

# VITOXIDE-NITRO®



the powerful antimicrobial action of atomic oxygen and silver  
kills 99.99 % of bacteria, viruses and fungi

## BROAD SPECTRUM OF ACTION

№ 22-1490-02-01

Fungicide. Cleaning and disinfection product for professional use.

### FUNGICIDE

Gardening: effective fight against bacteria, fungi and viruses, including Ervinia, Xanthomonas, Fusarium, Phytophthora, etc.

Disinfection of tools, equipment, machinery, disinfection of workwear.

Disinfection of industrial water, irrigation systems, biofilm removal.

### DISINFECTANT

Disinfection of domestic, medical, educational and commercial premises.

Disinfection of agricultural and veterinary facilities., poultry farming.

Disinfection of drinking water, disinfection of water in swimming pools.

Recommended for use by the Public Health Ministry of Ukraine.  
Approved for use in organic farming.

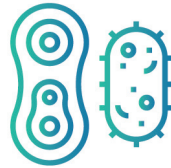
**IT DOES NOT CONTAIN CHLORINE OR ALCOHOL**



# TOP 8 AREAS OF APPLICATION



Horticulture, organic production: control of pathogens of bacterial, fungal and viral origin.



For current and final disinfection in foci of intestinal and drip infections.



For preventive disinfection in medical and educational institutions, enterprises, etc.



For disinfection of food industry, restaurant industry, and trade.



For sanitary treatment of veterinary facilities and poultry farming facilities.



For sanitary treatment of agricultural machinery, equipment, and transport.



For disinfection of drinking water.



For disinfection of process water, irrigation systems and biofilm removal.



For disinfection of water in swimming pools.

# COMPOSITION

## Active substance:

hydrogen peroxide 49 - 49.9% (pharmacological group: antiseptics and disinfectants, code D08A X01).

## Excipients:

silver nitrate as a stabilizing agent,  
distilled water to 100%

## Mechanism of action:

Numerous effects of «Vitoxide-Nitro» are achieved due to the fact that hydrogen peroxide is decomposed with the release of atomic oxygen, which works as a powerful disinfectant, has antiseptic and disinfecting effects against bacteria, fungi and viruses, and also provides cleansing and deodorizing effects. The presence of a stabilizer significantly enhances and prolongs its decontaminating effect, and also allows to increase the shelf life of the drug without losing its disinfecting properties.

# DRUG FORM:

Liquid for external use.

## Basic physical and chemical properties:

colorless, transparent, odorless liquid. It is mixed in all proportions with water, which makes it easy to create the required concentration of the working solution. Strong oxidizer. It is decomposed into water and atomic oxygen without forming toxic substances, so it is widely used in the production of organic products.

# KEY FEATURES



- It has a wide antimicrobial spectrum of action;
- Acts quickly and in low concentrations;
- Is economically affordable to use;
- Convenient for transportation and storage;
- Provides a fast decontaminating effect even in the presence of organic substances (blood, urine, sputum);
- It has cleaning properties, emulsifies fats well, removes protein - fat film from the treated surfaces, is easily washed off without leaving plaque;
- It is environmentally friendly, suitable for processing surfaces made of natural materials and for use in the production of organic products;
- It does not cause corrosion and does not damage the treated surfaces made of metal, glass, rubber, polymer materials, tiles, wood, porcelain, earthenware, equipment with varnish-paint, electroplating and polymer coatings;
- Non-toxic to humans;
- Does not contain chlorine and alcohols;
- Has good solubility in water;
- It is quite stable during storage.

# WHY VITOXIDE-NITRO



***Vitoxide-Nitro is an innovative fungicidal agent and disinfectant of combined action*** (fast contact and prolonged systemic action) with a wide range of antifungal, antiviral and antibacterial activity.

Over the years, more and more people and animals, valuable plant species, fruit and berry and nut crops, elite breeds in the veterinary industry, poultry, horticulture and agriculture have become victims of viruses, bacteria and fungi.

The widespread use of various disinfectants and fungicides only briefly allowed maintaining control over pathogenic microorganisms. And although today there are many broad-spectrum antibacterial and fungicidal agents with different mechanisms of action on the pathogenic cell, ***the appearance of resistance to them often negates the efforts of workers in various industries***. The rate at which the resistance of microorganisms to disinfectant solutions and fungicides is formed and spread is impressive. Drugs that were effective a few years ago are losing now ground and their use is forced to be limited. The main reasons for the total spread of this threatening phenomenon were excessive and often irrational use of disinfectants, including a wide range, uncontrolled systematic use of contact fungicides for preventive purposes. We do not take into account the fact that pathogens of even very similar diseases can vary dramatically, and viruses, fungi and bacteria, in turn, have different sensitivity (resistance) to various disinfectants. In addition, ***during laboratory diagnostics of diseases, as a rule, several types of pathogens are detected simultaneously*** – both bacteria and fungi, aerobes and anaerobes, mold and protozoa.

Therefore, often, in search of effective combinations, several drugs from different groups, contact fungicides and systemic agents are used, which, in turn, contributes to the development of polyresistance to disinfectants, further depletes the body, plant or animal weakened by the disease, and significantly increases the cost of «treatment».

That is why it was important the search for a disinfectant, so to speak, a **«universal soldier», endowed with a number of properties, namely:**

- easy to use and safe to work, suitable for use in various fields and at various stages of agricultural activity - processing of trees, berries, nut-bearing and grain crops, in the form of irrigation or spraying, processing of garden tools, containers for transportation or processing of products after contact with infected material; in veterinary medicine and poultry farming; on social and household facilities with a large crowd of people or contact with food;
- endowed with a wide range of antibacterial, virucidal, spore - and fungicidal properties that allow you to simultaneously affect different types of pathogens without harming humans, animals, plants and soil;
- economically affordable, which, thanks to a democratic pricing policy, allows you to use the product on large garden plots, fields, farms;
- it is environmentally friendly, completely decomposes to form organic substances, without harming the environment, and meets European quality standards for growing environmentally friendly, organic products.

***What is the uniqueness of the product and what ensures its rapid effect on bacteria, viruses and fungi?***

The mechanism of the action of Vitoxide-Nitro is the rapid destruction of cell membranes of pathogenic organisms and inhibition of key metabolic processes ***due to the universal decontaminating properties of atomic oxygen.***

The chemical structure of the product ensures its easy translaminar penetration into the plant, unhindered perfusion in xyletic tissues and free circulation in both acropetal and basipetal directions. At the same time, the high rate of reduction of peroxide with the formation of atomic oxygen ensures its instant powerful contact disinfection effect from the very first seconds on the surface of the affected tissue and hard surface, soil. Such **functional synergy provides a combined-rapid contact and prolonged systemic effect of the product**, including in forms resistant to the usual fungicides, anaerobic and putrefactive flora, providing significant advantages among other biological methods of plant protection. The presence of a stabilizer enhances and prolongs its decontaminating effect, and also allows you to significantly increase the shelf life of the drug without losing its disinfecting properties.

**«Vitoxide-Nitro» can be widely used as a broad-spectrum fungicide and disinfectant on closed objects (various premises, workshops, growing houses, greenhouses, etc.), for disinfection of various environmental objects, places of mass gathering of people, objects of the veterinary industry and animal husbandry, soil, planting material and plants.** It is used not only as a therapeutic, but also as a biologically safe preventive agent to combat pathogenic plant diseases, stimulating their immune mechanisms. Pre-sowing treatment of seeds with a solution of «Vitoxide-Nitro» in appropriate concentrations disinfects them, increasing the immunity of future plants, as a result of which seedlings become resistant to weather conditions. **The components of the product stimulate the formation of jasmine acid and increase the lignin content in plant tissues, thereby strengthening plant immunity and preventing the penetration of pathogenic microorganisms. This contributes to the formation of a «universal immune defense» of the plant and significantly increases its protective properties in the fight against various pathogenic pathogens, both bacteria and fungi, viruses, protozoa, mold, etc.**

***In addition, the use of aqueous solutions of VITOXIDE-Nitro helps to strengthen the root system of crops and improves their development. The product has the properties of a plant growth stimulator.*** When processing the seed material with a 1% solution of « Vitoxide-Nitro», an increase in the percentage of seed germination and their more active germination is observed, which is explained by the softening of the near-seed shell under the influence of an oxidizing oxygen atom and the removal of an inhibitor that inhibits growth processes. ***The hydrogen restoration reaction improves soil oxygen saturation (soil aeration), as well as activates the root system and better supplies plants with nutrients.***

***Due to the effective components of the product, a wide spectrum of antimicrobial action and the ability to achieve easily the required concentration when diluted with water, the possibilities of using Vitoxide-Nitro are unlimited:***

- Effective fight against pathogens of fungal etiology: Fusarium fungi (Fusarium head, Fusarium root rot, Fusarium root eater), Phytium, Rhizoctonia solani, (pathogens of root rot, rhizoctoniosis, root eater), Aphanomyces (aphanomycete root rot), Phoma (fomosis, zonal spotting), Actinomyces scabies G., Streptomyces scabies (scab of potato, beet), Fusarium Link, Phytium Pringsh (vascular necrosis), Pucciniastrum coryli (rust pathogen), Phytophthora of cucumbers, potatoes, tomatoes, Cercospora beticola (beet cercosporosis), Venturia inaequalis, Venturia pirina (scab of apple, pear), Karaculinia cerasi (cherry scab), Erysiphe communis (powdery mildew of sugar beet), Ramularia beticola (powdery mildew of pears), Phillactinia suffulta (causative agent of powdery mildew of hazelnuts), Ramularia beticola (sugar beet ramulariosis), Uromyces betae (sugar beet rust), Peronospora schachtii (false powdery mildew of sugar beet), Alternaria spp., Cladosporium spp. (causative agent of alternariosis of sugar beet, ear black, olive rot in nut crops), Helminthosporium avenae (helminthosporiosis of oats), Helminthosporium mteres (reticulated spotting of barley leaves), Pyrenophora tritici (wheat helminthosporiosis), Blumeria graminis (causative agent of powdery mildew), galligena (causative agent of common European cancer), Sphaeropsis malorum (black cancer), Septoria piricola (white spot of pear), etc., in a concentration of 0.5 - 2%, depending on each specific pathology;



● **Effective control of pathogens of bacterial origin:** Agrobacterium (the causative agent of bacterial cancer), Pseudomonas tumefaciens (goiter, sugar beet root cancer), Xanthomonas, Ervinia amylovora (pathogens of bacterial burn), Puccinia recondita (the causative agent of brown rust), Puccinia striiformis (the causative agent of yellow rust), Clavibacter michiganensis (ring potato rot), Ralstonia (brown rot) and others in a concentration of 0.5 -1.5% depending on each specific pathology;

● **Effective control of pathogens of viral origin: sugar beet chlorosis viruses, Beta virus S. (sugar beet mosaic), influenza, parainfluenza, SARS and others:**

- disinfection of irrigation systems and disinfection of industrial water; the removal and control of biofilm formation;

- decontamination of containers for storing and transporting products, containers, pallet boxes, etc.;

- disinfection of agricultural machinery, equipment, transport;

- disinfection of working areas - greenhouses, hangars, warehouses, etc.;

- treatment of garden tools, clothing after contact with particularly dangerous infections (mold fungi, anaerobes, pathogens of «bacterial burn», etc.).

- prevention of the spread of pathogenic organisms in the soil by recirculation of irrigation water in growing houses and greenhouse farms.

● **Animal husbandry and poultry farming:**

- disinfection of drinking water;
- complete disinfection of premises (floor, walls, ceiling, furniture), containers, equipment, including livestock drinkers, reusable consumables;
- disinfection of equipment and tools used in veterinary medicine.

● **Food industry:**

- disinfection of industrial water;
- complete disinfection of premises (floor, walls, ceiling, furniture), containers, equipment, materials.

● **Medicine:**

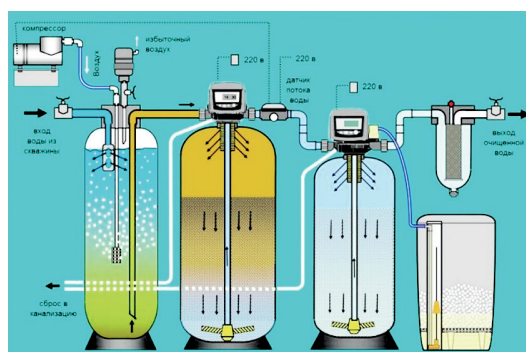
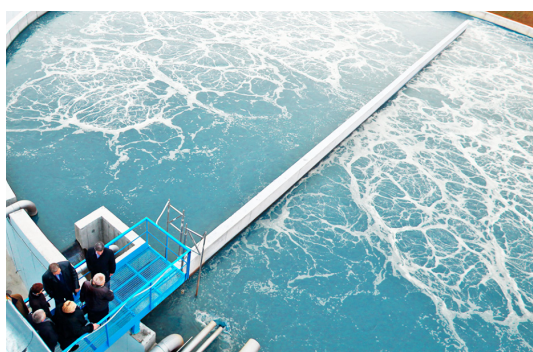
- disinfection of surfaces of hard furniture, plumbing equipment, patient care items in medical institutions, as well as in clinical, microbiological and other laboratories, for the treatment of sanitary transport and isolettes.
- disinfection of premises, work surfaces, furniture of medical institutions, in order to control the prevalence of particularly dangerous infections, such as tuberculosis, coronavirus infection, etc.  
It can be used for both manual and mechanized processing.

● **Other applications:**

- **disinfection of liquids in distillery dreg storage tanks** (withdrawal from alcohol production) due to the destruction of organic sediment fractions, followed by a significant reduction in smell;
- due to its wide range of antimicrobial activity, as well as its unique ability to prevent the formation and removal of biofilms, it is effectively used **for disinfection of swimming pools and cleaning of water systems**;
- in appropriate concentrations it is used in the woodworking industry for disinfection of wood and its derivatives, tools, manual and mechanized equipment, etc.

The powerful disinfecting properties of VITOXIDE-Nitro, confirmed by laboratory expertise, as well as its biological safety as an organic decontaminating agent, make it possible to effectively use the product for water disinfection in centralized, autonomous and non-centralized water supply; for disinfection of surface and underground water in reservoirs and tanks (including water from mine wells, pump rooms, captages, wells), bottling points; water at treatment plants, as well as disinfection and post-treatment of water in order to improve its quality and safety to the level of drinking water, in the field and in the event of emergencies (natural disasters, military operations and various accidents related to pollution of drinking water and household water).

- **IT DOES NOT CONTAIN CHLORINE.**
- **ODORLESS.**
- **IT ACTS QUICKLY AND IN LOW CONCENTRATIONS.**
- **NEUTRALIZES UP TO 99.9% OF PATHOGENS PRESENT IN WATER.**
- **NON-TOXIC TO HUMANS AND THE ENVIRONMENT.**





## FUNGICIDE

- Gardening: the fight against pathogens of bacterial (*Xanthomonas*, *Erwinia*, etc.), fungal (*Fusarium*, *Phytophthora*, *Alternaria alternate*, etc.) and viral (TMV, CMV) etiology;
- Treatment of garden tools and clothing after contact with particularly dangerous infections;
- For disinfection of process water, irrigation systems and biofilm removal;
- Disinfection of hives, including those affected by American and European rot;
- Disinfection of workers' workwear in apiaries.



# PERFORMANCE INDICATORS

Fungicide «VITOXIDE-Nitro», applied in concentrations of 0.5 and 1.5%, in laboratory conditions, to a number of the main pathogens of fungal and bacterial origin of diseases of cultivated plants, according to the results of testing the laboratory of seed and phytopathological expertise RHIZA, according to domestic and international regulatory documents DSTU, DSTU ISO, DSTU IES, DSTU EN.

№	Латинська назва збудника	Хвороба рослин
80	<i>Erwinia amylovora</i>	Bacterial burn
80	<i>Pseudomonas syringae</i>	Bacteriosis
81	<i>Penicillium</i> spp. <i>Aspergillus</i> spp. <i>Rhizopus nigricans</i>	Mold, rot
82	<i>Fusarium oxisporum</i>	Fusarium rot, fruit cancer
82	<i>Phomopsis vaccinii</i>	Stem blight
82	<i>Septoria piricola</i>	Leaf spotting
83	<i>Alternaria</i> spp.	Alternarium rot, spots
83	<i>Cladosporium</i> spp.	Olive mold, rot
83	<i>Botrytis</i> spp.	Grey rot
84	<i>Pythium</i> spp.	Pitious rot
84	<i>Phytophthora infestans</i>	Late blight rot
84	<i>Peronospora</i> spp.	False powdery mildew

Variant №	Concentration %	Pathogen	Average value and error		Disinfectant effect %		Necessary number of days for pathogens' recovery
			deconstructed colonies by processing	Rehabilitation on the 10th day	deconstructed colonies by processing	on the 10th day	
20P-80	0,5	Erwinia amylovora	36,25±0,35	87,02±0,70	36	23	13
		Pseudomonas syringae	41,27±0,29	89,36±0,58	41	11	11
20P-80	1,5	Erwinia amylovora	92,0±0,12	64,12±0,24	92	36	16
		Pseudomonas syringae	94,28±0,18	60,11±0,22	94	40	17
20P-81	0,5	Penicillium spp.	92,97±0,42	45,52±0,52	93	54	22
		Aspergillus spp. Rhizopus nigricans	99,82±0,35	15,32±0,88	100	85	67
20P-82	0,5	Fusarium oxisporum	91,22±0,52	51,20±0,68	91	49	20
		Phomopsis vaccinii Septoria piricola	95,32±0,82	26,32±0,41	95	74	38
20P-83	0,5	Alternaria spp.	95,18±0,15	65,38±0,23	95	35	15
		Cladosporium spp. Botrytis spp.	99,92±0,05	44,12±0,15	100	56	23
20P-84	0,5	Pythium spp.	52,39±0,43	85,39±0,21	52	15	12
		Phytophthora infestans Peronospora spp.	89,29±0,64	64,48±0,46	89	36	16

## SCHEME OF APPLICATION OF «VITOXIDE-NITRO» ON FRUIT AND BERRY CROPS

Culture	Beginning of sap flow	Beginning of the vegetation	Flowering	Beginning of ovary formation-collection	After collection
Grain, stonefruit, vineyards and berry crops	2%	1-1,5%	0,5%	1-1,5%	1,5 -2%
Nut-bearing plants	2%	1-1,5 %	0,5%	1-1,5%	1,5 -2%
* Fertigation		1,5-2%			1,5 -2%

Processing is carried out at intervals of 7-10 days. During a prolonged rainy period, we reduce the intervals between treatments to 5-7 days, if necessary, increasing the concentration of the solution, but not more than 2.5%, and reducing the rate of discharge per 1 ha, if the leaves are wet.

Aluminum fosetyl should not be used simultaneously with VITOXIDE-Nitro solution, or the interval after applying VITOXIDE-Nitro should be 2-3 weeks.

\*If it is necessary to flush drip lines and fertigation systems, the concentration of the working solution is 2-3%.



# SCHEME OF APPLICATION OF «VITOXIDE-NITRO» ON VEGETABLES

Culture	Processing before planting	Beginning of the vegetation-flowering	Flowering	Vegetation period-collection
Vegetables	1,5 -2%	1-1,5%	0,5%	1-1,5%
Greenstuff	1,5 -2%	1-1,5%	0,5%	1-1,5%
Potatoes	1,5 -2%	1-1,5%	0,5%	1-1,5%
Cucurbits	1,5 -2%	1-1,5%	0,5%	1-1,5%
* Fertigation		1,5 -2%		1,5 -2%

Processing is carried out at intervals of 7-10 days. During a prolonged rainy period, we reduce the intervals between treatments to 5-7 days, if necessary, increasing the concentration of the solution, but not more than 2.5%, and reducing the rate of discharge per 1 ha, if the leaves are wet.

Aluminum fosetyl should not be used simultaneously with VITOXIDE-Nitro solution, or the interval after applying VITOXIDE-Nitro should be 2-3 weeks.

**\*Processing (immersion) of seeds is carried out one day before planting, sowing!**





## SCHEME OF APPLICATION OF «VITOXIDE-NITRO» ON DECORATIVE PLANTS

Culture	Beginning of the vegetation	Flowering	Vegetation period	Vegetation end
Coniferous trees and bushes	1-1,5 %	0,5 %	1-1,5 %	1,5 -2%
Deciduous trees and bushes	1-1,5 %	0,5 %	1-1,5 %	1-1,5%
Lianes	1-1,5%	0,5 %	1-1,5 %	1-1,5%
Decorative plants	1-1,5%	0,5 %	1-1,5 %	1-1,5%
* Fertigation	1,5 -2%			1,5 -2 %

Processing is carried out at intervals of 7-10 days. During a prolonged rainy period, we reduce the intervals between treatments to 5-7 days, if necessary, increasing the concentration of the solution, but not more than 2.5%, and reducing the rate of discharge per 1 ha, if the leaves are wet.

Aluminum fosetyl should not be used simultaneously with VITOXIDE-Nitro solution, or the interval after applying VITOXIDE-Nitro should be 2-3 weeks.

\* If it is necessary to flush drip lines and fertigation systems, the concentration of the working solution is 2-3%.



## SCHEME OF APPLICATION OF «VITOXIDE-NITRO» ON VEGETABLES

Culture	Processing of seeds before planting	Beginning of the vegetation -flowering	Flowering	Vegetation period -collection
Grain crops	1,5 -2%	1-1,5 %	1%	1-1,5 %
Legumes	1,5 -2%	1-1,5 %	1%	1-1,5%
Oilseeds	1,5 -2%	1-1,5 %	1%	1-1,5%
Root vegetables	1,5 -2%	1-1,5 %	1%	1-1,5%
Feed products	1,5 -2%	1-1,5 %	1%	1-1,5 %

Processing is carried out at intervals of 7-10 days. During a prolonged rainy period, we reduce the intervals between treatments to 5-7 days, if necessary, increasing the concentration of the solution, but not more than 2.5%, and reducing the rate of discharge per 1 ha, if the leaves are wet.

Aluminum fosetyl should not be used simultaneously with VITOXIDE-Nitro solution, or the interval after applying VITOXIDE-Nitro should be 2-3 weeks.

**\*Processing of seeds is carried out one day before sowing!**



Powerful fungicidal properties, confirmed by laboratory expertise, and a wide range of antibacterial, spore - and fungicidal properties of the drug «VITOXIDE-Nitro» allow it to be effectively used both for preventive disinfection purposes and with a pronounced therapeutic effect, as well as simultaneously affect various types of pathogens without harming the environment.

VITOXIDE-Nitro is an environmentally friendly fungicide-disinfectant that completely decomposes with the formation of organic substances, without harming the environment, and meets European quality standards when growing environmentally friendly, organic products.



# DISINFECTION, DECONTAMINATION

Area	Concentration, dosage	Method of application of the product, exposure
Fruit storage facilities, greenhouses, hangars, warehouses, etc.	3 - 6% of the solution	Spraying or washing
equipment (lines) for washing of vegetables, fruit, mushrooms (bubbling-vortex washing machine with elevator, brush washing machine, inspection conveyor, roller, etc.)	1-2% of the solution (1-2 liters of the drug per 100 liters of water)	Washing, including directly adding to water for washing or immersing individual parts in the solution for a period of 5 minutes, depending on the degree of contamination and after preliminary mechanical cleaning with detergent (if necessary)
Containers for food transportation, boxes, cases, seedling containers, etc.	1-3% of the solution (1-3 liters of the drug per 100 liters of water)	Spraying, washing or immersion in the solution for 5-15 minutes, depending on the degree of danger of diseases and after preliminary mechanical cleaning with detergent. Rinse with water and dry.
Processing of garden tools, clothing after contact with particularly dangerous infections (mold, anaerobes, pathogens of bacterial burns, etc..)	3-6% of the solution (3-6 liters of the drug per 100 liters of water)	Spraying, washing or immersion in the solution for 5-15 minutes, depending on the degree of danger of diseases and after preliminary mechanical cleaning with detergent. Rinse with water and dry.



# DESINFECTANT

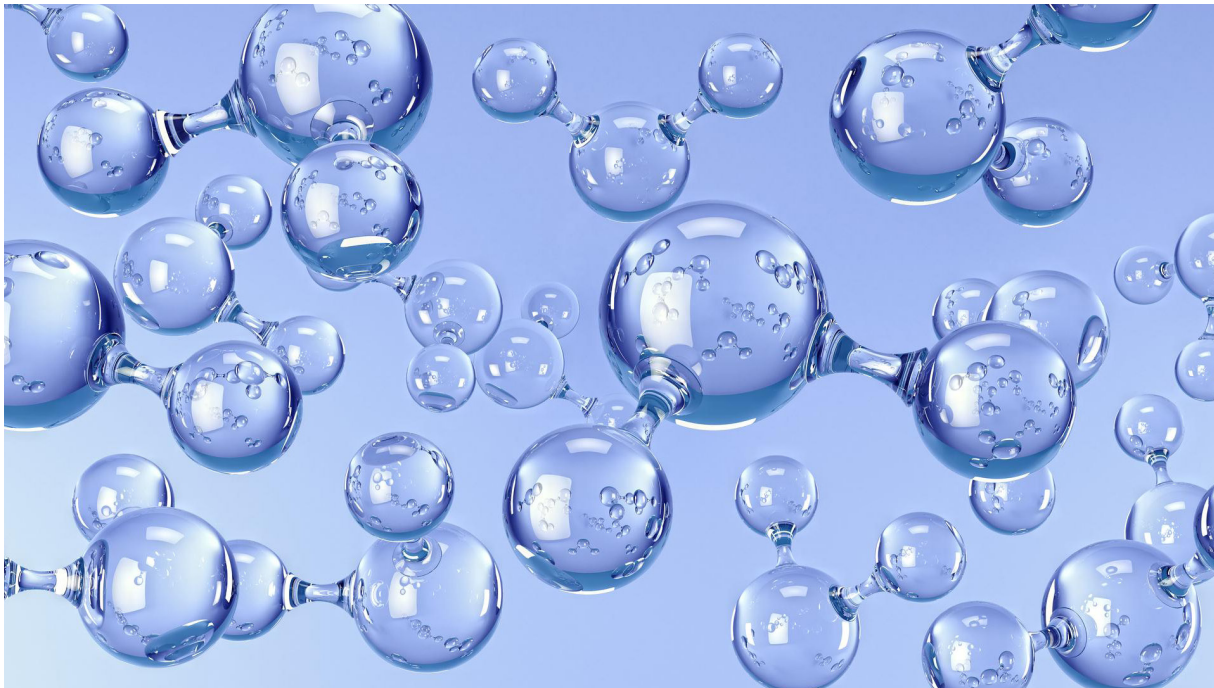
- Rapid disinfection of domestic, medical, educational and commercial premises;
- Disinfection of premises (greenhouses, hangars, warehouses, etc.), namely floors, walls, smooth surfaces;
- Disinfection of agricultural machinery, equipment, transport;
- Disinfection of equipment (lines) for washing vegetables, berries and mushrooms;
- Disinfection of food transportation containers, cases, pallet boxes, seedling boxes, etc.



## Spectrum of antimicrobial activity :

Vitoxide-Nitro has powerful **bactericidal** (staphylococci, streptococci, corinobacteria, various gram+ and Gram-bacteria, including S.aureus, E.coli, P.aeruginosa, Enterococcus hirae, bacteria of Legionella and Salmonella, aerobes and anaerobes, etc.), **antituberculous (mycobactericidal)** including against M.tuberculosis,

M.terrae, virucidal (including pathogens of all types of influenza, parainfluenza, polio, adeno-, Entero- (including polio), Corona-, rhinoviruses, respiratory syntitial infection, rotavirus, adenovirus infections, SARS, hepatitis A, B, C, HIV, etc.), **fungicidal** (including pathogens of various types of Mycoses and pseudomycoses, fungi of Candida, mold fungi, mold, including mold fungi A.niger, etc.) and **sporocidal properties** (including against spores of B.subtilis, B. cereus, B.anthraxis, C.botulinum, C.sporogenes, C.perfringens, C.difficile, A.niger). In addition, Vitoxide-Nitro can be used in foci of **particularly dangerous and zoonotic infections** (SARS, plague, cholera, anthrax, avian and swine flu, etc.).



# MODE OF APPLICATION

## FIELD OF APPLICATION

Rapid disinfection of domestic, medical, educational and commercial premises:

- Apartments and houses;
- Educational and technical institutions of various accreditation levels, including children's educational institutions;
- Wholesale and retail trade locations, restaurants;
- Warehouses and facilities for railway and road transport support;
- Medical, dental, and veterinary clinics;
- Pharmacies;
- Sports and recreation complexes;
- Recreation and entertainment establishments, communal facilities (hotels, campsites, dormitories, laundries, dry cleaners, baths, saunas, etc.);
- Public facilities (hairdressers, beauty salons, manicures, pedicures, beauty salons).

### Concentration and dosage regimen

3 - 6% Solution (3-6 liters of product per 100 liters of water)

### Method of application of the product, exposure.

Washing or spraying (if necessary - after the preliminary mechanical cleaning with detergents, in case of massive contamination).  
Leave to dry completely.

- **For current and final disinfection in foci of intestinal and drip infections** of bacterial, fungal and viral etiology;
- **For preventive disinfection** in healthcare institutions, in enterprises of perfume and cosmetics, food industry, pharmacies (pharmacy warehouses, points, kiosks), in preschool and school institutions, in educational institutions of various accreditation levels, in health facilities (rest homes, sanatoriums, dispensaries). In the sphere of recreation and entertainment (hotels, dormitories, swimming pools, saunas, baths, public toilets), at public facilities (hairdressers, beauty salons, beauty offices, laundries, dry cleaners, etc.), at public catering and trade enterprises, at enterprises of the alcohol processing industry and non-alcoholic products, at facilities for providing railway, automobile, water and air transport, communication institutions, banking institutions, etc.;
- **For sanitary treatment of veterinary facilities**, premises and equipment at enterprises of the meat, dairy and poultry processing industries, including washing and disinfection of milking equipment, dishes, tankers on dairy farms;
- **For sanitary treatment of agricultural machinery, equipment, transport, disinfection** of equipment (lines) for washing vegetables, berries and mushrooms (bubbling-vortex washing machine with elevator, brush washing machine, blowing machine, inspection conveyor, roller, etc.), disinfection of containers for transporting food, cases, pallet boxes, seedling boxes, etc.;
- **For washing and disinfecting workwear** of employees of the medical and pharmaceutical industries, veterinary medicine, animal breeding and processing industry enterprises;



● **Disinfection of water.** Water supply systems create a favorable environment for the development of various microorganisms and the formation of biofilms. Bacteria that live in biofilms are often resistant to conventional disinfectants and, for example, pose a risk to human health. **Vitoxide-Nitro destroys 99.99%** of bacteria, viruses and fungi, does not contain chlorine and alcohol, biologically breaks down into natural products - water and oxygen, without forming toxic substances for humans and the environment.

## TOXICITY AND SAFETY OF THE PRODUCT.

According to the parameters of acute toxicity according to GOST 12.1.007-76, **working solutions** of Vitoxide-Nitro belong to the 4th hazard class (low-hazard substances), when applied to the skin – to the 4th class (low-toxic substances). There are no cumulative properties. The product in the form of a preparation in conditions of free evaporation belongs to the 4th hazard class (low-risk substance) when inhaled. When inhaled in the form of vapors and aerosol, **the concentrated product** can cause irritation of the mucous membranes of the respiratory organs and eyes. Working solutions in concentrations up to 6% do not have a local irritant, skin - resorptive and sensitizing effect on the skin, directly the concentrate can cause irritation of the skin, eyes and mucous membranes. It is not a mutagen or carcinogen, and does not exhibit embryotoxic, teratogenic, or gonadotropic properties.

## STORAGE CONDITIONS:

Store in the original packaging, in a cool, dark place, at a temperature of 5 to 25 degrees. Strong oxidizer. Store separately from organic products, combustible mixtures, and heavy metals (cotton wool, fuel and lubricants, iron, copper, manganese, nickel, chromium, etc.). A concentrated aqueous solution is explosive. Avoid overheating and direct sunlight.

Disinfection of premises (greenhouses, hangars, warehouses, etc.), namely, floors, walls, smooth surfaces.	3-6 % of the solution (3-6l of the product per 100 liters of water)	Washing or spraying (if necessary-after preliminary mechanical cleaning with detergents, in case of massive contamination). Leave to dry completely.
Disinfection of agricultural machinery, equipment, and transport.	3 - 5% solution (3 - 5 liters of product per 100 liters of water)	Spraying, washing or immersion in the solution for 5 minutes. Depending on the degree of contamination and after preliminary mechanical cleaning with detergents. Rinse with water. Dry it.
Disinfection of equipment (lines) for washing vegetables, berries and mushrooms (bubbling-vortex washing machine with elevator, brush washing machine, inspection conveyor, roller, etc.).	1 - 2% solution (1-2 liters of product per 100 liters of water)	Washing, including directly with the addition of water for washing, or immersion of individual parts in the solution for a period of 5 minutes. depending on the degree of contamination and after preliminary mechanical cleaning with detergents (if necessary). Rinse with water. Dry it.
Decontamination of food transportation containers, cases, pallet boxes, seedling boxes, etc.	1 - 3% solution (1-3 liters of product per 100 liters of water)	Spraying, washing or immersion in the solution for 15 minutes, depending on the degree of contamination and the degree of danger of diseases, and after preliminary mechanical cleaning with detergents. Rinse with water. Dry it.
Complete disinfection of premises (floor, walls, ceiling, surfaces) where livestock and poultry are located.	2-6 % solution (2-6 liters of product per 100 liters of water)	Spraying after preliminary mechanical cleaning with detergents. Minimum exposure: bacteria, fungi, viruses - 30 min. Leave to dry completely.
Disinfection of equipment and tools used in veterinary medicine, containers, equipment, including drinking bowls for livestock, reusable consumables, including syringes-catheters for artificial insemination of livestock.	0,5 - 3 % solution (0,5 - 3 liters of product per 100 liters of water)	Spraying, washing or immersion in the solution for 5 minutes. depending on the degree of contamination and after preliminary mechanical cleaning with detergents. Rinse with water (in case of disinfection of syringes-catheters for artificial insemination of livestock, rinse with isotonic sodium chloride solution). Dry it.
Disinfection of the skin of hands.	0,5 - 1 % solution (0,5 - 1 liters of product per 100 liters of water)	Treatment of the skin of the hands for 10 - 15 seconds, after preliminary mechanical cleaning with detergents.
Disinfection of water in swimming pools.	0,5 - 1 % solution (0,5 - 1 liters of product per 100 liters of water)	Direct addition to water.
Decontamination of liquid in distillers storage tanks (due to destruction of protein fractions of sediment), followed by a significant reduction in odour.	5 - 10 % solution (5 -10 liters of product per 100 liters of water)	Direct addition of a solution of the appropriate concentration to the Bard storage tank.
Disinfection of wood and its derivatives in the woodworking industry, tools, manual and mechanized equipment.	3 - 6 % solution (3 -6 liters of product per 100 liters of water)	Spraying after preliminary mechanical cleaning with detergents. The minimum exposure time is 30 minutes. Leave to dry completely.



# PARTNERS



ТУ У 20.2-2657612836-001:2020

ТУ У 20.2-2657612836-002:2020

**Product form:** PE cans of 1.1, 5, 10, 1000 L, equipped with special gas-permeable covers.

**Shelf life:** 2 years from the date of manufacture.

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Made in Ukraine

