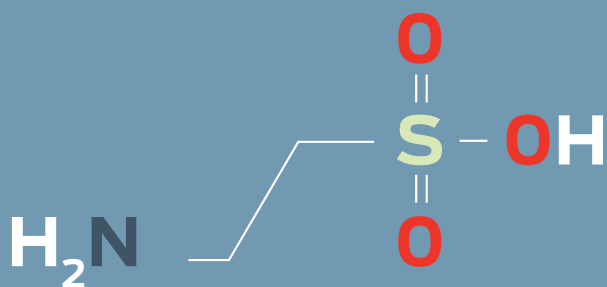


HOT TOPIC

Benefits of synthetic ingredients in commercial pet foods



TAURINE



In focus

Similar to human foods, ingredients used in pet foods come from a number of sources. Many are obtained directly from animal or plant raw materials, but they can also be manufactured (or synthesized) and are referred to as 'synthetic' ingredients. What types of synthetic ingredients are used in pet foods and what is their role?

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Are there differences between the various sources of ingredients?

All ingredients found in pet foods are strictly regulated and serve a purpose, e.g., to provide complete and balanced nutrition, or to enhance palatability or appearance of the food to ensure pet acceptance.

Ingredients, and their associated nutrients, whether coming from plants or animals are not inherently of higher quality than synthetic ones.¹

After digestion, the body cannot differentiate the source of the nutrient. What is important is that the nutrients are bioavailable so the body's cells and tissues can use them, and that a complete and balanced pet food provides all the essential nutrients the pet needs in the correct amounts and ratios relative to one another.

What types of synthetic ingredients are used in commercial pet food?

- **Vitamins**, e.g., thiamine mononitrate (vitamin B1), and minerals, e.g., mono and dicalcium phosphate (a source of calcium and phosphorus)
- **Amino acids**, e.g., taurine, L-lysine monohydrochloride (lysine), DL-methionine (methionine)
- **Antioxidants and other preservatives**, e.g., butylated hydroxytoluene (BHT)
- **Flavorings**, e.g., artificial smoke flavor
- **Colors**, e.g., iron oxides.²⁻⁴

What are the benefits of using synthetic ingredients in pet food?

- More consistent quality and content (purity) of ingredients versus plant-sourced ingredients.⁵



The quality and nutrient content of plant-sourced ingredients can vary according to specific crop conditions (e.g., weather, soil).⁵

- Synthetic vitamins, minerals, and individual amino acids can be purposely added to ensure complete and balanced nutrition,⁴ or to provide a very specific level in the formula, e.g., where higher levels are required to meet specific nutritional needs, such as in therapeutic diets.
- Improved palatability by helping enhance flavors sourced from animals or plants.⁴
- Enhanced visual appeal of food for both pet and owner – synthetic colors are often less sensitive to deterioration from exposure to light, heat, and oxygen (more stable over product shelf life and storage until consumption),⁵⁻⁷ and provide more vivid and uniform hues^{6,7} compared to colors from plant sources. Also, smaller amounts of synthetic colors are needed to achieve a similar effect from plant-based ingredients.⁶



- Unlike some plant-sourced colors, e.g., pigment sourced from red beets (beetroot), synthetic colors do not add undesirable flavors or aromas.^{5,6}

Pet food ingredients – whether from animal or plant raw materials or synthesized – are strictly regulated.⁸⁻¹⁰

In addition, all ingredients in Purina pet foods must also meet the company's stringent safety and quality standards before they are included in the food.

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