**Выписать слова с переводом:**

advantage – преимушество

aqueous – водный

beet – свекла

cavity – полость, выемка

centrifugation – центрифугирование

centrifuge – центрифуга

clarify – очищать, отделять от примесей

collect – собирать, скапливаться

concern – касаться, иметь отношение

disadvantage – недостаток

filtration – фильтрация

filter – фильтр

porous – пористый

pulp – мякоть, пульпа

screen – решето, сито, грохот

sedimentation – осаждение, оседание

seed – зерно, семя

settle – осаждаться, отстаиваться

sieve – сито, решето, грохот

sifting – просеивание

sorting – сортировка

sugar beet – сахарная свекла

waste – отходы

**Прочитать текст и выполнить задания после него:**

MECHANICAL SEPARATION

Mechanical separation is used for heterogeneous mixtures of solids, solids and liquids, solids and gases, liquids and gases and also immisible liquids.

The purpose of the solid/liquid separation may be either the recovery of the liquid (in the clarifying of fruit juices and wine), the recovery of the solids (examples are the winning of starch from aqueous suspensions and the pressing of all kinds of products before drying – sugar beet pulp, fish waste, etc.). The processing of oil-containing raw material is an example of a separation in which both the liquid and the solid are important products.

It is obvious, that to obtain a separation of two substances, they must differ in some property. Since there are numerous properties, there are also many different methods of separation. The materials to be separated very seldom differ in only one property, but if so, there is only one possible method of separation. Generally, the substances differ in two or more prop-

erties and consequently it is usually possible to choose from several separation methods. To find the best method for a particular case, all advantages and disadvantages of available methods have to be considered.

These methods are commonly divided into two classes: physical methods and mechanical methods. For example, filtration, centrifugation and pressing are mechanical methods and evaporation is a physical method. Combinations of physical and mechanical methods are also applied.

The method and the equipment required also depend on the combination of substances to be separated. If it is necessary to separate solid from liquid, sedimentation, filtration or pressing can be used. Sedimentation is the settling of solid from a solid/liquid mixture, a concentrated suspension of the solid with a clear liquid above it being formed. Filtration is the separation by a porous medium, the liquid passing through this medium and the solid staying on its surface. Pressing is the separation of solid from liquid under pressure.

The separation of solids is usually called sorting or classification, this method being important in the processing of cereals and seeds of different shape (such as oil seeds, coffee and cocoa beans), vegetables, fruits, fish, etc. For separation of cereals and seeds cylindrical separators have been used for over a hundred years. A rotating slightly sloping cylinder has a wall equipped with cavities of particular sizes and shapes. Sorting usually takes place inside the drum. Round and oblong seeds fill the cavities.

The round seeds are carried further upwards than the oblong ones and collected separately.

Separation of heterogeneous mixtures of two liquids is a fairly common operation, the two liquids being of different densities. In general this concerns the separation of emulsions, for example, the winning of cream from milk. Separation of different materials can be accomplished in filters, centrifuges, presses, separators, etc., the choice of the equipment depending on the nature of the product.

I. Translate into Russian:

fruit juices recovery, low solid/liquid mixture concentration, oil seeds separation, physical and mechanical methods combination, very seldom separated materials, cereals classification, fairly common operation, density difference, solid substance sedimentation, high filter efficiency, centrifugation advantages.

II. Translate into English:

несмешивающиеся жидкости, выделение крахмала, недостатки имеющегося метода, требуемое фильтровальное оборудование, пористая среда, концентрированная суспензия, разнородные смеси, сортировка бобов, кофе, какао.

III Try to describe how the cylindrical separator works. (some sentences)