Dates: April 2012-September 2013

Projects: FY12-CFSAN Sampling for Seafood Species Labeling in Wholesale Seafood

FY13-CFSAN Sampling for Seafood Species Labeling in Wholesale Seafood

FY13-CFSAN Sampling for Seafood Species Labeling in Imported Seafood

BACKGROUND

All FDA regulated products are required to be labeled in a manner that is truthful and not misleading. One aspect of truthful labeling is identifying seafood species by their acceptable market names. The Seafood List - FDA's Guide to Acceptable Market Names for Seafood Sold in Interstate Commerce was developed to provide guidance to industry about what FDA considers to be acceptable market names for seafood sold in interstate commerce and to assist manufacturers in labeling seafood products. Incorrect use of an established acceptable market name, which causes the labeling to be false and/or misleading, can result in the product being misbranded under section 403(a)(1) of the Federal Food Drug and Cosmetic (FD&C) Act (21 U.S.C. 343(a)(1)). In recent years there have been a number of reports of seafood in the U.S. being labeled with an incorrect market name. In response to these reports FDA began conducting DNA testing on fish that have a history of being misidentified, in an effort to determine the accuracy of the market names on their labels. To date FDA's testing has focused primarily on fish collected from the U.S. wholesale distribution chain, prior to the point of retail sale, and to a limited extent on seafood collected at the point of import. FDA will use the results from this testing to help guide future sampling, enforcement, and education efforts designed to ensure that seafood offered in the U.S. market is labeled with an acceptable market name for the species.

OVERALL SUMMARY FOR THREE SAMPLING EFFORTS FOR SEAFOOD SPECIES LABELING PERFORMED IN FY 2012-2013

In FY 2012-2013, three sampling efforts were performed to assess the accuracy of seafood species labeling. This sampling focused primarily on products from the U.S. wholesale distribution chain, prior to the point of retail sale, and to a limited extent on seafood collected at the point of import. In total, 174 product lots were tested, with testing of each product lot involving the collection of 4 retail units (1 filet, fish, or retail package), collected from each of 4 randomly selected containers; therefore 696 DNA analyses were performed for species identification. Products were considered mislabeled if any of the 4 filets were determined by DNA testing to not match the product labeling. Samples were collected from 14 states [Alabama, California, Connecticut, Florida, Illinois, Louisiana, Massachusetts,

Maine, Mississippi, New Hampshire, Rhode Island, Tennessee, Vermont, Washington]. These sampling efforts specifically targeted product codes that have been reported to be at the highest risk for mislabeling and/or substitution. These included cod, haddock, catfish, basa, swai, snapper and grouper.

These products were not comprehensively sampled across all states but were targeted in the areas where they are most commonly imported and/or distributed. A small number of additional samples were collected at the discretion of the FDA investigators and included products like mahi mahi, orange roughy, monkfish and swordfish.

The three sampling projects found that the fish species was correctly labeled 85% of the time.

Below is a breakout of the results for fish for which 5 or more samples were collected and tested (85% labeled properly)

- 100% (5 out of 5) of the catfish samples were labeled properly
- 100% (15 out of 15) of the cod samples were labeled properly
- 89% (57 out of 64) of the grouper samples were labeled properly
- 100% (11 out of 11) of the haddock samples were labeled properly
- 63% (31 out of 49) of the snapper samples were labeled properly
- 100% (20 out of 20) of the swai samples were labeled correctly

Below is a breakout of the results for fish for which fewer than 5 samples were collected and tested (90% labeled properly)

- 0% (0 out of 1) of the basa samples were labeled properly
- 100% (1 out of 1) of the mackerel samples were labeled properly
- 100% (1 out of 1) of the mahi mahi samples were labeled properly
- 100% (1 out of 1) of the monkfish samples were labeled properly
- 100% (3 out of 3) of the orange roughy samples were labeled properly
- 100% (1 out of 1) of the swordfish samples were labeled properly
- 100% (2 out of 2) of the tilapia samples were labeled properly

Among the 174 lots tested, 26 were found to be incorrectly labeled (15%) according to the FDA Seafood List. Among the products found to be incorrectly labeled, nearly all (25 of 26) were within the product categories of snapper and grouper. The remaining sample that was incorrectly labeled was labeled as basa (*Pangasius bocourti*) but was actually swai (*Pangasius hypopthalamus*).

Among the 174 product lots tested in total, 113 were from the product codes for snapper and grouper. Among these, 25 were found to be incorrectly labeled (22%).

A total of 49 lots were tested under the product code of snapper, of which 18 (37%) were incorrectly labeled. Among these 18 product lots, 14 were still species within the Lutjanidae (snapper) family, but the specific product labeling did not match the assigned

species in the Seafood List. The remaining 4 lots of product that were labeled incorrectly were non-snapper species [ocean perch/rockfish (2) and porgy/squirefish (2)].

A total of 64 lots were tested under the product code of grouper, of which 7 (11%) were incorrectly labeled. Among these 7 product lots, 4 were still species within the families commonly marketed as grouper, but the specific product labeling did not match the assigned species in the Seafood List. The remaining 3 lots of product that were labeled incorrectly were non-grouper species [weakfish (1), jobfish/snapper (1), and cuskeel (1)].

Among the 113 lots tested within the product codes for snapper or grouper, 22 (19%) contained a mixture of species (anywhere from 2-4 different species among the 4 sub-samples tested per lot). The only other product tested that contained a mixture of species was tilapia (1).

For more information, please see the detailed summaries for the three sampling efforts summarized above. A detailed data set is also provided for all 696 analyses performed.