Dr. George’s Plaque Blast TM

Dear Veterinarian:

Please allow this letter to express the attributes of Dr. George’s Plaque Blast TM I, Dr. George, have spent over ten years in its research and development. I have studied nearly six years of various scientific disciplines at the undergraduate and postgraduate levels. Those studies have included Biochemistry, Veterinary Medicine and Dental Medicine.

The two main active ingredients that in Dr. George’s Plaque Blast TM are Sodium Hexametaphosphate (SHMP), and Chlorine Dioxide (ClO2). Both have been extensively studied for safety and effectiveness, for years. Plaque Blast has been protected by a US patent. Sodium Hexametaphosphate (SHMP), and Chlorine Dioxide (ClO2), have been extensively studied for safety and effectiveness, for years.

During the research and development of Plaque Blast TM, I reviewed appropriate studies from Pub Med, patent research by Colgate, P & G, research from professional journals, and much more. The scientific literature was replete with information. One pertinent example was an article that spoke of the merits of SHMP that is used in Plaque Blast TM. It has been shown to reduce calculus formation on Beagle dogs in the ***Journal of Veterinary Dentistry***- J Vet Dent Vol. 24, No 4, Dec. 2007. The literature confirmed what I already understood-that oral health for dogs and humans, cross-over. This is one of the reasons why dogs have long been used in human periodontal research.

SHMP fights against calcium phosphate mineralization within dental plaque, which leads to calculus formation. It also disrupts the biofilm pellicle to remove extrinsic stains. When SHMP is swallowed it breaks down in the stomach, due to the low pH there, and acts as a nutritional supplement supplying calcium and phosphate. Hexametaphosphate (HMP) acts to chelate the Calcium (cations) within the tartar, via intermolecular bonding with Oxygen (anions) within the Phosphate groups of HMP. It also acts to make a smoother surface on the enamel by acting as a smooth protective covering, making plague adherence difficult. There is much literature on HMP mechanisms, but I feel are not necessary, and not within the scope of this introductory letter.

Like SHMP, CLO2 has enjoyed very extensive research by P & G, Colgate, and others. CLO2 is a safe and effective biocide which has been used for eliminating odors in water for over 30 years, for whitening in the paper industry, and for biofilm removal in commercial water-cooling towers. Because of this biofilm removal property, the film pellicle that forms on teeth (responsible for plaque adherence) is disorganized, and substantially removed.

Biofilm coatings on the dorsal, posterior portions on the tongues of pets, as well as humans, are responsible for the production of volatile sulfur compounds (VSCs). In this biofilm, gaseous CLO2 penetrates and oxidizes VSCs such as hydrogen sulfide to non-odoriferous salts; while it also oxidizes sulfur containing peptide substrates, and amino acids. Since it is microbiocidal down to .1 parts per million, it kills the gram-negative malodorous anaerobic bacteria responsible for producing malodor. These are some of the same bacteria responsible for periodontal disease. So, in the process, the gingiva gets pinker and healthier. Next, I began to test certain hypotheses in vitro. I used calculus and cut it into certain geometrical shapes. Different pieces were placed into my own different formulas, as well as another potentially competitive product. Through this, I began to clearly see which product formulations worked. See the photographs at [www.DrGeorges.com/Plaque-Blast-oral-spray/before-and-after/](http://www.DrGeorges.com/Plaque-Blast-oral-spray/before-and-after/) to see the results. You can see sectional pieces of calculus, which have been suspended in Dr. George’s Plaque Blast solution for different periods of time. As you can see from the photographs, the tartar truly dissolved, changed shapes, rounded out, got lighter/whiter, and broke apart.

Finally, I further tested the product clinically on my own pet Gracie- a 13-pound Pomeranian. The clinical photos, like the ones above, are un re-touched. They show reduced gingival redness and stain removal. Also, clinical results are shown from using Plaque Blast TM twice daily for 6 months, versus once daily for 6 months. There will probably be less compliance with a twice daily regimen, but it is apparently a regimen that will produce improved oral health, which surely will translate into improved systemic health. Calculus is better controlled by using the oral spray 3 times daily (it was softer, with more dissolution), but it is held in abeyance with once or twice daily use. The gingiva was pinker and smoother in a week, and the breath was better instantaneously. See the White Papers tab under the Plaque Blast TM tab, at www.DrGeorges.com for other scientific articles, particularly on the main two active ingredients.

There are other ingredients that facilitate the two main ingredients, e.g., Poloxamer 406. It is a surfactant that helps to spread the ingredients to the lower and front teeth, and a sweetener to go with the salty taste that pets love. For a complete list of the ingredients and the reason they’re used, click on the Plaque Blast tab, then on the ”Purpose of Plaque Blast Ingredients”. Other products on the market contain alcohol. Alcohol dries the mouth, which leads to breath malodor. Consumer Reports magazine has shown that alcohol with essential oils “…only mask bad breath for a short time.”

Because of the scientific literature, and my in vivo and in vitro studies, observed through simple phase microscopy, and my own eyes, I was not as surprised with the lab and clinical results; showing the effectiveness of Plaque Blast TM. I guess I am more surprised that one of the big companies has not already pioneered a product like this. No other products to date really have proven ingredients within their formulations like Dr. George’s Plaque Blast TM, which freshens breath, removes plague biofilm, promotes healthy gums, and diminishes /controls unsightly calculus build up. Write us and get it wholesale: drgeorge@drgeorges.com.

Sincerely,

Dr. George Madray BSA, DMD

President

M&M Innovations Inc., Brunswick, GA