



# ODESSA NATIONAL ACADEMY OF FOOD TECHNOLOGIES

## THE SECOND TYPE DIABETES DIET'S DEVELOPMENT

### **Purpose and scope**

Experts predict that in 2030 diabetes will be the seventh leading cause of death in the world. Over the next 10 years the number of deaths from diabetes will increase by the half. That is why the second type diabetes diet's development is a very important task.

### **Important indicators that characterize the level of scientific output**

The first thing that triggering the mechanism of appearance, and in the future and progression of diabetes type II are defections of a basic homeostasis regulation systems, which are responsible for providing nutritional cells and human tissue with numerous physiologically active functional ingredients. Different stress effects that exceed the strength and duration of the compensatory man possibilities even more accelerate and deepen the deficit. The absence in the human body of the extremely necessary amounts of hundreds of micronutrients and functional active ingredients that come from food or formed endogenously by cells of the intestine and representatives of symbiotic microorganisms, underlying the origin and progression of diabetes type II.

Two articles in "Food science and technologies" journal were published.

### **Key Features**

It is recommended for the patients to take meal according to the ninth regime. In the regime describing there is a list of permitted and prohibited products, methods of thermal processing of it and day menu examples divided on parti-tive meal. Diabetes is a disease that requires periodic sanatorium visits. In sanatorium they make a generalized diet, according to the ninth regime, which deferens by the mass fraction of main makronutrien from the RDA of healthy per-sons. This diet usually is general and does not take into account individual physiological characteristics of the patient.

### **Market demand**

The comparative analysis of the micronutrient diet compositions of the patients with type II diabetes and healthy people were held. On the base of this data it is possible to create the individual diet recommendations for the diabetes type II patients.

### **The state of work**

For now it is necessary to analyze the patients diets and create recommendations for its revision in view in accordance to the latest achievements in the nutrition science. To summarize the scientific evidence, we believe it is necessary, firstly, to create a database of the chemical composition of foods recommended for patients with diabetes type II, and secondly, to develop technological approaches for enriching food products with necessary components, thirdly, to develop software and determine the criteria which will form sick person's individual diet. It is offered, for the start, to establish such selection criteria as the total number of proteins, fats, carbohydrates, and minimal content of omega-3 fatty acids and maximum content of simple carbohydrates and starch [17-20]. Also enter the minimum diet presence value of the vitamins B, biotin, vitamin A, E, D, C, minerals such as magnesium, zinc, calcium, selenium, manganese, chromium, sulfur and maximum values for sodium, iron and fluoride.

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