Animal Health

Innovative Nutritional Ingredients for Pets & Animals



Consumers treat their pets as part of the family. The global pet care market is expected to reach \$232.14 billion by 2030, according to a new report by Grand View Research, Inc. In 2021, The American Pet Products Association saw \$50 billion spent on pets in the United States, with over \$29.8 billion spent on supplies and OTC medications. The use of pet medicines and supplements to ensure longer, healthier lives for pets continues to increase. NutriScience Innovations has many efficacious ingredients for pet health.





Anxiety Support Concept

Product Fac	cts
Active Ingredients per 1 Chew	
	Amount per Serving
Phosphatidyl Choline	352 mg
Krill Oil	100 mg
Shoden® (Ashwagandha)	30 mg
Suntheanine® L-Theanine	20 mg

For use in cats and dogs only. Recommended to help maintain calmness in stressful situations.



Digestive Support Concept

Product Fac Active Ingredients per 2 Chews	ts
	Amount per Serving
Sunfiber® Hydrolyzed Guar Gum	1,000 mg
Slippery Elm (<i>Ulms rubra</i>) Bark	300 mg
Deglycrrhizinated Licorice (Glycyrrhiza root extract)	50 mg
Berberine HCI	20 mg
	illion CFU
Ginger	10 mg

For use in cats and dogs only. Recommended to help relieve occasional loose stools due to environmental stress or dietary changes.

SHODEN

Adaptogen for Relaxation & Restoration of Balance

Ashwagandha (*Withania somnifera*) is an adaptogen. Adaptogens mimic the body's own stress-reducing hormones and increase the body's ability to recover from stress while creating an overall feeling of balance and normalization. This makes Shoden® an ideal option for stressed or anxious pets.

- A purified ashwagandha extract standardized to an industry-leading 35% withanolide glycosides that has been tested in both humans and animals
- Shoden® increases a pet's ability to recover from stress while creating an overall feeling of balance and normalization
- The effects of Shoden® are typically felt after about 1 week of use
- Shoden® works synergistically with Suntheanine®, resulting in increased GABA levels as well as mimicked action, leading to a multiplier effect
- Shoden® is Non-GMO Project Verified



Organic Certified Prebiotic Mushroom Blend for Immune & Digestive Health

An innovative blend of three mushrooms that supports both immune and digestive health. TriCelium™ offers multiple health benefits, making it ideal for daily wellness supplements. As the benefits of mushrooms become more widely understood for human health, this trend is continuing to flourish in the animal health space as well.

- A combination of reishi, maitake and oyster mushrooms these mushrooms have been studied for their immune supporting and digestive health properties
- TriCelium[™] has been studied and demonstrated to increase the production of Short Chain Fatty Acids (SCFAs), making it an effective prebiotic option for animals to support healthy digestion
- TriCelium[™] contains beta-glucans for immune support
- The mushrooms are USDA Certified Organic and grown in the USA

Multivitamin Concept



For use in cats and dogs only. Recommended to help support overall health.



Sunfiber®

Pet Digestive Health & Prebiotic Support

Pets need fiber for digestive support in the same way humans do. Digestive health remains a top concern for many pet owners. With the extensive use of kibble for pet feed, fiber is sorely lacking.

- A tasteless, soluble guar fiber that ferments at a steady pace in the colon
- Unlike fast fermenting fibers, Sunfiber® does not produce bloating or gas, and does not lead to stomach distress
- Sunfiber® has specific osmolality effects which help regulate stool and improve stool normalization - can be used for both diarrhea (loose stool) and constipation (hard stool)
- Extensively studied in lab animals for prebiotic effects, satiety, and as an FDA-approved fiber
- Sunfiber® is Non-GMO Project Verified

MorActive

MorActive: Clinically Researched Moringa Seed Extract for Improved Mobility

Many animals, especially dogs, develop chronic joint issues like arthritis and hip dysplasia during their lifetime. That's why joint supplements are the most popular supplements that owners give their pets. MorActive™ is a new and novel ingredient option for the mobility category, which has seen little innovation in recent years. Moringa is known to possess antioxidants and anti-inflammatory properties, helping to support optimal health, performance and peak potential of pets.

- MorActive™ is a new, patented extract from the moringa seed, Moringa oleifera, standardized to >20% glucomoringin
- The seeds contain high levels of glucosinolates, sulfur-containing compounds that possess anti-inflammatory and antioxidant properties
- Glucomoringin is converted to moringin in the body, which is known to be a
 potent agonist of TRPA1 an ion channel that is a known sensor for pain
- MorActive™ is easy to work with, is soluble in water, has little taste, and requires a low dose

Joint Health Concept

Product Facts Active Ingredients per 2 Chews	
	Amount per Serving
Glucosamine HCL	500 mg
MSM (Methylsulfonylmethane)	400 mg
Chondroitin Sulfate	150 mg
MorActive™	130 mg

For use in cats and dogs only. Recommended to help support mobility and flexibility.





Calming Support Concept

Product Facts Active Ingredients per 1 Chew	
	Amount per Serving
L-Tryptophan	50 mg
Suntheanine® L-Theanine	30 mg
Hemp Seed Oil	30 mg
Passion (<i>Passiflora incarnata</i>) Flower	30 mg
Moringa Oleifera Leaf	30 mg

For use in cats and dogs only. Recommended to help support normal emotional balance.

Complete Digestive Supports Digestive Health and Promotes Proper Intestinal Microflora

Complete Digestive Concept

Product Fac Active Ingredients per 2 Chews	ts
	Amount per Serving
ButyraGen™ Tributyrin Complex	50 mg
Pet Probiotic Blend 5 Bi	illion CFU
Bifidobacterium lactis, Lactoba rhamnosus, Lactobacillus acido Lactobacillus plantarum and Enterococcus faecium	cillus ophilus,

For use in cats and dogs only. Recommended to help support a healthy digestive tract.

Suntheanine[®]

Calm & Soothe Pet Anxiety

Pet stressors come in many forms, from separation anxiety (most pronounced in dogs) to anxiety caused by thunderstorms and house guests. Anxious and stressed pets can be destructive to themselves and their home. Suntheanine® is produced via a technologically advanced, patented production process that mimics the natural process in green tea, resulting in isomerically pure L-theanine. Suntheanine® is highly soluble with little to no taste, making it easy to formulate and palatable to even the pickiest pets.

- · A patented, award-winning, clinically tested dietary ingredient
- Suntheanine® is one of the most clinically researched ingredients for stress and anxiety, promoting relaxation and focus
- Suntheanine® has been used for dogs, cats, horses, birds, and even camels
- Works quickly, typically with 30-45 minutes; patented for suppressing pet behavioral problems

SunActive Iso 2

Solubilized, Highly Bioavailable Quercetin

SunActive® IsoQ is a novel isoquercitrin precursor to quercetin made from rutin, a component of the flower buds of the Japanese pagoda tree. It is encapsulated in an almost cylinder-shaped structure that allows it to be solubilized, making it 25 times more bioavailable than quercetin itself

- SunActive® IsoQ addresses the common solubility and bioavailability issues
 of supplemental quercetin. It is converted from isoquercitrin to quercetin by
 enzymatic hydrolysis in the gut
- Quercetin works to reduce inflammation and the amount of histamine released in an animal's body. It can be used to help itchiness, inflammation and discomfort from allergies
- Quercetin has been shown to benefit immune, cardiovascular, and cellular health, and has also been shown to support allergy symptom relief
- The 25x bioavailability allows for smaller doses than traditional quercetin

Allergy Support Conce	ot
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Product Fac Active Ingredients per 2 Chews	ts
	Amount per Serving
Colostrum	250 mg
Turmeric Root	150 mg
Fish Oil	150 mg
MSM (Methylsulfonylmethane)	100 mg
SunActive® IsoQ Isoquercitrin Equivalent to 99 mg Quercetin	40 mg
Perilla Seed Extract	25 mg

For use in cats and dogs only. Recommended to help support normal histamine levels.



ButyraGen

Direct Butyrate Generation for Digestive Health & Beyond

A Next Generation Prebiotic. ButyraGen[™] is a direct butyrate generator for gut health and beyond, generating high levels of butyrate directly in the colon. Butyrate is a key short-chain fatty acid (SCFA), shown to be a critical signaling molecule for improving gut health and for gut-related effects on other organs via the gut-brain axis.

- The primary active ingredient in ButyraGen™ is tributyrin, which has a history
 of use as a feed additive for pigs and chickens to improve growth and
 performance, as well as an alternative to antibiotics
- Works as a direct butyrate generator, and does not rely on fermentation because of this, more pets can benefit regardless of the state of their microbiome
- Works well as a stand-alone ingredient, or in combination with probiotics to synergistically deliver enhanced benefits
- Modulates gut-brain and other gut-organ interactions, leading to a wide variety of health benefits, making it an ideal addition to many types of formulas



Boost Pet Immune Health

A pet's immune system may require support to work at peak efficiency and to help ensure a long, healthy, and active life. This unique source of 1,3-Beta Glucan has been studied in animals and contains high levels of the 1,3 linkages associated with immune health.

- The unique fermentation process used to produce BGF-Immune[®] yields some of the highest levels of 1,3 linkages that have been shown to support immune health
- Backed by studies to support a healthy immune system in humans and animals
- In commercial agricultural settings, BGF-Immune® has been shown to support improved growth and feed utilization and lower incidence of disease
- BGF-Immune® is Non-GMO Project Verified

Immune Support Concept



For use in cats and dogs only. Recommended to help support normal immune system function.



Animal Health Product Guide







Calming/Relaxation

 $NutriGP^{\mathbf{M}}$ Magnesium Glycerophosphate \mathbf{V}

NutriPS® (PS from Soy)

NutriPS® (PS from Sunflower) 🔻

Shoden® Ashwagandha 🔰 🔻

Suntheanine® (L-Theanine) [Patent for Pet Behavior] > V
Fish Oil Powder (EPA/DHA) [Regular & Mint Flavored]

Cardiovascular & Heart Health

ButvraGen[™] **∨**

Shoden® Ashwagandha 🔰 🔻

SunActive® IsoQ V

Fish Oil Powder (EPA/DHA) [Regular & Mint Flavored]

Gastrointestinal (GI) Support

ButyraGen[™] **V**

ElderMune® (Elderberry Immune Support 65:1 Concentrate) 🦭 🏉 🔻

NutriGP™ Calcium Glycerophosphate ▼

Sunfiber® (Partially Hydrolyzed Guar Gum) 🔰 🥖 🔻

TriCelium™ (Mushroom Prebiotic & Immune Support) /

Healthy Skin & Coat

ButyraGen[™] 💜 🔻

ElastaGLO™ (Hydrolyzed Elastin)

 $KeraGL0^{\scriptscriptstyle{\top\!\!\!M}}\,Keratin\,(Hydrolyzed)$

SunActive® IsoQ ¥

Immune Support

BGF-Immune® (High Purity 1,3-Beta-Glucan) ▼

ButvraGen™ V

ElderMune® (Elderberry Immune Support 65:1 Concentrate) 🔰 🥒

InoPhyte® (IP6, Calcium Magnesium Phytate) 🔻

Shoden® Ashwagandha 🔰 🔻

SunActive® IsoQ V

TriCelium™ (Mushroom Prebiotic & Immune Support) /

Joint Health

MorActive[™] **∨**

NutriGP™ Calcium Glycerophosphate ¥

Metabolic Support

ButyraGen[™] 🔰 🔻

NuMalic[™] L-Malic Acid 🔰 🥖 🔻

NutriGP[™] Magnesium Glycerophosphate **y**

Muscle Building

Shoden® Ashwagandha 🔰 🔻

Oral Health

Perilla Seed Extract V

NuMalic[™] L-Malic Acid **V**

NutriGP™ Calcium Glycerophosphate ¥

Performance

MorActive[™] **V**

ElastaGLO™ (Hydrolyzed Elastin)

NuMalic[™] L-Malic Acid **V** ✓ V

NutriGP[™] Mineral Glycerophosphates (Ca, K, Mg, Mn, Na) **y**

Shoden® Ashwagandha V

SunActive® IsoQ Y

Suntheanine® (L-Theanine) [Patent for Pet Behavior] 🔰 🔻

Hyaluronic Acid (Sodium Hyaluronate) >

Vision Health

OptiLut® and XanMax® // V (Lutein Esters, Free Lutein, Lutein/Zeaxanthin)



Our purpose is to develop innovative ingredients that make man- and animal- kind healthier and happier.

With over 25 years of experience, we take innovation seriously. As a leading global ingredient developer and supplier, we offer innovative ingredients based on science and efficacy. We have scoured the earth in search of new and unique ingredients so that our customers can be truly innovative. Our ingredients are backed by

clinical research, guaranteed quality and unparalleled customer service.

Consultative Approach - Bringing Expertise That Our Customers Value



Consistent Source of On-Trend, Commercially Attractive New Product Ideas





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