

## SOLUMIUM® ORAL

ANTIMICROBIAL SOLUTION TO TREAT AND PREVENT ORAL, SKIN, AND MUCOUS MEMBRANE INFECTIONS 250 ml

# **INSTRUCTIONS FOR USE**

#### **BASIC FACTS**

SOLUMIUM® ORAL is an antimicrobial solution for the treatment and prevention of oral, skin, and mucous membrane infections. It kills all pathogenes including bacteria, fungi, protozoa, and viruses, including those in microbial biofilms responsible for various infections. At the same time, SOLUMIUM® ORAL is not harmful to humans (see paragraph "SCIENTIFIC BACKGROUND").

SOLUMIUM® ORAL does not sting, and may freely come into contact with the teeth, the skin, and the mucous membrane. The product does not discolor teeth. It does not induce a hardening or metaplasia of the mucous membrane of the mouth.

Chemically, SOLUMIUM® ORAL is an aqueous solution of high purity chlorine dioxide (ClO<sub>2</sub>), the compound responsible for the liquid's yellow color, and characteristic smell. There are no other ingredients in it. SOLUMIUM® products are made using a new, patented method [2].

The product is highly volatile. After treatment, it evaporates with no residues, enabling the treated region to heal naturally. Because of the product's volatility, please close bottle cap tightly, immediately after use. If the solution depletes, its yellow color fades. If the liquid becomes colorless, it is ineffective. Please avoid spilling the product on clothes, as it may discolor them.

## **SOLUMIUM® ORAL - HOW TO APPLY:**

#### Bad breath (halithosis): cca. 20-fold dilution

SOLUMIUM® ORAL kills the bacteria responsible for bad breath, and also deodorizes the volatile compounds produced by the bacteria.

Rinse with SOLUMIUM® ORAL diluted 20-fold by water, every day, in the morning and in the evening, after tooth brushing. For the dilution, pour a little SOLUMIUM® ORAL into the attached scaled plastic cup, filling it up to about half the height of the lowest (2.5 ml) mark, according to the picture on the right. Then use warm water to fill up the cup to the 25 ml mark. Use the diluted liquid for 2-3 thorough rinsings, swirling and gargling for 10-15 seconds each time, then spit it out.

# — 30 ml — 25 ml — 20 ml — 15 ml — 10 ml — 5,0 ml — 2,5 ml

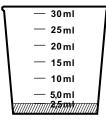
## Sore throat: cca. 10-fold dilution

To treat an acute pharyngitis (inflammation of the throat or pharynx) pour 2.5 ml of SOLUMIUM® ORAL into the scaled plastic cup (lowest mark on cup, see picture on right) and then use warm water to fill up the cup to the 25 ml mark. Use the diluted liquid for 2-3 intense garglings. One gargling should last 10 seconds.

If the pain does not decrease, repeat the procedure using a more concentrated dilution for gargling: pour 5-6 ml of SOLUMIUM $^\circ$  ORAL into the cup, and then continue the procedure as above.

Illness-related pain will decrease substantially in 5-10 minutes after treatment, with all symptoms normally disappearing in a few hours.

Repeat the rinsing procedure 6 and 12 hours after the first treatment.



#### Blocked nose

For the treatment of a nose blocked by the common cold put a piece of cotton wool soaked in undiluted SOLUMIUM® ORAL into both nostrils for a few minutes, or use a cotton swab to brush both nostrils.

If that treatment is not effective enough, dilute SOLUMIUM® ORAL 20-fold (for diluting instructions, see "Bad breath" section above), and apply the liquid as nose drops. 5 minutes after treatment breathing through the nostrils improves substantially. 30 minutes after treatment the nostrils usually free up completely. To avoid recurrence, repeat the procedure within 12 hours.

### Gingivitis (inflammation of the tooth gum)

To treat gingivitis, use a cotton swab dipped into undiluted SOLUMIUM® ORAL, for gently brushing the affected area, for 1 minute, twice a day, for 3-4 days. If the inflammation is more extended (i.e. not just in a small, localized area), then rinse with a ten times diluted SOLUMIUM® ORAL for one minute in the evening and in the morning, also for 3-4 days.

## **Fungal infections**

To treat various fungal infections of the skin (like athlete's foot, yeast infection in skin folds, Jock Itch, etc.) use undiluted SOLUMIUM® ORAL for a 2-minute brushing. After treatment, use a neutral cream on the treated area. To avoid recurrence, repeat the procedure the next day.

## Disinfection of scratches and abrasions of the skin

Clean the area to be treated, let it dry, and wait until bleeding lessens or stops. Then pour a few drops of undiluted SOLUMIUM® ORAL onto the padding of a bandaid, and apply the bandaid to the wound. A wound already covered with a gauze pad can also be disinfected by pouring SOLUMIUM® ORAL onto the gauze, until the liquid reaches the surface of the wound. (Note: the liquid will evaporate from the gauze with no residue.)

## SOLUMIUM® ORAL has no known long-term side effects.

If applied at an acute injury area on the mucous membrane, a temporary and mild feeling of burning, and an increased secretion of saliva might occur. Directly after treatment, a temporary feeling of drought and a reduced sense of taste might arise. These mild symptoms disappear completely within ten minutes.

#### SCIENTIFIC BACKGROUND

SOLUMIUM® ORAL is an aqueous solution of high purity chlorine dioxide (ClO<sub>2</sub>). Chlorine dioxide is an ideal local antiseptic: it is typically more effective than any other antimicrobial agent or disinfectant, while it is harmless to humans [1]. The use of chlorine dioxide as an antimicrobial agent for human use has previously been stalled because it was not available in a clean and stable solution. SOLUMIUM® products contain chlorine dioxide in very high purity made possible by a new patented invention [2]. The high purity of SOLUMIUM® means that it is harmless to human tissues, and its storage time is greatly extended. Chlorine dioxide is a so-called size-selective antimicrobial agent: in the concentration needed for treatment it kills all the microbes rapidly but cannot harm the much larger humans during the few minutes of a treatment [1].

- [1] "CHLORINE DIOXIDE IS A SIZE-SELECTIVE ANTIMICROBIAL AGENT" (Plos One, November 5, 2013)
- [2] "PERMEATION METHOD AND APPARATUS FOR PREPARING FLUIDS CONTAINING HIGH PURITY CHLORINE DIOXIDE" (WO/2008/035130)

INGREDIENTS: High purity chlorine dioxide (ClO₂) (CAS: 10049-04-4) (0.03% / 300 ppm), water.

 $\textbf{ANTIMICROBIAL SPECTRUM:} \ \ \textbf{Bactericide, fungicide, virucide.}$ 

DO NOT MIX WITH OTHER ANTIMICROBIAL AGENTS.

## KEEP OUT OF REACH OF CHILDREN.

**STORAGE:** Close the bottle firmly, immediately after use. Keep the bottle in a dark, cool place, like a refrigerator, above freezing point. If not placed in a refrigerator, the bottle should be put back into its box, to protect it from light. Do not expose the bottle to strong sunlight for a longer time, as that can decrease its concentration.

**BEST BEFORE:** Potency of the unopened, properly stored product is guaranteed for 18 months from date of manufacture. See date of expiry on packaging. Please note that the product may still be effective even after several years of storage as long as it is yellow.

**ECOTOXICITY:** Toxic to aquatic life. Must be diluted to a concentration below 0.8 ppm before discharging to surface water or ground water.

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PATENTS: EP2069232; US 8,512,671; CN101605720

MEDICAL DEVICE



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