

Is Your Pet's Food Safe?

Lately it seems there has been one recall after another, with almost no type of pet food unaffected. What's a pet guardian to do? Unless you decide to make your pet's food on your own (and even then) your job is to do thorough homework on which company you feel comfortable trusting with the well being of your pet.

What can we, as raw pet food manufacturers, do to earn your trust?

Begin at the Beginning

The first step is sourcing our ingredients. The importance of knowing our sources cannot be overstated. Questionable sources can't provide quality ingredients. Because we start out with human-grade quality, fresh ingredients from reputable sources, we are already a step ahead of the game in maintaining the safety of our finished products.

Practice What You Preach

It's simple really; we follow the same safe handling instructions given for any raw meat products: maintain proper cold temperatures (heat encourages bacterial growth); good personal hygiene (gloves, hair nets, frequent hand washing); and a sanitary work environment (with the use of hot water and environmentally friendly disinfectant cleaners).

Just In Case

Once the ingredients have been converted into one of our recipes, the final step is to take a sample and test it for the presence of commonly found contaminants, such as *E.coli* and *Salmonella*. In the unlikely event an unwanted organism was detected in a batch, the batch would be destroyed before ever entering the marketplace.

That's It

These steps have worked without a hitch for Aunt Jeni's Home Made for the last eleven years, and we plan to stick with what we know works for us. We have never had a recall or found any traces of contamination in any of our ingredients or finished products. We are confident our food achieves the highest possible levels of safety and quality through our vigilant attention to detail and a generous application of Common Sense.

But What About...

You may have heard of a new approach some companies are now using, which goes by a few different names: Hydrostatic High Pressurization (HHP); High Pressure Pasteurization (HPP); High Hydrostatic Pressure Pasteurization (HHPP); Ultra High-Pressure Processing (UHP).

What is it?

High Hydrostatic Pressure (HHP) pasteurization is a process where pressure is uniformly applied to products in an attempt to kill pathogenic (disease-causing) organisms. Pressure causes the cell membranes/walls to rupture, thereby killing/neutralizing the organisms. The process has been used in the food industry for about 20 years and cannot be used on all types of foods. It is most commonly used on pre-cooked meats, seafood, prepared deli salads, and liquids like juice, soup and wine. The technology is ineffective on solid dry foods, low-acid foods (such as vegetables) and foods with a high air content, which do not have sufficient moisture or rigidity. It works best on foods with a high acid content, because they are prone to spoilage caused by microorganisms that are more easily destroyed by HHP (yeast, molds, non-spore forming bacteria). Different bacteria and even different strains within one species have different pressure sensitivities. Some pathogens, including *Listeria*, *Salmonella* and *E. coli*, have actually acquired resistance to the HHP process. In order to completely eliminate the threat of pathogens, spores and toxins, HHP must be combined with high heat, and sometimes also irradiation.

The Burning Question

How does HHP know the difference between bad bacteria, good bacteria, enzymes, and the muscle cells of meat? How does it only kill the bad stuff and leave the good stuff alone? The answer is: it doesn't.

Concerns

If you are using, or considering using, a pet food that has been treated with HHP, here are some things to contemplate:

- Manufacturers could use HHP to cover up the use of spoiled or low quality meats.
- Adherence to Good Manufacturing Practices and Safe Handling Techniques could become lax.
- Besides killing bad bacteria, it also kills good bacteria and denatures proteins and enzymes.
- Taste, texture and color are negatively affected.
- It does not destroy bacterial spores and toxins already present in the food without the addition of heat.
- Heat application could cause meat proteins to react with other components in the product to form carcinogenic compounds.
- Several organisms are already resistant to the process; likely more will develop as time goes by.
- The possibility of chemicals used in food packaging migrating into the food as a result of the pressure has been questioned.

Final Thoughts

You probably chose a diet based on raw foods for your pet because you believe it provides better health. Part of the reason it does that is because it contains enzymes and other nutrients that are present in their natural (living) state. This might even include some potentially dangerous types of bacteria, such as *Salmonella* or *E.coli*. But you know that your pet is a carnivore, well adapted to handle even relatively high loads of bacteria without becoming ill. Do you want to sacrifice the benefits of a raw diet to an attempt to kill a few germs? An “abundance of caution” seems unnecessary for germs that might not even be there in the first place, and in fact probably are not there as long as the steps mentioned at the beginning of this article are being followed!

Milk is pasteurized, because the sale of raw milk is illegal in most areas, due to fear of disease. Pasteurized milk is not raw. Likewise, pasteurized, sterilized, pressurized raw meat pet food is no longer raw. Why throw out the baby with the bath water by eliminating all traces of the good guys with their living qualities that make raw food the right choice in the first place?

Article written by J. Boniface and E. Thibodeau (c) Copyright 2010, all rights reserved.

Other articles available online at www.auntjeni.com

References



Figure 2.1: Top view of the fresh and frozen beef samples treated by HHP

P. Picouet, M. Perez-Juan, and C>E> Realini (2008). High Hydrostatic Pressure technology on fresh beef and beef products.

<http://www.prosafebeef.eu/images/site/assets/hhp%20technology.doc>

Abram Aertsen, Kristof Vanoirbeek, Philipp De Spiegeleer, Jan Sermon, Kristel Hauben, Anne Farewell, Thomas Nyström, and Chris W. Michiels (2003). Heat Shock Protein-Mediated Resistance to High Hydrostatic Pressure.

<http://aem.asm.org/cgi/content/full/70/5/2660>

Alvarez, I., Niemira, B.A., Fan, X., Sommers, C.H. 2005. Inactivation of salmonella in liquid whole egg by ionizing radiation and heat. Institute of Food Technologists Annual Meeting and Food Expo., New Orleans, LA. p. 108-14.

Paul L. Chen, PhD Food Science & Technology Bring Your Healthy Living.
<http://www.tc.umn.edu/~chenx088/research.php?topic=nonthermal>

Dr. George Flick, Jr. (2003). High Hydrostatic Pressure Processing Has Potential.
<http://www.hpp.vt.edu/downloads/HPPPotential.pdf>

High hydrostatic pressure processing can help eliminate food safety problems in meat and poultry (2009). <http://www.ftclfd.org/news/news-13oct2009.html>

Kinetics of Microbial Inactivation for Alternative Food Processing Technologies. A report of the Institute of Food Technologists for the Food and Drug Administration of the U.S. Department of Health and Human Services submitted March 29, 2000
<http://www.fda.gov/Food/ScienceResearch/ResearchAreas/SafePracticesforFoodProcesses/ucm100158.htm>

Ohio State University Extension: High Pressure Processing Fact Sheet
<http://ohioline.osu.edu/fse-fact/0001.html>

Ohio State University, High Pressure Food Processing Lab: HPP FAQ
<http://grad.fst.ohio-state.edu/hpp/faq.html>

Raghupathy Ramaswamy, V.M. (Bala) Balasubramaniam Ph.D., Gnl Kaletun Ph.D.
<http://ohioline.osu.edu/fse-fact/0001.html>

Use of High Hydrostatic Pressure for the Control of *L. monocytogenes* in Ready to Eat (RTE) Meats and Poultry. Food Directorate Health Products and Food Branch Health Canada Tunney's Pasture Ottawa, Ontario K1A 0L2 <http://www.hc-sc.gc.ca/fn-an/gmf-agm/appro/nf-an138decdoc-eng.php>

K. Yamamoto, M. L. Bari, M. Mori, S. Koseki, and S. Kawamoto National Food Research Institute, Japan IfujiSangyo Co., Ltd, Japan Effect of Repeated High Hydrostatic Pressure Treatment on the Inactivation of Salmonella Enteritidis in Liquid Whole Egg <http://nfri.naro.affrc.go.jp/research/katsudo/pdf/2007/07IFT-KY.pdf>



Liquid whole egg. The product on the left is untreated. The product on the right has been treated with HHP.