

## SILVER ACTIVE INGREDIENTS

# FACE CARE

## ANTIMICROBIAL ACTIVE - SKIN CARE

Silver-based ingredients are new and natural alternatives providing care to your skin. Bactericidal silver properties allow having a clean face skin without daily impurities.



## FINAL PRODUCTS

- Anti-acne cream and soap.
- Clarifying and cleansing wipes.
- Antimicrobial gel, lotions and bar soap.
- Mask, cleanser, wash and exfoliating peel gel.
- Daily cream and active treatment serum.
- Atopic cream.

### ARGENOL PRODUCTS

| NAME                      | INCI                               | %Ag      | DOSAGE RANGE | CERTIFICATION   |
|---------------------------|------------------------------------|----------|--------------|---|
| METALIC SILVER POWDER G/W | Silver                             | > 99%    | 0,1 - 0,3%   | COSMOS APPROVED  |
| SILVER CITRATE SOLUTION   | Citric Acid (and) Silver Citrate   | 0,25%    | 0,2 - 1%     | COSMOS APPROVED  |
| SILVER SOLUTION - B       | Colloidal Silver                   | 0,25%    | 0,2 - 1%     |                  |
| SILVER SOLUTION - C       | Pentasodium Pentetate (and) Silver | 0,05%    | 0,2 - 0,8%   |   |
| COLLOIDAL GOLD - P        | Colloidal Gold                     | 0,01% Au | 0,05 - 0,5%  |   |
| GOLD POWDER               | Gold                               | > 99% Au | 0,01 - 0,1%  |   |
| COLLOIDAL PLATINUM        | Colloidal Platinum                 | 0,01% Pt | 0,05 - 0,5%  |   |

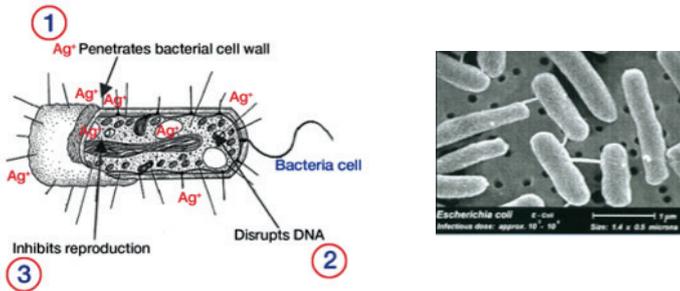
## SILVER ACTIVITY

Antimicrobial mechanism:

- Inhibition of bacterial respiratory chain enzymes.
- Alteration of membrane function.
- Inhibition of cell replication.

Strengthening immune system.

No resistances founded.



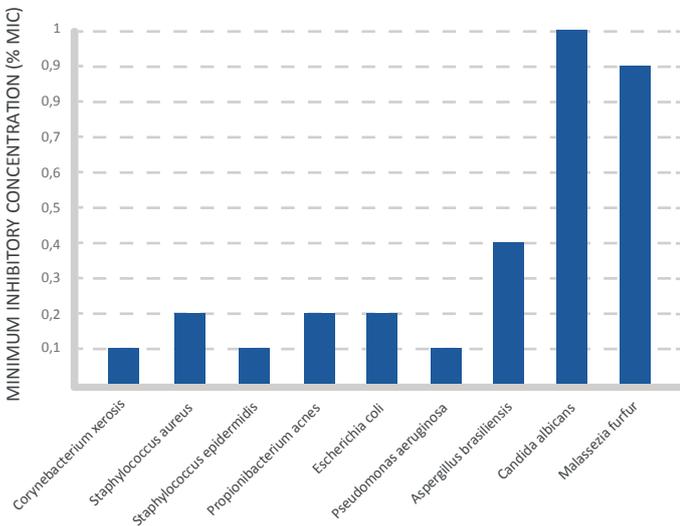
## BENEFITS & CLAIMS

- 1 Atopic skin care and anti-acne ingredient.
- 2 Bacteria growth control: *S. epidermidis*, *P. aeruginosa*, *P. acnes*.
- 3 Cleansing of daily impurities.
- 4 Non-irritating. Dermatologically tested.
- 5 For all kind of skin and ages.
- 6 Combined with Hyaluronic Acid and Aloe Vera.

## ANTIMICROBIAL EFFICACY

### MIC TEST

#### SILVER CITRATE SOLUTION



Study was performed using the Clinical Laboratory Standard Institute (CLSI) by microdilution method (M07-A8).

### DISC-PLATE ASSAY



Antimicrobial activity vs *P. epidermidis*



Antimicrobial activity vs *P. aeruginosa*

### CHALLENGE TEST

Our Silver-based actives prevents the development of microorganism in finished products. Challenge test (available for dry, greasy and sensitive skin) confirms that our products work quite well as stand-alone preservatives and antimicrobial; moreover they can be combined with other preservatives if needed.

**CLAIMS: PARABEN FREE, PRESERVATIVE FREE.**

### PATCH TEST

According to Patch Tests carried out with our products, it can be concluded that the skin compatibility of SILVER-based actives may be considered as very good.

### QUALITY

Laboratorios ARGENOL is GMP certified by Spanish Agency of Medicines and Medical Devices (AEMPS).

## SILVER ACTIVE INGREDIENTS

# BODY CARE

## ANTIMICROBIAL ACTIVE - SKIN CONDITIONING

The skin conditioning and antibacterial properties of Silver-based ingredients used in skin care. Help our body to be healthy and care.



## FINAL PRODUCTS

- Atopic, depilatory, regenerating, dry and ultra-dry, peeling, sensitive cream.
- Body lotion, antibacterial body spray, cleansing milk and protection skin pH.
- Exfoliating soap, hypoallergenic shower gel, deodorizing foam, body wash and skin repair.
- Hand and leg care.

## ARGENOL PRODUCTS

| NAME                       | INCI                             | %Ag      | DOSAGE RANGE | CERTIFICATION   |
|----------------------------|----------------------------------|----------|--------------|---|
| METALLIC SILVER POWDER G/W | Silver                           | > 99%    | 0,1 - 0,3%   | COSMOS APPROVED  |
| SILVER CITRATE SOLUTION    | Citric Acid (and) Silver Citrate | 0,25%    | 0,2 - 1%     | COSMOS APPROVED  |
| SILVER SOLUTION - B        | Colloidal Silver                 | 0,25%    | 0,2 - 1%     |                  |
| COLLOIDAL GOLD - P         | Colloidal Gold                   | 0,01% Au | 0,05 - 0,5%  |   |
| GOLD POWDER                | Gold                             | > 99% Au | 0,01 - 0,1%  |   |
| COLLOIDAL PLATINUM         | Colloidal Platinum               | 0,01% Pt | 0,05 - 0,5%  |   |

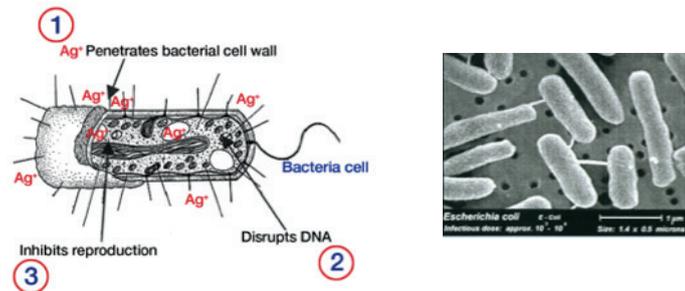
## SILVER ACTIVITY

Antimicrobial mechanism:

- Inhibition of bacterial respiratory chain enzymes.
- Alteration of membrane function.
- Inhibition of cell replication.

Strengthening immune system.

No resistances founded.



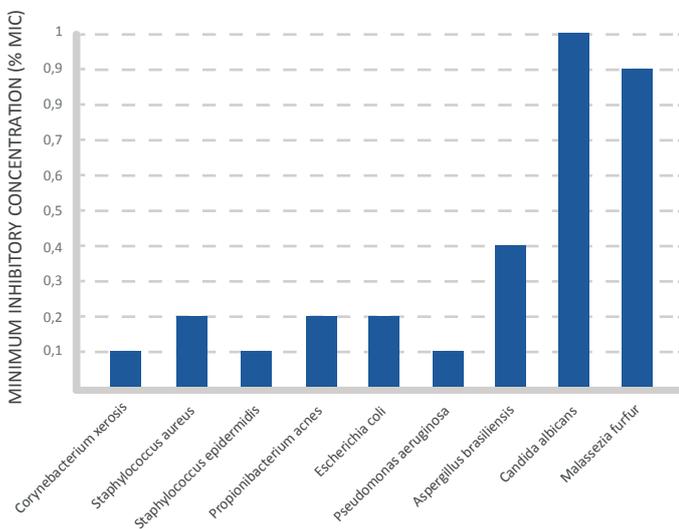
## BENEFITS & CLAIMS

- 1 Antibacterial activity against *S. epidermis* and *C. xerosis*.
- 2 Avoids bad odour in axilla/underarm, foot...
- 3 Non-irritating skin. Dermatologically tested.
- 4 Non-toxic.
- 5 No volatile compounds are generated.
- 6 Prevents the development of microorganism in final products. Preservative.

## ANTIMICROBIAL EFFICACY

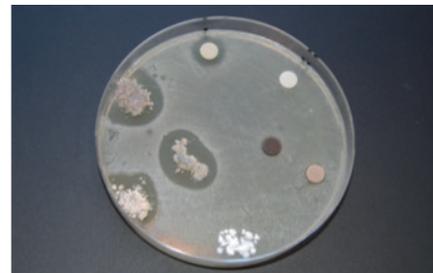
### MIC TEST

#### SILVER CITRATE SOLUTION



Study was performed using the Clinical Laboratory Standard Institute (CLSI) by microdilution method (M07-A8).

### DISC-PLATE ASSAY



Antimicrobial activity vs *P. epidermidis*



Antimicrobial activity vs *P. aeruginosa*

### CHALLENGE TEST

Silver-based actives prevent the development of microorganism in finished products. Challenge test (available for dry, greasy and sensitive skin) confirms that our products work quite well as stand-alone preservatives and antimicrobial; moreover they can be combined with other preservatives if needed.

**CLAIMS: PARABEN FREE, PRESERVATIVE FREE.**

### PATCH TEST

According to Patch Tests carried out with our products, it can be concluded that the skin compatibility of SILVER-based actives may be considered as very good.

### QUALITY

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## SILVER ACTIVE INGREDIENTS

# DEODORANT

## ANTIMICROBIAL ACTIVE - DEODORANT AGENT

Silver-based deodorant actives allow a controlled release of silver and inhibit skin flora associated with odour at low concentrations. It is highly effective at eliminating underarm and foot odour.



### FINAL PRODUCTS

- Deodorant and no gas spray.
- Deo body spray.
- Antiperspirant liquid roll-on.
- Roll-on.
- Deo stick.
- Cream.

### ARGENOL PRODUCTS

| NAME                    | INCI                               | %Ag                     | DOSAGE RANGE | CERTIFICATION   |
|-------------------------|------------------------------------|-------------------------|--------------|---|
| SILVER ZEOLITE          | Sodium Silver Aluminium Silicate   | 2,5%                    | 1 - 2%       |   |
| SILVER COPPER ZEOLITE   | Silver Coper Zeolite               | 1,5%<br>(0,5 - 4,5% Cu) | 1 - 3%       |   |
| SILVER CITRATE SOLUTION | Citric Acid (and) Silver Citrate   | 0,25%                   | 0,2 - 1%     | COSMOS APPROVED  |
| SILVER SOLUTION - B     | Colloidal Silver                   | 0,25%                   | 0,2 - 0,5%   |                  |
| SILVER SOLUTION - C     | Pentasodium Pentetate (and) Silver | 0,05%                   | 0,2 - 0,4%   |   |

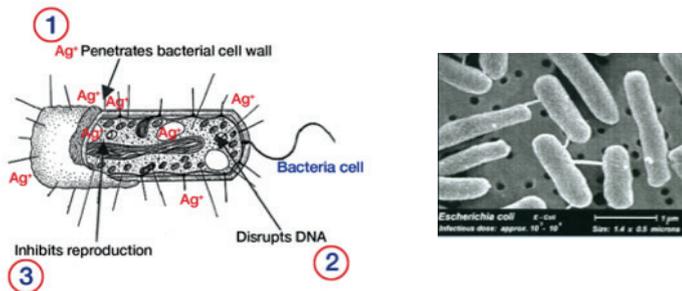
## SILVER ACTIVITY

Antimicrobial mechanism:

- Inhibition of bacterial respiratory chain enzymes.
- Alteration of membrane function.
- Inhibition of cell replication.

Strengthening immune system.

No resistances founded.

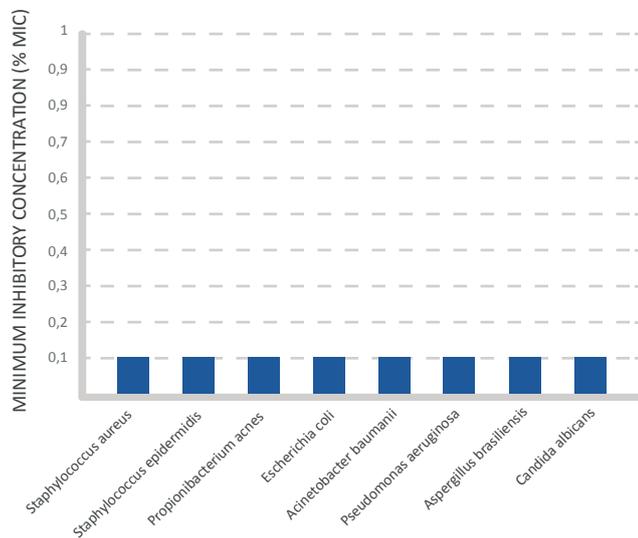


## BENEFITS & CLAIMS

- 1 Antibacterial activity against *S. epidermis* and *C. xerosis*.
- 2 Avoids bad odour in axilla/underarm, foot...
- 3 Non-irritating skin. Dermatologically tested.
- 4 Non-toxic.
- 5 No volatile compounds are generated.
- 6 Prevents the development of microorganism in final products. Preservative.

## ANTIMICROBIAL EFFICACY

### MIC TEST SILVER ZEOLITE



Study was performed using the Clinical Laboratory Standard Institute (CLSI) by microdilution method (M07-A8).

### DISC-PLATE ASSAY



### DEODORANT EFFICACY - SNIFF TEST

Deodorant cream with 1,5% Silver Zeolite:

- ✓ Satisfactory application.
- ✓ Satisfactory deodorant and anti-perspirant efficacy after 12 hours.
- ✓ No traces left on skin or t-shirt.

Deodorant spray with 1% Silver Citrate Solution:

- ✓ Easy to apply.
- ✓ No residues and traces found.
- ✓ No body smell after 12 hours.

### CHALLENGE TEST

Silver-based actives prevents the development of microorganism in finished products. Challenge test confirms that silver products work quite well as stand-alone preservatives; moreover they can be combined with other preservatives if needed. Therefore with only one of our deodorant agents it can achieves Deodorant and Preservative properties.

**CLAIMS: PARABEN FREE, PRESERVATIVE FREE.**

### PATCH TEST

According to Patch Tests carried out with our products, it can be concluded that the skin compatibility of SILVER-based actives may be considered as very good.

## SILVER-BASED PRODUCTS

# HAIR CARE ANTIMICROBIAL

Silver based hair care products helps to eliminate fungus causing dandruff and more harmful bacteria and yeast for scalp. Silver can be used as well as hair dye treatment.



### FINAL PRODUCTS

- Anti-dandruff shampoo
- Standard shampoo
- Hair dye
- Dry shampoo
- Permanent shampoo
- Masks
- Nourishing products

### ARGENOL INGREDIENTS

| NAME                    | INCI   | % Ag                      | DOSE RANGE |
|-------------------------|--|---------------------------|------------|
| SILVER CITRATE SOLUTION | Citric Acid (and) Silver Citrate   | 0,25 %                    | 0,9 – 1 %  |
| SILVER SOLUTION - B     | Colloidal Silver   | 0,25 %                    | 0,5 – 1 %  |
| SILVER COPPER ZEOLITE   | Silver Copper Zeolite  | 1,5 %<br>(0,5 – 4,5 % Cu) | 0,5 – 1 %  |
| SILVER SULFATE          | Silver Sulfate   | 69 %                      | 0,8 – 1 %  |
| MT SOLUTION             | Aqua (and) Citric Acid (and) Zinc Citrate (and) Copper Citrate (and) Silver Citrate (and) Magnesium Citrate (and) Molybdenum Chloride (and) Cobalt Gluconate (and) Manganese Citrate |                           | 1 – 5%     |



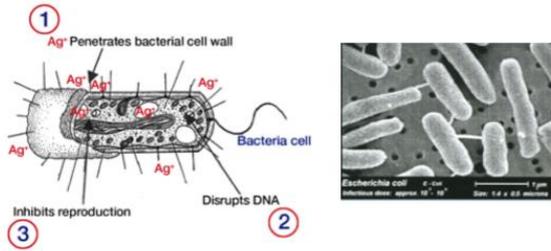
## SILVER ACTIVITY

Antimicrobial mechanism:

- Inhibition of bacterial respiratory chain enzymes.
- Alteration of membrane function.
- Inhibition of cell replication.

Strengthening immune system.

No resistances founded.

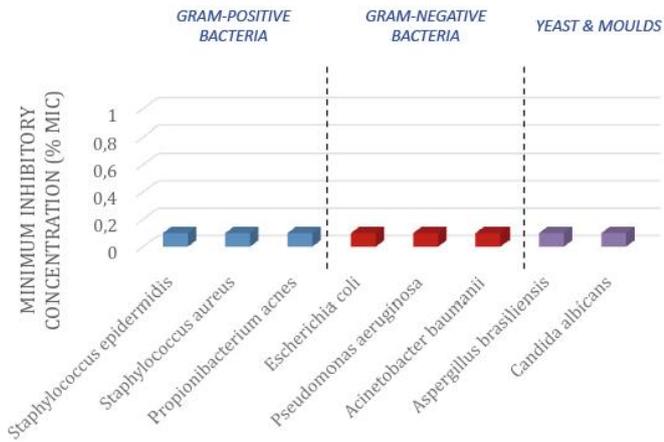


## BENEFITS & CLAIMS

1. Antibacterial activity against *M. furfur*
2. Safe hair dye
3. MT- Solution performs antibacterial broad-spectrum protection, prevents dandruff, tones and nourishes the skin of your head.
4. Shampoo formula available
5. COSMOS & ECOCERT certification
6. Parabens and preservative free

## ANTIMICROBIAL EFFICACY

### MIC TEST



Study was performed using the Clinical Laboratory Standard Institute (CLSI) by microdilution method (M07-A8).

### DISC-PLATE ASSAY



### CHALLENGE TEST

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### QUALITY

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**LABORATORIOS  
ARGENOL**

## SILVER ACTIVE INGREDIENTS

# FOOT CARE

## ANTIMICROBIAL ACTIVE - DEODORANT AGENT

Silver-based products keep your feet fresh and effectively protected from bad odour providing anti-perspirant properties. Silver bactericide and fungicide effect prevent infections and fungi problems in feet.



## FINAL PRODUCTS

- Foot deodorant in spray, talc and cream.
- Foot antiperspirant spray and powder.
- Antifungal repair nails and cracked heels creams.
- Shoe deodorant.
- Antibacterial emulsions.
- Bath treatments.

## ARGENOL PRODUCTS

| NAME                                | INCI                                   | %Ag                     | DOSAGE RANGE | CERTIFICATION   |
|-------------------------------------|--|-------------------------|--------------|---|
| SILVER ZEOLITE                      | Sodium Silver Aluminium Silicate       | 2,5%                    | 1 - 2%       |   |
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| SILVER CITRATE SOLUTION             | Citric Acid (and) Silver Citrate       | 0,25%                   | 0,2 - 1%     | COSMOS APPROVED  |
| SILVER SOLUTION - B                 | Colloidal Silver                       | 0,25%                   | 0,2 - 0,5%   |                  |
| SILVER SOLUTION - C                 | Pentasodium Pentetate (and) Silver     | 0,05%                   | 0,2 - 0,4%   |   |
| SILVER CHLORIDE ON TITANIUM DIOXIDE | Silver Chloride (and) Titanium Dioxide | 1,5%                    | 0,15 - 0,2%  |   |

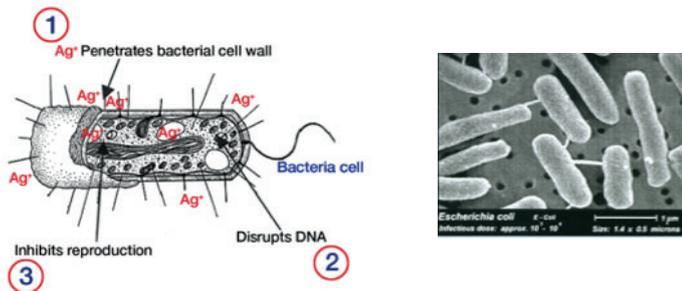
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Strengthening immune system.

No resistances founded.



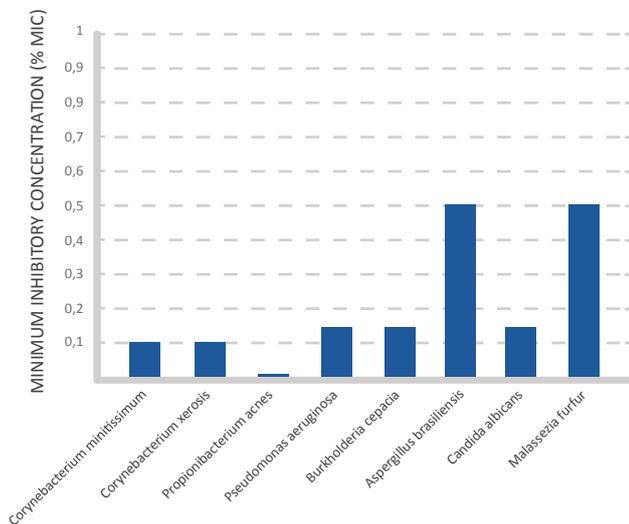
## BENEFITS & CLAIMS

- 1 Bacteria and fungi growth control: A. brasiliensis, C. albicans, S. epidermis, C. xerosis.
- 2 Avoid bad odour causing bacteria.
- 3 Non-irritating. Dermatologically tested.
- 4 Prevent the formation of athlete's foot or micotic infections.
- 5 Inhibition of fungi feet-nails problems.

## ANTIMICROBIAL EFFICACY

### MIC TEST

#### SILVER COPPER ZEOLITE



Study was performed using the Clinical Laboratory Standard Institute (CLSI) by microdilution method (M07-A8).

### DISC-PLATE ASSAY



Antimicrobial activity vs A. brasiliensis



Antimicrobial activity vs C. albicans

### DEODORANT EFFICACY - SNIFF TEST

Deodorant cream with 1,5% Silver Zeolite:

- ✓ Satisfactory application.
- ✓ Satisfactory deodorant and anti-perspirant efficacy after 12 hours.
- ✓ No traces left on skin.

Deodorant spray with 1% Silver Citrate Solution:

- ✓ Easy to apply.
- ✓ No residues and traces found.
- ✓ No smell after 12 hours.

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