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Dissertation topic: "Amino Emissions from waste agricultural sector fermentative process"

Many sectors of agriculture, processing of agricultural products are material-type of production, in which the volume of raw materials and basic auxiliary materials is several times the output of finished products, that is, there is no full use of raw materials. When growing plants and breeding livestock and poultry, as well as in other areas of the development of agriculture waste is often thrown away, which also does not lead to efficient use of raw materials. Agro-industries are ubiquitous - cultivated plants, businesses operate, processing locally grown agricultural products and raw materials. Agro-industries are major sources of waste that after a certain processing can become secondary material resources.

Relevance of the topic: the object of study are the amino acids, which are widely used in medicine, food industry and agriculture. Currently, there is strong interest in the use of pure amino acids and their derivatives in the pharmaceutical industry. However, - experience available to allocate aliogennyh amino acids from culture liquids and natural objects shows that a large part of their lost during the isolation and purification method for obtaining a derivatives thereof multistage reagents and require high costs. In this regard, the search for new methods for the isolation and receive amino acids and their derivatives has theoretical and practical significance.

Amino acids in immune reactions can be used for the development of effective strategies for improvement of health and the prevention of infectious diseases. Amino acids such as gamma-amino butyric acid (GABA), glycine, serine, leucine, valine, β -alanine, are known to play an important role in various biological systems. Among these neurotransmitters GABA and glycine, which are related to specific receptors in the vertebrate nervous system and mediate synaptic transmission. And serine is used as a natural moisturizing agent in some cosmetics and skin care products. Other necessary to repair muscle tissue and muscle metabolism and increases endurance. amino acid methyl esters are important intermediates in organic synthesis, where they are used to introduce amino groups in areas such as peptide synthesis, medicinal chemistry and polymeric materials. Isolation of amino acids from proteins and clarification of the nature of the connection between the amino acid residues in a protein molecule required enormous effort and very sophisticated equipment. A complete analysis of a protein, which includes not only a qualitative determination of individual amino acids, but also the order in which they are connected in the protein molecule, difficult, that the completion of studies of only one protein is an event in the scientific world. Isolation of amino acids complex composition of electrolyte can be made in consideration of the concentration of mineral impurities. When the concentration of the main component of 10-40 g / l and the concentration of mineral impurities greater than 40 g / l of amino acids in solution selection involves great time and energy costs.

Development of methods of separation, purification and isolation of the amino acid has a specific scientific and practical interest. One of the promising methods of purification and recovery of amino acids is a method of electrodialysis.

Objective: allocation of amino acids from waste agricultural sector. For this thesis, we selected waste from factories such as «Maykudukskaya pticefabrika», «Karagandinskii melkombinat», «Astro-Agro». In order to reduce the cost of livestock production is economically feasible in animal nutrition is widely used waste food production. At the same amino acids contained in the waste, switches to a physiologically active state, and effectively act how plant growth stimulants and sources of nutrients only after activation. Addition of amino acids in the feed increases the content of biological activity and growth in animals. The use of amino acids as feeding for animals and fertilizer for the plants helps to strengthen their vital functions and help some of the physiological properties of the upswing.

Methods: to solve the following problems

- Extracting amino acids from waste agricultural sector "Maykudukskaya pticefabrika";
- Obtaining kinds of amino acids;
- Study of the impact of different types of amino acids at seed growth;
- Control of concentrations received kinds of amino acids voltampermetric method.
- The study of the influence of various process parameters.

This research work will focus on the production of kinds of amino acids, by controlling the concentration voltampermetric method that allowed us to obtain the corresponding amino acid standards for animals and plants. The resulting amino acid types may be used as an additive for animal feed. Different kinds of amino acids play an important role in the body of animals. For example, gamma-amino butyric acid, glycine neurotransmitters that are associated with specific receptors in the vertebrate nervous system and mediate synaptic transmission. And serine is used as a natural moisturizing agent in some cosmetics and skin care products.

Technical essence of the present invention is a method for producing various kinds of amino acids of waste products by increasing their range, which will improve the quality of feed and simultaneously solve the problem of their disposal.