

Daily Oral Hygiene Gel for Dogs and Cats to Help to Maintain Natural Microbial Balance, Prevent Dental Plaque and Tartar Formation, and Neutralise Halitosis.



Presentation: 59 ml.

Characteristics:

- For global care of the oral cavity or localised areas.
- Complete protection - Optimal oral health.
- Oral gel - Higher adhesion - Longer permanence.
- Easy to use - Multiple application alternatives - Increased compliance.
- Synergistic Formula:
 - TrisEDTA:
 - Tromethamine - Alkalizes the environment.
 - EDTA - Chelating action over Ca⁺⁺ and Mg⁺⁺.
 - Chlorhexidine - Maintains the natural microbial balance.
- Helps in cases of injury to the oral cavity.
- Suitable for use before, during and after professional dental procedures. Also suitable for regular use.
- Xylitol free.
- Animal protein free.
- Beef flavour - High acceptance.
- Does not stain household surface, fabrics or animal's coat.

Introduction:

Periodontal disease is number one health problem in adult dogs and cats, with an 80% of dogs and 70% of cats developing periodontal disease by the age of 2 years and older¹.

It starts when biofilm (oral bacteria contained in a matrix) adheres to the tooth surface forming plaque. Gingivitis is initiated when there is a Gram+ to Gram- change in bacterial plaque; and calculus, or tartar, is produced by secondary mineralisation of plaque¹. Plaque and tartar can spread below the gum line and cause gingivitis and subsequently periodontitis (loss of bone and soft tissue around the teeth).¹ In addition, tartar provides a rough, porous surface to which bacteria can attach, which in turn contributes to periodontal disease. This progression can allow bacteria to enter the bloodstream and affecting pets internal organs, such as the heart or kidney¹.

Although plaque and tartar should be removed by professional dental cleaning, studies by 'Kling, Katherine, et al' indicate that the application of chlorhexidine at a concentration of 0.12-0.2% prior to prophylaxis decreases the bacterial load³.

Plaque forms within 24 hours, however, after a professional dental cleaning, excellent oral health can be maintained at home with proper hygiene habits¹. The goal of these guidelines is to prevent the accumulation of bacteria and plaque and their subsequent mineralisation. Successful adherence to dental hygiene guidelines depends on many factors, including the availability of the owner and the character of the animal. The choice of the right product for each case and its ease of use are key to following the recommended guidelines.

Key Constituents:

Tromethamine	0.20 %	Disodium EDTA	0.10 %
Tromethamine HCl	q.s. pH 6.8 – 7.2	Chlorhexidine Digluconate	0.12 %

Mechanism of Action:

EDTA (ethylenediaminetetraacetic acid): a chelating agent capable of combining with metal ions present in the bacterial cell wall, making it more permeable and thus, helping to destabilise the biofilm and increase the efficacy of chlorhexidine or the penetration of antimicrobials^{3,5,6}. In addition, it supports the demineralisation process of the affected dentine by chelating its main component, tricalcium phosphate⁶.

Tromethamine: alkaline buffer that enhances the action of EDTA⁷.

Chlorhexidine: it is considered one of the most effective chemical anti-plaque agents available⁸. Its antiseptic action is based on its binding ability to the bacterial wall, causing damage to the Gram +, Gram -, aerobes or facultative anaerobes membrane^{3,8} as well as affecting viruses and fungi⁹. It is highly adherent to oral tissues and acts for a prolonged period of time¹. **In combination with Tris-EDTA:** a synergistic effect is produced, making it possible to reduce the necessary doses of chlorhexidine and thus, avoiding the appearance of undesirable effects associated with high concentrations^{3,6}.

Recommended Uses:

- Maintains the natural microbial balance.
- Preparation of the oral cavity before a professional dental hygiene or other dental procedures.
- Applied prior to dental prophylaxis it helps to reduce the aerosol spread of bacteria and contamination of the environment.
- Maintenance after professional dental hygiene or other dental procedures, helping to preserve the microbial balance after the procedure, and to enhance, prolong and improve its efficacy.
- Prevention of plaque formation and its progression to tartar.
- Halitosis control.
- Applied daily, it helps to maintain optimal oral health, helping to prevent secondary problems caused by dental plaque.

How to Use:

Lift the upper lip and apply 1 drop of product on both sides of the upper gums.

It can be applied directly from the incorporated applicator, using a toothbrush or the index finger.

For animals ≥ 10 kg, increase the quantity of product proportionally.

Administer daily and separately from meals.



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2. Fraser A, Hale. "Periodontal disease in Dogs and Cats". Royal City Animal Hospital Guelph, ON, Canada. May, 1992.
3. Kling, Katherine, et al. "Effect of TrisEDTA and Chlorhexidine 0.12% on an In Vitro-Defined Biofilm Representing the Subgingival Plaque Biofilm of the Dog." Journal of Veterinary Dentistry, December 2021.
4. D.A. Devine, R.S. Perceval, D.J. Woods, L.J. Tuffill, P. Kite, R.A. Killington and P.D. Marsh. "Inhibition of biofilms associated with dentures and toothbrushes by tetrasodium EDTA". Journal of Applied Microbiology, 30 May, 2007.
5. Jaime A, Cury et al. "The demineralizing efficiency of EDTA solutions on dentin". State University of Campinas, dentistry school of Piracicaba, 1981.
6. Apolo Pineda J. "Uso de Clorhexidina, EDTA y solución salina como irrigantes en conductos radiculares" Editorial de ciencias odontológicas U de G, Guayaquil, 2011.
7. Charlotte C. Pyle, Anshel Singh and J. Scott Weese. "Evaluation of the impact of tromethamine edetate disodium dihydrate on antimicrobial susceptibility of Pseudomonas aeruginosa in biofilm in vitro" Vet Dermatol 2014; 25: 120-634.
8. Cova Bustamante O. et al. " Oral antisépticos: Clorhexidina, fluoreína y triclosan" Rev. Salud & Vida Sipanense. 2020;7(1):4-16 Facultad de Ciencias de la Salud – USS.

