



# SAFER, BETTER TASTING PET FOOD

## Acidification: Sodium Bisulfate vs Phosphoric Acid

The pet food industry uses acidifiers in dry cat food for feline urine acidification and in soft treat and liquid digest for pH reduction and preservation.

The two most common options for acidification are SBS Pet™ (sodium bisulfate) and 85% phosphoric acid. For diets using 85% phosphoric acid, SBS Pet™ can easily be substituted at the rate of 1 kg SBS Pet™ per 1 kg of 85% phosphoric acid.

While the addition rates are equal, the two products have many differences of which pet food formulators should be aware to help make safe, value-added products. This knowledge can be especially valuable for companies working to satisfy the rapidly growing demand for natural pet food products.



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## Nutritional Considerations

Pet food formulators must balance various nutritional considerations. One key focus is the calcium to phosphorus ratio, which has an ideal balance of 1:1. If the ratio is too high it can impair phosphorus absorption. If it is too low, it can lead to many nutritional problems from calcium deficiency—including bone loss. Excess phosphorus can be detrimental for cats' kidney function.

Formulators must also consider what is important to consumers. The March 2021 issue of Petfood Industry cited a survey showing that joint health and mobility is a top reason for consumer use of condition-specific pet foods and supplements.

### What does this mean in your selection of acidifiers?

SBS Pet™	Phosphoric Acid
SBS Pet™ is a natural product that acidifies the diet and improves palatability without affecting the calcium/phosphorus ratio.	Phosphorus is the main element in phosphoric acid. High phosphorus diets are associated with adversely affecting renal function parameters in healthy cats (Dobenecker et al., 2018) and an increased risk of developing chronic kidney disease (CKD) (Böswald et al., 2018).
Sulfates, which are the main components of SBS Pet™, are beneficial for joint health as they are involved in the formation of sulfated glycosaminoglycans, major components of cartilage.	Phosphoric acid offers no benefit to joint health.

## Safety, Storage and Handling

	SBS Pet™	Phosphoric Acid
<b>Safety</b>	<p>Dry, granular acid can be added to the micro bin and mixed with the pre-mix before extrusion for flexibility</p> <p>Can be swept up with a broom if spilled for enhanced employee safety and easy disposal.</p>	<p>Clear, colorless liquid acid that requires investment and maintenance in a corrosion resistant delivery system</p> <p>Can burn employees if leak in the system, spilled liquid cleanup requires dilution and treatment in wastewater.</p>
<b>Storage and Handling</b>	<p>SBS Pet™ is a dry product that contains no water and will not freeze.</p> <p>SBS Pet™ is hygroscopic (meaning it absorbs moisture) which makes it easier to handle at lower temperature due to low humidity in the air.</p>	<p>85% phosphoric acid freezes at 70°F which can make transportation, storage and handling difficult in colder climates and in cooler weather.</p> <p>If freezing point is reached, crystal formation occurs which can delay manufacturing and raise costs. Insulated and heated pipes and tanks can be used to prevent solidification and crystal formation, but this capital investment can be prohibitive.</p>

**Ready to learn more about SBS Pet™ and the difference this acidifier can make in your formulations?  
Complete the form to request a call.**



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