



## CONTROL OF NITRATES IN FOOD

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**Relevance.** B in the world wants every year more than 420,000 people died in the poor quality of food consumed , and about 600 million people - sanitar- that does not meet hygiene students food products to the consumer, after health violation. Also , food-related risks lead to the development of more than 200 acute and chronic diseases of the gastrointestinal tract, cancer gin [1] . The quality and safety of food is one of the most important issues in ensuring the health of the population. Food security is that the peculiarities of the production of food products to the he is up to and fro processing and service chain, each of which is associated with the risk. FAO is an international organization that oversees all aspects of the food chain and thereby implements a single overall vision of food security. This is facilitated by cooperation with the World Health Organization (WHO). Through their additional mandates, the FAO and WHO address a range of issues related to global food security and consumer health.

**The main part.** The role of agro-industry in the production of quality food products is invaluable, which also leads to an increase in demand for food products due to population growth. Accordingly, the excessive use of mineral fertilizers in recent years to increase agricultural productivity has led to the accumulation of nitrates in fruits and vegetables, especially in early spring due to the excess of nitrate in strawberries, spinach, cabbage, beets, watermelons and others. It is no secret that they cause diseases.

Also, due to excessive and irregular application of nitrogen fertilizers, the amount of nitrates in drinking water is increasing as a result of soil washing and absorption into groundwater. In addition, meat and meat products are also treated with nitrates, which give them color, taste and long-term storage properties.

Europe at the amount of nitrates academic average of 5% of processed meat, vegetables and more than 80% of the corresponding [2] . Excessive intake of nitrites in the body leads to serious health disorders (primarily in children and the elderly). According to the absorption of nitrates in the stomach. 8 - hour urine up to 90% of nitrates separated . After the clinical symptoms of poisoning by nitrates organism 1 6 hours after the visible and palpable enlarg ed liver and stomach, mixed with scleral subikterikligi dyspeptic disorders characterized by the form. As well as by changes in the nervous system - part of a general weakening, whiskers Kosher, drowsiness,



dizziness headache , symptoms of a violation of his eyes darkened, in line with movements can be monitored. Nitrates vasodilating effect of a decrease in arterial blood pressure, sinus arrhythmia, chest aching clearing breathing. N and excreted nitrate is one of the main components of the T-forming salts, fertilizers and many people depend on farming practices such fertilizers is growing over the years has led to increase in the level of irritation. Long years, the people of dietary sources of nitrates metemoglobinemiya and cause cancer , and that it is harmful to human. However, it has also been found that normally taken nitrates are important for the body.

Accordingly, daily norms of nitrates in food for consumption have been developed for the body. At the beginning of nitric oxide in the 1980 Road E in the body nitrates prosecution email will be generated ndogen di, this is about the safety of nitrate. Nitrate and nitrite consumption e ng advantage of the most discussed and described its positive effects on the cardiovascular system is established. Recently, cardiovascular and infectious diseases, to protect the sources of nitrate diet dishes were revealed.

Tests in animals have shown that dietary nitrates and nitrites lower blood pressure through their antioxidant properties. Such a decrease in blood pressure by nitrates is due to the conversion of nitrates to nitrites and NO, which requires an assessment of the risks and benefits associated with nitrates in our food and water supply. According to the World Health Organization, the permissible amount of nitrate in food is 3.7 mg per 1 kg per day for adults, and 222 mg for those weighing an average of 60 kg.[2] . Table 1 below shows the permissible levels of nitrate in melons and fruits. Exceeding these indicators of daily consumption of vegetables and melons is considered dangerous for human health.

**Table 1**  
**Permissible norm of nitrate content in vegetables and melons \***

Nº	Name	Nitrate content mg / kg
1	Greens	2000
2	Cucumber	150-400
3	Pumpkin	400
4	Carrots	250
5	Beets	1400
6	Cabbage	900
7	Potatoes	250
8	Tomatoes	150-300
9	Bell peppers	200
10	Onion	80
11	Grapes	60
12	Apple	60
13	Apricot	60
14	Strawberries	100
15	Melon	90





16	Watermelon	60
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\* - Information from the site <https://www.botanichka.ru/>

It should be noted that, at present, a number of scientists by the amount of food containing nitrates allowed by the standards of many scientists abroad A.T.Donald, D. Kay, M. Super H . V , HEES , D . Data collected by Mackenie et al. In our country, detailed information is provided in the textbooks and monographs recommended by Ph.D., Professor G. Shaykhova, Sh.I. Karimov. Hence, it is important to control the order in which.

**Conclusion.** Based on the above data, it is worth noting that in the conditions of the country there is not enough scientific work on the content of nitrates in food, which necessitates doctoral research in this area and the implementation of preventive measures among the population.

#### FOYDALANILGAN ADABIYOTLAR:

21. Norbuvaevna A. R. et al. Ecological and hygienic application of the accumulation of toxic substances in soil and food products under the influence of agricultural factors //ACADEMICIA: An International Multidisciplinary Research Journal. – 2021. – T. 11. – №. 11. – C. 836-840.

22. Norbuvaevna A. R., Nurmuminovna G. G., Rukhsora M. HYGIENIC ASSESSMENT OF THE EFFECT OF NITRATES ON HUMAN HEALTH //Archive of Conferences. – 2021. – C. 24-26.

23. Botirov, X. F., & Abdumuminova, R. N. (2013). Winter green manures and peach yields./The text of the materials of the scientific-practical conference" of UzBU and Veterinarian Research Institute factors of development, yield and quality improvement of intensive garden vineyards in the Republic"(12-13 may 2013).).

24. Abdumuminova, R. N. (2013). Environmental factors and peach yield./Materials of the scientific-practical conference devoted to the" Year of prosperity" of professors and teachers on the topic" science achievements and prospects of agrarian sphere"(10-11 April 2013).)- Part I. Samarkand, Samarkand State Agricultural Institute, 57-53.

25. Narbuvayevna, A. R. N., Murodulloyevna, Q. L., & Abduraxmanovna, U. N. (2022). Environmentally friendly product is a Pledge of our health!. Web of Scientist: International Scientific Research Journal, 3(02), 254-258.

26. Norbuvaevna, A. R., Ergashevna, K. D., Baxramovna, M. M., & Shomuratovna, B. R. (2021). Ecological and hygienic application of the accumulation of toxic substances in soil and food products under the influence of agricultural factors. ACADEMICIA: An International Multidisciplinary Research Journal, 11(11), 836-840.

27. Abdumuminova, R. N. (2016). Effective use of Natural Resources and techniques factors in gardening. Scientific application" Agro science" of the Journal of Agriculture of Uzbekistan.- Tashkent, 6, 42-43.



28. Shaw B, Nagy C, Fountain MT. Organic Control Strategies for Use in IPM of Invertebrate Pests in Apple and Pear Orchards. *Insects*. 2021;12(12).
29. Narbuvaevna AR, Karimovich BZ, Mahramovna MM. Improving Food Safety and Improving the Fundamentals of Reducing the Negative Effects on The Environment. *Eurasian Research Bulletin*. 2022;5:41-6.
30. Abdumuminova, R. N. (2017). Requirements of peach to external environmental factors. *Journal of Agriculture of Uzbekistan.-Tashkent*, 8, 40.
31. Norbuvaevna, A. R., Nurmuminovna, G. G., & Rukhsora, M. (2021, August). HYGIENIC ASSESSMENT OF THE EFFECT OF NITRATES ON HUMAN HEALTH. In *Archive of Conferences* (pp. 24-26).
32. Abdumuminova, R. N., Sh, B. R., & Bulyaev, Z. K. (2021). On The Importance Of The Human Body, Nitrates. *The American Journal of Medical Sciences and Pharmaceutical Research*, 3(04), 150-153.
33. Eshnazarovich TB, Norbuvaevna AR, Nurmuminovna GG. RESEARCH OF ECOLOGICAL AND HYGIENE ASPECTS OF AGROFAKTORS AFFECTING HUMAN HEALTH. *Web of Scientist: International Scientific Research Journal*. 2021;2(08):7-11
34. Mamurova G.N. Makhmudov K.Kh., Abdumuminova R.N., Mukhitdinov Sh.M. Study of environmental and hygienic aspects of soil pollution with heavy metals *PROBLEMS OF BIOLOGY AND MEDICINE* 2023/2 142 № 1
35. Тухтаров, Б. Э., Абдумуминова, Р. Н., & Гаппарова, Г. Н. (2021). ИНСОН САЛОМАТЛИГИГА ТАЪСИР ЭТУВЧИ АГРОФАКТОРЛАРНИНГ ЭКОЛОГО-ГИГИЕНИК ЖИХАТЛАРИНИ ТАДҚИҚ ЭТИШ. *Scientific progress*, 2(4), 80-86.
36. Тухтаров, Б., Абдумуминова, Р., Наимова, З., Хакимова, Х., & Каримов, А. (2024). Эколого-гигиеническая оценка загрязнения почв тяжелыми металлами и разработка мероприятий по его улучшению. *Каталог монографий*, 1(1), 2-110. извлечено от <https://inlibrary.uz/index.php/monographs/article/view/27813>
37. Abdumuminova R.N., Tursunqulova S.T., & O'tayev B.J. (2024). SHAFTOLINING DORIVOR XUSUSIYATALARINI TADQIQ ETISH. <https://doi.org/10.5281/zenodo.10500696>
38. Abdumuminova R.N., & Annaqulov S. A. Xasanova G. A. (2024). BOLALAR SALOMATLIK HOLATIGA MAKTAB JIHOZLARINING TAЪSIRINI GIGIYENIK BAHOLASH. <https://doi.org/10.5281/zenodo.10500703>
39. R.N. Abdumo'minova, G. A.Vafaxonova, & Y. M.Shakarboyeva. (2024). SHARQIY ZIRABULOQ AHOLISI HUDUDLARIDAGI OCHIQ SUV HAVZALARINING SANITAR-GELMINTOLOGIK HOLATI. <https://doi.org/10.5281/zenodo.10500719>
40. Abdumuminova R.N., Ismoilov Zoxid Yo'ldashevich Isayev G'ulom Bobonazarovich, & Jalolova Shoxida. (2024). ONTOGENESIS. DEVELOPMENT OF SKULL BONES. *UNIVERSAL JOURNAL OF MEDICAL AND NATURAL SCIENCES*, 2(9), 81-86. Retrieved from <https://humoscience.com/index.php/mc/article/view/2593>