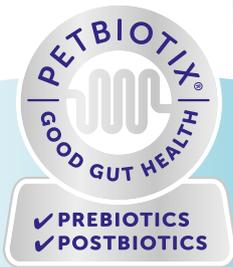


PlaqEase®

Oral health matters

Periodontal conditions are the number one clinical finding by vets,¹⁻¹² and oral health has been shown to influence many other body systems such as the heart, kidney, skin and liver.¹³⁻²²



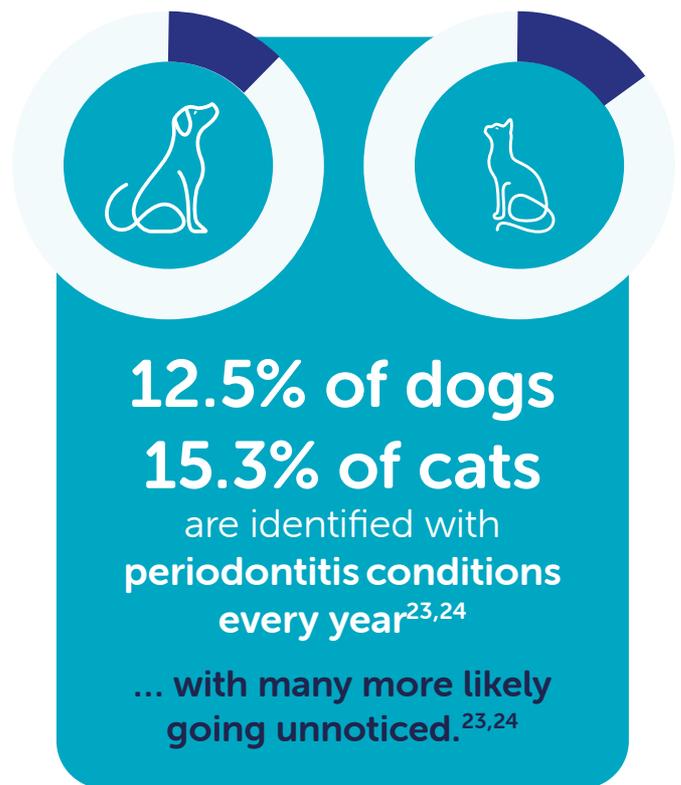
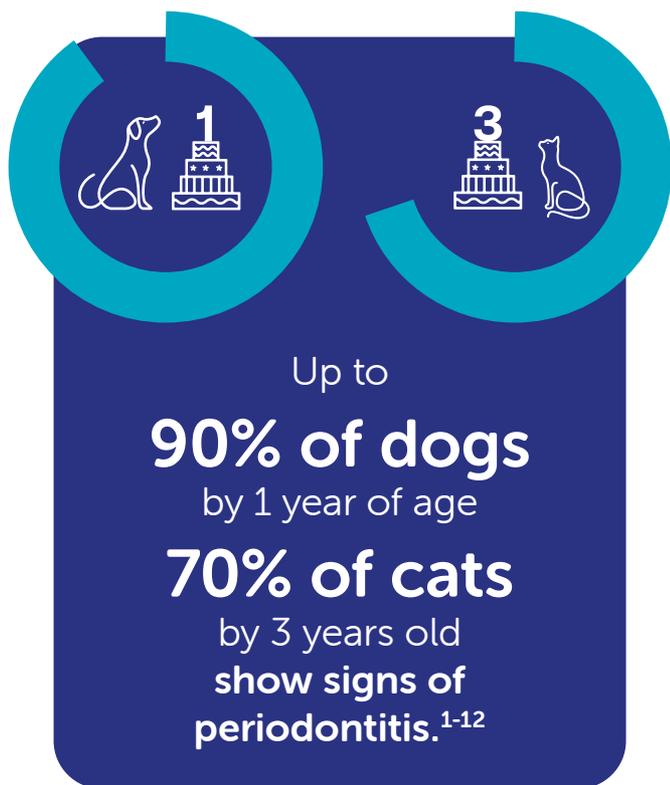
Protexin®

VETERINARY

Smarter pet care, powered by biotics.



Studies show:



Poor oral health and dental disorders significantly impact welfare in dogs and cats.^{23,25,26}

Smaller dog breeds, cats with high body weight and older pets tend to experience more frequent oral health concerns.^{4,23,27-29}

Despite over 80% of owners

considering their dog's dental health as important⁵...



1 in 4
owners

have difficulty examining their dog's teeth⁸



Managing oral health

There is a range of oral health conditions, some of which can be improved with appropriate veterinary care, while others may require ongoing attention.^{23,30-34}

One study found that 1 in 8 dogs have been anaesthetised for a dental procedure,⁵ however, a biofilm forms almost immediately afterwards, with primary biofilm colonisers such as *Neisseria zoodegmatis* being able to form significant biofilms within 2 hours.³⁵ Plaque-forming bacteria attach to this biofilm and proliferate. Within 24 hours plaque forms and develops a rough surface for increased bacterial adhesion.³⁵ The plaque then matures by thickening and extending to the gingival sulcus, depleting the oxygen and shifting the

Sub-gingival plaque contains more disease-associated species than supra-gingival plaque.^{35,39,40}

growth of bacteria to more gram-positive anaerobic species.^{26,29, 36-38}

Over time, calcification occurs, leading to the formation of calculus. If left unmanaged, this can contribute to changes in the gum tissue and surrounding structures due to the persistence of anaerobic bacteria and their byproducts.^{1,26,29,41} Over time, gums start to recede, connective tissues are affected, and alveolar bone can be lost.²⁶

Daily toothbrushing is considered the gold standard for maintaining good periodontal health.^{38,42-45} Unfortunately, compliance in pets is low:



69% of owners have never brushed their dog's teeth⁴⁶



46% of those who do brush their dog's teeth, only brush once or twice weekly⁴⁶



73% of owners have never brushed their cat's teeth⁴⁷



74% of those who have brushed their cat's teeth do so less than once weekly⁴⁷

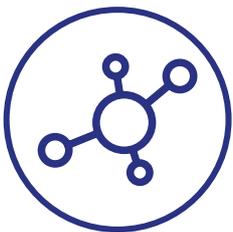
This highlights the importance of education for pet owners and early training of pets in toothbrushing. It also emphasizes the need for alternative solutions for owners who still want to support their pets' oral health when toothbrushing is not a feasible option.



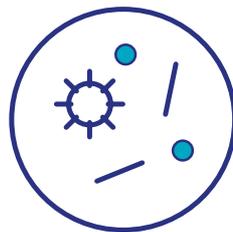
Discover the world of the oral microbiome

The oral microbiome in dogs and cats consists of a diverse community of microorganisms, primarily bacteria.^{1,37,41,48,49} These microbes play a key role in maintaining oral health, influencing processes like digestion and immune function as well as having a more negative impact such as interacting to cause plaque formation.^{1,35}

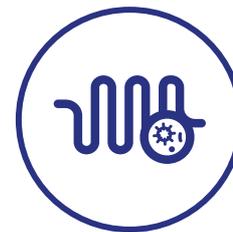
A balanced oral microbiome helps to limit the growth of certain types of bacteria that can contribute to oral health challenges.^{1,26,41}



Studies have shown that the oral microbiome of dogs and cats have the same dominant phyla but a different profile of species.^{37, 49-51}



There are different niches within the oral microbiome – with each area of the oral cavity having a different microbial composition.³¹



In human research there is strong evidence of an oral-gut microbiome axis, and the oral cavity is seen as an endogenous reservoir for intestinal microbiota.⁵²⁻⁵⁴

PlaqEase

Supports a healthy mouth and a happy oral and gut microbiome



Helps control plaque



Manages tartar build-up



Reduces bad breath



Supports a healthy oral microbiome



Dogs & Cats



Palatable powder



Artificial chicken flavour



Long-term use



Clinically proven ingredients

Science-backed formulation:

Petbiotix®:

Our Petbiotix have been expertly developed to support a healthy microbiome, essential for the normal functioning of the gastrointestinal tract and rest of the body.

Prebiotics selectively feed beneficial bacteria, supporting a diverse and healthy microbiome.

Postbiotics are inactivated micro-organisms which remain bioactive, providing health benefits.



Postbiotics:

Inactivated *Lactiplantibacillus plantarum* CECT 9161 (PRIOME® OC):



Shown to help reduce dental plaque formation in dogs, balance the oral microbiome, and support periodontal function.^{55,56}

CitriStim:

An inactivated yeast, *Pichia guilliermondii*.

Acts as a source of mannan-oligosaccharides (MOS) and beta-glucans, both of which have immunomodulatory properties in dogs.⁵⁷⁻⁶⁸

Clinically proven:

Inactivated *Lactiplantibacillus plantarum* CECT 9161 (PRIOME® OC) has been found to inhibit growth and development of canine oral biofilms in vitro, with an average reduction of 55%.^{55,56}

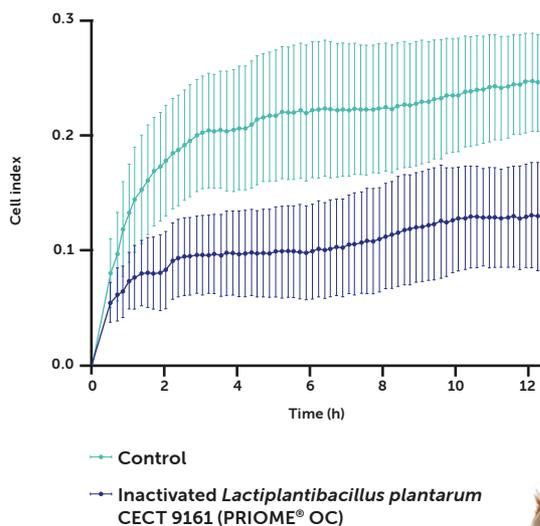
A clinical study found it reduced plaque formation in dogs without mechanical action or retention technologies maintaining the ingredient on the tooth surface, as well as positively modulating the oral microbiome.^{55,56} This postbiotic was also able to inhibit the secretion of interleukins in an oral epithelial model, showing immunomodulatory properties.⁵⁵

Clinical study results⁵⁶

Pre-clinical study results

Inactivated *Lactiplantibacillus plantarum* CECT 9161 (PRIOME® OC) significantly decreased biofilm formation in canine saliva in vitro.

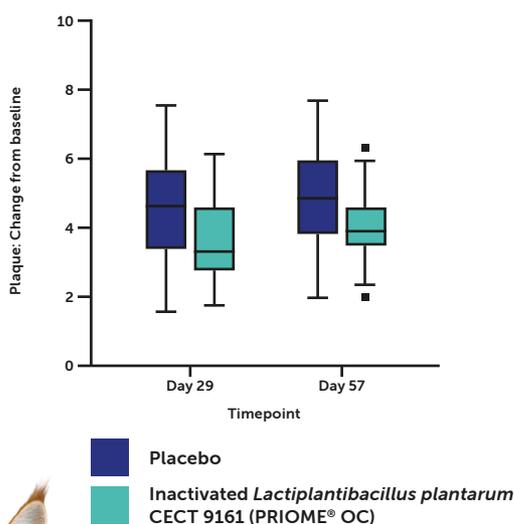
Biofilm growth curve



Clinical study results

Inactivated *Lactiplantibacillus plantarum* CECT 9161 (PRIOME® OC), when added to the daily diet as a powder, reduced plaque accumulation compared to placebo.

Change in plaque scores from baseline at day 0



Clinically proven:

Kelp (*Ascophyllum nodosum*):

Ascophyllum nodosum has been shown in many clinical studies to help reduce plaque and calculus build up, support healthy gums and contribute to the body's natural immune responses.^{29,72-80}

In a study 47.7% of owners report bad breath in their dogs.⁵ *Ascophyllum nodosum* has also been demonstrated to significantly help reduce the concentration of volatile sulphur compounds, which are the main cause of oral odour.²⁹



Prebiotic:

Fibersol-2®: A resistant starch which is utilised by bacteria in the intestines.⁶⁹

It has been shown to support levels of the beneficial bacteria such as *Bifidobacterium* spp.⁷⁰ Fibersol ferments slowly, producing short-chain fatty-acids (SCFAs) over a longer period to provide longer-acting support for the microbiome.

Vitamin C

Vitamin C has multiple roles in the body that help support oral health. It is needed for the biosynthesis of collagen, which is important in connective tissue such as gums,⁸¹⁻⁸³ and is also a recognized antioxidant, helping reduce oxidative stress.^{81,83,84}

Flavouring

Artificial chicken flavouring to aid palatability – suitable for pets with meat protein allergies.

**SCFAs
constitute
the primary
energy source
for enterocytes and are
important metabolites
for the maintenance of
intestinal health.⁷¹**

Protexin[®] VETERINARY

Smarter pet care, powered by biotics.

PlaqEase is available
in two pack sizes:
75g and 150g pots,
scoop included



Easy for pet owners to use:



PlaqEase should be used daily on a long-term basis.



It can be sprinkled on top of, or mixed with, the food.

Weight

Less than 10 kg

10-20 kg

20-30 kg

More than 30 kg

Daily amount

1 measure

2 measures

3 measures

4 measures

Shake before use. Water may be added. Ensure fresh water is available at all times. PlaqEase is naturally high in iodine so should be used with caution in animals with thyroid conditions.

Home Tester Club:



84%

From a survey of 102 dog owners who tried PlaqEase⁸⁵

of owners saw an improvement in unpleasant breath after just 4 weeks of use



82%

trust that PlaqEase supports their dog's dental health after just 4 weeks of use



87%

agree their dog enjoyed the taste of PlaqEase



79%

agree that PlaqEase helps them to easily maintain a home dental care routine for their dog

Amazing product!

Protexin Veterinary Dental Powder is a game changer. My rescue dog has never liked me doing oral hygiene on him and I only wish we had this powder sooner! It's improved his overall dental health, his breath is fresher and his teeth look cleaner. Really easy product to use and clear instructions.

Shannon



Very easy to use, happy dog!

Very easy to use. My dog wags her tail when she sees me adding it to her food. Visible difference even after a short period of time.

Megan



Lolas's teeth

This is a fantastic product. Lola's teeth look good and she didn't mind the product at all. Would highly recommend this to anyone looking to improve their dogs well being and teeth.

Caroline



Teeth and breath were brighter

My pooch are it without hesitating his teeth were cleaner and breath was smelling so much better.

Alana



Brilliant!

Made a huge difference in my dogs teeth and breath. Would use again!

Martha-Louise



Scan here for more information on PlaqEase and dental care or visit: www.protexinvet.com/dentalcare



Scan here for full reference list or visit: www.protexinvet.com/plaqease-refs

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