УНИВЕРЗИТЕТ У НОВОМ САДУ, МЕДИЦИНСКИ ФАКУЛТЕТ

UNIVERSITY OF NOVI SAD, FACULTY OF MEDICINE

СЕКЦИЈА ЗА ХИГИЈЕНУ СРПСКОГ ЛЕКАРСКОГ ДРУШТВА

SERBIAN MEDICAL SOCIETY, HYGIENE SECTION

ПОД ПОКРОВИТЕЉСТВОМ МИНИСТАРТСВА ЗДРАВЉА И МИНИСТАРСТВА ПРОСВЕТЕ, НАУКЕ И ТЕХНОЛОШКОГ РАЗВОЈА РЕПУБЛИКЕ СРБИЈЕ

UNDER THE PATRONAGE OF THE MINISTRY OF HEALTH AND THE MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGICAL DEVELOPMENT OF THE REPUBLIC OF SERBIA

МЕЂУНАРОДНИ КОНГРЕС

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ABSTRACT BOOK

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the correlation with the pollen concentrations with moderate and high risk for the appearance of allergic reactions. During the annual pollination, there were 12 (5.4%) days with moderate and high concentrations of three indicators (pollen of *Betula*, *Poaceae* and *Ambrosia*) when concentrations of PM_{10} were increased.

Keywords: pollen monitoring, PM_{10}, air pollution.

PHYSICO-CHEMICAL COMPOSITION OF BOTTLED NATURAL MINERAL WATERS IN SALES

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The sanative properties of natural mineral water have conditioned the need for their bottling. Thus, these waters became available to a wide range of consumers. They differ from ordinary drinking water in the content of mineral matter, trace elements and other ingredients that may have a certain physiological effect.

THE AIM: Physico-chemical analysis of bottled natural mineral waters in sales and assessment of their impact on human health.

RESULTS: 22 samples of natural mineral waters, 13 non-carbonated and 9 carbonated, were analyzed in laboratories of Public Health Institute Niš. The analysis included the following parameters: dry residue at 180 °C, pH, anions and cations and trace elements.
The common characteristic of non-carbonated natural mineral waters is that those with low content of dissolved mineral matter have low sodium and other minerals content. Such quality assures their daily and unlimited use.

Carbonated natural mineral waters contain carbon dioxide, even up to a few grams per liter, which reduces the pH value of water. The chemical composition of these waters is very diverse. High mineralization waters prevail, in which Na +, Ca2 +, Mg2 +, F-, Cl-, HCO3- are characteristic ingredients. Consumption of such waters must be limited.

CONCLUSION: Uncontrolled consumption of carbonated natural mineral waters can lead to undesirable negative effects on human health. By introducing consumers with the chemical composition of bottled natural mineral waters in traffic, every person, healthy or ill, can use those waters that are most suitable for him.

KEY WORDS: natural mineral waters, mineralization, characteristic ingredients.

CONTAMINATED SITES AND POTENTIAL RISKS TO HUMAN HEALTH AND ENVIRONMENT IN THE REPUBLIC OF SERBIA

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Decades of poor waste management, the use of "dirty" technologies, absence of remediation of the resulting pollution, lack of public awareness, as well as the price of sustainability, have led to incomprehensible consequences - adverse effect to both human health and the environment. In many cases, contaminants are released from active industrial processes or are present in accumulated hazardous waste from past industrial activities. Often, multiple contaminants exist simultaneously, posing a mix of certain or suspected risks. The monitoring and proper management practices in the cases of contaminated sites are recognized as one of the most effective actions in the prevention of negative impacts of contaminants on human health and the environment. One of the result of the UN Environment/ GEF project "Enhanced Cross-sectoral Land Management through Land Use Pressure Reduction and Planning", which is implemented in the Republic of Serbia in the period 2015-2019 is the defined possible impact (direct and indirect) of contaminated sites on the environment and human health. In the framework of the project, a preliminary risk assessment - human health hazards – have been applied according to the results on previous research (environmental impact assessment studies, expert opinions, plans, laboratory analyzes within the characterization of hazardous and

non-hazardous waste, inspection reports and other documents), as well as the results of new soil, underground and surface water and sediments quality control. From a total of 32 surveyed industrial sites with historical pollution, from the aspect of risk, 14 sites are priorities for detailed investigation, as well as for the implementation of remediation measures.

KEY WORDS: contaminated sites, contaminants, human health, environment

IMPROVING OF AMBIENT AIR QUALITY MONITORING NETWORKS FOR ASSESSING POPULATION EXPOSURE AND POTENTIAL HEALTH IMPACT

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OBJECTIVE: Modification of existing local monitoring networks (MN) for ambient air quality in the City of Novi Sad in way that provide sufficient data which indicate population exposure to ambient air pollution.

METHOD: Throughout 2012-2016 for the area of the City of Novi Sad according to legal and sub-legal acts, as well as the US EPA Ambient air MN assessment guidance, an analysis of the MN (state, provincial and local) for ambient air quality was performed from the aspect of number of measuring points, EoI classification and pollutants (type, number, temporal coverage and data availability). Optimization of the MN within the competence of local self-government is based on the obtained results of the analysis, the data of the natural population change and on harmonization with MN under the jurisdiction of the states and the province.

RESULTS: The MN of local self-government in relation to the network under the jurisdiction of the state and the province, was most often coincidental in terms of EoI classification, limited spatial distribution, incomplete coverage of pollutants and unsustainable temporal coverage, or availability of data. The applied statistical techniques justified the displacement of the existing measuring points of the urban area in the suburban at the places of expected maximum concentrations (traffic) or in residential areas (background).

CONCLUSION: Local MN must be carefully planned and harmonized with national network to cover all critical areas in the City, thus providing a complete picture of the air quality that indicates a whole population exposure and potential health impact.

KEYWORDS: Air pollution, Environmental Monitoring, Environmental Exposure, Population, Health