

Ingredient Spotlight: Natural Zeolites

For your clients seeking an alternative to brushing their pet's teeth, [Perio Support Pro](#) is a convenient, tasty powder that can be easily added to a pet's bowl at mealtime. It's not only easy to use, but effective in supporting oral health in cats and dogs. In a [double-blind study](#) of 20 canine subjects, Perio Support Pro demonstrated a reduction in overall plaque by 20% and calculus by 18% in the 28-day trial period. (1) This dental health powder features six effective ingredients, including natural zeolites.

What are Natural Zeolites?

There are both natural and synthetic zeolites with a range of 30 to 140 types found in nature. Natural zeolites are of geologic origin and composed of aluminosilicate mineral particularly in organic rock. Clinoptilolite is the natural zeolite found in oral health products. This substance has a unique structure including an open matrix with channels and cavities that allow the exchange of ions.

Due to their porous structure, zeolites contain [adsorbent and chelation properties](#) which help capture minerals that lead to the formation of dental calculus. Zeolites are long-lasting and effective even in the oral environment and stable despite extended contact with saliva. (2)

What is the Mechanism of Action?

- **Antioxidant activity:** With their porous structure, naturally occurring [Clinoptilolite](#) traps free radicals, which deactivates and prevents them from affecting gum tissue. Zeolites have been shown to significantly decrease lipid peroxidation. (3)
- **Chelation properties:** Zeolites [neutralize and eliminate](#) noxious substances like heavy metals and toxins. Since the pores and channels of the zeolites are negatively charged, they attract both mono and divalent cations like calcium and sodium. By binding with calcium in the oral cavity, there's less material available to form calculus. Zeolites bind to toxins secreted by the bacteria in plaque, which helps keep them away from gingival tissue. By acting as a binding agent for ammonia, Zeolites can decrease fecal odor in cats. (4)
- **Immune support:** Clinoptilolite has been shown to stimulate T-cell activity and increase the number of macrophages in the body to promote [healthy immune system](#) function. (3)
- **Mechanical disruption of the biofilm:** As a result of their rigid mineral structure, zeolites may also help to mechanically disrupt the biofilm that forms on teeth. (2)
- **Supports bone and tissue repair:** Promotes tissue repair following disruption.

Adverse effects: Rare. These are very safe compounds.

Potential drug interactions: Zeolites can potentially bind with tetracycline and quinolone as well as oral iron. This may be avoided by separating the dose from the use of the zeolite.

Note: Clinoptilolite does not affect the homeostasis of trace elements and micronutrients. It is selective for heavy metals and toxins.

References:

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