

FDA's Ongoing Pet Food Investigation

Pet food manufacturers have voluntarily recalled more than 100 brands of dog and cat food across the nation since March 16, 2007. The recall was prompted by reported cases of cats and dogs in the United States that developed kidney failure after eating the affected products.

If you're a pet owner wondering what to feed your pets, keep in mind the following: Although many different types of pet food are affected by the recall, the recalled products represent only about one percent of the total pet food available for purchase, according to the Pet Food Institute, the trade association for pet food manufacturers.

"There remains an ample supply of safe cat and dog food available at stores throughout the United States," says Stephen F. Sundlof, D.V.M., Ph.D., Director of the Food and Drug Administration's Center for Veterinary Medicine (CVM). "We encourage the public to continue to use pet food that is not subject to the recall."

FDA, through CVM, regulates the manufacture and distribution of feed ingredients and complete feeds, including pet food, as well as animal drugs. Since March 15, 2007, when FDA first learned that cats and dogs were becoming sick and dying from certain pet foods, the agency has:

- dedicated personnel in each of its 20 district offices to take consumer calls and conduct inspections and



A scientist in FDA's Forensic Chemistry Center isolates foreign particles from contaminated wheat gluten using a stereoscopic light microscope. These particles will be analyzed using advanced analytical chemistry techniques.

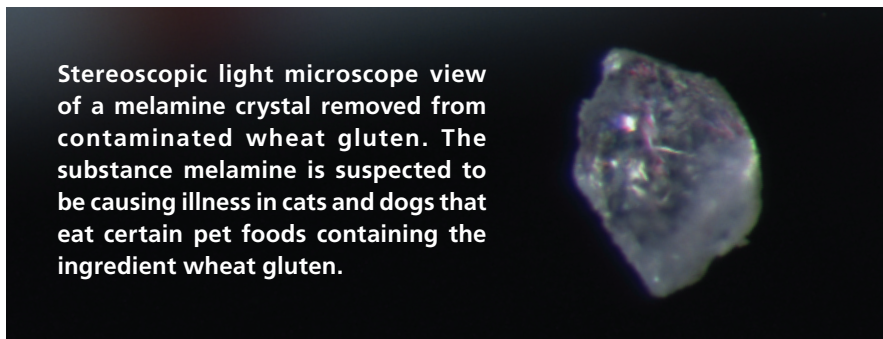
investigations

- mobilized more than 400 employees to collect pet food samples, monitor the effectiveness of the recall, and prepare consumer complaint reports
- conducted numerous inspections of manufacturing facilities and warehouses to trace all of the contaminated product
- analyzed more than 250 pet food and ingredient samples in six FDA field laboratories and FDA's Forensic Chemistry Center
- issued press releases, conducted media interviews, and developed a Web site to provide current information that consumers, veterinarians, and regulatory counterparts need to support animal health
- worked with its regulatory partners in all 50 state agriculture and health agencies to share information and collaborate on investigative and analytical efforts
- activated its Emergency Operations Center, with staff available to all FDA offices on a 24-hour basis to manage incoming information from pet owners, veterinarians, and others, making sure that crucial information gets to FDA's scientists and inspection teams
- testified before the Senate Agriculture Appropriations Subcommittee at its April 12, 2007, "Pet Food Safety" hearing.

Launching the Investigation

FDA first learned of a problem with pet food manufactured by Menu Foods Inc. after the company reported illnesses and deaths in cats and dogs that had eaten some of its "cuts and gravy" style products. The Canada-based manufacturer supplies cat and dog food to numerous pet food companies that sell it under various brand names. Menu Foods voluntarily recalled about 100 different brand name products made at its U.S. plants in Emporia, Kan., and Pennsauken, N.J., and its Canadian plant in Streetsville, Ontario.

Within 24 hours of learning about the pet food problem, FDA investigators were on-site at the Emporia plant to search for possible



Stereoscopic light microscope view of a melamine crystal removed from contaminated wheat gluten. The substance melamine is suspected to be causing illness in cats and dogs that eat certain pet foods containing the ingredient wheat gluten.



Samples of wheat glutes are collected from around the United States by FDA investigators and sent to FDA laboratories for analysis.



A scientist in FDA's Forensic Chemistry Center weighs out a sample of wheat gluten to be tested for melamine. Once the samples are prepared, state-of-the-art instrumentation is used to check for the presence of melamine contamination and to determine the amount present.

sources of contamination. FDA worked with the manufacturer to ensure that the contaminated products were removed from the market and to inform consumers of the danger of feeding their animals the suspect products. "Our first priority was to identify all of the contaminated product and remove it from store shelves to limit the risk of animal injury and death," says Sundlof.

At the same time, FDA consumer complaint coordinators around the country began taking calls from pet owners and veterinarians who reported illnesses that may have been associated with the contaminated pet food. FDA received over 14,000 such reports in the first four weeks—more than twice the number of complaints typically received in a year for all of the products the agency regulates.

Elimination of Suspects

FDA inspectors collected samples of the recalled pet food and sent them to FDA laboratories around the country for analysis. FDA scientists looked at a broad spectrum of ingredients. "We first looked at all the most likely suspects and compounds that might cause acute kidney disease," says Sundlof, "such as vitamin D, ethylene glycol (antifreeze), and some of its derivatives: diethylene glycol and propylene glycol." In addition, scientists tested products for toxic metals, as well as mycotoxins, toxic substances formed by certain molds that are known to be toxic to the kidneys. None of those compounds was found in the samples.

A New York State laboratory reported finding aminopterin, a form of rat poison, in some pet food samples. FDA's Forensic Chemistry Center could not confirm these findings. What the center did find, though, was melamine in the pet foods and in the wheat gluten used as an ingredient. Subsequently, FDA's field laboratories found melamine in over 130 of more than 210 samples of pet food and wheat gluten. In addition, Cornell University scientists found melamine in the urine and kidneys of cats that were part of a taste-testing study conducted for Menu Foods.



A gas chromatograph with a mass selective detector is used to test wheat gluten and finished product pet foods for the presence of melamine contamination. The instrument is capable of detecting melamine in the products at levels of 0.001%.

Photos: Black Star/Chris Cone for FDA

The Melamine and Wheat Gluten Connection

Melamine is a molecule that has a number of industrial uses, including use in manufacturing cooking utensils. It has no approved use in human or animal food in the United States, nor is it permitted to be used as fertilizer, as it is in some parts of the world.

Wheat gluten is a mixture of two proteins obtained when wheat flour is washed to remove the starch. It is sometimes used to thicken pet food "gravy." The wheat gluten that had gone into the pet food had been

received from a new supplier in China, according to Menu Foods.

FDA is not 100 percent certain that melamine, a relatively non-toxic substance, is the cause of the spate of pet illnesses and deaths. Although some studies have shown a toxic effect of melamine in rodents, research is scarce on melamine's effect on cats and dogs.

"While the levels we've found to date in both the finished pet food product and the wheat gluten are below what would be considered toxic in rodents, there is extremely little data in the scientific literature on melamine expo-

sure in dogs and cats,” says Sundlof. “Regardless, the association between melamine in the kidneys of cats that died and melamine in the food they consumed is undeniable.” Now FDA must attempt to determine whether or not it is the melamine itself that is the culprit, or whether it’s some other contaminant associated with the melamine. Another piece of FDA’s detective work is to find out whether cats and dogs are more sensitive to melamine than rodents without actually testing the toxicity of melamine on cats and dogs.

Tracking Down Wheat Gluten

By examining import records obtained during its investigation, FDA identified the distributor of the contaminated wheat gluten as Chem-Nutra of Las Vegas. The firm supplies ingredients to pet food companies. Working with the firm, FDA traced the suspect product to a single supplier in China, Xuzhou Anying Biologic Technology. FDA issued an import alert focused on this supplier, and is sampling 100 percent of all wheat gluten from China—regardless of its source—coming into the United States. FDA is also sampling all wheat gluten coming from the Netherlands, since the Chinese supplier shipped some of its wheat gluten to this European country.

“At this time in the ongoing investigation, there is no evidence that any imported wheat gluten contaminated with melamine has entered the U.S. human food supply,” says Michael Rogers, Director of FDA’s Division of Field Investigations. As an added precaution, however, FDA has asked the Centers for Disease Control and Prevention to use its surveillance network to monitor for signs of human illness that could indicate contamination of the human food supply.

An Active Investigation

FDA’s investigation remains open and active, and the agency continues to follow leads to get closer to the root cause of the pet food problem, says Rogers. “FDA will continue monitoring the ongoing recalls, conduct recall audit follow-ups to ensure an

What to Do With Recalled Pet Food

Do NOT feed the pet food to your animals. Return the pet food to the store where you purchased it and ask for a refund. If you cannot return the pet food immediately, store it in a secure place where pets and children cannot get to it.

Signs to Look For in Your Pet

Pet owners should be alert to signs of kidney illness, such as:

- loss of appetite
- weakness or lack of energy
- vomiting

If your pet shows any of these signs, call your veterinarian.

How to Report a Reaction to a Pet Food


Call the FDA consumer complaint coordinator for your geographic area. To find your coordinator, visit: www.fda.gov/opacom/backgrounders/complain.html. Try to have the following information available before calling:

- Brand name, lot numbers, and UPC code for the pet food fed to your dog or cat when it was ill. A lot number is typically stamped on the bag/pouch or on the can lid. Lot numbers usually consist of a series of letters and numbers.
- If your pet received treatment by a veterinarian, his/her name, address, and telephone number
- Date illness first noticed
- Signs displayed
- Any veterinary reports available.

effective recall, and promptly inform the public of any additional findings regarding the recent outbreak of cat and dog illness.”

FDA recognizes that there may be many more pet illnesses and deaths than the 16 deaths it has confirmed so far. Universities and groups such as Banfield Pet Hospital (a nationwide network of veterinary hospitals), the Veterinary Information Network, the American Association of Veterinary Laboratory Diagnosticians, and other organizations are providing information to help FDA in assessing the extent of the outbreak. In addition, these organizations help the agency communicate important health information to the public about the safety of their pets.

As the investigation continues, FDA scientists will review blood and tissue samples of affected animals to understand how melamine contributed to the pet illnesses. “This understanding will provide valuable information

about the cause of this outbreak, and what FDA and the pet food industry can do to avoid this type of problem in the future,” says Sundlof. 

For more information, including a list of recalled pet food, visit: www.fda.gov/oc/opacom/hottopics/petfood.html