

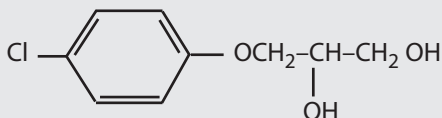


DEFINITION / COMPOSITION

ELESTAB® CPN is a wide spectrum hydrosoluble antimicrobial substance, active against bacteria, fungi and yeasts.

It is used as a polyvalent preservative for microbiological protection of cosmetic products.

- **Chemical denomination:**
3-(4-Chlorophenoxy)-1,2-Propanediol.
- **DCI:** Chlorphenesin.
- **Chemical structure:**



- **Molecular formula:** C₉ H₁₁ ClO₃.
- **Molecular Weight:** 202.64.

ANTIMICROBIAL PROPERTIES

ELESTAB® CPN has a wide **bactericidal** and **fungistatic** activity against Gram (+) and Gram (-) bacteria, and fungi as mentioned in the table hereunder:

Strains	ELESTAB® CPN Concentration (µg/ml)	
	MIC (*)	MMC (**)
Bacteria		
<i>Staphylococcus aureus</i> NCTC 10788	3,000	>3,000
<i>Staphylococcus epidermidis</i> NCIMB 8853	3,000	>3,000
<i>Lactobacillus brevis</i> NCIMB 11973	3,000	>3,000
<i>Streptococcus lactis</i> NCIMB 6681	1,500	>3,000
<i>Corynebacterium xerosis</i> NCTC 8481	1,500	3,000
<i>Escherichia coli</i> NCIMB 8545	500	3,000
<i>Enterobacter cloacae</i> NCIMB 10101	1,500	3,000
<i>Klebsiella aerogenes</i> NCTC 7427	1,500	3,000
<i>Klebsiella pneumoniae</i> NCIMB 10341	1,500	3,000
<i>Proteus vulgaris</i> NCIMB 4175	500	1,500
<i>Pseudomonas aeruginosa</i> NCIMB 8626	3,000	3,000
<i>Pseudomonas putida (fluorescens)</i> ATCC 12842	3,000	3,000
<i>Salmonella typhimurium</i> NCIMB 10258	1,500	1,500
<i>Serratia marcescens</i> NCIMB 11851	3,000	3,000
Fungi		
<i>Aspergillus niger</i> IMI 149007	1,500	3,000
<i>Penicillium pinophilum</i> IMI 87160	1,500	3,000
Yeasts		
<i>Candida albicans</i> NCPF 3179	>3,000	>3,000
<i>Saccharomyces cerevisiae</i> NCPF 3275	>3,000	>3,000

(*) MIC = Minimum Inhibitory Concentration
(**) MMC = Minimum Microbicidal Concentration

COSMETIC USE

- ELESTAB® CPN is suitable for microbiological stabilization of cosmetics, including emulsions (creams, lotions), masks, gels, aqueous or alcoholic solutes, sprays, sticks, serums, tonics, makeup products (eyeliner, mascaras...), shampoos, conditioners, foams.

- It may be necessary, in some formulations, to complete the activity of ELESTAB® CPN with other preservatives, such as ELESTAB® 4112, ELESTAB® 388...

ADVANTAGES

- ELESTAB® CPN is a pure substance, free from solvents or diluents; hence its sufficient concentration in cosmetic products is low.
- ELESTAB® CPN does not contain any free or bound formaldehyde; local skin and mucosa tolerance is good.
- ELESTAB® CPN does not enhance fat oxidation, as often occurs with phenolic preservatives. It does not denature proteins.
- ELESTAB® CPN is an efficient low-toxicity antibacterial and antifungal agent that is equally effective against common dermatophytes.

DOSAGE / SOLUBILITY / MODE OF INCORPORATION

1. **Dose of use:** 0.10 to 0.30%.
The relevant antimicrobial protection of the cosmetic product has to be checked by a challenge test.
2. **Solubility:** ELESTAB® CPN is soluble in water (50 - 80°C), it is soluble in ethanol and insoluble in oils and fats.
3. **Mode of incorporation:** Dissolve ELESTAB® CPN by stirring into the water of the formula, previously heated to 50 - 80°C.

COMPATIBILITY / INCOMPATIBILITY

No incompatibility with cosmetic raw materials has been observed.

The suitable pH is between 3 and 9.

ANALYTICAL CHARACTERISTICS

1. **Aspect:** white microcrystalline powder with a characteristic odor.
2. **Specifications:** upon request.

TOLERANCE

Good.

STORAGE

In its original packaging, at 15 - 25°C.

REGULATORY STATUS

Approved: USA, EC, Japan, Australia, Canada.

INCI NAME

Chlorphenesin.

SUPPLIER

Laboratoires Sérobiologiques, division de Cognis France.