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"HYGIENIC ASSESSMENT OF CHEMICAL, ORGANOLEPTIC AND BACTERIOLOGICAL INDICATORS OF DRINKING WATER" (ON THE EXAMPLE OF THE CITY OF TASHKENT)

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Abstract:

Water is of great importance in human life. Its importance is not only related to human and animal life, but also to the plant world. Providing the population with high-quality drinking water and the health indicators of the population, the elimination of many epidemic diseases, the improvement of residential areas and ensuring the sanitary comfort of residential buildings are closely related [8]. During the years of independence, Uzbekistan has done a lot of work to improve the provision of the population with high-quality drinking water. The consistent implementation of very important programs and projects for the development of the drinking water supply system has made it possible to significantly improve the water supply situation in cities and districts, including rural areas.

Keywords:

Relevance of the topic: Water is of great importance in human life. Its importance is not only related to human and animal life, but also to the plant world. Providing the population with high-quality drinking water and the health indicators of the population, the elimination of many epidemic diseases, the improvement of residential areas and ensuring the sanitary comfort of residential buildings are closely related [8]. During the years of independence, Uzbekistan has done a lot of work to improve the provision of the population with high-quality drinking water. The consistent implementation of very important programs and projects for the development of the drinking water supply system has made it possible to significantly improve the water supply situation in cities and districts, including rural areas.

Over the past six years alone, about 13 thousand kilometers of water pipelines and water supply networks, more than 1.6 thousand water extraction wells, as well as 1.4 thousand towers and reservoirs that create water pressure have been built and reconstructed. As a result, including through the attraction of grants and loans from international financial organizations, many settlements that were not provided with drinking water have been provided with water that meets modern requirements in terms of quality and safety. Resolution of the President of the Republic of Uzbekistan. On the Program for the Comprehensive Development and Modernization of Drinking Water Supply and Sewerage Systems in 2017-2021) [9,12].

At the same time, a number of unresolved problems of providing some regions with high-quality drinking water still remain, primarily the Republic of Karakalpakstan, Bukhara, Jizzakh, Kashkadarya, Surkhandarya, Syrdarya and Khorezm regions. [3,9]. The continuous growth of the population, the construction of new residential areas, the continuous expansion of cities and settlements require practical measures to radically improve the guaranteed water supply system, aimed at the modernization and rapid development of water intake facilities, water pipelines, pumping stations, distribution nodes and water supply networks, based on the active introduction of modern technologies that save energy and resources. Creating comfortable and convenient social and household conditions for the life of wide segments of the population, especially in rural areas, and achieving the provision of high-quality drinking water to consumers everywhere require increasing the efficiency of water supply services in the republic.

Goals and objectives of our work. The purpose of this research work is to study the state of drinking water supply on the example of the Yunusabad district of Tashkent city. Based on the archival materials of the district SEA and the Department of Water Resources and Sanitation and personal inspections, to carry out control of the quality of drinking water according to indicators, namely bacteriological indicators (total microbial count, coli-index); organoleptic indicators (odor, taste turbidity); analysis of laboratory tests conducted on physicochemical indicators.

Results obtained. A total of 2,101 samples were taken for laboratory tests of the quality of water from the central water supply system of the Yunusabad district of Tashkent city in 2021 and until August 2022. Personal inspections were carried out in the autumn-winter and spring-summer months with the participation of Yunusabad district SEA employees, a total of 360 samples were taken from tap water from various institutions and the samples were analyzed in the sanitary and hygienic laboratory of the district SEA. We saw that the chemical indicators in the 2101 sampled waters did not exceed the norm for any indicator and that the chemical indicators of the tap water at the points where the tests were conducted fully met the requirements of Uz Dst 950-2011, namely, the amount of fluorine - 0.7 mg / dm3; nitrates - 45 mg / dm3; oxidizability - 5.0 mg / dm3; total hardness - 10 mg / dm3; chlorides - 270-

350 mg / dm3; sulfates - 400-500 mg / dm3; iron -0.3 mg/dm3 (when we analyzed archival materials and annual reports and compared them with our obtained indicators, we witnessed the same result, that is, all chemical indicators of drinking water did not exceed the norm).

1850 samples were taken for the tests conducted to study the organoleptic indicators of drinking water. When the samples were tested in the laboratory, it was determined that the clarity of drinking water was 1.5-2.0 mg/dm3, taste was 1-2 points, smell was 2 points, and color was 21-250, which indicated that all organoleptic indicators of drinking water were at the required level of Uz Dst 950-2011. We have also witnessed that the organoleptic indicators of the water samples taken by us have not exceeded the norm anywhere, and the water has been determined to be suitable for drinking.

The analysis of 1783 samples taken to study the bacteriological indicators of the central water supply system of Yunusabad district showed the following: total microbial count of drinking water - 100/1 cm3; coli index - no more than 3 in 1 l of water; fresh fecal contamination index - 200 cm3; Coliphage BOE - 1 in 200 cm3. As can be seen from the figures, the bacteriological indicators of the water samples taken from the central water supply network meet the requirements of Uz Dst-950-2011.

We have also witnessed that the bacteriological indicators of the water samples taken by us have not exceeded the norm anywhere, and the water has been determined to be suitable for drinking.

CONCLUSION. The conducted analyses showed that, according to archival materials obtained from the sanitary and hygienic department of the Yunusabad district municipal administration of Tashkent city and the results of personal inspections, the chemical, organoleptic and bacteriological indicators of the quality of central tap water did not exceed the standards for any indicator, and the tap water at the tested points met the requirements of Uz Dst 950-2011 for chemical, organoleptic and bacteriological indicators.

LITERATURE:

1. Абдукадирова, Л. К., & Абдуллаева, Ў. Я. (2019). Тошкент шаҳри кичик ёшдаги болалар тарбияланаётган оилаларнинг ижтимоий-гигиеник холатини ўрганиш натижалари. Интернаука, (5-2), 47-48.
2. Abdukadirova, L. K., Jalolov, N. N., Nozimjonova, M. N., & Narzullayeva, U. S. (2022). Evaluation of practical nutrition of patients with chronic hepatitis.
3. Abduraimovna, A. D., Turg'unboyevna, Y. N., & Rustamovna, Q. S. (2023). QIZLARNI OILA VA JAMIYATDA O 'ZO 'RNINI TOPISHDA PSIXOLOGIK KO 'NIKMA VA MA'NAVIY YETUKLIKNI SHAKLLANTIRISH. *Scientific Impulse*, *1*(7), 310-313.
4. Абдукадирова, Л. К. (2019). ЭКОЛОГИК БАРҚАРОРЛИКНИ ТАЪМИНЛАШНИНГ МУҲИМ ОМИЛИ-АТМОСФЕРА ХАВОСИНИ МУҲОФАЗА ҚИЛИШДИР. Интернаука, (5-2), 49-50.
5. Абдукадирова, Л. К., & Умирбеков, О. Д. (2020). Даволаш профилактика муассасалари радиология бўлими хоналаридаги нурланиш доза даражасини аниқлаб баҳолаш. Интернаука, (2-2), 68-69.
6. Абдукадирова, Л. К. (2017). Соғлом турмуш тарзининг гигиеник асослари. Фан ва техника тараққиётида хотин-қизларнинг ўрни. Республика илмий-амалий анжумани маърузалар тўплами-2017.
7. Абдукадирова, Л. К. Она ва бола саломатлиги-миллат соғлиги. Тиббий таълимда инновацияларни қўллаш ва интеграл маърузаларни такомиллаштириш-2016 С96-97, 3.
8. Абдукадирова, Л. К., & Абдурахмонов, Б. О. (2019). РАДИОЛОГИЯ БЎЛИМИ ХОНАЛАРИДАГИ НУРЛАНИШ ДОЗА ДАРАЖАСИНИ АНИҚЛАБ БАХОЛАШ. Интернаука, (3-3), 30-31.
9. Абдукадирова, Л. К. (1999). Бир ёшгача бўлган болалар соғлиқ холатига ижтимоийгигиеник ва экологик омилларнинг таъсири. кандидатлик диссертацияси. кандидатлик диссертацияси.
10. Абдукадирова, Л. К., & Насимов, С. И. (2021). РАДИАЦИОН ОБЪЕКТЛАРНИ ЖОЙЛАШТИРИШ ВА ҲУДУДЛАРНИ ЗОНАЛАШТИРИШ ҚОИДАЛАРИ. ИНТЕРНАУКА, 47, 91.
11. Абдукадирова, Л. К. (1999). Бир ёшгача бўлган болалар соғлиқ холатига ижтимоийгигиеник ва экологик омилларнинг таъсири. кандидатлик диссертацияси. кандидатлик диссертацияси.
12. Абдукадирова, Л. К., & Насимов, С. И. (2021). РАДИАЦИОН ОБЪЕКТЛАРНИ ЖОЙЛАШТИРИШ ВА ҲУДУДЛАРНИ ЗОНАЛАШТИРИШ ҚОИДАЛАРИ. ИНТЕРНАУКА, 47, 91.
13. Абдукадырова, Л. К., Иброхимова, Д. И., & Гуломова, Ш. Х. (2023, February). ВЛИЯНИЕ БЕССОННИЦЫ НА ПСИХОЭМОЦИОНАЛЬНОЕ СОСТОЯНИЕ СТУДЕНТОВ. In Proceedings of International Conference on Educational Discoveries and Humanities (Vol. 2, No. 3, pp. 151-155).
14. Абдуқодирова, Л. К. (2022). Хомиладор аелларнинг хакикий овкатланиши ва витаминлар билан таъминланганлик холатини ураганиш ва бахолаш.
15. Абдукадирова, Л. К., Саломова, Ф. И., & Шарипова, С. А. (2024). Дарсни интерфаол методларда Ташкил этишнинг афзалликлари.
16. Akhmadaliyeva, N. O., Salomova, F. I., Sadullayeva, K. A., Abdukadirova, L. K., & Imamova, A. O. (2024). Nutrition of frequently ill preschool children in organized collectives. In BIO Web of Conferences (Vol. 84, p. 01011). EDP Sciences.
17. Абдукадирова, Л. К., Турсинбаев, А. А., & Халиуратов, Б. З. (2021). ЭКОЛОГИК МУАММОЛАР-ИЖТИМОИЙ СИЁСАТНИНГ АЖРАЛМАС ҚИСМИ. Интернаука, (1-3), 36-37.
18. Абдукадирова, Л. К., & Шарипова, С. А. (2021). Система мероприятий по защите окружающей среды от

радиоактивного загрянения.
19. Абдукадирова, Л. К. (2019). ЗАГРЯЗНЕНИЕ АТМОСФЕРНОГО ВОЗДУХА И ЗДОРОВЬЕ ЧЕЛОВЕКА. In EUROPEAN RESEARCH: INNOVATION IN SCIENCE, EDUCATION AND TECHNOLOGY (pp. 69-71).
20. Akhmadalieva, N. O., Salomova, F. I., Sadullaeva, K. A., Abdukadirova, L. K., Toshmatova, G. A., & Otajonov, I. O. (2021). Health State Of Teaching Staff Of Different Universities In The Republic Of Uzbekistan. NVEO-NATURAL VOLATILES & ESSENTIAL OILS Journal| NVEO, 15954-15967.
21. DS, K. S. R. X. (2022, May). PREVALENCE OF ALLERGIC DISEASES IN CHILDREN UNDER HOT CLIMATIC CONDITIONS. Materials of International Scientific-Practical Conference.«Only English: Topical Issues of Healthcare».
22. Ibodullaevna, S. F., Rustamovna, K. S., Gairatovna, A. D., & Abdurakhmonovna, S. H. (2022). PREVALENCE AND RISK FACTORS OF ALLERGIC DISEASES IN CHILDREN IN HOT CLIMATIC CONDITIONS. *Art of Medicine. International Medical Scientific Journal*, *2*(3).
23. Jalolov, N. N., Sobirov, O. G., Kabilzhonova, S. R., & Imamova, A. O. (2023). The role of a healthy lifestyle in the prevention of myocardial infarction.
24. Jalolov, N. N., Sobirov, O. G., Kabilzhonova, S. R., & Imamova, A. O. (2023). The role of a healthy lifestyle in the prevention of myocardial infarction.
25. Kh, M. M. (2022). Prevalence and risk factors of bronchial asthma in children. *Texas Journal of Medical Science*, *7*, 111-116.
26. Kobiljonova, S. R., Jalolov, N. N., Sharipova, S. A., & Mirsagatova, M. R. (2022). COMBINED SKIN AND RESPIRATORY MANIFESTATIONS OF FOOD ALLERGY IN CHILDREN.
27. Kobiljonova, S. R., Jalolov, N. N., Sharipova, S. A., & Mirsagatova, M. R. (2022). COMBINED SKIN AND RESPIRATORY MANIFESTATIONS OF FOOD ALLERGY IN CHILDREN.
28. Mirrahimova, M. X., Kobiljonova, S. R., & Sadullayevna, X. A. (2022). *Prevalence and risk factors of allergic disease in children* (Doctoral dissertation, INDIA).
29. Mirsagatova, M. R. (2023). Features of the Microflora of the Gastrointestinal Tract in Chronic Inflammatory Diseases of the Upper Digestive Organs in Children.
30. Rahimov, B. B., Salomova, F. I., Jalolov, N. N., Sultonov, E. Y., & Obloqulov, A. G. (2023). O ʻZBEKISTON RESPUBLIKASI NAVOIY SHAHRI HAVO SIFATINI BAHOLASH: MUAMMOLAR VA YECHIM YOLLARI.
31. Rihsitillaevna, M. M., Rustamovna, K. S., & Nodir o'g'li, J. N. (2023). CONSEQUENCES OF HYGIENIC POLLUTION FACTORS. *Spectrum Journal of Innovation, Reforms and Development*, *14*, 38-42.
32. Sadullayeva, X. A., Salomova, F. I., Mirsagatova, M. R., & Kobiljonova, S. R. (2023). Problems of Pollution of Reservoirs in the Conditions of Uzbekistan.
33. Salomova, F. I., Akhmadalieva, N. O., Sadullayeva Kh, A., Imamova, A. O., & Nigmatullayeva, D. Z. (2023). Hygienic characteristics of the social portrait, conditions and lifestyle of infectious diseases doctors.
34. Salomova, F. I., Akhmadalieva, N. O., Sharipova, S. A., & Abdukadirova, L. K. (2019). Social Portrait, Conditions, Lifestyle and Health of Universities Professors of The Republic of Uzbekistan in Modern Conditions. Central Asian Journal of Medicine, 2019(3), 93-103.
35. Salomova, F. I., Mirrahimova, M. X., Sadullayeva, X. A., & Kobiljonova, S. R. (2022, November). Prediction and prevention of food allergies in children. Uzbekistan-Japan International Conference «Energy-Earth-Environment-Engineering», November 17-18, 2022, Uzbek-Japan Innovation Center of Youth, Tashkent, Uzbekistan Uzbekistan-Japan International Conference «Energy-Earth-Environment-Engineering», November 17-18, 2022, Uzbek-Japan Innovation Center of Youth, Tashkent, Uzbekistan tezis Bet 81.
36. Salomova, F. I., Mirrakhimova, M. K., & Kobilzhonova, S. R. (2022, April). Influence of environmental factors on the development of atopic dermatitis in children. European journal of science archives conferences series.
37. Salomova, F. I., Rakhimov, B. B., Jalolov, N. N., Sultonov, E. Y., & Oblakulov, A. G. (2023). Atmospheric air of the city of Navoi: quality assessment. *British Journal of Global Ecology and Sustainable Development*, *15*, 121-125.
38. Salomova, F. I., Sadullaeva, H. A., Abdullaeva, D. G., & Kobilzhonova Sh, R. (2022). PREVALENCE AND RISK FACTORS OF ALLERGIC DISEASES IN CHILDREN IN HOT CLIMATIC CONDITIONS.
39. Salomova, F. I., Sharipova, S. A., Axmadalieva, N. O., Sadullaeva, X. A., & Abdukadirova, L. K. (2024). Zamonaviy ma'ruzalarning ta'lim tizimidagi o ʻrni.
40. Yarmukhamedova, N. F., Matkarimova, D. S., Bakieva, S. K., & Salomova, F. I. (2021). Features of the frequency of distribution of alleles and genotypes of polymorphisms of the gene Tnf-A (G-308a) in patients with rhinosinusitis and the assessment of their role in the development of fhis pathology.
41. Абдукадирова, Л. К. (2017). Соғлом турмуш тарзининг гигиеник асослари. *Фан ва техника тараққиѐтида хотин-қизларнинг ўрни. Республика илмий-амалий анжумани маърузалар тўплами-2017*.
42. Абдукадирова, Л. К. (2019). ЭКОЛОГИК БАРҚАРОРЛИКНИ ТАЪМИНЛАШНИНГ МУҲИМ ОМИЛИ-АТМОСФЕРА ХАВОСИНИ МУҲОФАЗА ҚИЛИШДИР. *Интернаука*, (5-2), 49-50.
43. Абдукадирова, Л. К. Она ва бола саломатлиги-миллат соғлиги. Тиббий таълимда инновацияларни қўллаш ва интеграл маърузаларни такомиллаштириш-2016 С96-97, 3.
44. Абдукадирова, Л. К., & Абдурахмонов, Б. О. (2019). РАДИОЛОГИЯ БЎЛИМИ ХОНАЛАРИДАГИ НУРЛАНИШ ДОЗА ДАРАЖАСИНИ АНИҚЛАБ БАХОЛАШ. *Интернаука*, (3-3), 30-31.

45. Абдукадирова, Л. К., & Умирбеков, О. Д. (2020). Даволаш профилактика муассасалари радиология бўлими хоналаридаги нурланиш доза даражасини аниқлаб баҳолаш. *Интернаука*, (2-2), 68-69.
46. Кобилжонова, Ш. Р., & Садуллаева, Х. А. (2021). IMPACTS OF THE ENVIRONM ENT ON HUMAN HEALTH.
47. Миррахимова, М. Х., Нишонбоева, Н. Ю., & Кобилжонова, Ш. Р. (2022). Атопик дерматит билан касалланган болаларда панкреатик етишмовчиликни коррекциялаш.
48. Миррахимова, М. Х., Садуллаева, Х. А., & Кобилжонова, Ш. Р. (2022). *Значение экологических факторов при бронхиальной астме у детей* (Doctoral dissertation, Россия).
49. Ниязова, О., & Саломова, Ф. (2022). Studying changes in the health state of school children arising from incorrect fiting.
50. Саломова, Ф. И. (2008). Особенности физического развития школьников с нарушениями осанки. *Вестник Санкт-Петербургской государственной медицинской академии им. ИИ Мечникова*, (4), 48-50.
51. Саломова, Ф. И., Абдукадирова, Л. К., Эштемиров, А. Н., & Эркинов, Ш. Э. (2023). Облучение пациентов при внутриполостной лучевой терапии.
52. Саломова, Ф. И. (2009). Функциональное состояние опорно-двигательного аппарата школьников с нарушениями осанки. *Травматология и ортопедия России*, (1), 70-73.
53. Саломова, Ф. И. (2010). Гигиенические основы профилактики нарушений осанки и начальных форм сколиозов у детей и подростков. *Автореф. дис. докт. мед. наук. Ташкент*.
54. Саломова, Ф. И., & Тошматова, Г. О. (2012). Эпидемиология мастопатии и особенности заболеваемости женщин, страдающих мастопатией. *Врач-аспирант*, *52*(3.1), 222-228.
55. Саломова, Ф. И., Ахмадалиева, Н. О., & Тошматова, Г. О. (2022). Шаҳар ва қишлоқ шароитида таълим олаётган ўқувчилар саломатлигига уларнинг овқатланишининг ва мактаб шароитининг аҳамияти.
56. Саломова, Ф. И., Ахмадалиева, Н. О., Ниязова, О. А., & Хайруллаева, Л. Г. (2022). Изучение и гигиеническая оценка питания студентов Высших учебных заведений (узбекистан, германия).
57. Саломова, Ф. И., Миррахимова, М. К., & Кобылжонова, С. Р. (2022). Влияние факторов внешней среды на развитие атопического дерматита у детей. In *Серия конференций Европейского журнала научных архивов*.
58. Саломова, Ф. И., Ниязова, О. А., & Мирсагатова, М. Р. (2022). Гигиеническая оценка расписания средних классов Общеобразовательных школ наманганской области.
59. Саломова, Ф. И., Садуллаева, Х. А., Кобилжонова, Ш. Р., & Гаибназаров, С. С. (2022). Генные модификации при аллергических заболеваниях и действие их на детей.
60. Шеркузиева, Г. Ф., Саломова, Ф. И., & Юлдашева, Ф. У. (2023). Результаты санитарно-химических исследований воды.