



CNT SALUS MUNDI SRL

for over 25 years, advanced technological solutions for agriculture, cosmetics, veterinary, and industry – with the support of CNT LAB.

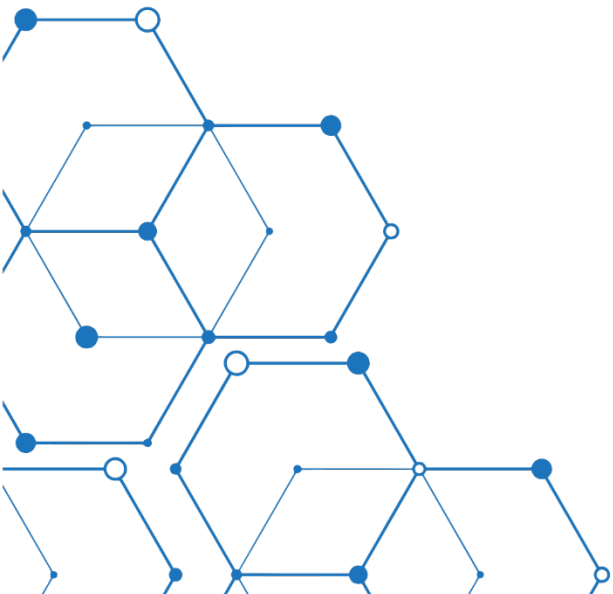
SynthAg<sup>++</sup>

# CATALOGUE

Nanotechnology Products for the Hygiene and Health of Dairy

CATTLE AND SMALL RUMINANTS

Innovation and Technology for Animal Well-being



# SYNTHAG TECHNOLOGY

## PROPERTIES OF SILVER ION CLUSTERS

SynthAg is a patented technology that produces light-stable silver ion clusters without nanoparticles, ensuring enhanced antimicrobial action for medical devices, cosmetics, and veterinary products.

## MAIN FEATURES

- Ag<sup>+</sup> ion clusters (101–1500 nm)
- Advanced stabilization for safety and efficacy
- Selected functional components for optimized antimicrobial action
- Optimized pH range to maximize performance

This solution overcomes the traditional limitations of silver ions, offering stability, long-lasting effect, and reduced photosensitivity.

## ANTIMICROBIAL ACTION

SynthAg acts through four key mechanisms:

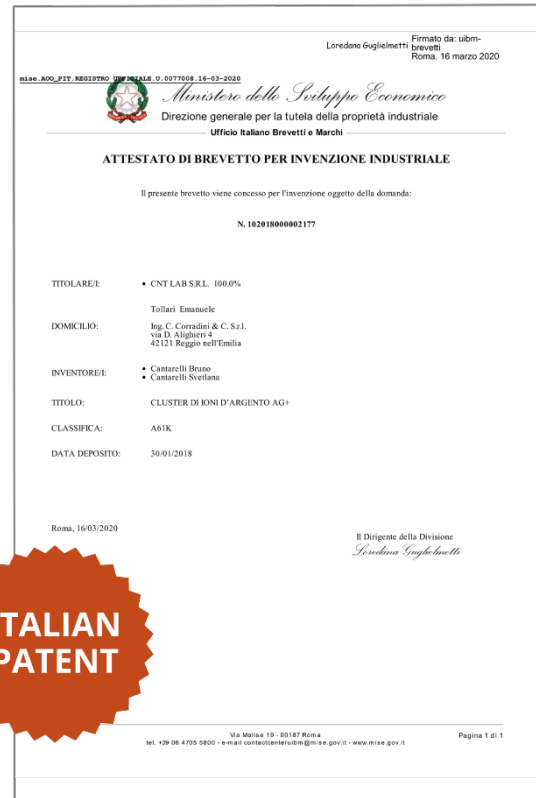
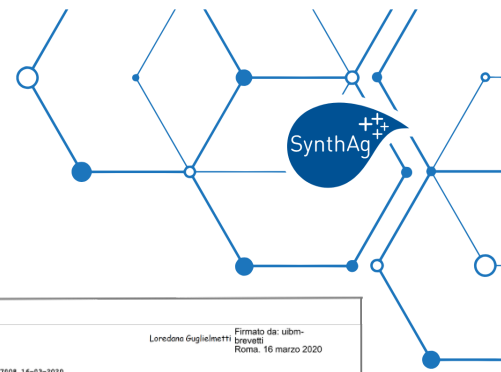
1. **Metabolic inhibition** – Blocks essential enzymes, preventing DNA replication
2. **ROS formation** – Generates free radicals that damage microorganisms
3. **Maximum safety** – Not absorbed by animal or human cells
4. **Biofilm prevention** – Inhibits bacterial resistance

Thanks to these properties, SynthAg is an advanced antimicrobial solution, ideal for medical, cosmetic, veterinary, and industrial applications.

# SEAL OF EXCELLENCE

We are proud that our Clusternanotech Group received the **“Seal of Excellence”** from the **European Commission** for the **MASTERCOW project** — a **bioinorganic, antibiotic-free therapy for bovine mastitis**.

This certificate is the result of a rigorous international evaluation and a recognition of the high scientific and practical value of our innovation.



# OUR FLAGSHIP PRODUCTS

## PAPILLA SEAL

### Sealant for Dry Period Dairy Cattle

Papilla Seal creates a physical barrier primarily due to its unique composition, which includes beeswax and SynthAg colloidal silver. Once applied to the teat, Papilla Seal forms a physical barrier within the teat canal. This prevents the entry of bacteria and other pathogens, significantly reducing the risk of intramammary infections during the dry period.

#### 3 KEY BENEFITS:

- ✓ Effective prevention: blocks infections
- ✓ Natural composition: safe ingredients  
Zero wait time: milk immediately usable



**BASE INGREDIENTS:** Natural origin beeswax; propylene glycol; cucumber glycolic extract; vegetable glycerol. Preservative: colloidal silver (SynthAg) 20ppm.

Prevention of Ascending Intramammary Infections During the Dry Period.

### FOR VETERINARY USE ONLY

#### INSTRUCTIONS FOR USE

For intramammary application. Administer the contents of one syringe into the teat of each quarter of the udder immediately after the final milking (at the start of the dry period). Do not massage the teat or udder after infusion. It is essential to ensure that the teat is thoroughly cleaned and disinfected with appropriate products. Allow the teat to dry before infusion. Avoid contaminating the syringe nozzle. After infusion, it is recommended to use a suitable sanitising dip or spray for the teat.

#### PACKAGING

- 18 L bucket: contains **180 Papilla Seal syringes (5g each)**
- 8 L bucket: contains **80 Papilla Seal syringes (5g each)**



PACKAGING	
PAPILLA SEAL Bucket: 80x5g Syringes	
Specification	Value
Content CU (net weight) (ml)	4 kgs
CU Dimensions (L*W*H) cm	3x2x15
CU gross weight (Kg)	0.015
CU / HU	80
HU Dimension (L*W*H) cm	Bucket 23,2x23,2x25,5
Grossweight for HU (kgs)	1.6
HU for layer	15
HU / Pallet	75
CU / Pallet	6,000
Grossweight for Pallet (kgs)	117.4

PACKAGING	
PAPILLA SEAL Bucket: 180x5g Syringes	
Specification	Value
Content CU (net weight) (ml)	9 kgs
CU Dimensions (L*W*H) cm	3x2x15
CU gross weight (Kg)	0.015
CU / HU	180
HU Dimension (L*W*H) cm	Bucket (30,7x30,7x32,2)
Grossweight for HU (kgs)	5.5
HU for layer	9
HU / Pallet	45
CU / Pallet	8,100
Grossweight for Pallet (kgs)	157.4

# SALVALAT

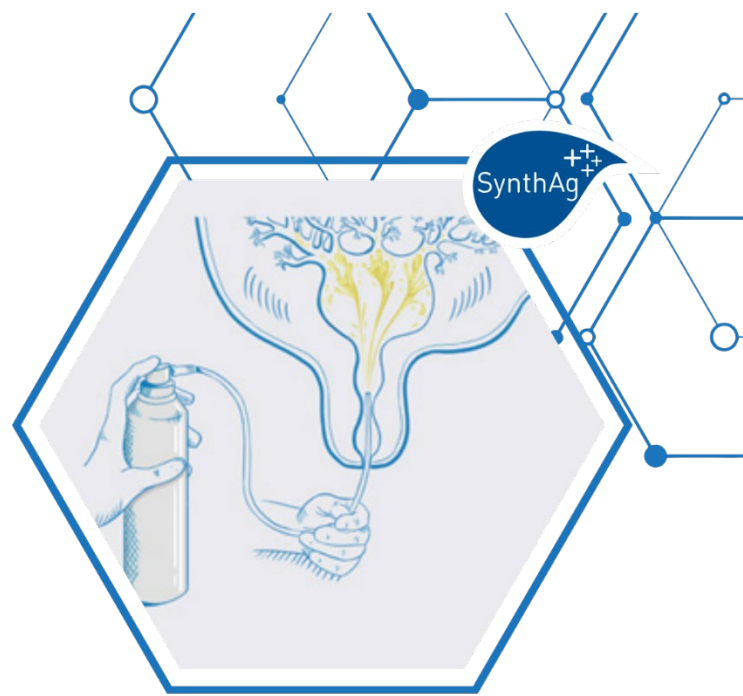
A technological and innovative solution to bovine mastitis

**Salvalat Functional Lavender** reduces or eliminates the chronicisation process of subclinical mastitis, ensuring the possibility of keeping the animal in the herd.

Lavender is used to facilitate the removal of potential cellular and bacterial biofilms within the udder of dairy cows. The product exerts a mechanical action to remove biofilm from inside the udder.

### 3 KEY BENEFITS:

- ✓ Free from biocides
- ✓ Not an antibiotic
- ✓ Does not penetrate or migrate into the animal's Body



**COMPOSITION:** Butylene Glycol, Aqua (Deionized Water), Glycerin, Cucumis Sativus Fruit Extract, Polysorbate 20, PVP, Colloidal Silver (SynthAg) 90ppm as a preservative.

Prevention of Ascending Intramammary Infections.

### FOR VETERINARY USE ONLY

#### INSTRUCTIONS FOR USE

For intramammary application. Administer the contents of one canister into the affected quarter via the dedicated catheter immediately after milking. It is essential to ensure that the teat is thoroughly cleaned and disinfected with appropriate products. Avoid contaminating the catheter. After infusion, it is recommended to use a suitable sanitising dip or spray for the teat.

Residues of the product and bacterial biofilm are eliminated with subsequent milkings.

Do not use milk from treated cows within the first 24 hours after treatment.

The product is contained in a **bag-on-valve** system and is expelled by air pressure within the canister.

#### AVAILABLE FORMATS

- **6 canisters** with catheter, packed in a carton
- **12 canisters** with catheter, packed in a carton



PACKAGING	
SALVALAT (Single Pressurized Can)	
Specification	Value
Content CU (net weight) (ml)	0.2
CU Dimensions (L*W*H) cm	4,5x4,5x22
CU gross weight (Kg)	0.200
CU / HU	24
HU Dimension (L*W*H) cm	BOX 30X21X24
Grossweight for HU (kgs)	4.8
HU for layer	12
HU / Pallet	60
CU / Pallet	1,440
Grossweight for Pallet (kgs)	313.0



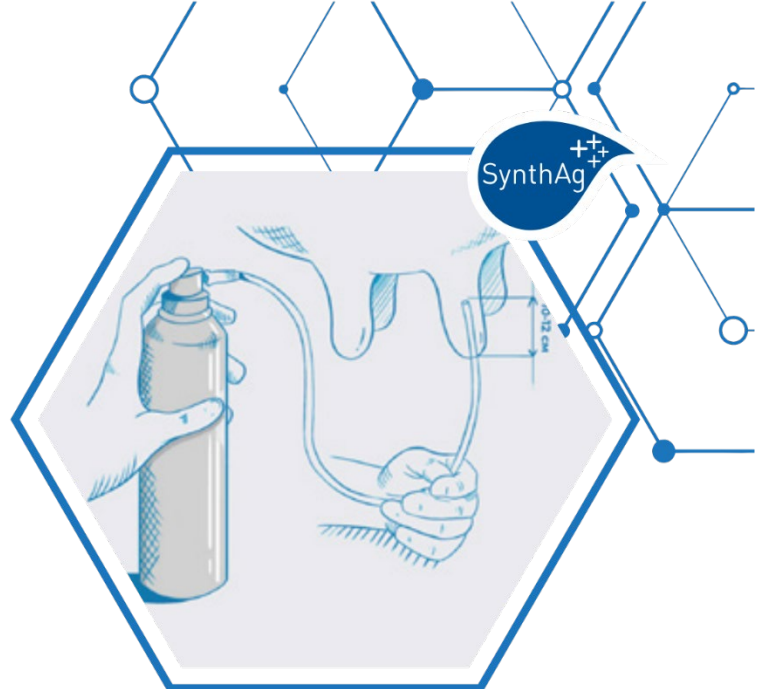
# SALVALAT ASCIUTTA

## FOR DRY DAIRY CATTLE, SHEEP, AND GOATS

Salvalat Asciutta is specifically formulated for animals experiencing an increase in somatic cell count before drying off. This product enhances udder health and helps reduce the incidence of subclinical mastitis, supporting optimal animal management during the dry period without the use of antibiotics.

### BENEFITS

- **Reduces the incidence of subclinical mastitis** – Helps maintain udder health.
- **Promotes animal well-being** – Supports overall health during the dry period.
- **Safe for frequent use** – Leaves no antibiotic or inhibitory residues in milk.
- **Easy to apply** – Ideal for daily farm management.
- **Natural components** – Respects both animal health and the environment.



**COMPOSITION:** Propylene glycol, Butylene glycol, Vegetable glycerin, Distilled water, Distilled water with a trace preservative of colloidal silver (SynthAg), Cucumber glycolic extract, Polysorbate 20.

Salvalat Asciutta is formulated with carefully selected ingredients to enhance biofilm adhesion, improve preservation, and ensure uniform application. It includes natural components with soothing, purifying, and moisturising properties, respecting both animal health and the environment.

### FOR VETERINARY USE ONLY

#### INSTRUCTIONS FOR USE

Administer immediately after milking, ensuring the teat is thoroughly cleaned and disinfected beforehand.

Perform an individual quarter irrigation. Insert the catheter into the teat for at least 10–12 cm.

Avoid contamination of the sterile catheter before insertion into the teat.

Residues of the product, including bacterial biofilm, are eliminated with subsequent milkings.

Do not use milk from treated animals within the first 24 hours after treatment.

Use the entire contents of the canister for each application.

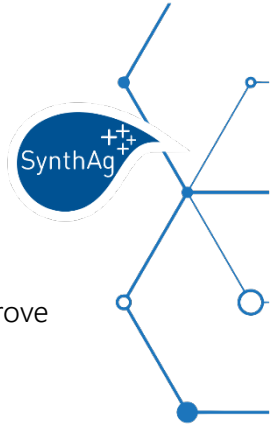
#### AVAILABLE FORMATS

- **6 canisters** with catheter, packed in a carton
- **12 canisters** with catheter, packed in a carton



PACKAGING	
SALVALAT (Single Pressurized Can)	
Specification	Value
Content CU (net weight) (ml)	0.2
CU Dimensions (L*W*H) cm	4,5x4,5x22
CU gross weight (Kg)	0.200
CU / HU	24
HU Dimension (L*W*H) cm	BOX 30X21X24
Grossweight for HU (kgs)	4.8
HU for layer	12
HU / Pallet	60
CU / Pallet	1,440
Grossweight for Pallet (kgs)	313.0

# DRY-OFF PROTOCOL



## SELECTIVE DRY-OFF: SALVALAT ASCIUTTA AND PAPILLA SEAL

The selective dry-off protocol using Salvalat Asciutta and Papilla Seal has been developed to improve the efficiency of the dry period management while minimizing antibiotic use, in line with current guidelines on combating antimicrobial resistance.

## DRY-OFF PROTOCOL

6–7 days before the dry-off period, it is essential to:

- Perform the **California Mastitis Test (CMT)** to assess udder health.
- Identify **positive quarters** and review the **clinical history** of the cow:
- Any episodes of mastitis during lactation
- Increased somatic cell count during lactation
- Available bacteriological analyses and antibiograms

## INTERVENTION STRATEGIES

### 1. COWS WITH NEGATIVE CMT IN ALL QUARTERS

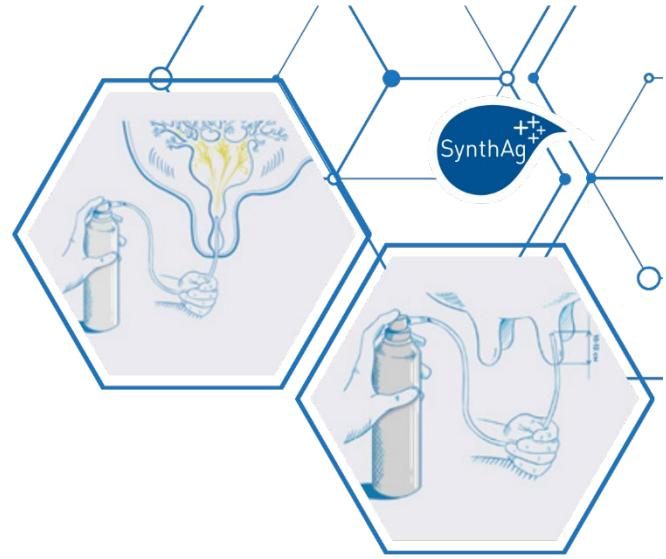
- Reduce milk production using appropriate herd management strategies.
- On the day of dry-off, repeat the CMT.
- If the CMT remains negative:
- Disinfect the teat tip with cotton and alcohol
- Insert **Papilla Seal** (1 tube per quarter)
- Proceed with a **film-forming post-dipping** for added protection
- (See video for correct application)

### 2. COWS WITH POSITIVE CMT (< 500,000 CELLS/ML) WITHOUT PREVIOUS MASTITIS EPISODES

- Treat the positive quarters with **Salvalat Asciutta**
- Gradually reduce milk production
- Empty the affected quarters once a day until dry-off
- Apply **Papilla Seal** as described in point 1

### 3. COWS WITH POSITIVE CMT (> 500,000 CELLS/ML) AND PREVIOUS MASTITIS EPISODES

- Treat the positive quarters with **Salvalat Asciutta**
- Gradually reduce milk production
- Empty the affected quarters once a day until dry-off
- Administer a **dry cow antibiotic** (according to the farm's antibiogram)
- Apply **Papilla Seal** as described in point 1
- If mastitis is chronic, consider a **systemic antibiotic treatment**



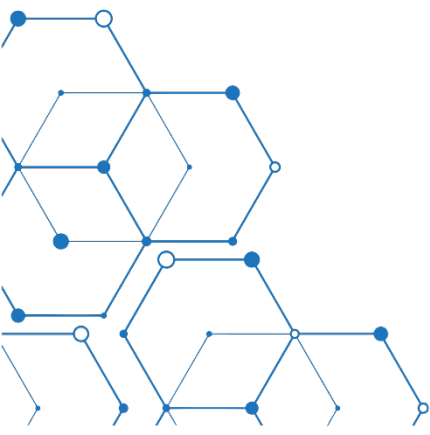
## IMPORTANT INNOVATION

### SALVALAT + ANTIBIOTIC

"Antibiotics are less effective due to habituation, resistance, and defense mechanisms such as biofilm."

Apply  $\frac{1}{2}$  can of **SALVALAT** to the affected quarter and administer the antibiotic after **24 hours**.

The efficacy of the antibiotic increases because the biofilm — which protects the microorganisms — is removed, allowing the immune system to attack them more effectively.



# DIPPING PRO

## CONCENTRATED TEAT DIP

COMPATIBLE WITH BOTH MANUAL AND AUTOMATED APPLICATION SYSTEMS.

### BENEFITS:

- Maintains high udder hygiene, preventing milk contamination.
- Tested formulation compliant with European safety and quality regulations.
- Easy to apply and safe for daily use.
- Natural ingredients that respect animal health and the environment.
- Provides prolonged action until the next milking.
- Ensures maximum reliability in milking systems.



PACKAGING	
TEAT DIP (pH 5-6)	
Specification	Value
Content CU (net weight) (ml)	1000 liter
CU Dimensions (L*W*H) cm	1000x1200x1150
CU gross weight (Kg)	1000-200-20
CU / HU	n.a
HU Dimension (L*W*H) cm	n.a
Grossweight for HU (kgs)	n.a
HU for layer	n.a
HU / Pallet	n.a
CU / Pallet	1
Grossweight for Pallet (kgs)	1100.0

### AVAILABLE FORMATS

Canister: 10 kg, 20 kg

Drum: 200 kg

IBC: 1000 kg

### APPEARANCE

Clear, transparent fluid.



**INGREDIENTS:** Aqua, Vegetable Glycerin, Hydrogen Peroxide, Propylene Glycol, Citric Acid, Isopropyl Alcohol, Colloidal Silver (SynthAg Technology).

**SUITABLE FOR UDDER HYGIENE IN THE LIVESTOCK AND VETERINARY SECTOR.**

### INSTRUCTIONS FOR USE

**Preparation:** Dilute the concentrate **200–300** times with distilled water.

**Pre-treatment:** Thoroughly clean the udder and disinfect the teats.

**Application:** Immerse the teats in the solution immediately after milking.

**Dosage:** Use the recommended amount to ensure full coverage.

**Action:** Leave the solution on until the next milking.

**Monitoring:** Regularly check the effectiveness of the treatment.

This product complies with European safety and quality regulations. Possible individual sensitivity to components.

**Not a medicinal product.**

### ADDING E110 COLOURANT FOR MANUAL APPLICATION OF DIPPING PRO

#### COLOURANT QUANTITY

The recommended dosage of **E110** depends on the desired colour intensity:

- **Standard colouring** (for clear visual control): **0.05–0.1 g** per litre of ready-to-use solution.
- **More intense colouring** (for better visibility): **0.15–0.2 g** per litre.

#### HOW TO ADD THE COLOURANT

1. **Prepare the DIPPING PRO solution** – Dilute the concentrate **1:150–1:200** with distilled water.
2. **Add the colourant** – Weigh the required amount of **E110** and distribute it evenly into the prepared solution.
3. **Mix thoroughly** – Stir for **2–3 minutes** until the colourant is fully dissolved.
4. **Use as instructed** – Immerse the animals' teats in the solution immediately after milking.

**IMPORTANT!** The colourant must be completely dissolved, leaving no residue. The dilution should be carried out in a clean container designated exclusively for udder treatment. Before the next milking, carefully clean the teats to remove any remaining solution.



# PODALIS Unguento

## FOOT HYGIENISER FOR ANIMALS

Effectively reduces bacterial load on the surface and within the hoof/claw.

The components of PODALIS Ointment provide hygienising and protective action. The extremities of livestock animals are prone to bacterial infections and traumatic injuries, leading to hoof wall deterioration caused by abrasive, uneven surfaces and humid, unsanitary conditions.

Thanks to its advanced formulation, PODALIS Ointment helps prevent foot diseases, reduce infections, and promote tissue recovery, ultimately improving the overall well-being of the animals.



### BENEFITS

- **Reduces infections and accelerates recovery** – PODALIS Ointment helps inhibit the proliferation of pathogens, promoting fast and effective tissue healing.
- **Enhances animal health and well-being** – The product's natural composition helps reduce pain and inflammation, improving overall animal comfort.
- **Supports mobility recovery** – Animals with healthy feet move freely, enhancing productivity and improving farm profitability.

**PRODUCT COMPOSITION:** Glycolic Acid, Distilled Water, Propylene Glycol, Glycerol, Glycolic Cucumber Extract, Colloidal Silver (SynthAg), Hydrogen Peroxide, Sepigel, PVP, Camphor Oil, 90 ppm.



***Results in 15 days.** Treatment protocol: PODALIS Ointment + Podalis TNT Bandage (treated wipe with SynthAg colloidal silver, 10x10 cm, 50 pcs., 100% biodegradable).*

The components of PODALIS Ointment provide hygienising and protective action.

## FORMULATED FOR THE LIVESTOCK AND VETERINARY SECTOR

### INSTRUCTIONS FOR USE:

1. **Clean and groom** the affected area thoroughly, removing excess dirt.
2. **Apply PODALIS Ointment** by dabbing it onto the injured area.
3. **Cover the treated area** using TNT bandage treated with SynthAg colloidal silver, ensuring protection both internally and externally.
4. **Allow the product to act** for the recommended time, ensuring the active ingredients penetrate the tissues effectively.
5. **After the recommended time**, remove the bandage and dispose of used materials appropriately.

### PACKAGING

- **PODALIS Ointment** is available in 500 ml jars.
- **Bucket packaging** includes 3 x 500 g jars and TNT Podalis bandages in transparent plastic pouches.

# SMALTISALUS

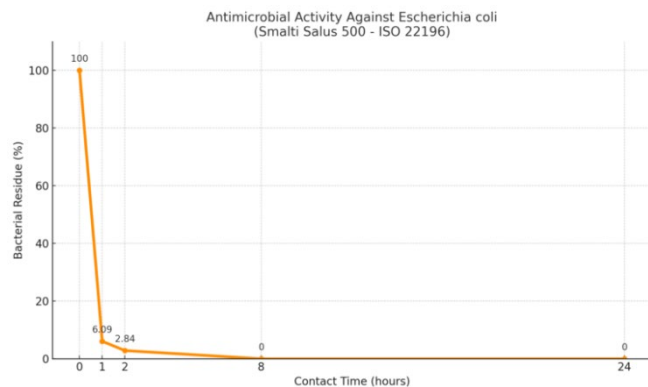
Water-dispersible bacteriostatic enamel for environments with high sanitary requirements

**SMALTISALUS** is an acrylic, water-dispersible bacteriostatic enamel developed to ensure protection, hygiene, and safety in environments that demand the highest sanitary standards.

Thanks to its solvent-free formula—without formaldehyde, plasticizers or nonylphenols—the product is ideal for use in enclosed and poorly ventilated spaces such as hospitals, schools, healthcare facilities, residential areas, clinics, communities, and livestock farms.

Its bacteriostatic action is guaranteed by the presence of **SynthAg**, a patented Italian compound based on silver ion clusters, which ensures long-lasting hygienic safety of treated surfaces.

**SMALTISALUS** combines high technical performance with extended protective action.



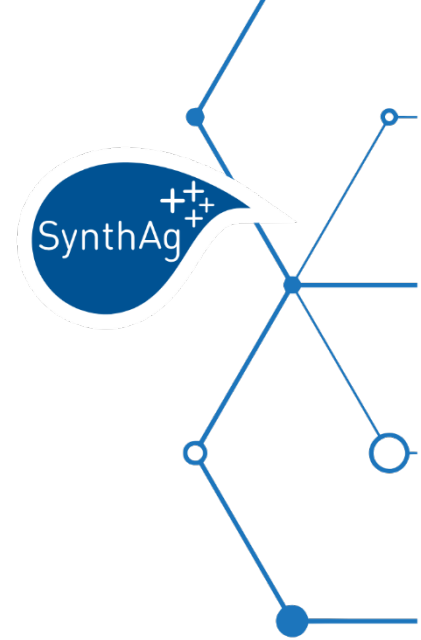
The graph shows a sharp reduction in *E. coli* bacteria within the first hour (from 100% to 6.09%). After 2 hours, the bacterial count drops to 2.84%, and by 8 and 24 hours, no bacteria remain (0%).

## ANTIMICROBIAL ACTIVITY AGAINST ESCHERICHIA COLI

(Smalti Salus 500 – ISO 22196)

The chart clearly shows a rapid reduction in *E. coli* bacteria within the first hour (from 100% to 6.09%).

- After 1 hour – down to 6.09%
- After 2 hours – 2.84%
- After 8 and 24 hours – 0% bacteria detected



## CERTIFIED BACTERIOSTATIC EFFICACY – WALL SURFACE TESTING

**SMALTISALUS** was subjected to microbiological testing in accordance with ISO 22196 to assess its bacteriostatic performance on wall surfaces.

### THE RESULTS SPEAK FOR THEMSELVES:

- 100% elimination of *Staphylococcus aureus*, *Escherichia coli* and *Candida albicans* within 4–8 hours after contact
- Long-lasting and stable effect as long as the coating remains intact, without releasing harmful substances

This makes **SMALTISALUS** an ideal solution for high-traffic areas where microbiological safety is essential — such as livestock facilities.

Viral and bacterial contaminations like **Salmonella**, **Avian Influenza**, and **African Swine Fever** are decimating livestock worldwide.

## SMALTISALUS IS AN EXTRA WEAPON IN THE FIGHT AGAINST INFECTIONS — SUPPORTING ANIMAL HEALTH AND THE ECONOMIC RESILIENCE OF THE FARM.

# ZOOSALUS

## GENERAL SANITIZING AGENT FOR ENVIRONMENTS

ZOOSALUS is an environmental sanitizing agent designed for the prevention of diseases caused by airborne pathogens. It is a concentrated product based on SynthAg silver at 30K ppm, a powerful antimicrobial agent which, when mixed with propylene glycol, glycerol, and water, provides effective protection for various types of environments. The product is ideal for use in settings such as animal farms, production facilities, and any other place where preventing the spread of airborne pathogens is essential.

## MAIN FEATURES

- ✓ Advanced formula with SynthAg silver 30K ppm to ensure effective antimicrobial action.
- ✓ Suitable for indoor environments, ideal for preventing airborne diseases.
- ✓ Easy to use, with customizable dilution based on specific needs.
- ✓ Completely safe when used according to the instructions.



## PRODUCT CHARACTERISTICS

**Antimicrobial action:** Thanks to the presence of SynthAg silver 30K ppm, ZOOSALUS provides protection against a wide range of airborne pathogens.

**Dilution flexibility:** The product can be diluted from a minimum of 10,000 up to 30,000 times, depending on the specific environmental needs and the level of microbiological contamination.

**Compatibility:** Can be used on surfaces and in environments where preventive action against airborne bacteria and viruses is required.

## CONCENTRATE MIXING

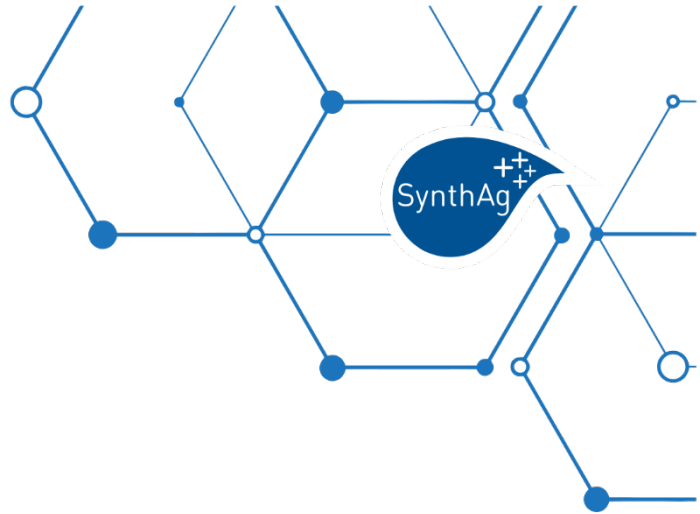
The mixing of ZOOSALUS should be carried out as follows:

- Propylene glycol: 80% (modifiable based on specific needs).
- Glycerol: 1%.
- Distilled water: remaining amount.

## DIRECTIONS FOR USE

**Preparation of the mixture:** Dilute the ZOOSALUS concentrate with a base of propylene glycol, glycerol, and water according to the specific requirements of the environment.

**Application:** The product can be used with nebulization systems or room diffusers. The dilution ratio depends on the specific needs of the environment and the density of microbiological contamination.



*" The well-being of livestock is not only an ethical concern but also a crucial component of effective and high-quality production. Together with the Clusternanotech Group, we aim to create a healthy and productive environment "*

— Dr Giuseppe Orsi (Herd Management, Prevention, CNCPS Nutrition, Hygiene, Milk Quality and Rheology) and  
— Dr Marzio Schianchi, Veterinary Specialist in Animal Husbandry, in collaboration with the Clusternanotech Group.



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**PRODUTTORE**  
**CNT Salus Mundi S.r.l.**  
Production and development of colloidal silver-based cosmetic products SynthAg for pets, cattle, agriculture and Humana.  
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**TECHNOLOGICAL SOLUTIONS BASED ON SYNTHAG**  
**COLLOIDAL SILVER**  
**CNT LAB**  
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Capital Share: 200.000,00 €  
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