GS-1301-004
DEVELOPMENT OF THE SYSTEM FOR NANOMATERIALS AND NANOTECHNOLOGY SAFETY IN RUSSIAN FEDERATION
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Abstract: The article discloses a system of guidelines establishing unified order of detection, identification of nanoparticles and nanomaterials, estimation of their safety, sanitary regulation, control and supervision in environmental objects and production of nanindustry, evaluation and management of risk produced by nanoparticles and nanomaterials. Recent development of nanosafety system in Russian Federation serves the aim of balanced achievement of unconditional ensuring welfare of present and future human population together with promotion of advanced technologies promising lot of useful applications.

GS-1301-011
ON THE IMPROVEMENT OF THE LEGAL SUPPORT OF THE FOOD SAFETY IN THE CONDITIONS OF TRADE AND ECONOMIC INTEGRATION OF STATES-MEMBERS OF THE CUSTOMS UNION AND THE RUSSIAN FEDERATION'S ACCESSION TO THE WTO
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Abstract: In the article priority activities of The Federal Service for the Oversight of Consumer Protection and Welfare on improvement of standard legal support of safety of foodstuff and control of compliance of foodstuff to legislation requirements are reported.. The main documents directed on harmonization of the international requirements with national ones and requirements of the Customs union on safety of foodstuff are submitted. Work within a framework of Russian Federation's accession to the WTO is described. And data on control of quality and safety of foodstuff are provided also.
Key words: standard legal support, safety of foodstuff, compliance of foodstuff to legislation requirements

GS-1301-014
USE OF SYSTEM OF RADIATION AND HYGIENIC CERTIFICATION OF TERRITORIES FOR ENSURING SUPERVISION OF RADIATION SAFETY OF THE POPULATION AT THE REGIONAL LEVEL.
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Abstract: In article the experience of Department of Federal Service for Supervision of Consumer Rights Protection and Human Welfare in St. Petersburg, related with performing of radiation and hygienic certification of the organizations and territories is considered. The annual assessment of individual and collective risks of emergence of stochastic effects for the population and the personnel of radiation objects shows the significance of radiation and hygienic certification for hygienic justification of the measures directed on a decrease in radiation exposure of the population from technogenic, natural and medical sources of ionizing radiation. The long-term analysis of the structure and dynamics of annual individual and collective effective doses of radiation of the population within the framework of radiation and hygienic certification and the Universal state system for control and accounting for individual doses of radiation of citizens allows to estimate efficiency of address target programs for the solution of actual problems of radiation safety at the regional level.
Key words: radiation safety, radiation and hygienic certification, natural radiation, medical radiation, technogenic radiation, deactivation, address target program

GS-1301-018
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Abstract: Basic provisions of the medical and sanitary passport of chemically dangerous object and the territory adjoining to it are presented in article. Need of development of the medical and sanitary passport for systematization of sanitary and epidemiologic data with the purpose of a complex assessment of health of the population and the personnel working at chemically dangerous objects, harmful factors production and environment taking into account emissions of polluting substances of chemically dangerous objects is shown.

Key words: health passport, chemically hazardous facility, public health, health of the personnel, factors, work environment, the environment, risk, medical and environmental stress

GS-1301-022

PHYSIOLOGICAL AND HYGIENIC ASSESSMENT OF PERCEPTION OF THE INFORMATION FROM ELECTRONIC DEVICE FOR READING (READER)

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Abstract: A comparison of the legibility of the three different media: paper, personal computer (LCD) and the e-reader in schoolchildren (12-14 years of age) was performed. Comprehensive assessment of the reading performance (speed of reading aloud, the number of errors in reading, and integral indicator of the degree of difficulty of visual task), its physiological value (according to data of EEG, EOG and ECG), and subjective preference of type of media by the schoolchildren showed that by the sum of signs e-reader occupies an intermediate position between printed text and the computer screen. The effect of increased emotional intensity of using e-reader (increased motivation), which is manifested in the preservation of the sympathetic nervous system activation after the reading, was obtained. The necessity of additional research has been shown.

Key words: e-reader, electronic book, electronic paper, legibility, functional status, children, adolescents

GS-1301-026

A SCIENTIFIC PROVIDING FOR THE SYSTEM OF HYGIENIC OPTIMIZATION AND ANTI-EPIDEMIC SAFETY OF RAIL RIDERSHIP

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Abstract: The system of scientific and reasonable measures for hygienic and anti-epidemic providing of rail ridership is elaborated. The legal and methodical base for precautionary and current sanitary inspection in the field of hygiene and epidemiology of ridership has been created, standard and methodical documents have been introduced in practice of medical sanitary health services of the railroads and accepted to realization by the design, car-building and carrepair organizations. Sanitary and hygienic monitoring for rail ridership, including control for sanitary, hygienic and microbiological indices of the air environment of passenger and service premises of stations and passenger trains, and also control for indices of health of the workers providing ridership, with use of pre-nosological symptoms of pathology is organized. Features of a bacterial aero-plankton of passenger objects are revealed. The increase of indices of bacterial pollution of air in passenger objects during the summer-autumn periods of year in comparison with winter period is established. Direct relationship between levels of bacterial air pollution of passenger rooms of stations and integrated indices of anti-infectious stability of an organism of workers of the railway stations serving ridership, and also number of persons with the changed indices of the immune status is revealed.

Key words: rail ridership, hygienic and anti-epidemic safety, sanitaryhygienic monitoring, methods and means of disinfecting, environmental protection

GS-1301-030

THE SOCIO-HYGIENIC MONITORING AS AN INTEGRAL SYSTEM FOR HEALTH RISK ASSESSMENT AND RISK MANAGEMENT AT THE REGIONAL LEVEL

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Abstract: The information and analytical framework for the introduction of health risk assessment and risk management methodologies in the Sverdlovsk Region is the system of socio-hygiene monitoring. Techniques of risk management that take into account the choice of most cost-effective and efficient actions for improvement of the sanitary and epidemiologic situation at the level of the region, municipality, or a business entity of the Russian Federation, have been developed and proposed. To assess the efficiency of planning and activities for health risk management common method approaches and economic methods of "cost-effectiveness" and "cost-benefit" analyses provided in method recommendations and introduced in the Russian Federation are applied.

Key words: socio-hygienic monitoring, risk assessment, health risk management, assessment of performance efficiency
potential danger of supertoxicants generation when applying thermal methods of neutralization of medical waste that contains polyvinyl chloride (PVC) is justified by thermogravimetric and mass spectrometric studies. This research shows the necessity of introducing technologies of separate collection of PVC medical waste and its thermal recycling in compliance with special requirements.

**Key words:** medical waste, thermal methods of waste treatment, thermogravimetric analysis, mass spectrometric analysis of waste decomposition products

GS-1301-047

ATMOSPHERIC AIR POLLUTION IN AN INDUSTRIAL CITY AS THE FACTOR OF NON-CARCINOGENIC RISK FOR HEALTH OF COMMUNITIES

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**Abstract:** The paper deals with the results of the research on risk of exposure of atmospheric air pollution in a large industrial city to health of communities. The results of individual both immediate and chronic risk estimation for selectable city zones are presented. Regression ratios of various substances concentrations and disease incidence are revealed. On their basis the estimation of risk of additional disease incidence is carried out and taxonomic values characterizing the contribution of separate pollutants to risk of health of communities’ disorder are obtained.

**Key words:** atmospheric air pollution, risk for human health.

GS-1301-050

THE STUDY OF HEALTH RISK IN SHORT-TERM INHALATION EXPOSURE IN CONDITIONS OF FOREST FIRES

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**Abstract:** The algorithm of studying of risk to population health due to short-term high atmospheric air pollution is presented. The algorithm was tested on a model example. The elevation of the content of a pool of carbon monoxide and the weighed particles in quantities above referential levels in the air are established to lead to increase in emergency medical aid appealability concerning diseases of respiratory and blood circulation organs.

**Key words:** atmospheric pollution, short-term exposure, ecosensitive groups

GS-1301-053

RESEARCHES OF THE STRUCTURE OF SOLID HOUSEHOLD WASTE AND ASSESSMENT OF THEIR SANITARY AND EPIDEMIOLOGIC DANGER

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**Abstract:** Compliance with hygiene requirements for the municipal solid waste (MSW) handling includes their composition control. The main methodological approaches to the MSW morphological composition study to assess their epidemiological risk are given. The main results of experimental waste composition analysis for a number of settlements are presented. These data were used for epidemiological risks estimation, measures for their minimization are suggested.

**Key words:** municipal solid waste, sanitary-and-epidemiological waste safety, hygienic regulations on landfill operation, municipal solid waste composition control.

GS-1301-056

THE SIGNIFICANCE OF GLUCOSE POSITIVE COLIFORM BACTERIA AND POTENTIALLY PATHOGENIC BACTERIA AS AN INDICATOR OF EPIDEMIOLOGICAL SAFETY OF TAP WATER

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Abstract: Due to intensive anthropogenic pollution of water environment generally accepted indicators of epidemic security of water bodies common bacteria (CB) and thermotolerant coliform bacteria (TCB) do not always permit to obtain an objective characterization of bacterial contamination of tap water. From the point of view of authors the integral index – glucose positive coliform bacteria most adequately reflect the sanitary-hygienic and epidemiological situation of water bodies. In monitoring for bacterial quality of tap water it is advisable to determine glucose positive coliform bacteria, that will provide the relevance of estimation of the epidemiological safety of water use. According to the method developed by the authors the calculation of the index of population risk of acute intestinal infections (AII) occurrence in dependence on the quality of tap water in Azov and Tsimlyansk towns.

Key words: tap water, microbial risk, glucose positive coliform bacteria, potentially pathogenic bacteria.

GS-1301-059
SELF-ESTIMATION OF HEALTH AND MODE OF LIFE OF NATIVE MINORITIES OF THE YAMAL NORTH
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Abstract: Preservation of health of native minorities of the Yamal North is the major medical and social problem. The purpose of research a self-estimation of health of the native minorities of the district in relation with a way of life in modern social and economic and ecological conditions. "Bad" and "very bad" health has been revealed in 20.9% of persons.

Key words: Yamal North, indigenous people, self-estimation, health, psychosocial stress.

GS-1301-061
PROBLEM OF CONGENITAL MALFORMATIONS IN CHILDREN IN THE REGION WITH AN AMBIGUOUS ECOLOGICAL SITUATION
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Abstract: The problem of birth defects in children in the Stavropol region is considered. The frequency and pattern of pathology is described on several sources of information. The environmental situation in the region has been analyzed, regional features of pathology and the territory of the region where excess of indices is noted have been revealed

Key words: congenital malformations, ecology

GS-1301-065
RISK FACTORS NEGATIVELY AFFECTING ON THE FORMATION OF MUSCULOSKELETAL SYSTEM IN CHILDREN AND ADOLESCENTS IN THE PRESENT CONDITIONS
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Abstract: Identifying risk factors affecting the formation of the musculoskeletal system (MSS) in children and adolescents is considered by the author as a necessary condition for the implementation of prevention, timely diagnosis and adequate correction of the MSS disorders and diseases. Introduction in the educational process developed by the author for the first time a conceptual model of prevention and correction of the MSS disorders and diseases in schoolchildren allowed significantly reduce the prevalence of functional disorders and early forms of the MSS diseases in students of a number of comprehensive schools in Moscow by 50%.

Key words: children and adolescents, the formation of musculoskeletal system, risk factors, prevention and correction

GS-1301-072
EVALUATION CRITERIA OF MEDICAL AND ECOLOGICAL SITUATION BASED ON THE METHOD OF SIGMA DEVIATIONS
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Abstract: Comparative analysis of the existing criteria for assessment of health and environmental situation was produced. The approach to health assessment of the environmental situation, where sigma intervals are used as criteria of belonging population morbidity in certain administrative areas in the region to the background incidence rate was proposed. The suggested criteria will increase the objectivity of the assessment of environmental health situation in the environment and health monitoring and implementation of epidemiological research.

Key words: ecological threat, risk, evaluation criteria of the medico-ecological situation

GS-1301-076
TO A QUESTION ON THE IMPACT OF NANOPARTICLES OF METALS PRESENT IN THE AQUATIC ENVIRONMENT, ON BACTERIA AND CONTINUOUS CELL LINES HEP-2 AND BGM
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Abstract: Promising application of nanoparticles and nanomaterials is the creation of sanitary hygienic means of new generation used for disinfection of water and indoor surfaces of mass use, furniture, sanitary technical equipment by virtue of modifying traditional materials to bring them effective biocidal properties, and for the development of methods in vitro for assessment their toxicity. In this paper the possibility of the use various forms of silver, copper and aluminum as disinfectant for bacterial test organisms in the aquatic environment and assess their toxicity on biological models of continuous culture of BGM cells (a stable line of African green monkey kidney cells) and HEp-2 (Human epithelial type 2 (HEp-2) cells, derived from a human laryngeal carcinoma) is considered.

Key words: nanoparticles, nanomaterials, microparticles, inactivation, validation, toxic effect

GS-1301-081
MONITORING FOR CONTAMINATION OF FOOD COMMODITIES AND FOOD PRODUCTS WITH TOXIC ELEMENTS
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Abstract: The results of hygienic assessment of toxic elements in food produced locally. The estimation of the levels of foodborne contaminants (lead, cadmium, arsenic, copper, zinc, mercury) on the basis of data on average food consumption has been presented. that the traditional products of mass consumption (dairy products, vegetables) were shown to make most significant contribution to the overall burden of priority contaminants. Child population of Saratov region has a greater risk to health from the peroral route of toxic elements in food.

Key words: monitoring, food staples, contamination, toxic elements, the risk

GS-1301-082
MONITORING THE QUALITY OF GROUNDWATER EXPLOITED ON THE TERRITORY OF THE REPUBLIC OF MARI EL
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Abstract: Hygienic characteristics of ground water used for drinking water supply of the Republic of Mari El is presented in the article. The features of the quality of ground water in different areas of the country have been revealed, the causes of the deterioration of drinking water, which can act as a risk to public health have been shown.

Key words: groundwater, water-supply, the Mari El Republic

GS-1301-085
ALGORITHM FOR TAKING INTO ACCOUNT THE AVERAGE ANNUAL BACKGROUND OF AIR POLLUTION IN THE ASSESSMENT OF HEALTH RISKS
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Abstract: The assessment of health risks from air pollution with emissions from industrial facilities, without the average annual background of air pollution does not meet sanitary legislation. However Russian Federal Service for Hydrometeorology and Environmental Monitoring issues official certificates for a limited number of areas covered by the observations of the full program on the stationary points. Questions of accounting average background air pollution in the evaluation of health risks from exposure to emissions from industrial
facilities are considered.

Key words: health risk assessment, the air, the average background air pollution.

GS-1301-087
MODERNIZATION OF PRODUCTION AS CRITERION FOR REDUCING OF SANITARY PROTECTION ZONE
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Abstract: The complex hygienic assessment of a large enterprise of chemical profile as a source of the chemical and physical effects on the environment and human health has been given. Modernization of the production with the introduction of modern technologies, effective gaspowered dust collector units was found to permit to reduce emissions by 20%, diminish the levels of atmospheric air pollution to the normative values, health risks to acceptable. According to the research after the reconstruction of the plant the possibility to move it from 1 to 2 danger class with reduction in size of sanitary protection zones in 2 times (from 1000 to 500 m).

Key words: technology, air pollution, noise, health, population, sanitary protection zone

GS-1301-089
NEW METHODOLOGICAL APPROACHES TO ESTABLISHMENT THE SIZES OF THE SANITARY PROTECTION ZONE AND ROADSIDE CLEAR ZONES OF CIVIL AIRPORTS
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Abstract: In the Russian Federation there is a fragmentation of a methodical approaches, methods and software for calculating aircraft noise and concentrations of pollutants in the air from aviaengines in aircrafts. Especially sharply it manifests today in the development of projects of sanitary protection zones (SPZ) for civil airports.
This circumstance leads to considerable mistakes it creation of SPZ borders of the airports, in some cases it impedes development of the latters and causes objective difficulties for hygienic assessment of projects. In this article the results of studies on the creation and validation of two new domestic methods for the construction of impact zones of aircraft noise and dispersion of the concentrations of pollutants in assessing the negative impact of airports are considered. Both branch methods agreed upon with the Ministry of Transport have been harmonized with ICAO (International Civil Aviation Organization) requirements. The results of full-scale measurements have confirmed the possibilities of developed software for their implementation in the formation of a common SPZ border of an airport.

Key words: airport, aircraft noise, pollutants, methods of calculation, the sanitary protection zone