

## 17. PFONATEC Project Design and Interfaces

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**Project aim.** The development and deepening of fundamental and applied researches with a major impact on food technology, using agri-food sources as natural texture agents and carotenoids obtained by innovative extraction methods in order to apply them in product diversification. The elaboration of "functional foods" with beneficial effects on human body.

### **Project objectives:**

- The obtaining and characterization of natural texture agents and carotenoids from vegetable sources using innovative techniques;
- The functional potential testing of natural texture agents and carotenoids on the quality and shelf life of developed functional products;
- The technology development of functional products assortment producing, Production recipes and technological flow that maintain the native and curative-nutritive characteristics of functional compounds;
- The quality characteristics evaluation of food products obtained by the improvement of their composition with natural texture agents and carotenoids. Safety indices and harmlessness;
- The determination of functional products shelf life. The methodology of shelf life specification;
- The training of young specialists/researchers in the field of biotechnology, technological engineering, food quality and safety by the elaboration of PhD theses.

**Methods.** Technological, physico-chemical, chemical, biochemical and microbiological methods according to International Standards. Statistical methods, including the analysis of experimental data by means of control charts X-R, S<sup>2</sup>, and other methods.

**Expected results.** The physico-chemical characteristics of agri-food sources investigated in order to obtain functional compounds. The innovative methods, technological schemes of functional compounds production from local agri-food sources. The samples of functional compounds obtained at a pilot plant. The characteristics of the nutritional, antioxidant and functional potential of obtained samples. Scientific justified production processes and recipes of food products with an improved functional potential. The methods of the shelf-life evaluation of elaborated functional food products.

**Relevance.** The innovative methods of producing the functional products with natural texture agents and carotenoids. The chemical composition and functional potential of bioactive compounds. Scientific justified processes and recipes for the production of the new assortment of functional products.

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### **References**

1. Project Proposal for Young Researchers "*Functional products obtained by using natural texture agents and carotenoids*" (PFONATEC), Chisinau, Moldova, 2018, 42 p.