

Darcy's GutDiscovery[®] Microbiome Profile

Part 1: Overview and Recommendations

Sample date: 15/05/2024

Analysis date: 24/05/2024

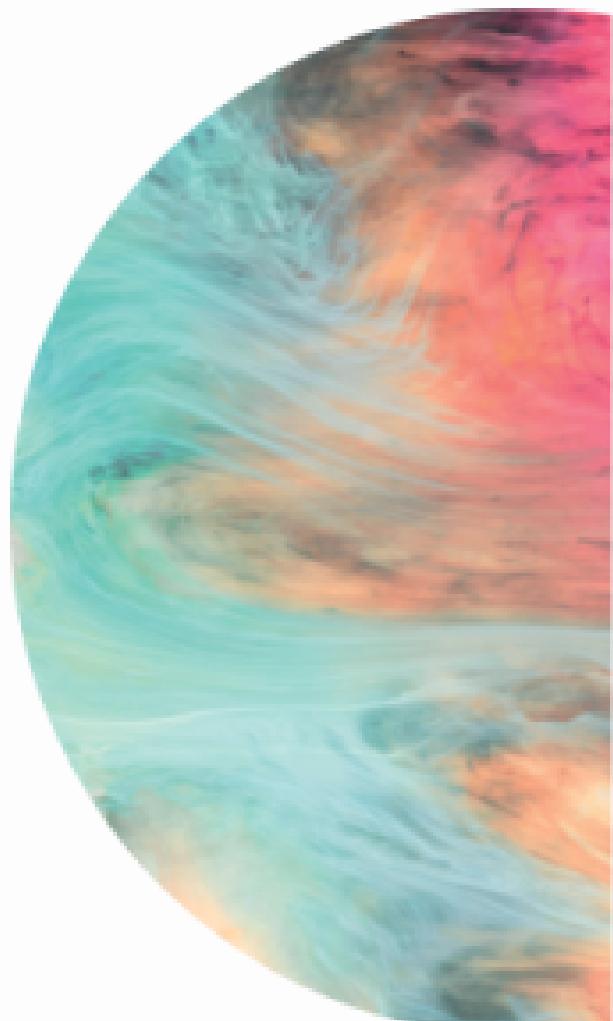
Sample code: 7DDRMT

Breed: Springerdoodle

Recommended retest date:

24/11/2024

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View Darcy's full supplement plan & pricing online

[Click Here ↗](#)

For Darcy's Detailed Microbiome Analysis - See Report Part 2

Section 1

Darcy's GutDiscovery® Results

GutDiscovery® Microbiome Profile Test was the first step you made into the amazing science of Darcy's gut microbiome and total body health. The insights it unlocked can help you make choices that give her a happier, healthier and longer life.

Your sample has been sequenced and analysed using our proprietary Invisible Health AI algorithms to generate the scorecards and breakdowns presented in this section.

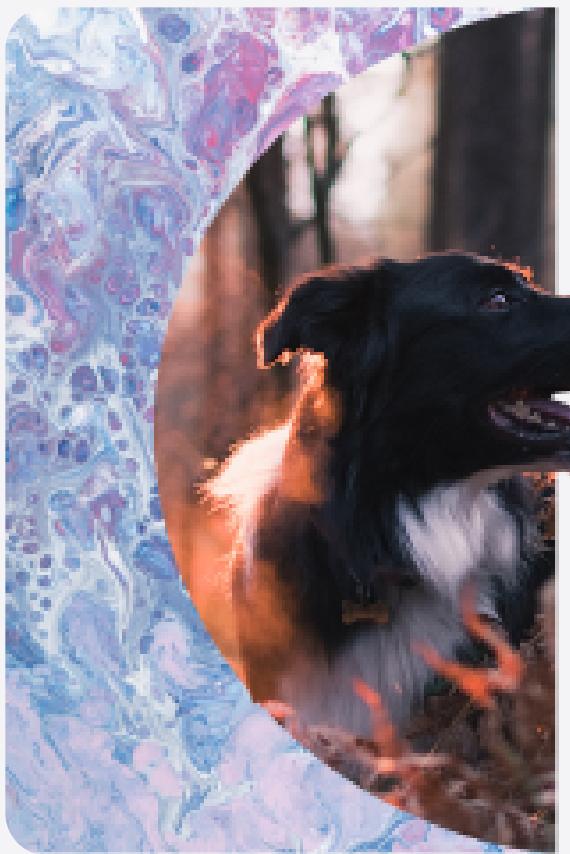


**The gut is the invisible organ
which shapes our lives..."**

Fasano and Flaherty, MIT Press 2021

How will this report help Darcy?

In creating this report, we've analysed millions of data points from her gut microbiome to give you insights into specific aspects of her digestion and how well her gut ecosystem is supporting her wider health. We've used this along with the information you've given us, to create targeted recommendations in Darcy's BiomeVitality® Care Plan (Section 2), that can hopefully benefit her over the months and years to come.



Introduction to the Microbiome

The gut microbiome is an extremely sensitive and diverse ecosystem of microorganisms. Its composition includes many species of bacteria, fungi and archaea, that live in harmony within your pet's gastrointestinal tract.

These microorganisms work with the host and one another, impacting many aspects of your pet's health, including digestion, cognitive function, immune response and even cardiovascular support, as well as many other aspects of their wellbeing.

Due to the vast species diversity that exists, even a minor shift in populations - strongly linked to diet - can cause effects that may negatively impact your dog. Therefore, an understanding of the gut microbiome population can prove extremely insightful, and indicate some simple nutritional changes and supplementation support that can potentially help your pet's digestive and total health.

Understanding the results of your dog's GutDiscovery®

GutDiscovery® is intended as a holistic wellness product, and should not be interpreted as a medical diagnosis. We present findings in a way that is unique to BIOME9 based on our proprietary research methodology.

The measures we have used to display Health Indicators are a product of published research in the field of Canine Microbiology, which we have synthesised along with our own research to develop our InvisibleHealth® AI algorithms. Scorecards are intended as a guide to help you benchmark and monitor your dog's gut health over time.

It is important to note that as our scientific research in the field grows, our foundational AI models and outputs will continue to improve, and methodologies and recommendations will evolve.

How should I read my dog's scores?

The scores provided serve as a guideline to compare your dog's gut bacteria against established healthy standards from research, aiding in tailored recommendations for gut health and broader well-being. Scientific practices evolve, meaning there are no absolute standards. Some healthy dogs may have microbiome profiles outside these ranges. Our AI detects bioinformatic patterns that could reveal significant insights over time, and any pertinent updates will be communicated to you.

What should I do if my dog's scores are "poor" (red)

If your dog's scores are red, this indicates their gut microbiome may not be optimally balanced according to our research-based thresholds, suggesting areas for more effective intervention. However, this does not diagnose symptoms or health issues, nor does it signal immediate concern. We're highlighting the levels of bacteria in your dog's gut to suggest how they might support various health functions. Other factors like diet, exercise, genetics, breed, and environment also play crucial roles in your dog's health. The gut microbiome is important, but not the sole determinant of health outcomes. If you have concerns about the report, consulting with your vet is recommended.

What should I do if my dog's scores are "healthy" (green)

If your dog's scores are mostly green, it suggests their gut microbiome is within, or near, our research-defined target ranges for balance. However, this doesn't discount the presence of symptoms or health issues. It indicates an optimally supportive microbiome for health functions, but remember, the microbiome's composition can change rapidly, so ongoing monitoring and continued nourishment is essential. Factors like diet, exercise, breed, and environment significantly impact overall health. While the gut microbiome aids various health systems, it isn't the sole factor in health outcomes.

Will the BiomeVitality® Care Plan cure my dog's symptoms?

Our dietary and supplement recommendations aim to holistically support your dog's wellbeing, not to treat or cure any symptoms. These suggestions and the ingredients we've chosen are based on thorough research, all showing potential to positively modulate gut bacteria colonies. However, effectiveness varies individually due to factors like genetics, breed, health conditions, diet, age and environment.

Do I have to follow your recommendations?

Ultimately, you know your dog best. Our suggestions are exactly that - suggestions. Following both dietary and supplement recommendations could yield significant benefits for your dog's health, but the choice is yours. There's no one-size-fits-all diet for dogs, so we advise experimenting to see what is best for yours. As we evolve, our recommendations will only get better, and we'd love you and your dog to be a part of that journey.

Darcy's InvisibleHealth® Score

Microbiome Population Scoreboard

See detail on Page 6

Shows the abundance, diversity, balance, and resilience of gut bacteria found in Darcy's sample.

Health Indicators

See detail on Page 7

Shows how well the bacterial composition analysed in Darcy's sample is contributing to the support of various aspects of her health.

InvisibleHealth® Score

This proprietary score integrates the Microbiome Population Scoreboard with the Health Indicator Analysis allowing you to benchmark and monitor Darcy's overall gut health and quickly assess the impact of any changes in your next test report.

48%

Poor

Healthy

Darcy's score is Average. Try to improve the support level of her gut bacteria for optimal wellbeing, through improvements in diet and via additional supplementation where needed.

BiomeVitality® Care Plan

See plan on Page 9

From the detailed analysis of Darcy's gut microbiome, we've created a tailor-made roadmap designed to help improve her digestive health and overall wellbeing. This journey includes the following key components:

- ✓ Nutritional tips
- ✓ Precision supplement plan
- ✓ Tracking and measurement (retest)



Darcy's Microbiome Population Scoreboard

Diversity Score

3.48

Darcy

Poor

Healthy

Darcy's score is **HEALTHY** which means high diversity, reflecting even levels of the microbial species found in her gut population, and can better help contribute to overall health and digestive function.

The diversity score is calculated using the Shannon Index and gives you an overall picture of the distribution of species found in Darcy's gut microbiome population. It takes into account both the total count of individual bacteria found, and how well balanced they are with one another. Good balance and diversity means that amongst the different bacterial species, no single species dominates the others. We want a highly diverse population living in the gut, to aid in overall digestion and health.

Phyla (Balance)

Darcy

Poor

Healthy

Darcy's score is **AVERAGE** which means that the groups of species are relatively well balanced but not optimal.

Phyla Score gives you a macro-level snapshot of how harmonious the groups of species present in Darcy's gut microbiome are in comparison to an optimally balanced microbiome. This number tells you if some groups of microbial species are dominating, whilst some others are scarce, and to what extent. Further detail and breakdown can be found in Part 2 of your report.

Richness (Variety)

308

Darcy

Poor

Healthy

Darcy's score is **POOR** which means that the number of different species in her microbiome is too low for optimal gut health.

Richness or variety, shows you the actual number of different microbial species found during our analysis of Darcy's gut microbiome. High species richness is positively associated with benefits to overall health.

Resilience

Darcy

Poor

Healthy

Darcy's score is **AVERAGE** which means an adequate level of beneficial bacteria is present to support the health and resilience of the gut wall.

This measure takes into account the bacteria within Darcy's gut wall that help protect against harmful toxins or pathogens, contribute to nutrient absorption, and help build a protective army within the gut. When working together properly, these bacteria communicate with each other, effectively helping to neutralise threats. However, the presence of certain 'bad' bacteria can form biofilms, leading to inflammation of the gut and contribute to what is often referred to as 'Leaky Gut Syndrome'.

Darcy's Health Indicators

When it is in optimal condition, Darcy's gut microbiome can help to support other health functions in her body. Through advanced 16s rRNA sequencing, we've charted the bacterial landscape of her gut, using AI pattern recognition to benchmark her unique, complex bioinformatic profile against our proprietary dataset.

The table below presents indicators of how effectively Darcy's gut microbiome is supporting various health functions, offering a snapshot of her digestive wellbeing and its potential broader impact on her overall health, but also holds the potential to reveal patterns that may suggest underlying or hidden health issues*.

*You can find the recommendations based on this analysis in Section 2.

| Health Area | Level of Support |
|---|------------------|
| Digestive function | |
| Carbohydrate digestion | ● Moderate |
| Fibre digestion | ● Below Avg |
| Lipids (fat) digestion | ● Moderate |
| Protein digestion | ● Below Avg |
| Vitamin and mineral absorption | ● Moderate |
| Immunity and inflammation | |
| Gut inflammation | ● Moderate |
| Immunological function | ● Moderate |
| Joints and mobility | ● Good |
| Supportive health indicators | |
| Breath odour | ● Moderate |
| Cardiovascular | ● Moderate |
| Coat and skin | ● Below Avg |
| Neurological (behaviour) | ● Moderate |

Note: The indicators here show how well the microbiome is supporting the various health functions in the table, not the state of the health functions themselves - and therefore should not be taken as diagnosis of any medical conditions. If anything concerns you, a chat wth your vet may be of benefit.

| Pathogen Analysis | Result |
|-------------------------|----------------|
| Bacteria | |
| Campylobacter jejuni | ● Not Detected |
| Clostridium difficile | ● Not Detected |
| Clostridium perfringens | ● Present(123) |
| Salmonella enterica | ● Present(4) |
| Helicobacter pylori | ● Not Detected |

True pathogens refer to microorganisms that have the potential to cause disease. While many bacteria in the gut are beneficial and contribute to overall wellbeing, certain pathogenic bacteria can disrupt the delicate balance of the microbiome, leading to inflammation. Maintaining a diverse and balanced gut microbiome through lifestyle and diet is crucial for preventing the overgrowth of pathogens and promoting better overall gut health.

If a number is shown, this indicates the amount of individual bacterium of this pathogen species that were detected in Darcy's sample. If the number is shown in yellow, this is generally considered a low level, if red, you may consider discussing the result with your vet.

Disclaimer: Microbiome research is a pioneering field of science and our InvisibleHealth® AI continues to get more targeted and precise with every new sample we analyse. As such, the healthy ranges we measure your dog against today are based on the most up to date scientific understanding, our proprietary research, and bioscientific innovation. Through these advances and the use of your data our technology will become more precise and targeted over time.

Section 2

Darcy's BiomeVitality® Care Plan

Here you can find our simple-to-follow bespoke recommendations to help rebalance Darcy's gut microbiome which can help improve her overall health and wellbeing.

These have been created specifically to target the findings in Section 1 of this report.



You can't easily change your dog's genes, but you can alter their microbiome"

Dr. Stephen Christie

Creating Darcy's BiomeVitality® Care Plan

Darcy's InvisibleHealth® score is slightly below the level associated with optimal gut-health and wellbeing. The good news is that any imbalances pinpointed by her GutDiscovery® can be addressed through improvements in diet and targeted supplementation.

48

InvisibleHealth® Score

Based on Darcy's unique microbiome profile we have identified a few main areas to target with additional gut health support. Focusing on these, we have designed a programme of dietary improvements and precision supplementation to help improve her overall microbiome balance. Darcy's detailed bacteria readings can be found in Part 2 of your report and can be used to track improvements over time.

Priority areas

Addressing these findings has been prioritised in Darcy's BiomeVitality® Care Plan:

1. Coat and skin
2. Protein digestion
3. Fibre digestion
4. Gut inflammation



Darcy's Dietary Recommendations (1/2)

As well as fuelling their everyday activities, a dog's diet also plays a key role in the health of their gut microbiome. So it's important to consider what Darcy is eating every day to benefit her all round wellbeing, alongside any additional supplements you may give.

These tips from our Head Vet and nutritional expert, Dr Joe Inglis, will help ensure that Darcy's diet is perfectly optimised to support her microbiome:

Everyday feeding



Add more high fibre foods.

With below average support from the gut microbiome, your dog's fibre digestion efficiency is likely to be less effective compared to other dogs, and so increasing the level of fibre in their diet is recommended. Look for wet foods with more than 1% fibre, and dry foods with 6% fibre or more - these are usually designed to help dogs lose weight. You can also try adding a little extra fibre from raw veggies, such as finely chopped broccoli (one small floret per 5kg body weight per day would be ideal), carrot or celery to their wet food.



Increase lean, digestible protein.

The bacteria in your dog's gut microbiome are not providing an optimum level of support for the metabolism of dietary protein, so to help maintain healthy muscle mass, we recommend feeding a diet with high levels of easily digestible protein. Look for wet foods with at least 10% protein, and dry foods with 25% or more, ideally from easily digestible sources such as fish or chicken. You can also add in additional protein with meaty treats, eggs (raw or boiled), or even a teaspoon of cooked quinoa.



Add foods that promote skin and coat condition.

Your dog's gut microbiome population is not supporting their skin and coat as well as in most dogs, so foods that provide ingredients known to benefit skin condition are ideal. Dry and wet foods rich in omega 3 oils will help to support your dog's skin and coat health.

Darcy's superfoods



Apples

Apple can be fed raw or cooked. Feed about 1/8 apple per 5kg of body weight per day. Apples are rich in vitamin C, plus a good source of dietary fibre to support a healthy gut.



Fermented vegetables

Add small amounts of fermented vegetables to your dog's food bowl every day. Fermented vegetables are great sources of fibre and are natural probiotics, promoting healthy gut flora and improving digestion. Fermentation improves bioavailability, making nutrients easier to absorb in order to improve their immune function.

Darcy's Dietary Recommendations (2/2)

Darcy's superfoods (continued)



Linseed (flaxseed)

Add 1/2 tsp of linseeds per 5kg bodyweight to your dog's food once a day. Full of omega-3 fatty acids, linseeds help reduce inflammation, help with skin, coat and joints, provide fibre and support the immune system.



Kale

Green vegetables such as kale are best gently cooked by steaming or wilting in a pan with a little water. Add around a heaped teaspoon of cooked kale per 5kg bodyweight to your dog's food bowl every day. With beta carotene, vitamins C and K, calcium, potassium and antioxidants, kale is an excellent all-rounder that supports the immune system and acts as a good source of fibre to promote a healthy gut.



Spinach

Green vegetables such as spinach are best gently cooked by steaming or wilting in a pan with a little water. Add around a heaped teaspoon of cooked spinach per 5kg bodyweight to your dog's food bowl every day. Spinach is packed with nutrients such as A, C and K, alongside folate, iron and calcium. It is also a good source of fibre and a powerful antioxidant.

Foods to avoid



Butter

Like milk and cheese, butter is a dairy product linked to poor gut microbiome health in dogs.



Sugary treats

Treats containing added sugar are potentially harmful for the gut microbiome, as well as leading to dental health issues.



Milk

Milk is associated with negative effects on the gut microbiome and can cause digestive upsets in dogs with intolerances or allergies to dairy products.

Darcy's Precision Supplement Programme

Darcy's suggested programme has been put together using our range of BiomeBites® supplements, to help create better gut microbiome balance, using a 3-phased approach. After 6 months, we recommend a follow up GutDiscovery® test to assess progress and to allow us to fine-tune her ongoing personalised programme for maximum long-term gut health and vitality.

*All the bioactives in our supplements typically take 6-8 weeks to achieve their maximum beneficial effect. The programme has been designed in two-month frequencies to take advantage of this. Please note, this supplement plan is designed to support the microbiome, not treat any illness or symptom.

Plan #C58S

[View full plan & pricing online](#)

Get Darcy started on her Precision Supplement Programme

[Click here to view Darcy's plan online ↗](#)

If you are reading a printed copy, please login to your account on www.biome9.com to view.

Recommended Retest

We recommend a new GutDiscovery® Microbiome Profile Test to track progress and to adjust Darcy's personalised programme if necessary.

after 6 months

1. Restore

Help combat symptoms
Stabilise dysbiosis
Prime gut wall

⌚ **0-2 months**

2. Repopulate

Boost vital bacteria
Improve biotic diversity
Establish inner balance

⌚ **2-4 months**

3. Optimise

Sustain microbiome symbiosis
Build resilience
Target functional vitality

● **4 months onwards**



Restore

Plan #C58S

This is the first step in the programme. It will focus on restoring gut health and gut wall integrity, whilst priming it to allow for supplements to be properly absorbed.

[View Darcy's full supplement plan & pricing online](#)

[Click Here ↗](#)



GMB02

Concentrated Bioactive Gut Detoxifier



←

→

Anti Inflammation



↑

↓

Gut Detoxification



↙

↙

Gut Wall Resilience

A powerful detoxifier and gut cleanse supplement, targeting inflammation, gut wall biofilm resilience and symptoms including loose or irregular motions, constipation, and excessive flatulence.

Dose: 1 chew per day [More info ↗](#)



GMB07

Microflora Prebiotic Nutrient Complex



Functional Fibre



Beneficial Bacteria



Nutrient Absorption

Formulated for dogs with poor digestive function, biotic diversity and gut wall resistance, as well as improving the efficacy of complementary probiotics. Or as an everyday vital nutrient base for sustained gut health.

Dose: 1 chew per day [More info ↗](#)

Repopulate

Plan #C58S

Once the gut has been detoxified and is stabilised, we recommend giving beneficial bacteria a boost and supplementing to enhance full microbial diversity and balance.

[View Darcy's full supplement plan & pricing online](#)

[Click Here ↗](#)



GMB09

Symbiotic Skin-Guard Polyphenol Complex



Skin and Coat Health



Anti Inflammation



Microbiome Balance

Developed for dogs with skin itching, food allergies, skin rashes, recurring irritations and infections or lackluster coat.

Dose: 1 chew per day [More info ↗](#)



GMB07

Microflora Prebiotic Nutrient Complex



Functional Fibre



Beneficial Bacteria



Nutrient Absorption

Formulated for dogs with poor digestive function, biotic diversity and gut wall resistance, as well as improving the efficacy of complementary probiotics. Or as an everyday vital nutrient base for sustained gut health.

Dose: 1 chew per day [More info ↗](#)

Optimise

Plan #C58S

By now, the gut microbiome should be in better condition for optimal nutrient absorption and metabolism. Given Darcy's age, overall health condition, and veterinary history we recommend the following supplements as an ongoing plan to promote better digestive health to aid overall health and wellbeing.

View Darcy's full supplement plan & pricing online

[Click Here ↗](#)



GMB09

Synbiotic Skin-Guard Polyphenol Complex



Skin and Coat Health



Anti Inflammation



Microbiome Balance

Developed for dogs with skin itching, food allergies, skin rashes or recurring infections or bacterial soft tissue infections or bacterial soft tissue infections.

Dose: 1 chew per day [More info ↗](#)



GMB07

Microflora Prebiotic Nutrient Complex



Functional Fibre



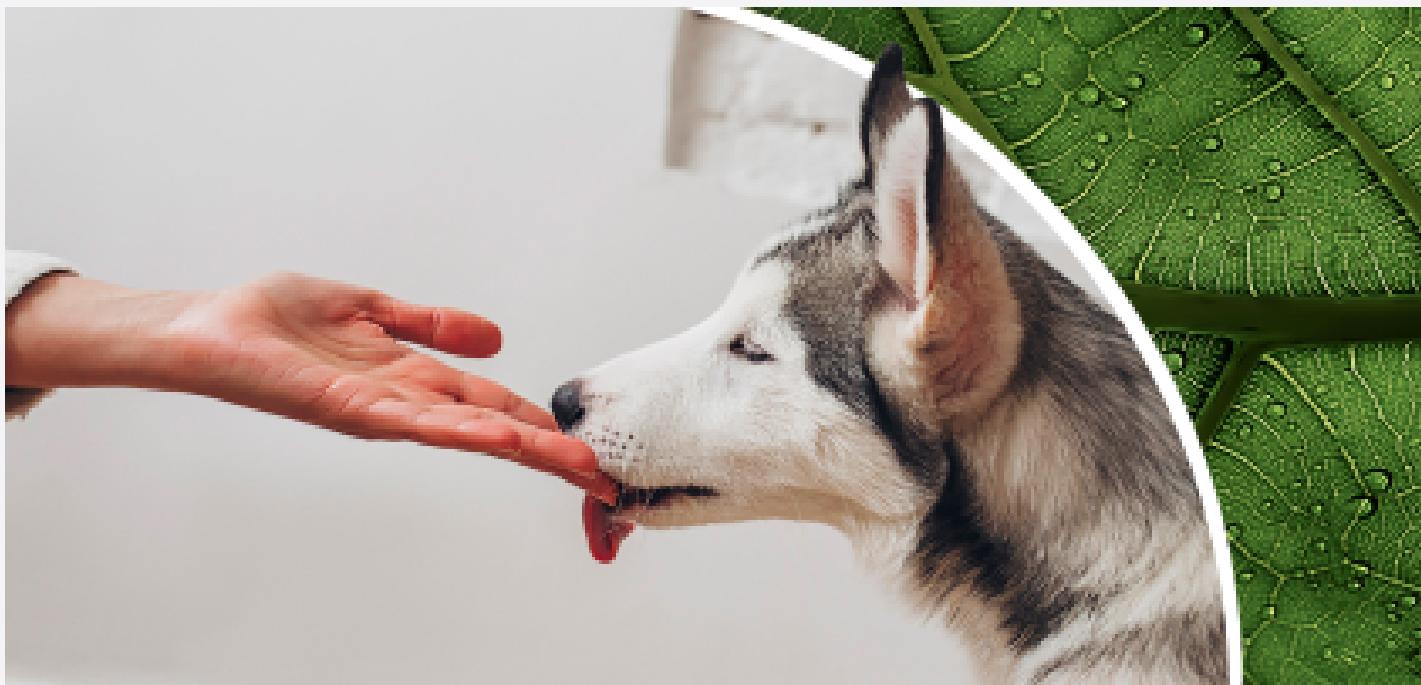
Beneficial Bacteria



Nutrient Absorption

Formulated for dogs with poor digestive function, biotic diversity and gut wall resistance, as well as improving the efficacy of complementary probiotics. Or as an everyday vital nutrient base for sustained gut health.

Dose: 1 chew per day [More info ↗](#)



More Information on BIOME9 BiomeBites® Supplements



Soft treats, delivered every 2 months

Our range of BiomeBites® Supplements are designed as delicious soft treats, to make it easier and more rewarding for Darcy to get exactly what she needs. They are delivered every 2 months, direct to your door with free delivery.



High bioavailability and sustainable

They are produced in the UK through a cold-extrusion process for maximum bioavailability and to preserve the integrity of our high-quality ingredients.

BIOME9 BiomeBites® Supplements are GMO and glyphosate-free. All our packaging is fully recyclable.



Vet formulated and expert approved



Easy and rewarding



GMO and Glyphosate-Free



Recyclable packaging



Fully sustainable UK production

Our team is here to help. For any further help or questions, please get in touch with us via web chat or email report@biome9.com



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Disclaimer:

This report is not intended to diagnose, treat, cure or prevent any disease or condition; It is intended to provide overview information and recommendations. Specific statements contained herein have not been evaluated by any veterinarian association, and you should refer to your local vet if you require further medical advice.

BIOME 9