



## Microflora of water, air and soil in southern regions of Uzbekistan

<b>Scientific supervisor: T.S. Ahmedova</b>	Tashkent Medical Academy Termiz branch "Microbiology, public health, Hygiene and Management" Senior teacher of the department
<b>Ro'ziboyeva Mohinur G'ayrat qizi,</b>	Students of Termiz Branch of Tashkent Medical Academy
<b>Aminova Mohinur Normurod qizi,</b>	Students of Termiz Branch of Tashkent Medical Academy
<b>Rashidov Shamisddin Sharofovich</b>	Students of Termiz Branch of Tashkent Medical Academy

### ABSTRACT

Healthy soil is essential for human health. Depending on the condition and composition of the given soil, this effect can be positive or negative, direct or indirect. Soils in the Southern Borderlands have a major impact on human health and well-being. Soils that affect human health typically include natural soils and agroecosystems with low anthropogenic pollution, soils in cities, mines, oil and gas production sites, landfills, and other places where anthropogenic pollution is likely to be high. Soil can be contaminated with toxic chemical elements and substances either naturally or as a result of anthropogenic influence. A change in the amount of any element can cause a person to be poisoned by the elements necessary for life. For any essential element, there is an optimal concentration range in humans, below this optimal range leads to deficiency, while concentrations above the optimal range cause toxicity, ore pathological condition.

### Keywords:

Air, water, soil, chemical element, dust, agroecology, penetration.

**Relevance of the topic.** Everyone's health is affected by the soil to some extent. This is because soil provides many of the nutrients we need and can transfer harmful substances through the food we eat. Some dusts from soil can travel thousands of kilometers and affect people far from where they originate. Despite recent advances in the role of soil in human health, few people think about the impact of soil on their health.

**The purpose of scientific work.** If everyone pays attention to their health, they should have enough information about the role of soil in human life, its positive and negative aspects.

**Inspection methods and materials.** We studied the microflora of air, soil and water in the southern regions of Uzbekistan using a number of methods, literature, experiments and scientific works. If the air is dry, the number of microbes in the air increases due to the dust raised from the soil.

Various plants and factories located in our region are also affected by air pollution. Besides, unlike water and soil, microbes maintain their life activity more in air. Pathogenic microorganisms in the surrounding air when the oral cavity or respiratory tract are infected: staphylococcus, streptococcus, whooping cough, whooping cough, tuberculosis, viruses, influenza, measles 'stimulators spread.

In our southern regions, the incidence rate of this disease is increasing significantly.

Many microorganisms are found in water because water is a natural environment. Microorganisms enter the water through the soil. If there are enough nutrients in the water, the number of microorganisms will increase greatly. Spring water is mainly used in the southern regions of Uzbekistan. We know that spring water has less microorganisms than other waters. There are a lot of springs in the south of Uzbekistan, these waters are distinguished by the purity of the minerals and healing properties. An example of these springs is the "Omonkhona" healing water center located in Surkhandarya region, the southernmost region of Uzbekistan. Although spring water is rich in minerals and lacks microorganisms, these waters cannot be drunk without inspection. Because some substances in spring waters are the main source of kidney stone disease. Due to the fact that our region is located in a mountainous area and we mainly use spring water, the incidence of kidney stones is higher in our region. Soil can be contaminated with toxic chemical elements and substances either naturally or as a result of anthropogenic influence. A change in the amount of any element can cause a person to be poisoned by the elements necessary for life. For any essential element, there is an optimal concentration range in humans, below this optimal range leads to deficiency, and above the optimal range causes toxicity, a pathological condition. Both deficiency and toxicity lead to disease and, in some cases, death. It can lead to pollution. There are many examples of this, for example, Tursunzoda aluminum plant in Tajikistan is one of the factors that cause great harm to the soil composition and human health, especially in the southern regions of Uzbekistan. The wind causes toxic substances rising into the air from the chimneys of the factories to change the composition of the soil as a result of damage to the bordering districts of Sariosiyo, Uzun and Denov. As a result of the pollution of the atmosphere and soil, not only economic, but also human health is harmed. Nutrient deficiency also results from the tendency of essential nutrients such as phosphorus and

sulfur to combine with aluminum and become unavailable to plants. In addition, according to the latest data, the level of harmful hydrogen fluoride in the human body is 2.5 times higher than the norm in Surkhandarya. As a result, the disease is increasing. Among women, anemia increased by 68.1 percent, goiter by 3.6 percent, and gastrointestinal diseases by 5.5 percent. In addition, hydrogen fluoride is considered extremely dangerous among toxic substances, due to its increasing amount, the surrounding soil and water sources are damaged, the productivity of agricultural crops, and the productivity of livestock are decreasing. The change in the ecology of the environment will definitely affect the soil composition. There are 14 elements that are essential for plant growth from soil, and many of these elements are also essential for human health.

### Conclusion.

Harmful gases in the air change the composition of the soil in the southern regions of Uzbekistan as a result of contamination by metals such as hydrogen fluoride and aluminum. which causes various diseases among the population. prevention of these problems is one of the main issues of today;

Except for the layers of the population due to the damage of air and water under the influence of various chemical substances; Big changes are also developing in the flora and fauna, causing the disappearance of rare plants and animals in the southern region;

This process has a great impact on the health of the population living in these areas, and increases the rate of birth defects and death. It is important for us to prevent air, water and soil pollution, and knowing that prevention is our duty, we must prevent these problems together.

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