



AstraGin[®]

For Pet Health

ASTRAGIN[®] SUPPORTS THE NUTRITIONAL VALUE OF PET FOODS

As our pets age, their nutritional needs change. Their ability to absorb the full spectrum of vitamins, amino acids, and minerals may diminish, and potential age-related complications mean that our furry friends may have more detailed dietary needs in their older years.

Derived from highly fractionated *Panax notoginseng* and *Astragalus membranaceus*, AstraGin[®] is a 100% plant-based ingredient that has been taste-tested with dogs, cats, and horses.

ASTRAGIN[®] ASSISTS ABSORPTION OF VITAMINS, MINERALS & AMINO ACIDS

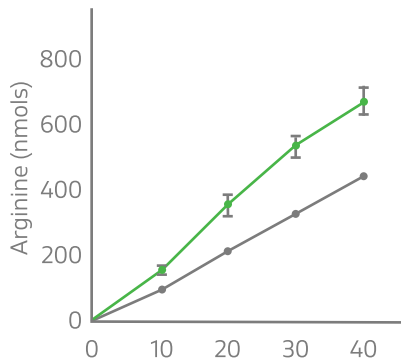
In preclinical *in-vitro* studies and uptake assays, AstraGin[®] has demonstrated increased absorption of arginine, citrulline, tryptophan, folate, and glucosamine in the intestinal tract. In other words, AstraGin[®] may increase the effectiveness of foods and other pet supplements, instead of having them go to waste through their digestive system.

By enhancing the bioavailability and absorption of many critical nutrients, AstraGin[®] may help your beloved pet receive the full range of nutrients from their diet needed for healthy aging.

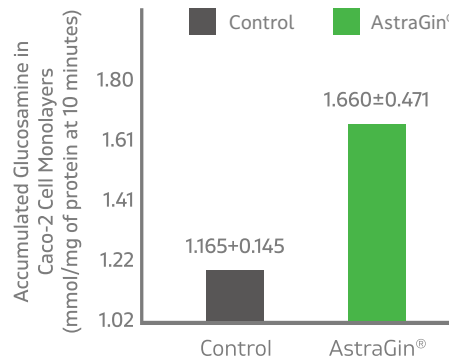
SAFETY

AstraGin® is a self-affirmed GRAS ingredient. GRAS stands for Generally Recognized As Safe by the Food and Drug Administration. To receive this novel status, AstraGin® demonstrated a 28-day toxicity study that is safe for normal usage. Conducted at a GLP compliant European lab, the study subjects (n=80 Wister rats) were subjected to a range of doses, including levels of 1000 times our recommended dosage with no observable adverse side effects.

EFFICACY



Increases the steady-state absorption rate of amino acids such as Arginine up to 67% *in-vitro*



Increases glucosamine absorption up to 42% *in-vitro*

ASTRAGIN® HUMAN TO ANIMAL DOSAGE CONVERSION TABLE

Species	Dosage	Body Weight (dosage used)
Human	0.83mg/kg	60kg (50mg)
Cats	2.24mg/kg	4kg (9mg)
Cattle	8.56mg/kg	300kg (2,568mg)
Dogs	1.56mg/kg	25kg (39mg)
Pigs	1.14mg/kg	50kg (57mg)
Chickens	0.23mg/kg	2kg (0.46mg)
Horses	5.7mg/kg	44kg (2,280mg)

- Han, H.G., Huang, X. H., Chen, Z. Y., Zheng, Q. S., Sun, R. Y. Dose conversion among different animals and healthy volunteers in pharmacological study. *Chinese Journal of Clinical Pharmacology and Therapeutics*. 2004, 1069-1072.
- Wu, W. L., Su, W. Y. Research on Current and Prospective View of Animal Health Product/Product Analysis, p. 474.
- Tan, F. H. Dosage and conversion of livestock and poultry. *Jilin Animal Husbandry and Veterinary Medicine*.

*These statements may not comply with your country's laws and regulations or with Reg. EC n. 1924/2006 and have not been evaluated by the Food and Drug Administration. The products are not intended to diagnose, treat, cure, or prevent any disease. Marketers of finished products containing this ingredient are responsible for ensuring compliance with the applicable legal framework.



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