

## The Scoop on Almond Pasteurization

You might say it's a heated issue. Starting September 1 of this year, the USDA will require that all almonds grown in California and sold as raw in the United States be sanitized via pasteurization. While the ruling has caused consternation among many consumers, the fact is almond pasteurization is going to happen, like it or not. So what prompted this decision? And what ramifications does it hold for Vitamin Cottage customers? Read on.

In recent years two outbreaks of *Salmonella* were traced back to conventional almond farms in California. In response to these outbreaks, the Almond Board of California—a quasi-governmental marketing agency representing California's almond growers—decided that the best way to ensure the safety and reputation of its product was to require the pasteurization of all almonds grown in the Golden State (which amount to virtually all almonds sold in this country). With mandatory pasteurization inevitable, the question facing manufacturers and retailers is, Which method of pasteurization will they choose?

The dilemma confronting almond buyers is whether to purchase almonds that have been pasteurized using steam or the chemical propylene oxide, aka PPO, which is considered a possible carcinogen. While steam pasteurization was perfected just recently, PPO pasteurization has been around a while. In fact, many conventional almond growers have been voluntarily pasteurizing their almonds with PPO since the second *Salmonella* outbreak in 2004. This includes Blue Diamond Growers (BDG), the main supplier of conventional bulk raw almonds for us at Vitamin Cottage.

BDG initially employed a steam pasteurization method as well, and it was our understanding at the time that any raw almonds BDG sold us would be steam treated. Unfortunately, somewhere along the line BDG found its steam method to be unsatisfactory and, unbeknownst to us, switched to pasteurizing our almonds with PPO. Since discovering this fact, we have made arrangements with BDG for all our bulk raw conventional almonds to be pasteurized using a new, perfected steam method. As a result, *by the first of October, all bulk raw almonds sold at Vitamin Cottage will be steam pasteurized.*

### Vitamin Cottage and PPO-Pasteurized Almonds

Because of the communication mix-up with BDG, all the conventional bulk raw almonds currently in our refrigerators have been PPO pasteurized. While this is regrettable, we don't believe the nuts pose a significant health risk in the short run because the amount of PPO they contain is very low. PPO-pasteurized almonds contain about 1/2500 of the lowest amount considered potentially dangerous.<sup>1</sup> At such levels, PPO is no more or less hazardous than the other chemicals commonly found on conventionally grown almonds. (As anyone who buys conventional foods should know, most non-organic crops carry residues of the synthetic pesticides and insecticides they're treated with.) In fact, some buyers may find the minimal risk posed by trace amounts of PPO to be worth the chemical's impressive sanitizing effect. (PPO rids almonds not just of microbes but of insects and insect larvae as well.) Others may wish to guarantee their almonds are free of

all chemicals by opting for organic nuts. We are leaving this decision up to you—at least until October, when, again, all our bulk raw almonds will be steam pasteurized.

Speaking of choices, please note that the almonds Blue Diamond uses in its popular boxed Nut Thins are and will continue to be pasteurized with PPO. (The almonds used for BDG's almond milk, Almond Breeze, are pasteurized via blanching and therefore do NOT contain PPO.) We will continue to carry the Nut Thins and again leave the choice of whether to buy the product up to you. In fact, we believe ultimately the decision of whether PPO pasteurization prevails is up to consumers in general. We encourage you not only to vote for steam or PPO with your wallet, but also let manufacturers know how you feel about the issue. You can start by calling Blue Diamond at (916) 325-2839.

Many other manufacturers make products containing almonds; each faces the question of whether to use nuts pasteurized with steam or PPO. Most companies are in the process of researching the issue before they make a decision. We will keep you abreast of the manufacturers' decisions via an update in the near future.

### **Steam Pasteurization and the Raw Issue**

Many people believe that unpasteurized almonds are inherently better than pasteurized ones, even if the latter are sanitized using steam. Is this true? According to Wendy Larson—general manager of Big Tree Organics, a processing plant for a coop of organic almond growers in California—presently it is standard practice for organic almonds not to be washed at any point of their trip from orchard to store. As a result, raw organic almonds are loaded with yeast, mold, and insect larvae, not to mention possibly deadly bacteria. "There really does need to be a washing step," opines Larson.

To cleanse their almonds, Big Tree has chosen a "dry-steam" pasteurization treatment that Larson equates to the almonds "getting a hot bath." While temperatures of the surface of the nut may reach as high as 160°F, the inside of the nut is not heated nearly as much. In fact, preliminary studies funded by the ABC reportedly show no significant degradation of the almonds' essential nutrients. Moreover, Larson and others have been able to sprout the steam-pasteurized almonds, stoking an ongoing debate as to whether pasteurized almonds are "raw."

The FDA believes that since the "essential characteristics" of the almonds are unchanged by pasteurization, it is acceptable to label pasteurized almonds as raw. The raw-food community disagrees, maintaining that exposing any food to a temperature above 118°F automatically disqualifies the food as raw. While Vitamin Cottage respects the opinion of both camps, we believe sproutability to be the litmus test for an almond's rawness. Therefore, since steam-pasteurized almonds do sprout, any almonds that we now label "raw" will continue to be so labeled. However, to avoid any confusion, our new labels will also include a note relaying the fact that the nuts have been pasteurized. If for any reason this policy is amended, we'll let you know in our update later this summer.

### **Notes**

1. U.S. Environmental Protection Agency website: Integrated Risk Information System: Propylene oxide (CASRN 75-56-9) (4 May 2007), <<http://www.epa.gov/iris/subst/0403.htm>>; "Almond Board of California Food Safety Document: Almond Pasteurization Using Propylene Oxide (PPO) Standard Operating Procedure (SOP)," Almond Board of California (Oct 2004).