

them from seeking timely treatment that could in the end improve health and reduce healthcare costs [7]. Genetic discrimination refers to discrimination of an individual on differences in the genome or gene from the normal genome or gene actually or predictively [1]. In France, insurers cannot request an applicant to undergo genetic testing for the purpose of the insurance application. Insurance companies cannot also use information provided by such a genetic test [12]. In the United Kingdom, much attention is paid to the seven impairments of relevant genetic tests specified by the Association of British Insurers' Code of Practice: Huntington's disease, BRCA 1, BRCA 2, Myotonic dystrophy, Polyposis coli, multiple endocrine neoplasia, Hereditary motor and sensory neuropathy, monogenic form of Alzheimer's disease [11].

**Conclusion.** The using of genetic testing in insurance has a big opportunity and challenge for the insurance companies and for the policyholders. The main benefits replay to the preventive measures that be started for the genetic abnormalities; making life decisions or family planning and so on. But the main problem is the genetic discrimination that could be occurs in the underwriting process.

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## INVESTIGATION OF THE EMPLOYMENT OF THE HYDRODYNAMIC TREATMENT OF LIQUID AQUEOUS SOLUTIONS

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*Abstract - It was carried out the investigations with an intention to establish the influence of physical method of impact, such as hydrodynamic treatment on the parameters and properties of liquid aqueous solutions for the technological processes of foodstuff production. The adjustment of physical and chemical properties and parameters of pure aqua and aqueous solutions has been established throughout the processing with appliance of hydrodynamic treatment. In this investigational research employment the results of the exploration of the change of the potential of reduction-oxidation reaction is presented. The decreasing of the potential of reduction-oxidation reaction of aqua in engineering process throughout experimental hydrodynamic treatment is shown. The frequent point of decrease potential of reduction-oxidation reaction in estimation with the preliminary formulates 60-65%. In all-purpose casing was recognized that the decreasing of the potential of reduction-oxidation reaction which obtained throughout dispensation on an extent 200s.*

**Introduction.** Foodstuff production is one of the largest sectors of worldwide with great responsibility to the economic advance of the country. Nowadays researches, engineers and technologists have turned their attention to employment of the modern alternative methods and modes in processing of the liquid mediums which consists of the aqua or aqueous solutions. Especially genuine to give explanation this obstruction is to use reasonably priced methods that require commercial venture and allowing the use of existing reserves to reduce specific energy consumption of existing equipment due to the intensification of technological processes. There are many methods and processes of aqua treatment to obtain aqua and aquatic solutions with indispensable physical and chemical parameters and properties, which require for the manufacturing during the foodstuff production [1-3]. The purpose of this research investigation is to study the influence of the appliance of hydrodynamic treatment on the physical and chemical parameters and properties of liquid aqueous solutions.

**Results and discussion.** The influence of introductory processing of aqua and aqueous solutions with appliance of the hydrodynamic treatment for stimulate reaction ability was considered. Aqua and aqueous solutions were equipped on pilot unit in laboratory conditions and at the manufacturing. After that the prepared examples of aqua and aqueous solutions were used as the model mediums for experiments. The control examples of aqua and aqueous solutions were not providing to treatment. At various stages in the uninterrupted mode of hydrodynamic treatment were realized hydrodynamic effects

such as: pressure of shift, local turbulence, cavitations effects, and shock waves of pressure or depression, alternating impulses of pressure, forcing and dumping of pressure [4, 5].

It was established that velocities of shift of a stream should be equivalent to  $2,0 \cdot 10^5 \text{ s}^{-1}$  for the first spinning rotor and  $2,5 \cdot 10^5 \text{ s}^{-1}$  for the second spinning rotor. Such values of the velocities of shift of a stream provide intensive movement of the continuous phase such as aqua or aqueous solutions. The significance of pressure of shift of a stream must be 230 Pa for the first spinning rotor and 250 Pa, for the second spinning rotor. Throughout the processing of aqua and aqueous solutions in the conditions of hydrodynamic treatment differentiated as  $\Delta P = 350 \text{ kPa}$  near an outside surface of an internal spinning rotor;  $\Delta P = 250 \text{ kPa}$  near an outside stator surface;  $\Delta P = 150 \text{ kPa}$  near an internal stator surface;  $\Delta P = 200 \text{ kPa}$  near an internal surface of an outside spinning rotor. It was established that the significance of the linear velocities of a stream should be within 22 m/s for the first spinning rotor and 24 m/s for the second spinning rotor. There are many slits on the spinning rotors and stator. For the duration of the treatment slits can coincide on the rotors and stators. Significant pressures of the shift and microcirculation streams emerge as a result of the treatment of liquid heterogeneous solutions in working chamber and parts of the apparatus. These trying hydrodynamic conditions provide the opportunity to treat aqua and aquatic solutions with the initialization of the creation of structure formation and intermolecular interacting such as appearance volume three-dimensional structure from the hydrogen bonds. The character and rapidity of many physical and chemical processes which take place in such aquatic solutions converts. Moreover, the activity of the aqua depends from the transformations and hydrogen bonds which can shape connecting molecules. The change of physical and chemical properties and parameters of aqua and aqueous solutions has been established at processing application of hydrodynamic treatment which it is possible to explain change of reactionary ability, owing to beginning of carrying over of a proton in allied liquids such as water, aliphatic alcohols, water-ethanol mixtures with different percentage of ethanol and configuration of a grating of hydrogen bonds which in turn influences the structural transformations and a configuration. Throughout aqua processing by hydrodynamic treatment the potential of hydrogen, the potential of reduction-oxidation reaction and reactionary capability of aqua varies. For carrying out of process of hydrodynamic treatment of aqua it gave in to processing during exceptional time from 1s to 600 s. A significance of the potential of reduction-oxidation reaction in the course of processing by hydrodynamic treatment depending on processing time decreases on 60-65%. The consequences of researches are presented that the potential of reduction-oxidation reaction of aqua and aqueous solutions is significance actable and at interaction with atmospheric air rises. In the isolated without full of atmosphere systems the increase suggests itself a large amount more slowly.

**Conclusions.** Multifaceted experimental, theoretical and analytical investigational studies demonstrated that hydrodynamic treatment of aqua and aqueous solutions may be appropriate for processing in technological processes of food industry, where hydrodynamic treatment are found to be an alternate to traditional processes. A complete study of experimental data showed that the use of hydrodynamic treatment of aqua and aqueous solutions allows obtaining solutions with improved physical and chemical parameters.

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## RHEOLOGICAL PROPERTIES OF SUSPENSIONS FOR MEDICAL AND COSMETIC PURPOSE

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*Annotation – an analytical review of the rheological properties of dispersed systems, which are part of soft dosage forms and decorative cosmetics, was conducted. The purpose of the study is to determine the types and properties of dispersion media used to obtain suspensions of medicinal and colorimetric purposes to determine the type of grinding machine. The main classifications of dispersed systems are analyzed depending on their rheological properties, as well as some of the most important characteristics of systems for technological and constructive equipment choices. Recommendations are made regarding the choice of equipment depending on the rheological type and characteristics, such as the adhesive-cohesive property, coagulation and sedimentation.*