOD INDUSTRY

The assortment of products of the food enterprises is a wide and varied one.

Bread and macaroni, meat and fish products, milk and butter, canned foods and vitamins, sugar and sweets, tea and coffee, beer and wine and dozens and hundreds of other items are produced at the food mills and factories of the country.

The technological processes and methods of treating raw materials are wide and varied. The food enterprises use heat and refrigeration, high pressure and deep vacuum, electric energy and radiation.

While mechanical methods prevail at some enterprises, invisible chemists work at others - microorganisms and enzymes. They are used at such enterprises which are based on fermentation: bread- baking, production of beer, vinegar, wine.

The food industry produces such foods that look and taste like meat but are made from soyabean proteins. If soyabean proteins are dissolved in alkali they form a sticky liquid. This liquid may be extruded through tiny holes and then recoagulated in an acid bath in the form of fibers. The fibers then can be spun into ropes with texture approaching the fibrous texture of chicken or beef muscle tissue. The fabricated tissue then can be interlaced with fats, food flavoring and food colors. Products are almost indistinguishable from chicken meat, fish, ham or beef. The products also may be dehydrated, compressed or otherwise processed.

I. Запомните произношение и значение следующих слов и словосочетаний (активная лексика):

canned foods - консервированные продукты

to treat - обрабатывать, перерабатывать

raw material - сырье

enzyme - фермент

to taste - иметь вкус

to extrude - экструдировать, выдавливать

fiber - волокно

rope - жгут

texture - текстура, структура

flavoring - вкусовое (ароматическое) вещество
to dehydrate - сушить, обезвоживать

II. Выберите утверждения, соответствующие содержанию текста:

1. The production of bread and beer is based:

a) on fermentation; b) on extrusion; c) on mechanical methods.

2. Soyabean protein is used for the production of:

a) sugar and sweets; b) foods that look and taste like meat; c) food flavorings.

III. Прочтите следующие словосочетания и переведите их на русский язык;

food enterprise, fish products, beer production, soyabean protein, acid bath, food colors, chicken meat, radiation treatment, food industry products.

IV. Найдите в тексте эквиваленты следующих словосочетаний: технологический процесс; методы обработки сырья; продукт, похожий на мясо; сделанный из соевых бобов; белки, растворимые в щелочи, образуют липкую жидкость; экструдировать через крошечные отверстия; сушеные продукты; в виде волокон; энергия, используемая в пищевой промышленности.

V. Определите, какой частью речи являются выделенные слова:

1. Many processes are used for the production of different foods. 2. These products can be processed by different methods. 3. This fabricated food tastes like ham. 4. I don't like the taste of this wine. 5. Heat energy is used in many processes of food production. 6. This canned food should be heated before use. 7. Dissolved soyabean proteins form a sticky liquid. 8. The sticky liquid is recoagulated in an acid bath in the form of fibers.

VI. Расскажите по-английски:

1. В каких отраслях пищевой промышленности используются микроорганизмы и ферменты; 2. Что такое экструдированные пищевые продукты, какое основное сырье используется для их изготовления, и как их изготавливают; 3. Какой внешний вид и вкус имеют экструдированные продукты.

Литература: 1,5,8,16,20.

UNIT III.

EDUCATION AND TRAINING OF PERSONNEL FOR THE FOOD INDUSTRY

Education plays a great role in the life of the people. There are institutes training engineers and technicians for the food industry. One of them is the Moscow State University of Food Production. The objectives of the University are to graduate specialists for the processing of raw material of plant origin.

The University consists of the following main divisions called Institutes:

1. The Institute of Technology and Production Management, which educates engineers in such branches as bread making, cake and pasta manufacture, sugar and confectionery technology, beer brewing and wine-making, the technology of fats, oils and cosmetics, baby and functional foods, the technology of public catering foods, food biotechnology and storage and processing of grain including grain milling, etc.;

2. The Institute of Equipment, Automation and Information Technologies, which trains engineers in the following fields: technological machines and equipment, thermoengineering, packaging technology and design, information technology and computer engineering, automation and control, computer-aided systems for data processing and control and others;

3. The Institute of Economics and Business Management, which educates engineers in accounting and auditing, economics and management of food enterprises, marketing, applied information science in economics and so on;

4. The Institute of Management, Quality, Safety and Ecology of Food Enterprises, training specialists in standardization and certification, quality management, environment protection and rational use of natural resources.

I. Запомните произношение и значение следующих слов и словосочетаний (активная лексика):

to graduate – оканчивать высшее учебное заведение

pasta – макаронные изделия

education – образование

technician – технолог

food industry – пищевая промышленность

processing – переработка

raw material – сырье

plant origin – природное происхождение

division – подразделение

production management – производственный менеджмент

beer brewing – пивоварение

wine-making – виноделье

public catering – пункт общественного питания

grain milling – помол зерна

equipment – оборудование

information technologies – информационные технологии

accounting – бухгалтер

auditing – аудит

management – управление

quality – качество

management – управление

environment protection – защита окружающей среды

rational use – рациональное использование

natural resources – природные ресурсы.

II. Перечислите и охарактеризуйте ведущие высшие заведения России, готовящих специалистов в сфере пищевой промышленности.

Литература: 2,7,8,16,20.

UNIT IV. HUMAN DIET

A person's diet is what he eats and drinks, and it is highly important because both growth and health are affected by it. Everyone knows that without food people starve to death, and every year this happens in some country of the world in the times of famine. Even people who can get food, however, sometimes suffer from various kinds of illness because they are eating too much of one kind of food and not enough of another. This is because the body has many different needs and these needs require a balanced diet.

A normal healthy diet for one day is a salad, fruit of some kind, a pint of milk, fish or meat, some cheese or an egg and some bread. Apple, orange or grapefruit juice is always a good thing, at breakfast or at any other time, so is a glass of water first thing in the morning and last thing at night.

Water is, of course, absolutely necessary to every kind of diet. About 70% of the weight of the human body is water, and a healthy man requires four quarts of water every 24 hours. However, since about 70% of most of the foods eaten is water, a large proportion of water comes from his food. The rest must be provided by tea, coffee, milk, soup and, of course, plain water.

I. Прочтите и переведите слова, имеющие одинаковые корни в английском и русском языках.

normal, salad, fruit, grapefruit, absolutely, coffee, soup, balanced, margarine, system, calorie, energy, chocolate, tomato, organ, temperature, form, activity.

II. Обратите внимание на значение следующих слов:

diet - пища, рацион, диета

person - человек, личность, особа

to affect - действовать, воздействовать, влиять

orange - апельсин; оранжевый

human - человеческий

proportion - пропорция, соотношение; часть, доля

cake - торт, пирожное, кекс

famine - голод (стихийное бедствие)

pint = 0.57 л - пинта (мера емкости)

quart = 2 pints = 1.14 л - кварта (мера емкости)

III. Запомните произношение и значение следующих слов и словосочетаний (активная лексика):

eat (ate, eaten) - есть (кушать)

kind - род, сорт, вид

vary - изменять(ся), различаться

various - различный, разнообразный

disease - болезнь

need - нужда, потребность

enough - достаточный; достаточно

juice - сок

weight - вес

provide - снабжать, обеспечивать

nutrition - питание

since - так как, поскольку; с, с тех пор (как)

IV. Проверьте, помните ли вы следующие слова. Если нет, проверьте их значения по словарю.

milk, fish, drink, cheese, egg, bread, water, tea, vegetables, sugar, meat.

V. Определите, какой частью речи являются выделенные слова:

1. The body has many *various* needs.
2. Man *needs* much water.
3. A person's *diet* is what he eats and drinks.
4. When fruit and vegetables are *frozen*, ice crystals form.
5. Water is most active in foods in its *liquid* form.
6. The preparation and cooking affect the *nutritive* value of foods.
7. A person's diet *affects* both growth and health.

VI. Прочтите предложения. Решите какое слово из указанных в скобках, должно быть употреблено в каждом из них.

1. A human body ... a balanced diet.

1) requirements; 2) requires.

2. About 70% of the ... of the human body is water.

1) weigh; 2) weight; 3) weightless).

3. Every ... person should drink milk every day.

1) grow; 2) growth; 3) growing.

4. A person needs ... amounts of energy for ... activities.

1) various; 2) variety; 3) vary.

5. Foods ... us with energy, body-building material, mineral salts and vitamins.

1) provide; 2) provision.

VII. Выберите утверждения, соответствующие содержанию текста:

1. A person's diet is

1) what he eats; 2) what he drinks; 3) what he eats and drinks.

2. A person's diet

1) affects growth and health; 2) does not affect growth and health.

3. ... to eat much of one kind of food.

1) It is useful; 2) It is harmful.

4. A healthy man requires

1) about 1.5 l of water every 24 hours; 2) about 4.5 l of water every 24 hours; 3) about 2.5 l of water every 24 hours.

VIII. Прочтите ряды слов и укажите номера слов, которые подходят к группе, обозначенной первым словом ряда:

1. color: 1) blue; 2) red; 3) heavy; 4) orange; 5) square; 6) green

2. fruit: 1) bread; 2) apple; 3) orange; 4) meat; 5) banana; 6) grapefruit

3. liquid: 1) juice; 2) cheese; 3) tea; 4) coffee; 5) fish; 6) milk

4. food: 1) salad; 2) soup; 3) egg; 4) flower; 5) meat; 6) sand

5. meals: 1) morning; 2) breakfast; 3) time; 4) dinner; 5) week;

6) lunch.

Литература: 3,6,8,16,19.

UNIT V.

MEALS

Three-four meals a day - breakfast, lunch, dinner and supper (or late tea) - are enough for most people. The meals should be varied, well cooked and attractive to look at - otherwise, however good they are, no one will want to eat them. Fresh food is better than tinned food and freshly cooked food is better than food that has been left in the oven or reheated after having become cold. Milk and butter are needed every day, with meat or fish or eggs (note or, not and). Fresh green vegetables or fruit are also needed every day. Every growing person, which means everyone up to the age of 20, should drink at least a pint of milk daily.

It is best not to eat last thing at night and not to swim or take a bath just after a meal. In order to give the digestive system time to get to work on food, it is always a good thing to pause for thought - and digestion.

A point to remember is that most people eat too much sugar, as they are fond of sweets, cakes and pastry. Too much meat can also be harmful. In the 18th century people ate meat for breakfast, lunch, tea, dinner and supper and they died early of various diseases.

The most important rule is moderation - eating neither too much nor too little.

I. Запомните произношение и значение следующих слов и словосочетаний (активная лексика):

varied - разнообразный

otherwise - в противном случае

reheated food - разогретая еда

daily - ежедневно

digestive - перерабатывающий

harmful - вредный

moderation - умеренность

tinned foods - консервы

pastry - мучные кондитерские изделия (пирожные, печенье и т.д.)

neither .. nor [но:] - ни ... ни

II. Определите, какие требования к пище упомянуты в тексте:

The meals should be:

- 1) cold; 2) varied; 3) salty; 4) hot; 5) well cooked; 6) fresh; 7) sweet;
8) attractive to look at.

III. Какие утверждения соответствуют содержанию текста (и/или)?

1. Milk and/or butter are needed every day.
2. Butter and/or margarine are needed every day.
3. Meat and/or fish are needed every day.
4. Cheese and/or eggs are needed every day.

Литература: 4,5,9,16,20.

UNIT VI.

CALORIES

Just as a railway engine requires fuel to supply it with energy, so our bodies require food to keep them going. But whereas an engine, when not working, does not use up fuel, a man, even when resting, still needs energy to keep the heart, lungs, and other organs working and to maintain the body temperature.

As heat and energy are different forms of the same thing, they can be measured in the same units, namely 'Calories'. The Calorie is the amount of heat necessary to raise the temperature of 1,000 grammes of water 1° Centigrade. The energy which results from eating any food can also be measured in Calories. Foods vary greatly in the amount of energy that they produce when they are taken into the body, that is in their calorific values.

The following table shows the amount of energy which an average person needs for various activities:

Form of activity.....	Calories used per hour
Sleeping	65
Sitting at rest	100
Dressing and undressing	113
Dish washing	144
Light exercise.....	170
Walking slowly	200
Active exercise	290
Fast walking	300
Swimming	500

Except for water, almost everything in the diet has calories in it. For example, 1 ounce (28.3 g) of butter provides 215 calories, 1 ounce of chocolate provides 150 calories, 1 ounce of sugar contains 110 calories, an ounce of cheese - 100 of potatoes - 20, apples - 12 and tomatoes - 4.

There is one important thing to remember about calories. If you are eating a well-mixed diet - which includes plenty of milk, eggs, meat, fish, fruit, vegetables, bread, butter and cheese - you will be getting all the calories you need for good health.

I. Запомните произношение и значение следующих слов и словосочетаний (активная лексика):

engine – двигатель
to require – требовать
fuel – топливо
to supply – снабжать
energy – энергия
body – тело
heart – сердце
lungs – легкие
to maintain – поддерживать
heat – тепло
to measure – измерять
calories – калории
amount – количество, сумма
necessary – необходимый
to raise the temperature – увеличить температуру
Centigrade – по Цельсию
average – средний, среднестатистический
activity – деятельность
to provide – обеспечивать
to contain – содержать
health – здоровье.

Литература: 1,5,8,16,20.

UNIT VII.

IMPORTANT MATERIALS IN YOUR FOOD

Foods contain different materials that help your body to stay strong and healthy. The most important of these are known to be proteins. They are absolutely necessary for building and repairing our bodies. Proteins consist of carbon, hydrogen, oxygen, nitrogen and other elements, such as phosphorus and sulphur. Proteins are built up of smaller units, the amino-acids. The richest sources of proteins are such animal foods as meat, fish, cheese, eggs, milk, and such vegetable foods as soya beans, bread, peas.

Sugars and starches, known as carbohydrates, are digested rather quickly and supply energy for the body. They are made up of carbon, hydrogen and oxygen. Foods rich in carbohydrates are fruit, honey, bread, cakes, potatoes, rice, macaroni.

Fats are also made up of carbon, hydrogen and oxygen. Fatty foods are considered to be good sources of energy, but people who eat too much of them become overweight. Fats are found in butter, cream, milk, oily fish, meat, olive oil, sunflower seed oil.

Your body also needs other materials called vitamins and minerals. They are present in small amounts but we know them to be extremely important for the proper functioning and growth of the body.

I. Прочтите и переведите слова, имеющие одинаковые корни в английском и русском языках:

material, element, phosphorus, soya, rice, macaroni, organic, gramme, olive, functioning, muscle, nerve, vitamin, cocoa.

II. Запомните произношение и значение следующих слов (активная лексика):

to combine - сочетать(ся), объединять(ся), комбинировать
generally - обычно, вообще
cream - сливки, крем
minerals - минеральные вещества
extremely - чрезвычайно, крайне, очень
to utilize - использовать, утилизировать
constituent - составная часть, составляющая

carbohydrate - углевод
to supply - снабжать, поставлять; снабжение, запас
rich (in) - богатый чем-либо
poor (in) - бедный чем-либо
to make up - составлять
to be made up of - состоять из
fat - жир
such as - такой, как; как например
hydrogen - водород
oxygen - кислород
starch - крахмал

III. Проверьте, помните ли вы следующие слова.

carbon, hydrogen, oxygen, nitrogen, sulphur, beans, peas, honey, potatoes, nuts, bones, teeth, blood.

IV. Обращая внимание на суффиксы, подберите к русским словам соответствующие английские слова:

1. разнообразный: 1) vary; 2) various; 3) variety
2. потребность: 1) requirement; 2) require; 3) required
3. производить: 1) produce; 2) production; 3) productive
4. различный: 1) differ; 2) difference; 3) different
5. здоровый: 1) health; 2) healthy; 3) unhealthy
6. строить: 1) builder; 2) building; 3) build
7. переваривать: 1) digestive; 2) digest; 3) digestion
8. чрезвычайно: 1) extremely; 2) extreme; 3) extremeness
9. использование: 1) utilize; 2) utilized; 3) utilization

V. Заполните пропуски в следующих предложениях нужной формой прилагательного:

1. Centimeter is a ... unit than a meter.
1) small; 2) smaller; 3) smallest
2. Fresh food is ... than tinned food.
1) good; 2) better; 2) best
3. Rice is one of the ... sources of vitamins.
1) poor; 2) poorer; 3) poorest

4. Some people eat mainly vegetables as they think that they are ... than animal foods.

1) healthy; 2) more healthy; 3) most healthy

5. Glucose is the ... form of sugar.

1) simple; 2) simpler; 3) simplest

6. The animal proteins are ... for the body than the vegetable proteins.

1) essential; 2) more essential; 3) most essential

7. Citrus fruits are ... sources of vitamin C.

1) good; 2) better; 3) best

Литература: 3,5,9,16,18.

UNIT VIII.

MINERALS

There are more than 20 different minerals in the body. The human body contains 65 per cent oxygen, 18 per cent carbon, 10 per cent hydrogen, 3 per cent nitrogen, about 2 per cent calcium and 1 per cent phosphorus. Then there are small quantities of sulphur, chlorine, magnesium, iron, copper, iodine, fluorine, cobalt, zinc and others.

Three of the most important minerals are calcium, phosphorus and iron. Calcium and phosphorus work together. The bones and teeth have 99 per cent of the calcium in the body, in the form of calcium phosphate. If people have enough calcium and phosphorus their bones and teeth will be strong and hard. In addition, their muscles, nerves and heart will work correctly. Milk and hard cheeses are the best sources of calcium. Calcium compounds are present in fruits, vegetables and fish, phosphates in eggs, meat and fish. In general, if one gets enough protein and calcium he will also get enough phosphorus.

The red color of the blood is the color of the hemoglobin, which contains one atom of iron among its ten thousand atoms. As iron carries oxygen, people who do not have enough iron do not get enough oxygen for their normal activities. Iron is found in kidney, liver, other meat products, some vegetables, dried fruits and bread.

A small quantity of iodine is also necessary for good nutrition - probably less than one ten-thousandth of a gramme daily. Deficiency of iodine results in an overgrowth of the thyroid gland. Sea foods are rich in this element.

Fluorine is a constituent of the enamel of the teeth but it is absent from most foods. So many cities now add traces of fluorine to the water supply, besides small amounts of fluorine are added to various toothpastes.

I. Запомните произношение и значение следующих слов и словосочетаний (активная лексика):

minerals – минералы
carbon – углерод
nitrogen – азот
calcium – кальций
phosphorus – фосфор
sulphur – сера

chlorine – хлор
magnesium – магний
iron – железо
copper – медь
iodine – йод
fluorine – фтор
bone – кость
muscle – мускул
sources – источник
protein – белок
deficiency – нехватка, дефицит
enamel – эмаль
kidney – почка
liver – печень
thyroid gland – щитовидная железа

II. Определите, в какой последовательности перечисленные ниже утверждения раскрываются в тексте:

1. The role of iron.
2. The importance of minerals.
3. Mineral content in the human body.
4. Characteristics of calcium and phosphorus.

III. Составьте утверждения в соответствии с информацией, данной в тексте.

1. If people have enough calcium and phosphorus.....
2. If there is not enough iron in the diet.....
3. If people get enough protein and calcium.....

Литература: 2,6,8,10,20.

UNIT IX.

VITAMINS.

Nutritionists think there are 13 vitamins that humans need. Vitamins are important because they prevent diseases and help to control body processes. Vitamin A is important for healthy skin and eyes. People who do not have enough vitamin A may have night blindness. Some automobile accidents happen in the evening because people who lack vitamin A do not see the road well after they look at the bright headlights of a car. Vitamin A in the diet comes from deep yellow fruits and vegetables, such as carrots, dark green leafy vegetables and milk, liver, cod-liver oil.

When people have enough B vitamins, their appetite is good and their nerves are calm. B vitamins come from meat and vegetables, milk, cheese and whole grain. When grain is processed it loses vitamins.

Vitamin C helps skin tissues to recover from cuts and burns. Vitamin C is supplied by tomatoes, citrus fruits like lemons and oranges, by cabbage and green peppers. Rose-hip syrup and blackcurrants also supply it.

Vitamin D is called the “sunshine” vitamin. When people are outside, ultraviolet rays from the sun change some fat in their skin to vitamin D. It is also in cod-liver oil, in the yellow of the eggs, milk and butter. Vitamin D helps the body to absorb calcium. It helps to build strong bones, and it prevents a disease in children that is called rickets.

Other vitamins (E, K, M, etc.) prevent other diseases, but all of them have a function in normal nutrition.

I. Запомните произношение и значение следующих слов и словосочетаний (активная лексика):

night blindness - «куриная слепота» (заболевание)

to lack - недоставать, не хватать, не иметь; недостаток, отсутствие

headlight - фара (автомобиля)

cod-liver oil - рыбий жир

to process - обрабатывать, перерабатывать

tissue - ткань

rose-hip - ягода шиповника

blackcurrant - черная смородина

nutritionist - диетолог

to prevent - предотвращать

skin - кожа

rickets - рахит

Литература: 1,5,8,16,20.

UNIT X.

TECHNOLOGY OF BREADMAKING

Bread is a valuable food. Excellent bread can be made with flour, yeast, salt and water. Other ingredients may be added, such as sugar, fat, eggs, milk, nuts and fruit.

The first basic step in the production of bread is the mixing of the ingredients to form a dough. This process takes place in mixers.

The mixed dough undergoes the second main stage of bread production called fermentation. At this time the yeast changes sugar to carbon dioxide and alcohol and the volume of the dough increases. .

The fermented dough is cut into pieces by a dividing machine. The dough pieces are taken to the next machine called a rounder. The function of this machine is to round the dough pieces into the form of a ball. The rounded dough balls are then subjected to a short fermentation period called intermediate proofing. After that a special molding machine shapes the dough pieces into a loaf form. The molded dough pieces undergo the final proofing in large chambers called proof boxes.

The last and most important step in the production of bread is the baking process, which is performed in the ovens.

I. Прочтите и переведите слова, имеющие одинаковый корень в английском и русском языках:

Ingredient, form, process, mixer, dioxide, alcohol, function, period, special, final, method, result.

II. Запомните произношение и значение следующих слов и словосочетаний (активная лексика):

flour - мука

yeast - дрожжи

to mix - смешивать, замешивать

dough - тесто

fermentation - брожение

to divide - делить

to round - округлять

oven - печь

to mold - формировать

III. Переведите на русский язык:

1. The dough is mixed in the mixer. - The dough mixed in the mixer is subjected to fermentation. 2. The dough is divided into pieces. - The dough divided into pieces is taken to the rounder. 3. This machine is called a divider. - The machine called a divider cuts dough into pieces. 4. This machine is called a rounder. - The machine called a rounder makes dough balls. 5. This fermentation period is called proofing. - The fermentation period called proofing is not long. 6. These large chambers (камеры) are called proof boxes - Large chambers called proof boxes are used for proofing. 7. Bread is baked in the ovens. - Bread baked in the ovens is cooled.

IV. Расположите названия следующих процессов в том порядке, в котором они описаны в тексте:

1) замес; 2) деление на куски; 3) промежуточная расстойка; 4) брожение; 5) округление; 6) окончательная расстойка; 7) формовка; 8) выпечка/

V. Найдите в тексте выражения, эквивалентные следующим:

ценный продукт питания; могут быть добавлены другие ингредиенты; смешивание ингредиентов для образования теста; подвергается второй основной стадии производства хлеба; дрожжи превращают сахар в CO₂ и спирт; объем теста увеличивается.

VI. Заполните пропуски словами из данного ниже списка.

1. The first step in the production of bread is ... of the ingredients. 2. The process of mixing takes place in 3. The ... dough undergoes fermentation. 4. The fermented dough is cut into pieces by a 5. The dough pieces are taken to the next machine ... a rounder. 6. The rounded dough pieces are ... to intermediate proofing. 7. The molding machine shapes the dough balls into a ... form. 8. The molded dough pieces ... the final proofing. 9. The last step in the production of bread is the ... process. 10. Bread is baked in the

1. divider; 2. mixing; 3. called; 4. mixed; 5. mixers; 6. subjected; 7. ovens; 8. undergo; 9. loaf; 10. baking

Литература: 5,8,10,16,20.

UNIT XI.

METHODS OF MIXING DOUGH

Bakery products are made from flour by moistening, processing raw materials. In its basic ingredients, processes and characteristics, bread has changed little since the Stone Age. Namely, flour, water, salt and yeast are mixed into a dough and allowed to ferment for a given number of hours, the dough mass is then divided into pieces of the desired weight, molded, again allowed to expand during the final proof period and finally are baked. However, close control of processes produces a more uniform product, and enrichment of materials results in a more nutritious product.

There are two main methods of mixing dough: the “sponge and dough” method and the “straight” process. In the sponge and dough method the yeast is first mixed with warm water and a small quantity of flour and the mixture is worked up into a kind of sponge. This mixture is then put aside and fermented for approximately 3-4 hr; more flour is then added, and all the ingredients are mechanically mixed and become a dough. The dough is given a short fermentation period, after which it is run through the various makeup equipment.

The straight method differs from the sponge and dough process in that all ingredients are added at one time and that there is only one mixing stage and one fermentation period. The fermentation period for a straight dough is approximately 2-3 hr. After fermentation is complete, the dough enters the divider and continues through the same makeup equipment as for the sponge and dough method.

I. Запомните произношение и значение следующих слов и словосочетаний (активная лексика):

bakery products – хлебобулочные изделия

moistening – увлажнение

weight – вес

enrichment – обогащение, насыщение

approximately – примерно

sponge – опара

Stone Age – каменный век

uniform – однородный

II. Выберите словосочетание, которое раскрывает содержание понятия «опара»: 1. Flour, yeast and other ingredients mixed together. 2. A mixture of warm water and small quantity of flour. 3. A fermented dough.

III. Закончите предложения, выбрав вариант, соответствующий содержанию текста:

1. In its basic ingredients bread

a) has changed little; b) has not changed at all; c) has greatly changed.

2. In a sponge and dough method the yeast is first prepared by mixing with

a) salt and other ingredients; b) sugar and water; c) warm water and a small quantity of flour.

3. The straight method differs from the sponge and dough process in that

a) yeast is not used; b) all ingredients are added at one time; c) there is no fermentation period.

Литература: 1,5,8,16,20.

UNIT XII.

FROM THE HISTORY OF BREAD

There are no records of when or where bread originated. It is certain, however, that the known history of bread is longer than the history of any other food; and that the history of bread runs parallel with the known history of man.

Although the history of bread is nearly as old as the history of mankind, the basic formulation has changed little. The history of bread is actually the history of the baking oven, and of the raw materials used in the preparation of bread - mainly the flour and leaven.

In very early times grain was pounded and consumed as a watery paste. During the Stone Age grain was crushed between stones and gave a crude flour which was mixed to a dough with water, shaped to a round, flat cake and then cooked on a large flat stone over a fire. As you may imagine the result - a rather hard bread - was very different from the loaf we know today. The next step was baking of fermented dough. An old story says that a forgetful young Egyptian left some uncooked dough sitting for some time before he remembered it, and during this time the dough fermented. This caused the dough to rise, then it was made into loaves. After baking the loaves, our young Egyptian baker found he had produced the first light textured risen bread.

I. Запомните произношение и значение следующих слов и словосочетаний (активная лексика):

formulation - рецептура

leaven - закваска

grain was rounded - зерно толкли

a crude flour - грубая, непросеянная мука

flat cake - плоская лепешка

forgetful - забывчивый

Egyptian - египтянин

to leave (left, left) - оставлять

light textured risen bread - легкий, пышный хлеб

II. Выберите правильный вариант ответа на следующие вопросы:

1. How many periods in the history of bread are described in the text?

a) 2; b) 3; c) 4.

2. What is the last period characterized by?
a) by cooking flat cakes; b) by baking fermented dough; c) by mixing a crude flour with water.

3. What kind of product is baked from the fermented dough?
a) a hard bread; b) a watery paste; c) a light textured risen bread.

Литература: 3,5,8,10.

UNIT XIII.

MEAT AND MEAT PRODUCTS

The flesh from the cattle over 6 months of age is beef and from younger cattle is veal. Beef is a nutritious food having approximately 25% protein and rich in essential acids, B vitamins, and minerals.

The primary products of swine are pork, lard, hides, and innumerable by-products. Pork is more successfully cured and stored than any other meats.

Fresh red meats are refrigerated. Cured meats such as ham, baton, and sausage contain chemical preservatives (salt, nitrate, nitrite) but are, in addition, heat processed and stored under refrigeration. Fresh and cured meats are also canned. With severe heat processing a shelf-stable product is produced. In certain products stability is achieved in part through other processes: fermentation, drying, smoking and impregnation with vinegar.

The manufacture of meat products includes those processes which prepare the product for consumption and increase the stability, improve the texture, color and appearance of various meat items. Various processes are employed depending upon the desired result. Various enzymatic agents and other additives are often used.

I. Прочтите и переведите слова, имеющие одинаковый корень в английском и русском языках:

bacon, salt, nitrite, nitrate, stability, mineral.

II. Запомните произношение и значение следующих слов и словосочетаний (активная лексика):

meat - мясо

flesh - мясо, мускульная ткань

beef - говядина

veal - телятина

essential acids - незаменимые кислоты

cattle - крупный рогатый скот

swine - свинья

pork - свинина

lard - топленое свиное сало

hide - шкура

to cure - солить

ham - ветчина, окорок

sausage - колбаса

preservative - консервант

to can - консервировать

smoking - копчение

impregnation - пропитывание

vinegar - уксус

III. Проверьте, помните ли вы значения следующих слов:

nutrition, approximately, primary, to store, severe, processing, shelf-stable, to achieve, drying, consumption, to increase, to alter, appearance, additive, item, to desire.

IV. Обращая внимание на суффиксы, подберите к русским словам соответствующие английские:

1. Питание: 1) nutritious; 2) nutrition; 3) nutritionist

2. Успешно: 1) success; 2) successful; 3) successfully

3. Охлаждать: 1) refrigerate; 2) refrigerator; 3) refrigeration

4. Сохранять: 1) preservation; 2) preservative; 3) preserve

5. Переработчик: 1) processing; 2) processor; 3) process

6. Устойчивый: 1) stable; 2) stability; 3) unstable

7. Сбраживать: 1) ferment; 2) fermentation; 3) fermenter

8. Сушка: 1) dry; 2) drying; 3) drier

9. Копчение: 1) smoke; 2) smoker; 3) smoking

V. Заполните пропуски словами из данного ниже списка:

1. ... is the flesh of the cattle. 2. The flesh of young cattle is called
3. Swine gives us ... and 4. Pork is successfully ... and 5. Chemical preservatives are contained in ..., 6. Fresh and ... meats can be also
7. ..., ..., ... are used to get stable products. 8. The manufacture of meat products improves ..., ..., ..., increases

1) cured, canned; 2) beef; 3) bacon, ham, sausages; 4) pork, lard;
5) drying, fermentation, smoking; 6) texture, flavor, appearance, stability;
7) veal; 8) cured, stored.

VI. Найдите в тексте эквиваленты следующих слов и словосочетаний:

мясные продукты, субпродукты, питательный продукт, богат минералами и незаменимыми аминокислотами, свинина, ветчина, консервировать, брожение, сушка, копчение, потребление, желаемый результат

VII. Дайте ответы на следующие вопросы:

1. What is beef? 2. What is veal? 3. What is beef rich in? 4. What are the primary products of swine? 5. What is stored and cured better, pork or beef? 6. How are cured meats stored? 7. What meats can be canned? 8. What processes are used for the manufacture of meat products?

Литература: 1,5,8,16,20.

UNIT XIV.

PRODUCTS OF MEAT PROCESSING

The manufactured meat products can be grouped as follows cured and pickled, cured and smoked, tenderized fresh, frozen, and canned.

Cured and pickled meats. Cured meats are those items which have had combined with them salt, sodium or potassium nitrite. Sugar and spices are optional ingredients.

The salt functions as a preservative while the nitrite and nitrate combine with the meat pigments to form fairly stable colored compounds.

Cured and smoked meats. In the category of cured, smoked and cooked meats is a broad line of sausage products such as frankfurters and bologna, which differ from cured and pickled meats in that they are prepared from finely chopped (or comminuted) meat to which salt, sugar, spices and flavorings have been added. They may also include such items as cereals, milk powders, protein hydrolysates, and other substances.

These products are not pickled since cure penetration is obtained during an extensive mincing or chopping procedure. To secure the low temperatures often necessary for stability during the heating process, suitable amounts of ice are incorporated during the chopping operation. Ice also introduces moisture and thus increases the acceptability of the end product by assuring proper juiciness.

The products are usually heated in the smoke house to approximate internal temperature of 65.6 - 76.7°C. Hardwood smoke is introduced, and the products are smoked for a length of time sufficient to impart the characteristic smoked flavor. This smoking operation further increases stability of the end products by depositing on the surface a certain quantity of bacteriostatic agents.

I. Запомните произношение и значение следующих слов и словосочетаний (лексика):

to pickle - мариновать

to tenderize - размягчать

optional ingredients - необязательные компоненты, компоненты по выбору

frankfurter - сосиска

bologna - болонская колбаса

to chop = to comminute = to mince - рубить, измельчать
spices - пряности
penetration - проникновение
to impart - придавать
to deposit - осаждать
frozen - замороженный
cured meat - копченое мясо
spices - специи
pickled – маринованный
cereals - злаковые культуры

II. Выберите утверждение, соответствующее содержанию текста:

1. Cured and pickled meats contain:
 - a) sugar, milk and oils; b) salt, sodium or potassium nitrate; c) flavorings.
2. Sausage products belong to the group of:
 - a) pickled meats; b) frozen meats; c) cured, smoked and cooked meats.
3. ... is used for the production of sausages and frankfurters:
 - a) Finely chopped meat; b) Tenderized whole meat pieces; c) Canned meat.
4. To obtain the end product with proper juiciness ... is incorporated,
 - a) ice; b) salt; c) a number of spices.
5. To impart the characteristic smoked flavor to the product ... are introduced.
 - a) bacteriostatic agents; b) hardwood smoke; c) flavorings.

III. Назовите глаголы, от которых образованы следующие слова: cured, pickled, smoked, tenderized, frozen, canned, preparation, addition, penetration, heating.

IV. Исходя из содержания текста, расскажите:

- 1) о соленых и маринованных мясных продуктах;
- 2) о копченых мясных продуктах;
- 3) чем отличаются колбасы и сосиски от соленых и маринованных мясных продуктов;
- 4) что входит в состав сосисок и болонской колбасы.

Литература: 2,4,9,17,20.

UNIT XV.

TENDERIZED FRESH MEATS

Enzyme tenderization of fresh meats particularly of certain beef cuts, has been a long practice. A photolytic enzyme such as papaya is usually used. The meat products are dipped in enzyme solution and then frozen. Another tenderizing process involves injecting an enzyme solution into the blood stream of the animal before slaughtering it.

Many frozen meats fall in the category of processed meat products. The cooking and rapid freezing of certain meat dishes is a well-established practice. Generally the precooked meat items hold up better in frozen storage if they are covered with gravy.

Canned meats are meats that are preserved by heat sterilization while enclosed in cans or glass jars. They may or may not be precooked prior to being placed in the container. If finely divided materials are to be processed and if it is desirable that they remain in this finely divided state, it is necessary that these items be precooked prior to being placed in the container. The containers are processed at 104.4 - 126.7°C for periods of time sufficient to inactivate most bacteria. This kind of treatment results in a commercially sterile product. The shelf-life of these items is very long. Certain canned meats are produced without inducing complete sterility. These include items such as canned hams, luncheon meat, etc. These items are generally reacted with curing ingredients and then processed to temperatures of approximately 71.1°C while in the can. Such items generally require storage at refrigeration temperatures of 4.4 - 10°C and are very stable at these temperatures, having shelf-life of approximately 2-3 years or longer.

I. Запомните произношение и значение следующих слов и словосочетаний (активная лексика):

cut - отруб
photolytic enzyme - протеолитический фермент
to involve - включать в себя
to inject - впрыскивать, вводить
dish - блюдо
gravy - мясной соус

commercial - промышленный
shelf-life - срок хранения
luncheon meat - мясо (консервированное) для завтрака

II. Прочтите и переведите следующие словосочетания:
enzyme tenderization, beef cuts, blood stream, processed meat products,
rapid freezing, well-established practice, precooked meat items, frozen
storage, heat sterilization, prior to being placed, finely divided state, curing
ingredients.

III. Выберите утверждение, соответствующее содержанию
текста:

1. For enzyme tenderization ... is used.
a) proteolytic enzyme; b) freezing; c) sterilization.
2. Enzyme solutions are used for
a) meat precooking; b) meat tenderization; c) canning.
3. Canned meats are preserved by
a) heat sterilization; b) freezing; c) injection of enzyme solutions.
4. The temperature of ... is sufficient to inactivate most bacteria.
a) 72°C; b) 200°C; c) 125°C.
5. Shelf-life of canned meat is
a) very long; b) very short; c) of considerable time.

Литература: 2,5,8, 10,19.

UNIT XVI. MILK AND DAIRY PRODUCTS

Fluid milk for commercial distribution is usually pasteurized, that is subjected to a temperature of 61.7°C for at least 30 min or 71.7°C for 15 sec, and then cooled and bottled. The importance of safety and cleanliness is stressed in the dairy industry. Milk may also be condensed or evaporated, dried, powdered, or separated into skim milk and cream.

Butter is churned from cream. Margarines are similar to butter but made of hydrogenated fats, usually vegetable in origin, with added butter-type flavors and coloring.

Ice cream is the frozen product made from a combination of milk products (cream, butter, or milk - either whole or evaporated, condensed, skimmed, or dried) and two or more of the following ingredients: eggs, water, and sugar, with flavoring and coloring matter. In the manufacture of ice cream, freezing is accompanied by agitation of the ingredients to avoid crystallization and to incorporate air for proper texture.

Cheese is the product made from curd obtained from the whole, partly skimmed, or skimmed milk of cows or other animals, with or without added cream.

Many fermented products are produced from milk. These fermentations require the use of bacteria that ferment lactose or milk sugar.

I. Запомните произношение и значение следующих слов и словосочетаний (активная лексика):

dairy products - молочные продукты
fluid milk - питьевое молоко
raw milk - сырое молоко
whole milk - цельное молоко
skim milk - обезжиренное молоко
condensed milk - сгущённое молоко
evaporated milk - концентрированное молоко
dried milk = powdered milk - сухое молоко
cream - сливки
ice cream - мороженое
curd - творог

fermented dairy products - кисломолочные продукты
intake - прием
clarification - очистка
clarifier - очиститель
freeze (froze, frozen) - замораживать

II. Проверьте, знаете ли вы, что означают следующие условные обозначения и сокращения, и умеете ли вы правильно их читать.

7°C - seven degrees Centigrade above zero - 12°C - twelve degree
15 sec - fifteen seconds 1.5 % - one point five percent

III. Переведите следующие словосочетания:

a) commercial distribution, stainless steel, plastic pipelines, flexible plastic pipelines;

b) added flavors, frozen product, processing plant, flavoring and coloring matter, receiving station;

c) milk sugar, truck driver, farm tank, stainless steel pipelines, skim milk fraction, discharge pipe, fat content, butter-type flavor.

Литература: 1,5,8,16,20.

UNIT XVII.

COMMERCIAL PROCESSING OF MILK

Most raw milk collected at farms is pumped from stainless steel tanks into tank trucks for delivery to processing plants.

Collection and intake.

The truck drivers are required to check flavor, temperature, and volume of milk in the farm tank and to collect a sample of raw milk for analysis before pumping the milk into the truck. At the receiving station of the processing plant the milk in the farm truck is weighed and pumped into the plant through flexible plastic and stainless steel pipelines.

Separation and clarification.

The actual processing of raw milk begins with either separation or clarification. These machines are essentially similar except that in the clarifier the cream and skim milk fractions are not separated.

Separators have two discharge pipes, one for cream and one for skim milk. Clarifiers have only one pipe for whole milk. Separators have a device called cream screw by which the fat content in the cream is regulated. This screw allows more or less cream to pass out through the discharge pipe.

I. Запомните произношение и значение следующих слов и словосочетаний (активная лексика):

tank truck - автоцистерна

cream screw - шнек-дозатор для сливок.

II. Прочтите и переведите слова, имеющие одинаковый корень в английском и русском языках:

product, pasteurize, temperature, condense, separate, margarine, crystallization, texture.

III. Обратите внимание на значения следующих слов:

commercial - промышленный, торговый, коммерческий, industry - промышленность, combination - соединение, сочетание, manufacture - изготовление, производство, agitate - перемешивать, взбалтывать.

IV. Проверьте, помните ли вы значение следующих слов: butter, cheese, cool, flavour, colour, egg, sugar, ferment.

V. Заполните пропуски словами из данного ниже списка:

1. Fluid milk for commercial distribution is usually 2. ... is churned from cream. 3. Ice cream is the ... product. 4. Cheese is the product made from 5. Industry processing milk is called ... industry. 6. After separation whole milk is separated into two fractions: ... and 7. Clarifiers have one pipe for ... milk.

1) curd; 2) pasteurized; 3) whole; 4) cream; 5) butter; 6) dairy; 7) skim milk; 8. frozen

VI. Найдите в тексте эквиваленты следующих словосочетаний:

для доставки на перерабатывающее предприятие; брать образец сырого молока на анализ; сепарация и очистка; порции сливок и обезжиренного молока; две отводные трубы; содержание жира в сливках; большее или меньшее количество сливок.

Литература: 6,7,8,13,20.

UNIT XVIII.

PASTEURIZATION

The value of heat for the preservation of foods has been known for thousands of years, but it was not realized until the 19th century that a very mild heat treatment, far below the boiling-point, made liquid foods such as milk keep much longer. The discovery followed the work of the French scientist Pasteur on wine and beer. The process, called after him "pasteurization", is a carefully controlled mild-heat treatment. It was found that the process served two purposes: it prevented the souring of milk, and it destroyed the dangerous disease germs which occur in some samples of milk.

Milk is rendered free of pathogenic bacteria by pasteurization. Milk is heated to a specified temperature and held at that temperature for a specified time. (145°F for 30 min when milk is pasteurized in a vat or at least 161°F for 15 sec when milk is pasteurized continuously).

Pasteurization on a batch operation requires a jacketed vat where steam or hot water can circulate and heat the milk. This treatment requires the longer times at lower temperatures to accomplish pasteurization (LTLT pasteurizer). Modern methods of processing milk and milk products utilize the high-temperature short-time (HTST) pasteurizer.

In Europe and to a limited amount in the United States, milk and milk products may be ultra-heat-treated (UHT). This process may use equipment similar to that used for HTST. The UHT processing requires a minimum heat treatment of 280°F for 2 sec. UHT dairy foods have extended shelf-life because all of the bacteria that would survive even HTST pasteurization have been destroyed.

I. Запомните произношение и значение следующих слов и словосочетаний (активная лексика):

F - Fahrenheit - по шкале Фаренгейта

vat - чан;

jacketed vat - чан с кожухом (для пара или горячей воды)

continuously - непрерывно

batch operation (process) - периодический процесс

to survive - выживать; зд. выдерживать

to destroy - разрушать; зд. уничтожать

II. Подберите к следующим названиям методов тепловой обработки молока соответствующие английские сокращения.

1. Кратковременный метод при высокой температуре. 2. Тепловая обработка молока при сверхвысокой температуре. 3. Метод длительной тепловой обработки молока при температуре.

Литература: 1,5,8,16,20.

UNIT XIX.

SUGAR PROCESSING

Sugar is extracted from the sugar cane and the sugar beet. Cane sugar is manufactured from the sugar cane. In the manufacturing of sugar cane, the first step is crushing of the cane to express the juice. The juice is then clarified, usually by heating with lime. The clarified juice is then concentrated in vacuum evaporators to a brownish syrup containing about 35 per cent moisture of syrup and crystals.

The crystals are separated from the liquor or molasses by centrifugal machines. The molasses may be evaporated a second and a third time and the crystals are removed. The sugar thus separated from the molasses is known as raw sugar. The raw sugar must be washed, treated with lime, filtered, recrystallized, washed and dried to give the familiar refined sugar. In some countries cane sugar is produced in small factories without use of centrifuges, and a dark-brown product, noncentrifugal sugar, is produced.

Recovery of crystalline sugar from the sugar beet is not a simple procedure. In its life processes, the sugar beet forms many organic substances other than sucrose and takes up inorganic nutrient elements from the soil. These nonsucrose substances are also brought into solution of sucrose during processing and must be removed. Some are removed by liming and filtering, but those that remain inhibit crystallization of sucrose. This is how beet sugar is produced. The beets are washed and sliced. The juice which is high in sucrose is leached by hot water. It is then subjected to clarification, filtration, and evaporation, resulting in formation of clear crystals.

I. Прочтите и переведите слова, имеющие одинаковый корень в английском и русском языках: extract, concentrate; syrup, contain; centrifugal; filter, filtration.

II. Обратите внимание на значение следующих слов:

liquor - вязкая жидкость, патока; напиток, formation - образование.

III. Проверьте, знаете ли вы значения следующих слов:

sugar, manufacture, clarify, crystal, dry, carbohydrates, starch, fruits, sweet, taste, commercial.

IV. Запомните произношение и значение следующих слов и словосочетаний (активная лексика):

sugar cane - сахарный тростник

sugar beet - сахарная свекла

rush - измельчать

to express - выдавливать, выжимать

juice - сок

to evaporate - выпаривать

to remove - удалять

raw sugar - сахар-сырец

to treat - обрабатывать

to refine - очищать

sucrose - сахароза

slice - нарезать на кусочки

to result in - приводить к

to be high in = be in - быть богатым чем-л., иметь высокое содержание чего-л.

lime - известь

vacuum evaporator - вакуумный выпариватель

molasses - патока

to inhibit - тормозить, задерживать

V. Прочтите текст внимательно еще раз и закончите следующие высказывания в соответствии с содержанием текста:

1. Cane sugar is manufactured from 2. Beet sugar is manufactured from 3. In the manufacturing of sugar cane the first step is 4. To produce beet juice the beets are

VI. Расставьте названия процессов в том порядке, в котором они описаны в тексте: а) обработка тростника для получения сахара-сырца:

1. clarification of the juice; 2. crushing of the cane; 3. separation of crystals from the molasses; concentration of the clarified juice

б) обработка сахара-сырца для получения рафинированного сахара:

1. filtering; treating with lime; 2. washing; 3. recrystallizing; 4. drying; 5. washing

в) обработка сахарной свеклы для получения сока:

1. slicing; 2. leaching; 3. washing;

г) обработка сока сахарной свеклы для получения чистых кристаллов сахара:

1. evaporation; 2. clarification; 3. filtration.

Литература: 4,5,14,16,20.

UNIT XX.

SUGAR CROPS

Sugar crops are crops produced as major sources of sugar, syrup, and other substances.

Sugar beet and sugar cane. These are crops which serve as a source of sucrose, the sugar of commerce. Sugar is a broad term applied to a large number of carbohydrates that have a more or less sweet taste. The primary sugar, glucose, is a product of photosynthesis and occurs in all green plants. Through chemical union, diverse sugars and starches are elaborated and become the major reserve food in storage organs, fruits and sap of plants. In most plants the sugars occur as a mixture that cannot be readily separated into the components. In the sap of some plants the sugar mixtures are condensed into syrup. The juices of sugar cane and sugar beet are unusually rich in pure sucrose. These two sugar crops serve as the sources of commercial sucrose.

Other sugar crops are sweet sorghum, sugar maple, sugar palm, honey and corn sugar.

Sugar maple. Colonists learned from the American Indians the art of making sugar and syrup from the sap of certain maple trees of the Great Lakes and St. Lawrence River region. The techniques, once used only for maple sugaring at home, have been for many years the basis of commercial production of sugar and syrup.

The trees are tapped for sap in early spring before the buds open. A large tree may be tapped each spring for many years. Trees vary greatly in yield of sap and sugar. The sugar in maple is almost 100% sucrose.

Sugar palm. Palm sugar is obtained from the sap of several species of palm in tropical regions of the world. In eastern Asia and Malaysia, where the production of palm sugar is an important village industry, the sugar palm is the major source of sap. The sap is collected from the stalk of the male flower rather than by tapping the trunk of the palm, as practiced with the maple tree. The sap contains 10 -16% sucrose. In processing, the sap is condensed by heating until it becomes a thick syrup in which the sucrose crystallizes. The viscous mass is poured into molds to form small cakes of sweet substance.

Corn sugar and syrup. These are produced by the inversion of starch to its component sugar. These sweeteners have wide use in bakery, confectionery, and beverage industries.

Some varieties of corn have a sweet juice in the stalks. Cornstalk juice is reported to have been a source of a sweet substance used by Indians of Central America.

I. Запомните произношение и значение следующих слов и словосочетаний (активная лексика):

crop - сельскохозяйственная культура
sap - сок (растений)
sorghum - сорго
sugar maple - сахарный клен
palm - пальма
technique - метод, способ
to tap - делать надрез (на дереве)
bud - почка (растения)
yield - выход продукта
species - вид, род
flower stalk - цветоножка
trunk - ствол (дерева)

II. Выберите утверждения, соответствующие содержанию текста, и переведите их на русский язык:

- Sugar crops are
 - a large number of carbohydrates;
 - crops which serve as a source of sucrose;
 - a product of photosynthesis.
- Sugar is a broad term applied to
 - a large number of carbohydrates that have a sweet taste;
 - storage organs, fruits and sap of plants;
 - sources of commercial sucrose.
- Sugar beet, sugar cane, sweet sorghum, sugar maple, sugar palm, honey and corn sugar are
 - crops which serve as sources of sucrose;
 - carbohydrates;
 - diverse sugars and starches.

Литература: 1,5,8,16,20.

UNIT XXI.

CARBOHYDRATES

Carbohydrates form a large group of chemical compounds of which the commonest examples are the various sugars, starch and cellulose. All carbohydrates are made of carbon, hydrogen and oxygen and in nearly all cases the hydrogen and oxygen are in the ratio of two to one, as in water, H₂O. Thus the simple sugar, glucose, can be represented by the formula C₆H₁₂O₆, which means that there are six atoms of carbon (C), twelve atoms of hydrogen (H) and six atoms of oxygen (O) in each molecule of glucose.

Glucose and fructose are simple sugars found in many fruit and honey, and glucose is used as the basis of some sweets. Glucose is also made when starch is digested in the body and it is the chief form in which sugar is carried round the body as a sugar solution. Although cane sugar or sucrose is obtained from the stem of the sugar cane, much of it comes from the root of the sugar beet. Maltose is the sugar of malt, made from germinating barley. When it is digested, maltose turns to glucose, while sucrose turns to glucose and fructose. All the sugars dissolve easily in water and have a sweet taste.

I. Запомните произношение и значение следующих слов и словосочетаний (активная лексика):

carbohydrates - углеводы

chemical compound - химическая составляющая

carbon - углерод

hydrogen - углерод

oxygen - кислород

in the ratio of - в соотношении

glucose - глюкоза

fructose - фруктоза

honey - мед

to digest - перерабатывать

cane sugar - сахарный тростник

stem - стебель

maltose - мальтоза

malt - солод

germinating - проросший

barley - ячмень

to dissolve - растворять.

Литература: 4,5,8,15,17.

VOCABULARY

ABUNDANCE (n) – изобилие

ACCEPT (v) – принимать, допускать

ACCEPTIBILITY (n) – приемлемость

ACCESS (n) – доступ

ACCOMPLISH (v) – выполнять, осуществлять

ACID (n) – кислота

acetic - уксусная кислота

amino - аминокислота

ascorbic - аскорбиновая кислота

benzoic - бензойная кислота

citric - лимонная кислота

fatty - жирная кислота

lactic - молочная кислота

nicotinic - никотиновая кислота

nucleic - нуклеиновая кислота

phosphoric - фосфорная кислота

propionic - пропионовая кислота

sorbic - сорбиновая кислота

ACTIVATE (v) – активировать

AGING (n) – созревание, выдерживание

AIRTIGHT (a) – непроницаемый для воздуха

ACIDIFICATION (n) – подкисление

ADDITIVE (n) – добавка

ADJUNCT (n) – добавка

malt - солодовая добавка

AGGRAVATE (v) – ухудшать, усиливать

AIRTIGHT (a) – воздухонепроницаемый

ALTER (v) – изменять(ся)

ALTERATION (n) – изменение, перестройка

ALTERNATIVE (a) – другой, (n) выбор из двух

AMBIENT (n) – окружающая среда

ANTIBODY (n) – антитело

ANTIOXIDANT (n) – антиоксидант

ASSIMILATE (v) – усваивать
ASSIMILABILITY (n) – усвояемость
AQUEOUS (a) – водяной, водный
BACTERIUM (n) – бактерия
aerobic - аэробная бактерия
anaerobic - анаэробная бактерия
pathogenic - патогенная (болезнетворная) бактерия
BAKE(v) – печь
BAKERY (n) – пекарня булочная
BALANCE (v) – уравнивать
BALLS (meat) – мясные фрикадельки
BARLEY (n) – ячмень
BARREL (n) – бочка
BATCH PROCESS – периодический процесс
BEEF (n) – говядина
BEER (n) – пиво
BENEFIT (n) – преимущество, польза
public - польза для общества
nutritional - питательность
BENZOATE (n) – соль бензойной кислоты
BEVERAGE (n) – напиток
BREEDING (n) – размножение, выведение
maker-assistant - зд. искусственное осеменение
BLANCH (n) – бланшировать
BLOODSTREAM (n) – кровообращение
BORAX (n) – бура (пироборноокислый натрий)
BOTTLING (n) – розлив в бутылки
BRAN (n) – отруби
BREADMAKING (n) – хлебопечение
BREAKDOWN (n) – распад
BREWERY(n) – пивоваренный завод
BREWING (n) – пивоварение
BRITTLE (a) – хрупкий
BROWNING (n) – побурение, потемнение
BUCKLE (v) – вспучиваться
BULK (n) – масса, объем

in bulk - без тары, навалом,
BUTTERFAT(n) – молочный жир
BUTTERMAKING (n) – маслоделие
CAN(v) – консервировать
CANNING(n) – консервирование
CARBOHYDRATE (n) – углевод
CARBON (n) – углерод
CARBON DIOXIDE – углекислый газ
CARBONATE (v) – газировать, насыщать газом
CATALYSIS (n) – катализ С
ATALYST (n) – катализатор
CAUSE (v) – вызывать, быть причиной, заставлять
CELL (n) – клетка
mammalian - клетка млекопитающих
CELLULAR (a) – клеточный
CENTER (v) – концентрировать(ся), сосредоточивать(ся)
CEREAL (n) – хлебный злак, зерно, крупа
CHAIN (n) – цепь
cold - холодильная цепь (непрерывность охлаждения при
хранении, транспортировке и реализации)
CHEESE-MAKING (n) – сыроделие
CHEMICAL (n) – препарат, химикат
CHLORIDE (sodium) – хлористый натрий
CHLORINE (n) – хлор
CHLORINATION (n) – хлорирование
CHURN (v) – мешать, взбалтывать, взбивать
CLARIFY (v) – очищать, осветлять
COMPOSITION (n) – состав
COMPOUND (n) – соединение
CONDUCTIVITY (n) – проводимость
CONFECTIONARY (n) – кондитерская фабрика, конфета
CONFECTIONERY (n) – кондитерская (или изделия), искусство
кондитера
CONSTITUENT (n) – составная часть, элемент
CONSUME (v) – потреблять
CONSUMER (n) – потребитель

CONSUMPTION (n) – потребление
CONTAIN (v) – содержать
CONTAMINATION (n) – заражение, инфицирование
CONTENT (n) – содержание
CONTINUOUS SYSTEM – система непрерывного действия
CONVENTIONAL (a) – обычный, традиционный, общепринятый
COOK (v) – подвергать тепловой обработке, варить, готовить
пищу
CORN (n) – кукуруза
CREAM (n) – сливки
CRUSH (v) – дробить, измельчать, перетирать
CURING (n) – консервирование, вяление, посол
CURRENT (electric) – электрический ток
DAIRY(a) – молочный
dessert - сладкое молочное блюдо
DECAY (v) – затухать, уменьшаться, разлагаться
DECOMPOSITION (n) – распад, разрушение
DEFICIENCY (n) – недостаток, отсутствие
DEFROST (v) – размораживать
DEHYDRATION (n) – обезвоживание
DELAY(v) – задерживать, препятствовать
DELICATE (a) – хрупкий, нежный
DEMAND (n) – спрос
DENATURATION (n) – денатурация
DEPLETION (n) – исчерпывание, истощение
DERIVE (v) – происходить, получать
DETERIORATION (n) – ухудшение, порча
DEVELOPER (n) – тестомесильная машина
DIASTASE (n) – диастаз
DIET (n) – питание, рацион питания
DIETETIC (a) – диетический
DIGESTIBLE (a) – перевариваемый
DIOXIDE (n) – двуокись
DIP (v) – погружать, окунать
DISCARD (v) – выбрасывать, выводить
DISPERSE (v) – диспергировать, рассеивать(ся)
DISPLAY (n) – выставка (продуктов, товаров)
DISPLAY CABINET (n) – охлаждаемая витрина

DISRUPT (v) – разрывать, разрушать
DISSOLVE (v) – растворять(ся)
DISTRIBUTION (n) – распределение
DIVIDER (n) – тестоделительная машина
DOUGH (n) – тесто
DRESSING (n) – приправа, соус
DROP (v) – падать, понижаться
DRYING (n) – сушка freeze
- сублимационная сушка roller
- вальцовая (барабанная, пленочная) сушка spray
- сушка распылением tunnel - туннельная сушка
DRUM (n) – барабан
EDIBLE (a) – съедобный E
MERCENCY (n) – непредвиденный
EMISSION (n) – излучение, эмиссия электронов
EMULSIFIER (n) – эмульгатор
ENHANCE (v) – увеличивать, усиливать
ENHANCEMENT (n) – интенсификация
ENZYME (n) – фермент hydrolytic - гидролитический
ESTER (n) – сложный эфир
ETHANOL (n) – этанол, этиловый спирт
EVACUATION (n) – откачивание воздуха, вакуумирование
EVAPORATION (n) – испарение flash ~ мгновенное испарение
EXCESS (n) – избыток
EXHAUST (v) – откачивать, выпускать, эксгаустировать
EXHAUST BOX – эксгаустер
EXHAUSTION (n) – истощение, исчерпывание
EXPOSE (v) – подвергать воздействию
EXPOSURE (n) – воздействие, выдержка, облучение, контакт
EXTRACT (n) – экстракт (извлекать)
flavoring ~ вкусовой (ароматический) экстракт; приправа, специя
FACILITIES – средства, устройства, приспособления, оборудо-
вание
ANGUS (pl. fungi) (n) – гриб, грибок
FAVOR (v) – благоприятствовать, способствовать
FAT (n) – жир
FERMENT (n) – фермент

FERMENTATION (n) – брожение
FERTILIZER (n) – удобрение
FILLING (n) – наполнение, розлив
aseptic ~ асептический розлив
FILM (n) – пленка
FINE (a) – мелкий, тонкий
FISHING (n) – рыболовный промысел
FISSION (n) – расщепление
FLASH (n) – вспышка
FLAVOR (n) – вкус
burnt - пригорелый вкус
FLESH (n) – мясо
FLOCCULATE (v) – выпадать хлопьями
FLOUR (n) – мука
FLUORINE (n) – фтор
FOOD (n) – пища, еда, пищевой продукт
infant - продукт детского питания functional
- функциональные пищевые продукты
- preservation – сохранение, консервирование пищевых продуктов
- processing – технология производства (обработки) пищевых продуктов
- process engineering – техника пищевых процессов
- science – наука о пищевых продуктах
sea ~ морепродукты
- technology – пищевая технология, технология пищевых продуктов
FREEZING (n) – замораживание
blast - замораживание в интенсивном потоке воздуха
fluidized bed - замораживание в псевдооживленном слое
immersion - замораживание погружением в жидкую холодную среду
plate - контактное замораживание
FURNISH (v) – снабжать, доставлять
GENE (n) – ген
GENETIC (a) – генетический
GENOME (n) – геном, совокупность генов
GERM (n) – росток
GERMINATE (v) – прорастать

GLOBULE (fat) – жировой шарик (молока)
GLYCEROL (n) – глицерин
GMO (genetically modified objects) – модифицированные объекты
GRADE (v) – сортировать, классифицировать
GRIND (GROUND) (v) – молоть
HAM (n) – ветчина
HANDLING (n) – обработка, переработка, транспортирование
HARM (v) – вредить
HARVEST (n) – урожай, (v) – убирать урожай
HEALTHFULNESS (n) – полезность
HEALTHCARE (т) – охрана здоровья, здравоохранение
HEAT-RESISTANT (a) – теплостойкий
HERRING (n) – сельдь
HINDER (v) – препятствовать, мешать
HOMEOSTASIS (n) – гомеостаз, постоянство состава систем
HOMEOSTATIC (a) – гомеостатический
HOMOGENIZE (v) – гомогенизировать
HOP (n) – хмель
HURDLE (n) – барьер, препятствие; фактор, регулирующий развитие микроорганизмов
HURDLE EFFECT – препятствующий эффект
HURDLE TECHNOLOGY – барьерная технология
HYPOCHLORITE (n) – гипохлорит
IMPACT (n) – воздействие
INCIDENCE (n) – распространение
desease - заболеваемость
INDICATION (n) – показание (прибора)
INDICATOR (n) – индикатор, указатель, счетчик
INHERENT (a) – присущий, свойственный
INJECTION (n) – впрыскивание steam ~ впрыскивание пара
INFERIORITY (n) – более низкое качество
INHIBIT (v) – замедлять, подавлять, тормозить
INOCULATE (v) – искусственно засеивать микроорганизмами
INTAKE (n) – потребление, поглощение
INTERFERENCE (n) – взаимное влияние, интерференция
INTERCELLULAR (a) – межклеточный
IODINE (n) – йод

IRRADIATION (n) – облучение
IRREVERSIBILITY (n) – необратимость
KEEPING QUALITY (n) – стойкость
KIDNEY (n) – почки
NEAD (v) – месить (тесто)
LABELING (n) – маркировка
LACK (n) – недостаток, нехватка
LAG (v) – отставать
LAMB (n) – барашек, молодая баранина
LARD (n) – свиное сало
LAYER (n) – слой
LEAKAGE (n) – утечка
LEAN (a) – тощий, скудный
LEGAL (a) – юридический
LEGUME (n) – боб, растение из семейства бобовых
LETTUCE (n) – салат-латук
LID (n) – крышка
LIPID (n) – липид, жир
LIQUOR (n) – напиток, жидкость, раствор
LIVER (n) – печень
LOAD (microbial) – количество бактерий
LOAF (n) – батон, буханка, булка
MAGNETIC (a) – магнитный
MALNUTRITION (n) – недостаточное, неправильное питание
MALT (n) – солод
MALTING (n) – соложение, получение солода
MALT MASH (n) – солодовый затор
MASH (n) – затор, (v) – затирать солод
cereal malt ~ зерновой солодовый затор
MASHING (n) – разварка, затираание солода
MATURE (v) – созревший
MESH (n) – сетка
METABOLISM (n) – обмен веществ
METHOD (n) – метод, способ
HTST – высокотемпературный кратковременный метод
LTST – низкотемпературный долговременный метод
holding - метод выдержки; способ длительной пастеризации

UHT – метод пастеризации при очень высокой температуре
MICROWAVE (a) – микроволновый
MILD (a) – мягкий, слабый
MILK (n) – молоко dried (powder)
- сухое молоко evaporated
- сгущенное пастеризованное молоко (без сахара)
market - питьевое молоко
skim - обезжиренное (снятое) молоко
sweetened condensed - сгущенное молоко с сахаром
whole - цельное молоко
MILKING (n) – доение
MILL (v) – размалывать, (n) мельница
MOLD (n) – плесень, форма, формовка
MOLD (v) – плесневеть, формовать
MULTITARGET (a) – многоцелевой
MUSCLE TISSUE – мышечная ткань
MUTTON (n) – баранина
NATIVE (a) – природный, чистый
NITROGEN (n) – азот
NITROGENOUS (a) – азотный, азотистый
NONTHERMAL (a) – нетепловой, нетермический
NOVEL (a) – новый
NUCLEUS(n) – ядро
NUT(n) – орех
NUTRIENT (n) – питательное вещество
NUTRITIONIST (n) – диетолог
NUTRITIVE (a) – питательный
NUTRITIVE VALUE – питательная ценность
OATS (n) – овес
OBTAIN (v) – получать
ODOR (n) – запах
OFF-FLAVOR (n) – посторонний привкус
OFF-FLAVORS (n) – пороки вкуса
OIL (n) – масло, жир
animal - жидкий (топленный) животный жир
vegetable - растительное масло
OLIVE (n) – маслина

ONION (n) – лук
ORGANOLEPTIC (a) – органолептический
OSCILLATING(a) – колебательный, вибрирующий
OVEN (n) – хлебопекарная печь
OVERCOME (v) – преодолевать
OVERCOOKING (n) – переваривание, пережаривание
OVERSOFTENING (n) – слишком большое размягчение
OXIDIZE (v) – окислять
PACKAGING (n) – упаковка, упаковывание
modified atmosphere - упаковка в газовой атмосфере регулируемого состава
PALATABLE (a) – вкусный
PANEER (n) – панир (кисломолочный продукт)
PASTA (n) – макаронные изделия
PASTEURIZATION (n) – пастеризация
PATHOGENIC (a) – патогенный, болезнетворный
PATTERN (n) – образец
- consumption – тип, структура потребления
PATTY (n) – брикет из мясного фарша, котлета
PEANUT (n) – арахис
PEEL (n) – корка, кожица, шелуха
PERISHABLE (a) – скоропортящийся
PICKLE (v) – мариновать
PINEAPPLE (n) – ананас
POISON (v) – отравлять
PORK (n) – свинина
POROUS (a) – пористый
POTASSIUM (n) – калий
POWDER (v) – толочь, превращать в порошок (пудра, порошок)
PRECIPITATION (n) – осаждение
PRESERVATIVE (n) – консервант
PRESSURE (n) – давление
hydrostatic - гидростатическое давление
PRODUCT (n) – продукт
long-life - долго сохраняющийся продукт
PROCESS (v) – обрабатывать
PROOF (n) – расстойка (теста)

intermediate - промежуточная расстойка
PROTECTION – защита environmental ~ защита окружающей среды
PROTEIN (n) – белок - sparing экономия белка
PROTEINACEOUS (a) – белковый
PUFFING (n) – вспучивание, вздувание
PULSED (PII) – импульсный
PUREE (n) – пюре
RANCIDITY (n) – прогорклость, прогорклый вкус
RADIATION (ionizing) – ионизирующее излучение
RAW MATERIAL (n) – сырье
RECORDER (n) – записывающее устройство, регистрирующий прибор
REDOX POTENTIAL – окислительно-восстановительный потенциал
REFINE (v) – очищать, рафинировать
RELISH (n) – приправа
REMOVE (v) – отводить, удалять
REQUIRE (v) – требовать
RESIDUE (n) – осадок
RESTRCT (v) – ограничивать
RETAIL (n) – розничная продажа
- display – выставка товара, витрина
RETARD (v) – задерживать, замедлять
RETENTION (v) – задержание
REVERSIBILITY (n) – обратимость
RIGOROUS (a) – строгий (о режиме процесса)
RINSE (v) – промывать, ополаскивать
RIPE (a) – зрелый
RIPEN (v) – созревать
ROUNDER (n) – тестоокруглительная машина
RUST (v) – ржаветь
RYE (n) – рожь
SAFE (a) – безвредный
SAFETY (n) – безопасность, безвредность
SATISFY (v) – удовлетворять
SOUECRROUT (n) – кислая капуста

SAUSAGE (n) – колбаса
SAVING (n) – экономия
SCRAP (v) – скоблить, скрести
SEAFOOD (n) – морепродукты
SEAL (v) – закатывать, запечатывать, закупоривать
SEED (n) – семя
SENSORY (a) – чувствительный
SHELF-LIFE (n) – сохраняемость
SHRINKAGE (n) – усушка, усадка
SLAUGHTER (n) – убой (скота)
SLICE (v) – резать, (n) – ломтик
SMELL (n) – запах
SMOKING (n) – копчение
SOAK (v) – вымачивать
SOFTEN (v) – размягчаться
SOLDER (n) – припой
SOLIDS (n) – сухие вещества
non-fat milk - сухое обезжиренное молоко
SOLUBILITY (n) – растворимость
SOLVENT (n) – растворитель
SORBATE (n) – сорбат
SORT (v) – сортировать
SODIUM (n) – натрий
SPECIES (n) – вид, разновидность
SPICE (v) – добавлять пряности
SPINACH (n) – шпинат
SPOIL (v) – портить(ся)
SPOILAGE (n) – порча
SPONGY (a) – рыхлый
SPORE (n) – спора
STABILITY (n) – стойкость
STABILIZER (n) – стабилизирующее вещество
STALE (a) – черствый, затхлый
STARCH (n) – крахмал
STARTER (n) – закваска
STEAM (n) – пар saturated ~ насыщенный пар
STERILIZATION (n) – стерилизация

STICKY (a) – липкий
STOMACH (n) – желудок
STORAGE (n) – хранение, хранилище, склад
chilled - (n) – хранение в охлажденном состоянии
cold - (n) – холодильное хранение
frozen - (n) – хранение в замороженном состоянии
SUBLETHAL (a) – почти летальный, близкий к смертельному
SUBLIME (v) – сублимировать, возгонять
SUBSTANCE (n) – вещество, субстанция
SUGAR (n) – сахар
- BEET (n) – сахарная свекла
- CANE (n) – сахарный тростник
SULFITE (n) – сульфит
SULPHUR (n) – сера
SYNERGISTICAL (a) – синергетический, сопутствующий
SYNERGISM (n) – усиливающее действие
SURVIVE (v) – выжить, продолжать существовать
SYRUP (n) – сироп
soda-fountain - сироп для содовой газированной воды
SUSCEPTIBLE (a) – восприимчивый, чувствительный
TAKE OUT (v) – выводить
TALLOW (n) – топленый жир, сало
TARGET (n) – объект, цель
TASTE (n) – вкус
TECHNIQUE (n) – техника, технический прием, способ, метод
TEXTURE (n) – структура, строение
THAW (v) – таять
TISSUE (n) – ткань
adipose - жировая ткань
epithelial - эпителиальная ткань
TOOL (n) – инструмент
TRACE (n) – незначительное количество
TRACE METAL (n) – микроэлемент
TRAP (v) – улавливать, захватывать
TRAWLER (n) – траулер
TRAY (n) – поднос, лоток, противень, поддон
ULTRAVIOLET (a) – ультрафиолетовый

ULTRAZONIC (a) – ультразвуковой
UNDERGO (v) – подвергать(ся)
VACREATION (n) – вакуация (пастеризация молока в вакууме)
VANILLA (n) – ваниль
VAT (n) – чан
VEGETATIVE (a) – растительный, вегетативный
VEHICLE (n) – средство перевозки (доставки)
VENT-HOLE (n) – вентиляционное отверстие
VINEGAR (n) – уксус
VISION (a) – зрение
VITALITY (n) – жизнеспособность, живучесть
VITAMIN (n) – витамин
fat-soluble - жирорастворимый витамин
water-soluble - водно-растворимый витамин
VOID (n) – пустота
WASTE (n) – отходы
WAVE (n) – волна
WAX (n) – воск
WEED (n) – водоросль
sea ~ морская водоросль
WHEAT (n) – пшеница
WHIP (v) – взбивать
WHOLESOME (a) – полезный
WHOLESOMENESS (n) – полезность
WITHSTAND (v) – выдерживать, противостоять
WILT(v) – увядать
WORT (n) – сусло
WRAP (v) – обертывать, заворачивать
YEAST (n) – дрожжи
YOLK (n) – желток
YOGHURT (n) – йогурт

ЛИТЕРАТУРА

а) основная:

1. Английский язык. Food manufacturing processes: Пособие / Сост. Л.А. Васильева, Н.Б.Нестерова. 2-е изд., испр. и доп. – СПб.: СПбГУ-НиПТ, 2004. – 154 с.
2. Словари и энциклопедии на Академике.// www.dic.academic.ru
3. Электронный словарь АBBYY Lingvo 12.
4. Foods and food production encyclopedia. Ed. by Douglas M. Concidine. – New York.: Van Nostrand Reinhold, 1982.
5. Food factories: Processes, equipment, costs. Ed. By Alfred Bartholomai. – Weinheim: VCH, 1987.
6. Saravacos, George D. Handbook of food processing equipment. – New York.: Klumer acad./Plenum, 2002.
7. Нестерова Н.Б. Английский язык. Food manufacturing processes: Учеб. пособие. СПб.: НИУ ИТМО; ИХиБТ, 2013. 90 с.
8. Нестерова Н.Б. Английский язык: Food Technology: Учебное пособие. Санкт-Петербург: Университет ИТМО; ИХиБТ, 2014. – 109 с.
9. Encyclopedia of food sciences and nutrition / Ed.-in-chief Benjamin Caballero. – 2nd ed. – Amsterdam, 2003.
10. Encyclopedia of human nutrition / Ed. by Douglas M. Concidine. – 2nd ed. Vol. 1-4. – New York, 2004
11. John M. Connor, Richard T. Rogers. The food manufacturing industries: structure, strategies, performance. – Toronto, 1995.
12. Food and nutrition / Ed. by William H. Sebrell, James Hagerty. – 2nd ed. – New York, 1998
13. П.М. Пушнова. Пособие по английскому языку для вузов пищевой промышленности / П. М. Пушнова, Л. С. Орел, В. М. Тимакина. - Москва : Высш. школа, 1970. - 110 с. : ил.; 20 см.
14. Щербакова Н.И., Звенигородская Н.С., Английский язык для специалистов сферы общественного питания. Москва, 2005.

б) дополнительная:

15. Мюллер В.К. Большой англо-русский словарь: в новой редакции. – М.: Цитадель - Трейд: Рипол классик, 2005.
16. Электронный словарь АBBYY Lingvo 12.

17. Современный англо-русский политехнический словарь / Сост. В.В. Бутник – М.: Вече, 2012.

18. Русско-английский политехнический словарь / Сост. Б.В. Кузнецов. – М.: Руссо, 2001.

19. Ковальская Л. Англо-русский словарь по пищевой промышленности/English-Russian Dictionary of Food Industry. Москва, 1988. 671 с.

20. Cambridge Advanced Learners Dictionary. McIntosh Colin. Cambridge, 2013.

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Ф.Б.Казиева, Т.Х.Цаллагова, С.Б.Гуриева

УЧЕБНО-МЕТОДИЧЕСКОЕ ПОСОБИЕ
ПО АНГЛИЙСКОМУ ЯЗЫКУ

для студентов факультета технологического
менеджмента

Учебно-методическое пособие

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