

The Truth About Preservatives

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Q. Does Univera use preservatives in its products and are they safe?

A: What do you think when you see a product advertised as containing NO PRESERVATIVES? The healthy skeptic response is, “what’s wrong with preservatives?” and the answer is: nothing. I think that preservative phobia was a reaction to the onslaught of chemical additives that started in the 1940’s, and I certainly would agree that the majority of emulsifiers, stabilizers, thickeners, artificial flavors, bleaches, nitrates, nitrites and artificial colors are to be avoided. But nitrate-free preservatives provide significant benefits for the consumer and none have been found to be harmful when used appropriately.

It is perhaps the most ironic aspect of the health foods movement that consumers pay more for preservative-free foods, and then walk to the next aisle and pay handsomely for encapsulated preservatives known as antioxidants. That’s right, the largest group of preservatives – including ascorbyl palmitate, ubiquinol, calcium ascorbate, sodium erythorbate, citric acid, alpha-tocopherol and others – are antioxidants. Other preservatives, including calcium propionate, sodium benzoate, benzoic acid and sorbic acid, inhibit the growth of yeast, bacteria and mold. It’s no exaggeration to say that preservatives are the single most important advance in food safety since the invention of the refrigerator. These are extremely valuable substances, so effective that many times, you don’t even have to put them in the food. Just putting BHT in the packaging, for example, will prevent your breakfast cereal from oxidizing.

Anti-preservative crusaders often claim that preservatives are only used to extend shelf life, implying that there is no real benefit to the consumer. Not so. Many of the microorganisms that grow in “natural” foods produce cancer-causing toxins. The common mold *Aspergillus flavis* produces a toxin known as aflatoxin, which is gram for gram the most carcinogenic substance on earth. I’ve traveled to tropical areas where aflatoxin-caused cancer – from unprotected food, is a leading cause of death. Importantly, you can get a whopping dose of aflatoxin even when there is no visible mold on the food.

So the real issue is, what is the appropriate and safe use of preservatives? Dousing a salad bar with sodium bisulfite keeps the lettuce and spinach nice and green, but sulfite-sensitive people suffer as a result. Univera is committed to the use of preservatives only when there is a compelling consumer safety need and there are no adverse effects.

Preservatives used in liquid Univera products are all GRAS (Generally Recognized As Safe) by the USDA and FDA, including minimal amounts of sodium benzoate, citric acid and potassium sorbate. Importantly, these natural compounds are found in berries and other fruits. Sorbic acid is very effective against yeast, and benzoic acid inhibits the growth of mold and bacteria. Both have significant antioxidant activity. In other words, berries and other fruits manufacture these organic acids to protect themselves. We add a little more to protect the polysaccharides in Aloe Gold, MetaBerry, AgelessXtra and Xperia.

Safety

Sodium benzoate and potassium sorbate are both included on the FDA's Generally Recognized As Safe (GRAS) list, and have been given thumbs up from leading food additive authority, Dr. Michael Jacobsen, founder and president of Center for Science in the Public Interest. Both compounds have a long history of use (nearly a century) and a wide safety range. Sodium benzoate actually assists the body in the detoxification of excess nitrogen has been used in extremely high doses for patients with metabolic disorders resulting in high blood levels of nitrogen-generated ammonia.¹ The compound is also used - by intravenous injection - to prevent headache after spinal tap.²

Sodium benzoate can prevent growth of almost all microorganisms (yeast, bacteria, and fungi) and works synergically with other food-grade preservatives -- most notably potassium sorbate. Sodium benzoate is freely found in nature, and in fact, organically grown cranberries or prunes can contain levels of benzoic acid that exceed the legal limit imposed by the FDA on U.S. food manufacturers (0.1% by weight), although the level normally found in berries will be in the range of 0.05 to 0.1%.

In 1954 Dr. W.H. Stein reported in the *Journal of the American Chemical Society* that benzoate is a natural metabolite of the human body; no different in its functioning as a preservative than vinegar (acetic acid).

Does sodium benzoate and citric acid combine to form benzene?

This controversy stems from the question of whether benzoate can be converted to benzene when combined with ascorbic or citric acid. It appears that this reaction can happen under conditions of high heat or pressure, neither of which are used in the manufacture of Univera products. Thus extensive testing by an *independent* laboratory has shown from zero to 4 ppb of benzene in Univera products. 4 ppb is less than the FDA allows in purified drinking water.

What about research showing that sodium benzoate is genotoxic?

This claim reverberated through the media for months, prompting people to ask if Univera planned to eliminate sodium benzoate from AgelessXtra and Xperia. The answer is rather simple. We review all research concerning the safety of every ingredient in every Univera product. In this case, there was no evidence that sodium benzoate is harmful to humans.

Where did the issue come from? A simple experiment in which a professor from the UK, Peter Piper, poured sodium benzoate (a weak organic acid) onto a culture of yeast cells and observed genomic damage. He then proposed to the media (not other scientists) that the same thing might happen in the human body when people consume minute amounts of this common preservative.

Professor Piper's research (and method of reporting) was widely criticized by the scientific community, including many like myself who pointed out that the same results can be obtained by adding yogurt (containing lactic acid) to the cell culture. Alert the media! Yogurt is genotoxic!

The End (for now)

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