



NANOBIOCIDE

NF

Strong Non-chemical Disinfectants

Based on Nanotechnology

(For use in livestock farms, slaughtering houses and packaging industries)

Antibacterial, Antiviral and Antifungal

The first product licensed by Iran Veterinary Organization in nanotechnology



ISO 9001 :2015
ISO 14001:2015
ISO 45001:2018

GMP
CE

www.nanochem.ir



Design: Javanmehdi.com



Pharmaceutical group: Disinfectant
Physical form: Liquid, odorless
Active substance: 4000ppm silver nanoparticles
Spectrum of activity: various types of enveloped and non-enveloped viruses, Gram-positive and Gram-negative bacteria, fungi, spores, oocysts and protozoa. Nano-silver is recommended in many developed countries for disinfection of sensitive and high-risk areas
Target species: Livestock
Distinctive properties:

- A very long shelf life (no degradation or evaporation)
- No microbial resistance observed
- No inhalation, cellular, oral or skin toxicity to the consumer and/or environment
- No corrosive effect upon treated surfaces and tools
- Effective at both acidic and alkaline media
- Effective over a wide range of temperatures.

Applications(surface,air,water,food):

- For fogging to prevent the spread of various diseases, especially viral infections such as foot-and-mouth disease (FMD)
- Sanitization of milking facilities and machines (tanks, containers, claws and pipelines)
- Elimination of biofilm formation in water distribution systems
- Disinfection of surfaces, and entrance foot-dips
- Disinfection of maternity pens, and examination, surgery, inoculation and vaccination instruments and umbilical cords of newborn calves

- Disinfection of slaughtering and processing plants
- To prevent the rapid spread of diseases in the herd and accelerate its recovery
- A substantial reduction of offensive odors caused by wastes and pollutant gases such as ammonia, hydrogen sulfide, etc
- Toxin disinfectant to prevent and treat cattle digital dermatitis infection
- Treatment of FMD wounds
- Flea and annoying insects repellent

Where to use	Concentration (Liter of NANO BIO CIDE per liter of water)	How to use
All surfaces and feeders after cleaning	1/200 -1/400	One liter of ready-to-use solution shall be applied to an area of 50 m ² . For the first time, it should be diluted 1 to 80, and 1/200-1/400 in subsequent series
Disinfection of milking machines	1/200 -1/400	Apply NANO BIO CIDE for 10-20 minutes before and after each use of the equipment and then rinse.
Toxin disinfection	1/200	May be used in basins by spraying on toxins
Disinfection of milking liners	1/200	In the form of immersion
Disinfection of meat transporting vehicles	1/200	One liter of ready-to-use solution shall be applied to an area of 50 m ² . The best result will be achieved in 10-20 minutes before rinsing.
Disinfection of the bed	1/200 – 1/400	One liter of ready-to-use solution shall be applied to an area of 50 m ² .
Disinfection of drinking water, reservoirs and prevention of biofilm formation	1/8000 – 1/10000	In order to remove biofilm from the drinking water system at the beginning of each period, use 0.5% NANO BIO CIDE solution for 4-6 hours and then wash all the pipes completely with hot and high-pressure water and then 1/10000 permanently.
Air disinfection and fogging in the presence of livestock	1/500	One liter of ready-to-use solution shall be applied to an area of 50 m ² .

Cautions:

Discontinue use of NANO BIOCIDES 24hours before and after vaccination.

Dilute NANO BIOCIDES solution in chlorine-free water, when possible.

Production and packages:

Ready-to-use product is available in 1 and 4-liter polyethylene containers and 500-ml spray bottles, with an expiry date of two years after production. with an expiry date of two years after production.





NANOBIOCIDE

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Strong Non-chemical Disinfectants

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(For use in poultry farms)

Antibacterial, Antiviral and Antifungal

The first product licensed by Iran Veterinary
Organization in nanotechnology



شماره پروژه فناوری نانو
97-177-D.1
TVC: 973590017144000



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GMP
CE

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Dr. Fariba Ghannavi

NANO BIOCIDES

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Pharmaceutical group: Disinfectant

Physical form: Liquid, odorless

Active substance: 4000ppm silver nanoparticles

Spectrum of activity: various types of enveloped and non-enveloped viruses, Gram-positive and Gram-negative bacteria, fungi, spores, oocysts and protozoa. Nano-silver is recommended in many developed countries for disinfection of sensitive and high-risk areas.

Target species: Poultry

Distinctive properties:

- A very long shelf life (no degradation or evaporation)
- Ideal in fogging systems
- No microbial resistance observed
- No inhalation, cellular, oral or skin toxicity to the consumer and/or environment
- No corrosive effect upon treated surfaces and tools
- Effective at both acidic and alkaline media
- Effective over a wide range of temperatures

Applications (surface, air, water, food):

- Fogging to impede the spread of respiratory infections
- Disinfection of chicken battery cages and incubators
- Elimination of biofilm formation in water distribution systems
- Sanitizing all surfaces, such as farmyards, roofs, walls, beds, windows, feeders and drinkers
- Disinfection of foot dip at house entrance
- Sanitization of poultry transporting vehicles
- Disinfection of slaughtering and processing plants
- Disinfection of air conditioner filters

The benefits of NANO BIOCIDES in poultry rearers:

- Prevention and control of viral pathogens such as influenza, infectious bronchitis and Newcastle disease in farms
- A substantial reduction of offensive odors caused by wastes and pollutant gases such as ammonia, hydrogen sulfide, etc.
- Improved conversion ratio
- Conditioning of the indoor air, resulting in the flock freshness
- A significant enhancement in cost/energy efficiency in production, treatment, and increased profitability

Where to use	Concentration (Liter of NANO BIO CIDES per liter of water)	How to use
All surfaces and feeders after cleaning	1/200 -1/400	One liter of ready-to-use solution shall be applied to an area of 50 m ² . For the first time, it should be diluted 1 to 80, and 1/200-1/400 in subsequent series
Feeders, drinkers, straws and beds	1/200 -1/400	Apply NANO BIO CIDES for 10-20 minutes before and after each use of the equipment and then rinse.
Air disinfection and fogging in the presence of poultry	1/500	One liter of ready-to-use solution shall be applied to an area of 50 m ² .
Disinfection of drinking water, reservoirs and prevention of biofilm formation	1/8000 - 1/10000	In order to remove biofilm from the drinking water system at the beginning of each period, use 0.5% NANO BIO CIDES solution for 4-6 hours and then wash all the pipes completely with hot and high-pressure water and then 1/10000 permanently.

Cautions:

Discontinue use of NANO BIOCIDES 24 hours before and after vaccination. Dilute NANO BIOCIDES solution in chlorine-free water, when possible.

Production and packages:

available in 500-ml ready-to-use polyethylene containers, with an expiry date of two years after production.



Strong Non-chemical Disinfectants

Based on Nanotechnology

For pets

(dogs, cats, rodents , ornamental birds, etc)

Antibacterial, Antiviral and Antifungal

The first and only product licensed by Iran Veterinary Organization in nanotechnology



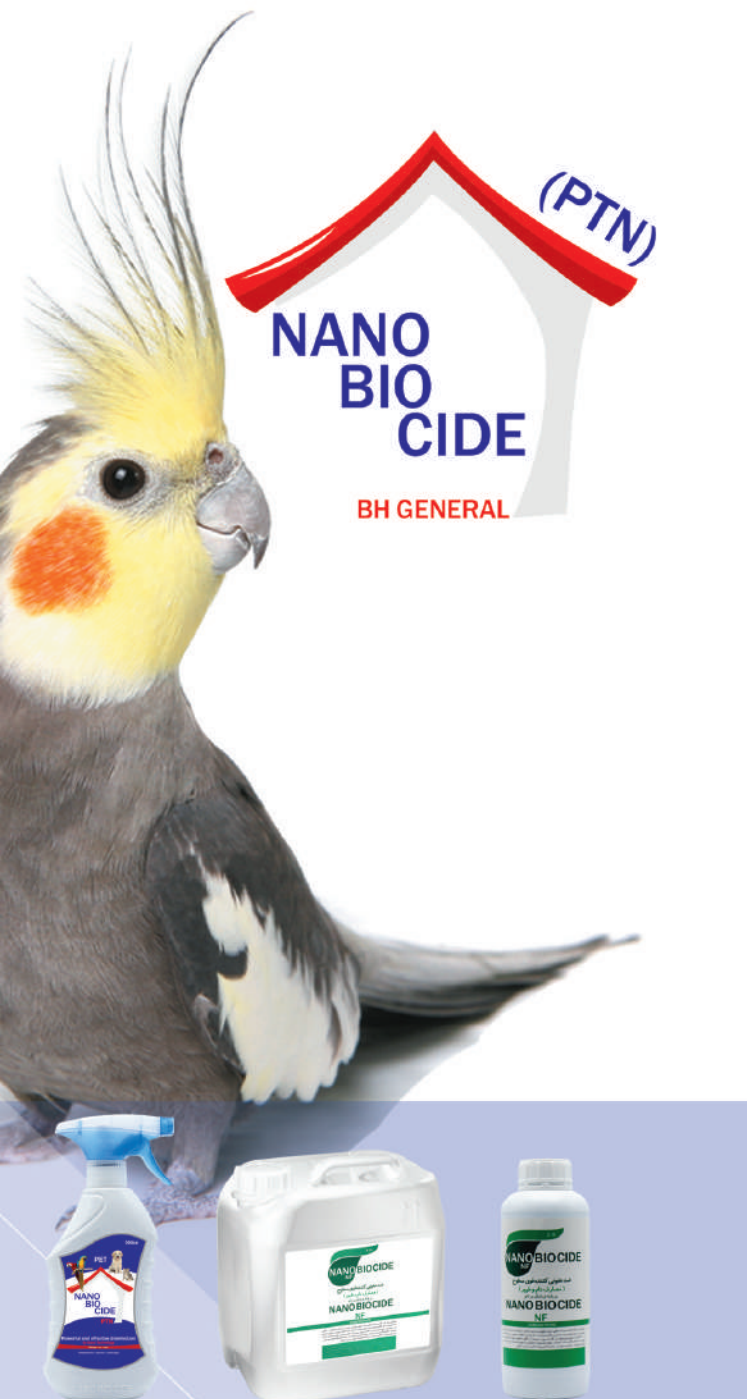
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Dr. Fariba Hosseini, DVM



Pharmaceutical group: Disinfectant

Physical form: Liquid, odorless

Active substance: Silver nanoparticles

Spectrum of activity: various types of enveloped and non-enveloped viruses, Gram-positive and Gram-negative bacteria, fungi, spores, oocysts and protozoa. Nano-silver is recommended in many developed countries for disinfection of sensitive and high-risk areas

Target species:

Pets (dogs, cats, rabbits, ornamental birds, etc).

Distinctive properties:

- A very long shelf life (no degradation or evaporation)
- No microbial resistance observed
- No inhalation, cellular, oral or skin toxicity to the consumer and/or environment
- No corrosive effect upon treated surfaces and tools
- Effective at both acidic and alkaline media
- Effective over a wide range of temperatures
- Prevents the spread of zoonoses

Applications:

- Applicable in fogging systems to impede the spread of respiratory and viral diseases
- Sanitization of the pet pensions and cages
- Repels fleas and other annoying insects
- Applicable on wound bandages and dressings
- Animal teeth and mouthwash during scaling to treat dental infections

The benefits of NANO BIOCID:

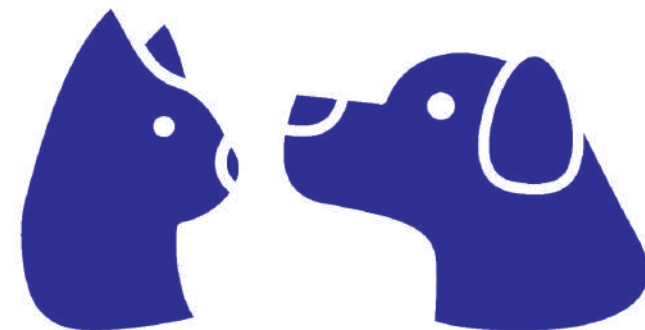
- Prevention and control of viral pathogens such as parvovirus, etc
- Prevention and treatment of respiratory infections in pets, particularly ornamental birds
- Prevention and treatment of various skin infections caused by pathogenic fungi
- Elimination of unpleasant odor from the pets living environment
- Conditioning of the pet hotel interior air and refreshing the pets

Cautions:

Discontinue use of NANO BIOCID 24hours before and after vaccination.

Production and packages:

available in 500-ml ready-to-use polyethylene containers, with an expiry date of two years after production.



NANOBIOCIDE

Povidone-Iodine 10% Antiseptic Solution NANO BIO CIDE (containing 1.2% iodine)



Topical antiseptic

Multipurpose disinfection

Extensive Microbial Spectrum & Effective against fungi, spores, viruses, protozoa and yeasts

Disinfectant Group: Povidone-Iodine 10% Antiseptic Solution NANOBIOCIDE

Dosage Form: Liquid

Active Ingredients: Contains 1.2% iodine, potassium iodide, glycerin, ethanol, and other excipients.

Mechanism of Action and Antimicrobial Spectrum: Povidone-Iodine 10% Disinfectant Solution NANOBIOCIDE acts through the gradual release of free iodine from its complex, enabling sustained antimicrobial activity. Free iodine reacts with microbial cell membrane lipids and surface proteins, increasing membrane permeability and causing leakage of cellular contents. It also binds to sulfhydryl (-SH), amine (-NH₂), hydroxyl (-OH), and carbonyl (C=O) groups in essential proteins and enzymes, leading to denaturation, structural degradation, and enzyme inactivation. Furthermore, by inhibiting key enzymes and damaging microbial DNA and RNA, iodine disrupts metabolic processes and vital cellular functions, ultimately preventing replication and survival. This mechanism effectively eliminates bacteria, viruses, fungi, and resistant spores. Povidone-iodine 10% exhibits a broad-spectrum microbicidal effect against microorganisms such as *Streptococcus pyogenes*, *Staphylococcus aureus*, *Helicobacter* spp., *Enterococcus faecalis*, *Streptococcus agalactiae*, *Candida albicans*, *Herpes simplex virus*, *Tinea* spp., *Aspergillus niger*, *Microsporum* spp., and *Trichophyton* spp.

Target Species: Livestock, poultry, horses, and companion animals.

Indications:

- Disinfection of wounds, burns, cuts, oral cavity, and tongue
- Treatment of skin infections, abrasions, and fungal dermatitis
- Pre- and post-milking teat disinfection (Pre-Dip & Teat-Dip)
- Skin disinfection before and after surgery or parturition
- Broad-spectrum sanitation of poultry farms, livestock facilities, hatcheries, and veterinary clinics
- Disinfection of tools, cages, and farm or poultry equipment

Directions for Use:

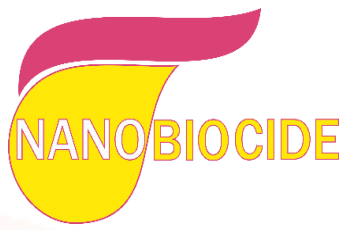
Indications	Dilution ratio	Description
Pre-milking teat disinfection (Pre-Dip)	1:5	Using spray or dip method
Post-milking teat disinfection (Teat-Dip)	Ready-to-use	Dipping
Wounds, cuts, and burns	Ready-to-use	Apply using a spray or sterile gauze soaked with the solution
Equipment and instrument disinfection	Use 20 mL in 1 liter of water	Dip and rinse after 20 minutes
Poultry houses, livestock facilities, hatcheries, veterinary clinics, hospitals, etc	1:10	Spray in the environment

Storage Conditions

- Store at a temperature between 5°C and 30°C, away from direct sunlight.
- Keep in a well-ventilated area and away from flammable materials.
- Always close the container tightly after each use to maintain product stability and effectiveness

Precautions

- Do not use simultaneously with other chemicals, alkaline substances, or insecticides.
- Avoid contact with eyes.
- Keep out of reach of children.



Iodized Glycerin Antiseptic Solution 1% NANO BIO CIDE (Containing 1% Iodine)



Topical antiseptic

Multipurpose disinfection

Extensive Microbial Spectrum & Effective against fungi, spores, viruses, protozoa and yeasts

Disinfectant Group: Iodized Glycerin Antiseptic Solution 1% NANOBIOCIDE

Dosage Form: Liquid

Active Ingredients: Iodized Glycerin Antiseptic Solution 1% NANOBIOCIDE (containing 1% iodine), potassium iodide, glycerin, and other excipients.

Mechanism of Action and Antimicrobial Spectrum: Iodized Glycerin Antiseptic Solution 1% NANOBIOCIDE combines the antimicrobial properties of iodine with the osmotic effects of glycerin to effectively eliminate a wide range of microorganisms. Iodine acts by oxidizing sulfhydryl ($-SH$) groups in cellular proteins and enzymes, leading to denaturation, protein coagulation, and disruption of the cell wall, ultimately causing the death of bacteria, fungi, and certain viruses. Glycerin, due to its hyperosmotic nature, reduces water activity in the surrounding environment, causing microbial dehydration and inhibition of growth and replication thereby enhancing the microbicidal effect of iodine. Thanks to its excellent tissue penetration, this formulation is particularly suitable for wound and soft tissue disinfection in veterinary applications.

Effective Against: A broad spectrum of microorganisms including bacteria, viruses, fungi, molds, mycobacteria, and spores such as *Streptococcus pyogenes*, *Staphylococcus aureus*, *Helicobacter* spp., *Enterococcus faecalis*, *Streptococcus agalactiae*, *Candida albicans*, *Herpes simplex virus*, *Tinea* spp., *Aspergillus niger*, *Microsporum* spp., and *Trichophyton* spp.

Target Species: Small ruminants, large livestock, horses, and other animals.

Directions for Use: Apply the iodine glycerin solution directly to the desired area using sterile gauze or cotton until the surface is fully moistened. Allow to dry naturally.

Storage Conditions

- Store at a temperature between 5°C and 30°C, away from direct sunlight.
- Keep in a well-ventilated area and away from flammable materials.
- Always close the container tightly after each use to maintain product stability and effectiveness

Precautions

- Do not use simultaneously with other chemicals, alkaline substances, or insecticides.
- Avoid contact with eyes.
- Keep out of reach of children.

NANOBIOCIDE

Iodine Tincture Antiseptic Solution 2% NANO BIO CIDE (Containing 2% Iodine)



Topical antiseptic

Multipurpose disinfection

Extensive Microbial Spectrum & Effective against fungi, spores, viruses, protozoa and yeasts

Disinfectant Group: Iodine Tincture Antiseptic Solution 2% NANOBIOCIDE

Dosage Form: Liquid

Active Ingredients: Iodine tincture (containing 2% active iodine), ethanol, potassium iodide, and other excipients.

Mechanism of Action and Antimicrobial Spectrum: Iodine Tincture Antiseptic Solution 2% NANOBIOCIDE, containing molecular iodine (I_2) and potassium iodide (KI) in an alcoholic solution, exerts its broad-spectrum antimicrobial effect through the controlled release of active iodine. The liberated iodine interacts with the lipid components of microbial cell membranes, increasing membrane permeability and causing leakage of intracellular contents. Additionally, iodine binds to functional groups such as sulfhydryl (-SH), hydroxyl (-OH), amine (-NH₂), and carbonyl (C=O) groups in essential proteins and enzymes, leading to their denaturation and inactivation. Moreover, by interfering with microbial DNA and RNA, it disrupts cellular metabolism and prevents replication and survival of microorganisms.

Effective Against: A wide range of microorganisms including bacteria, viruses, fungi, molds, mycobacteria, and spores such as Streptococcus pyogenes, Staphylococcus aureus, Helicobacter spp., Enterococcus faecalis, Streptococcus agalactiae, Herpes simplex virus, Tinea spp., Candida albicans, Aspergillus niger, Microsporium spp., and Trichophyton spp.

Target Species: Small ruminants, large livestock, horses, and companion animals.

Indications

- Disinfection of wounds, scratches, and minor cuts
- Preoperative skin antisepsis prior to minor or major surgical procedures
- Treatment of superficial infections and prevention of secondary skin infections
- Disinfection of injection sites prior to vaccination or medical treatment
- Umbilical disinfection in newborn livestock (such as calves, lambs, etc.) immediately after birth
- Cleaning and sanitizing of animal udders (in diluted form) to prevent mastitis
- Suitable for disinfecting water storage tanks
- Field disinfection of surgical and veterinary instruments

Directions for Use

- Moisten a piece of sterile gauze or cotton with the solution and apply it evenly over the target area.

Storage Conditions

- Store at a temperature between 5°C and 30°C, away from direct sunlight.
- Keep in a well-ventilated area and away from flammable materials.
- Always close the container tightly after each use to maintain product stability and effectiveness

Precautions

- Do not use simultaneously with other chemicals, alkaline substances, or insecticides.
- Avoid contact with eyes.
- Keep out of reach of children.