



**BEST
PRACTICES
ON HOW
TO MITIGATE
THE RISK OF
SEAFOOD
FRAUD**

BEST PRACTICES ON HOW TO MITIGATE THE RISK OF SEAFOOD FRAUD

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Food Marketing Institute proudly advocates on behalf of the food retail industry, which employs nearly 5 million workers and represents a combined annual sales volume of almost \$800 billion. FMI member companies operate nearly 33,000 retail food stores and 12,000 pharmacies. FMI membership includes the entire spectrum of food retail venues; single owner grocery stores, large multi-store supermarket chains, pharmacies, online and mixed retail stores. Through programs in public affairs, food safety, research, education, health and wellness and industry relations, FMI offers resources and provides valuable benefits to almost 1,000 food retail and wholesale member companies and serves 85 international retail member companies. In addition, FMI has almost 500 associate member companies that provide products and services to the food retail industry. For more information, visit www.fmi.org and for information regarding the FMI Foundation, visit www.fmifoundation.org.



BEST PRACTICES ON HOW TO MITIGATE THE RISK OF SEAFOOD FRAUD

As co-chairs of the Food Marketing Institute (FMI) Seafood Strategy Committee (SSC), our mission is to help seafood buyers create value for their companies and for their customers. We believe that combating fraud is fundamental to the success of everyone in the seafood supply chain—from fishery to fork. It is also essential to improving the industry’s reputation and to addressing the complex environmental, social, and economic concerns of today’s consumers.

“I know that at some point, every food retailer and vendor in the United States has experienced seafood fraud whether intentional or accidental. It is a sensitive subject, which is why I am so impressed by the openness with which the members of the Seafood Strategy Committee shared their experiences to create this document so others could learn from them.”

— Carl Salamone, Vice President, Seafood Sustainability, Wegmans Food Markets, Inc., and Past Chair of the FMI Seafood Strategy Committee.

The vast majority of seafood suppliers around the world are not actively engaged in seafood fraud. However, the suppliers, retailers and others that do defraud their customers are guilty of tarnishing the reputation of the entire industry and eroding consumer confidence.

“It is important to fix what we can fix in this industry and we can definitely stop (or greatly curtail) seafood fraud. The continued commitment and market pressure of industry leaders from the retail, supply, and NGO communities have already had tremendous impact on issues such as labor in Southeast Asia. That same collaborative market pressure can be used to address the issue of fraud along with a number of other industry issues.”

— Guy Pizzuti, Category Manager, Seafood, Publix Super Markets, Inc., and Vice-Chair of the FMI Seafood Strategy Committee..

“As seafood retailers we can no longer tolerate seafood fraud intentional or not. Our consumers expect honesty and integrity on the products and claims we make on the seafood sold in our stores. The best practices outlined in this document if implemented will send a clear message to the industry that we are serious about ending fraudulent practices. I appreciate the time and effort the committee has invested in creating this document and look forward to the great results it will produce.”

— David Wier, Seafood Buyer, Meijer, Inc. and Co-Chair FMI Seafood Strategy Committee

As you read this document, you will learn about best practices retailers and their supplier partners who have employed to combat seafood fraud. Practices such as DNA testing, conducting FDA-styled product audits, random cooking and taste tests, relevant traceability, updating employee trainings, and modifying procurement specifications have significantly mitigated the risk of fraudulent products reaching customers.

“Addressing seafood fraud is no longer an action taken in response to consumer or media criticism. In fact, for many retailers it has become an integral part of their sustainability and sourcing/procurement strategies. However, more work still needs to be done before we can honestly say that there is no fraud in the seafood sector. This paper is a good step in the right direction helping retailers, wholesalers and suppliers collaboratively work together to help ensure a supply chain with integrity.”

— Rick Stein VP of Fresh Foods , FMI

We thank the Food Marketing Institute, the National Fisheries Institute, and the retailers and suppliers who contributed to the development of this document. We are confident that the information shared will help you to succeed in the ever evolving, increasingly complex, and largely global seafood sector.

Carl P. Salamone, Vice President, Seafood Sustainability, Wegmans Food Markets, Inc.
(Previous Chair)

Gaetano “Guy” Pizzuti, Category Manager, Seafood, Publix Super Markets, Inc.
(Current Chair of FMI Seafood Strategy Committee)

David Wier, Seafood Buyer, Meijer, Inc. (Current Co-Chair of FMI Seafood Strategy Committee)

Rick Stein, Vice President of Fresh Foods, FMI (Staff Facilitator of the FMI Seafood Strategy Committee)



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OVERVIEW

Seafood is an important component of a healthy diet and a valuable internationally traded commodity. Americans, on average, consume 14.9 pounds of seafood per person each year, over 80 percent of which is imported. According to the National Marine Fisheries Service, in 2016, consumers in the United States spent \$93.2 billion for seafood products, which includes \$63.4 billion in expenditures at foodservice establishments and \$29.8 billion in retail sales for home consumption. The seafood trade is global and very complex, with several hundred edible species being caught, farmed, bought, and sold by almost every country in the world.

The seafood supply chains unique diversity and complexity offers various opportunities for seafood fraud to occur. Numerous investigations have found that seafood fraud is a major concern in the United States. The National Institute of Standards and Technology (NIST) speculated that if only 2 percent of the weight of all seafood is short-weighted, then the annual loss to consumers could be as high as \$1.6 billion.

Purpose of Document

This publication is designed to help the food retail, wholesale, and distributor industry mitigate the risk of seafood fraud by encouraging the development of detailed product specifications and the implementation of robust product verification practices.

The primary goals of the document are to:

- Educate associates about seafood fraud.
- Explore key opportunities and challenges of combating seafood fraud.
- Highlight and define major issues encountered with seafood fraud.
- Share best practices with FMI members to help mitigate the risk of seafood fraud.

What is Seafood Fraud?

According to The U.S. Food and Drug Administration (FDA), “Economic Deception or Fraud in the sale of seafood occurs when a less expensive species is substituted for a more expensive species.” Fraud also occurs when label information is incorrect or does not adhere to a variety of other labeling laws. However, for many buyers, seafood fraud is anything that falls on the side of failing their product specifications (specs).

Examples include:

- Species substitution – where a high-value seafood product is switched with a similar looking species of lower value without notification.
- Short-weighting – where excess ice glaze is included in the net weight of a seafood product to misrepresent the overall useable weight of seafood bought or sold, or the box is intentionally under filled.
- Incorrect counts – where shellfish sold does not match the count listed on the label, package or invoice.
- Misleading or incorrect size – where size per piece of seafood is misrepresented on signs or the label, when different sizes may be priced differently.
- Excess water added – where water is added to the product, much like glaze, to increase the net weight but reduces the quality and is not included in the ingredient legend.
- Not correctly labeled for country of origin – where country of origin labeling does not follow USDA, Customs or FDA regulations.
- Undeclared additives – where additives are added to the seafood product to retain moisture or preserve the product, and not declared on the label.
- Not adhering to other labeling laws – where a fish or shellfish product is labeled with misleading statements such as claims about the use of additives, catch method, or sustainability.



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WHO REGULATES SEAFOOD FRAUD?

In the United States, several agencies have responsibility to address different areas of seafood fraud. The FDA, under its authority from the Federal Food, Drug and Cosmetic Act, regulates most areas of the seafood industry. The FDA is responsible for the FDA Seafood List, which provides acceptable market names for seafood, and it regulates seafood products with the exception of fish of the order siluriformes (e.g., Catfish). Regulation and inspections of siluriformes is conducted by the USDA Food Safety and Inspection Service, as authorized by the 2008 and 2014 Farm Bills, which amended the Federal Meat Inspection Act.

Country of origin labeling is regulated by the USDA Agricultural Marketing Service, U.S. Customs and Border Protection and the Made in the USA Standard of the Federal Trade Commission.

Individual states also have jurisdiction over proper weights and measures. In addition, local laws may apply in certain jurisdictions.

BEST PRACTICES

Food Marketing Institute (FMI) members remain ever vigilant in identifying and addressing seafood fraud and other issues that could threaten their reputations and erode consumer confidence.

A brief explanation, and some of the key actions that should be taken to mitigate against the risk of seafood fraud, were developed for the list below:

- Credibility
- Training
- Specifications
- Species Substitution
- Weights
- Counts and Sizes
- Moisture
- Adhering to Labeling Laws; and
- Minimizing Misuse of Chemicals

It is important to note, in all cases, retailers should first consult internal company policies at each step of the supply chain for seafood.



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CREDIBILITY

What is it?

Credibility and transparency are essential factors in maintaining confidence in your retail organization. These are especially important when selling seafood at the retail level due to the opportunities for economic fraud. We consider it to be a best practice for suppliers to sign a code of conduct that all applicable laws, specifications, and the retailers' wholesalers' and distributors' requirements on responsible sourcing are being met.

Some actions that retailers can take to maintain credibility when selling seafood are:

- Belong to organizations such as the Better Seafood Board, whose members pledge to conduct business in an honest and trustworthy manner.
- Promote transparency, certifications and membership in industry organizations that promote best practices.
- Share their sustainability and traceability programs on their company website.
- Periodically audit suppliers to ensure they are meeting the standards that were established in the specifications.
- Monitor and read publications and websites that examine fraud, such as FDA's learning module videos for seafood labeling.
- Monitor FDA seafood fraud related Import Alerts, such as Import Alert 16-04.

TRAINING

Best Practices for Employee Awareness and Training

- Train store employees to be the “eyes and ears” as the first point in the prevention of species substitution.
- Develop a training module, to include topics discussed in this white paper, for all employees and identify those employees who have completed it.
- Each retailer should develop its own proprietary test that would include standard topics, as recommended from this FMI white paper.
- Train store and merchandising teams to become familiar with the attributes of problematic species, e.g., make sure they know the differences between Snapper, Grouper and Swai.
- List in a chart the species that are frequently subject to substitution and the species that are commonly used for the substitution.
- Warehouse personnel should be trained by the quality group to check and verify stated and actual weights of product received.
- Train employees on the major allergens and how to label accordingly.
- Review these Best Practices with senior management.



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SPECIFICATIONS

What are they?

Specifications are precise requirements for the product that the buyer wishes to buy that are outlined beforehand. Retailers are strongly encouraged to develop detailed specifications for all seafood products they buy from suppliers.

Best Practices for Items to Include When Developing Specifications

- Provide suppliers with product specifications which may include:
 - A set limit for moisture content
 - A definition of count per pound
 - How to determine uniformity ratios
 - How to determine the net deglazed weight
 - The set limit for net deglazed weight
- Every shipment is tested by a company representative against the product specifications and is reported in an inspection report.
- All purchase orders are inspected to verify that the product conforms to the product specifications.
- Perform random testing at independent labs twice a year to ensure that the suppliers are supplying product that conforms to the specifications.
- Product specifications include size and count parameters, including average size of product (actual and declared) and net weight per case (actual and declared).

Product specifications may include specifying that the deglazed weight be done according to the Association of Official Agricultural Chemists (AOAC) International method.

SPECIES SUBSTITUTION

What is it?

Species of fish can easily be substituted for that listed on the label and not detected by the purchaser, due to the similar appearance of the two species. This can represent a significant value in economic fraud. In addition, some substitutions may introduce a safety hazard because species-related hazards may be overlooked during a hazard analysis and not controlled with the supplier's or retailer's Hazard Analysis and Critical Control Points (HACCP) plan.

Once fish is filleted and skinned, the species can be difficult to determine, making it possible to substitute a low-valued species for a more expensive one (for example, labeling Catfish as Grouper). This, in essence, is species substitution a practice which defrauds consumers who are paying for a high-value seafood product but getting one of lower value instead. According to the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries), species substitution might be the most well-known type of seafood fraud, but it is not the most common.

Related to species substitution is mislabeling. In this case, the fish is correctly labeled by the supplier but incorrectly labeled at the store. The Food Code, published most recently in 2013 by FDA, establishes guidelines which regulatory jurisdictions can use to set retail and foodservice establishment sanitation standards. The Food Code states that "food shall be safe, unadulterated, and, as specified, under Section 3-601.12, honestly presented." That section states, "food shall be offered for human consumption in a way that does not mislead or misinform the consumer."



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Best Practices for Vetting Suppliers

- Vet suppliers before purchasing any product from them to determine if they are reputable companies.
 - Visit the plants and investigate the history and status of the company.
 - Verify the accreditations that the company holds.
- If the processor looks like a viable option, request samples of the actual product to inspect.
- Develop protocols for employees to visit all seafood vendors on a regular basis.

Best Practices for Writing and Implementing Buying Specifications

- Processors should be given specifications which are strict guidelines for the product that the suppliers agree to follow. There should be a full product specification sheet for all products.
- The common name, scientific name (Latin name), acceptable market name as presented in the specifications, and the item code should be required on purchase orders, on product specifications, on all documentation and labeling for shipping, and on the final retail packaging for verification and to minimize confusion. [The FDA Seafood List](#) provides guidance on names.
- Indicate that no substitutions are to be made and no unapproved chemical compounds, including antibiotics, are to be added.

Best Practices for Testing for Identification

- Complete quarterly DNA tests on top priority items that are selected by the Seafood Category managers.
- Conduct quarterly DNA sampling on random species with the product pulled directly from the distribution centers and send to an independent third-party testing lab.
- Alternately, request certain suppliers to complete their own DNA testing in their facilities and keep the results available for your reference, as needed.
- Require that all fillets of seafood at high-risk for substitution (Snapper, Grouper, Haddock, farmed and wild Salmon) are shipped and sold with skin on. Be aware that species sold with skin off are at a higher risk for fraud and therefore DNA testing is recommended.
- Inspect all product that comes into the central distribution center or a store through direct store delivery (DSD).
- Do quarterly testing with samples pulled at retail to make sure the product, market or common name and scientific name are consistent.
 - For frozen, include an opportunity to test the product before it is received in the warehouse or to do a recall in the purchase agreement.
 - For fresh, when the product does not pass the test, have a discussion with the vendor and include a provision for some sort of punitive action.
- Ensure species identification testing methodology is credible.



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Best Practices for Traceability

- Require traceability through the supply chain back to the fishery or farm, including method of catch to confirm substitution has not occurred. Options may include:
 - Sourcing supplies that are certified by a globally accepted certification organization, e.g., Best Aquaculture Practices (BAP), Aquaculture Stewardship Council (ASC) Marine Stewardship Council (MSC) or any certification programs benchmarked against the Global Seafood Sustainability Initiative.
 - Importers or brokers can obtain a Chain of Custody certification, e.g. International Featured Standard (IFS) Broker, MSC Chain of Custody (CoC), or ASC CoC. These certifications include an investigation of a traceability system to ensure it is efficient and accurate.
 - If needed by the organization, include traceability requirements in the purchase specifications.
- Maintain traceability records, updated daily, and maintain the ability to send records electronically either within your own organization or through a third party.
- Ensure that your supplier has a method of traceability. Use the power of digital traceability to continuously monitor and continuously audit (CMCA) seafood purchases to flag shipments that fail rules, which could indicate possible fraudulent activity.

CHECKING WEIGHTS

Why is checking weights necessary?

The weight of the product should be verified when purchasing both fresh and frozen fish and seafood. The weights of fresh product should be checked at receiving to ensure that the invoiced weight matches that which was delivered. Processors will add a layer of water glaze (ice) to protect frozen seafood products from dehydration during storage, which is a normal and legal practice. However, when a processor includes the weight of the glaze with the net weight of the seafood, that practice defrauds the store and customer.

Best Practices to Check Weights

- Perform daily inspection of high-volume species (not frozen) at warehouses and distribution centers, including tracking the stated weight and the actual weight variance. The report is emailed to all relevant parties. Warehouse personnel should be well trained by the quality group. In addition, stores are also asked to check weights.
- Post-weight check every fresh order daily at receiving.
- Spot check products at store receiving for proper weight.
- Randomly check the deglazed weight and count on shrimp and scallops in the stores. Scallops are sent to a third-party testing lab several times during the year and the test will include net weight, count, uniformity check and moisture check.
- Stores are instructed to check 10 percent of their cases of fresh items for true weights.
 - If catch weight, they need to validate that the case weight marked on the box matches the actual weight.
 - If net weight, they need to ensure that it's no less than the declared weight.
 - If a store reports a miscount or mis-weight, then recommend that all stores check that species or follow your specific company protocol.
- Conduct routine and random audits for weight, including deglazing products according to standard methods.

The methodology for checking the net weight is established by AOAC International and referenced by the U.S. Department of Commerce/National Marine Fisheries Service Seafood Inspection Program. For methodology, please see Chapter 12 of Part 4, Policies, Procedures and Requirements for the Audit of Fisheries Products on a Lot by Lot Basis: http://www.seafood.nmfs.noaa.gov/pdfs/part_4_audit_of_fisheries_products_on_a_lot_by_lot_basis.pdf

Frozen shrimp is included as an example when using these methods for thawing and checking net weights.



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CHECKING CORRECT COUNTS AND SIZES

Why is checking weights and counts necessary?

Shellfish may be sold by either weight and/or count. Some seafood items, such as Shrimp, are sold by net weight but have reference to the count per pound as the declaration of size (e.g., “21 to 30 Shrimp per pound”). With these types of product, the size will affect the price. It is important that this designation represent the count per pound and not a count per bag. Labels and packaging must accurately reflect the declared weight or count, and delivering an incorrect count is considered fraud.

Best Practices for Checking Correct Counts and Sizes

- For filet sizing (e.g., Tilapia in 7-9 oz. fillets), check ongoing program business randomly in the office, check the first few deliveries of new business in the office and check weekly in the field until comfortable with new suppliers.
- Quality assurance spot checks all frozen items for net weight and correct count once per quarter (e.g., 31-40 count Shrimp to 37). Product specification sheets are very clear on what to expect.
- For some products, such as King Crab, designate what a count of 6-9 means.
 - Randomly check the deglazed weight and count on Shrimp and Scallops in the stores. Scallops are sent to a third-party testing lab several times during the year and the test will include net weight, count and uniformity check.

Laboratories that are known to do this kind of testing are listed in Appendix A. This list does not represent an endorsement and each company is responsible to research and interview prospective laboratories before entering into agreements.

Please reference your company guidance on specifications for determining net weight and count. As part of quality assurance, each company should establish a protocol that requires checks for accuracy at the store level.

CHECKING MOISTURE

Why is checking moisture necessary?

Water is sometimes added to the seafood product during processing which then increases the weight to be sold. At the same time, the quality is diminished when the extra water is cooked out during meal preparation, which affects the taste. (See section on sodium tripolyphosphate below.)

Best Practices for Checking Moisture and Preventing Excess Water Added

- Have standard procedures for thawing to check weight of frozen Scallops and for testing, according to your company’s specifications for other at-risk species, such as Tilapia and Pangasius.
- Testing is done to identify the additive and compare that test to the stated sheet that accompanied the product at delivery. Moisture content should be on the specifications sheet.
- Perform periodic testing for other additives or chemicals that might be used in production.
- Specify the moisture content within the specifications and do regular testing to ensure the suppliers adhere to the specifications.
- Employ a third-party auditor or internal quality assurance department to complete periodic moisture testing to ensure that identified products meet all specifications. Instruct auditors on the items to be pulled from the warehouse and tested.
- Suppliers provide information on digital traceability documents on the percent of moisture for each shipment. Quality assurance randomly spot checks moisture levels once per month.

Recommend that the suppliers have their own auditing processes as well.



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ADHERING TO LABELING LAWS

Country of Origin Labeling

What is Country of Origin Labeling?

Unprocessed fish and shellfish sold at retail in the United States are required by USDA regulations to have Country of Origin Labeling (COOL). In addition, for fish and shellfish, the label must state the method of production whether that is wild caught or farm raised. Customs and Border Protection also has requirements for Country of Origin declaration. In addition, Federal Trade Commission regulations may apply if “Made in the USA” claims are made.

Best Practices to Correctly Label for Country of Origin

- Have a standard practice to verify the country of origin for seafood purchased. Be selective from whom you purchase and research the background of potential suppliers for prior incidences of fraud.
- Recommend the services of a third party to assure the retailer’s requirements on USDA COOL are being met by the supplier. If conditions exist that could allow for transshipment to avoid duties or regulatory action, and then include the ability to do traceability as part of your internal audit program.
- Stores should verify proper labeling. Store personnel should match the invoice to the actual case to verify correct country of origin.
- In order to validate records with what the store has labeled, maintain storage of information and implement an internal audit process. If an organization finds discrepancies in the records, they should notify the supplier or their internal supply chain and get the correct paperwork sent to the store.
- Species with different countries of origin should not be mixed within a fresh seafood case. Any discrepancies should be reported to the main office. It is recommended that the department manager validate country of origin compliance with case signage once the cases are set.
- Ensure that language used on labels is in compliance with federal regulations. Farm-raised, farmed, wild caught, and wild are acceptable terms for method of production. However, some examples of terms not acceptable for a label include ocean caught, line caught, farmed in the wild, fresh water caught and fresh land raised. (See COOL Regulations for Fish and Shellfish [7 CFR Part 60](#) for more information).
- Refer to applicable laws regarding country of origin labeling. (Keep in mind that value-added or further-processed products are not covered under current law.) Regulations regarding country of origin labeling are contained in Title [7 CFR Part 60](#), USDA COOL; U.S. Customs and Border Protection Chapter 2, Rules of Origin Title 19 CFR Part 102; and the [Federal Trade Commission Made in the USA Standard](#).



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Processed and Value-Added Food Items

Processed food items are exempt from USDA COOL labeling. Processed food items include those with a change of character (except for filleting) or combined with another food component. Substantial transformation (change in character) occurs when a new and different article of commerce emerges from a process with a new name, character, or use different from that possessed by the article prior to processing.

Examples of a change in character include:

- Cooking (e.g., frying, broiling, grilling, boiling, steaming, baking, roasting). Examples include cooked Shrimp, canned Tuna, canned Salmon, canned Oysters, Crab legs, and seafood medley.
- Curing (e.g., salt curing, sugar curing, drying). Examples include pickled Herring.
- Smoking (hot or cold). Examples include smoked Trout, smoked Salmon, Salmon jerky, and fish jerky.
- Restructuring (e.g., emulsifying and extruding, compressing into blocks and cutting into portions).

Examples of exempted seafood products as a result of being combined with another food component include stuffed Flounder, breaded Tilapia, Salmon burgers, Clams or Mussels in tomato sauce, and Cajun Catfish. Value added products are those that have one or more additional preparation step(s) that changes the nature of the product adding value at the time of sale. Examples include seafood medley, coconut Shrimp, soups, stews and chowders, sauces, pates, marinated fish filets, Crab salad, Shrimp cocktail, and breaded Shrimp.

Method of Production

In addition to requiring country of origin, the USDA COOL regulation also requires that the “method of production” be included for fish or shellfish. Fish and shellfish must list both the country of origin AND method of production on the label.

The method of production refers to the manner in which the fish are raised in either controlled or non-controlled environments.

Acceptable terms on the label for method of production include:

- Farm-raised
- Farmed
- Wild-caught
- Wild

Terms not acceptable on the label for method of production include:

- Ocean caught
- Line caught
- Farmed in the wild
- Fresh water caught
- Fresh land raised

COOL Final Rule References (Final Rule 7 CFR Part 60)

- Farm-raised fish and shellfish – CFR Part 60.106
- Wild fish and shellfish – CFR Part 60.133
- Commingled Covered Commodities – CFR 60.103
- Pre-labeled – CFR Part 60.118
- Processed Food Item – CFR 60.119



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U.S. Customs Rules of Origin

Processed food items are generally exempt from USDA Agricultural Marketing Service COOL regulations but are not exempt from U.S. Customs requirements. All products, including processed foods that enter the United States as such must be marked with the country of origin. Processed foods made in the United States may be exempt from COOL requirements but Customs marking requirements will apply if they are processed in the United States from imported ingredients. If the covered commodity undergoes a substantial transformation after arriving in the United States, then the foreign origins would not need to be marked. If the product is simply repackaged, the country of origin at the time of import would need to be stated on the label.

Example: Alaska Flounder shipped to Thailand for filleting becomes a product of Thailand. Russian Sockeye Salmon filleted in the United States may be labeled without any customs requirement for foreign origin declaration, but would still be subject to USDA AMS COOL labeling requirements, e.g. “Product of Russia, Processed in USA.”

OTHER LABELING LAWS

Other Labeling Laws

U.S. laws and individual state laws mandate certain information must be included on labels to help consumers make informed decisions. Fish and seafood products must follow certain label requirements as well.

In the United States, the FDA regulates food labels and labeling. There are required label elements and also voluntary label statements and claims. Most importantly, label statements and claims must be truthful and not misleading.

Best Practices for Adhering to Other Labeling Laws

- Expectations for allowed ingredients must be clearly stated in the product specifications.
- All added ingredients, including added water and added protein, must be safe for use in food and listed on the label.

Label Claims

These voluntary label claims are sometimes used but have requirements that need to be met for their use. The requirements allow buyers the ability to verify.

These label claims include:

- Fresh
- Frozen at Sea
- Previously Frozen
- All Natural
- Fat Free or Low Fat
- Omega-3
- Chemical Free (no added chemicals)
- No Preservatives
- No Antibiotics or Antibiotics Free
- Phosphate Free
- Sustainably Raised or Harvested
- Nutrient Content Claims
- Made in the USA



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Best Practices for Using Label Claims

- When developing the language for the label, members should only state information that is known to be truthful and can be substantiated and verified. Have proposed labeling claims reviewed by knowledgeable persons (third party, etc.) for accuracy and remove any misleading information.
- Random samples of product are tested for any substances for which a claim of the absence or the addition of that substance would be made on the label.

Further information about sodium tripolyphosphate and chemical misuse, which can be a concern in label claims, follows:

Sodium Tripolyphosphate

According to the FDA, sodium tripolyphosphate (Tri-poly) is generally recognized as safe when used in accordance with good manufacturing practices. This compound is used in the processing of some popular seafood products like Scallops and Shrimp to add or retain moisture and to keep the seafood plump. Unfortunately, the potential exists for economic fraud through undeclared or excessive use of Tri-poly.

Undeclared Additives

Several additives may be used in seafood as preservatives, antioxidants, neutralizing agents, etc. These additives include sodium tripolyphosphate, ascorbic acid (vitamin C), calcium ascorbate (vitamin C), sodium ascorbate (vitamin C), erythorbic acid (isomer of vitamin C), citric acids, sodium citrates, potassium citrates, calcium citrates, sorbic acid, benzoic acids, sulphur dioxide, phosphoric acids, 4-Hexylresorcinyll, carbon monoxide and others. **Not declaring these additives on the label is considered fraud. It is rare for an additive used in seafood processing to be considered a processing aid and therefore not required to be listed on the label.**

Best Practices to Minimize the Risk of Undeclared Additives

- Distribute a list of approved antibiotics and company guidelines for antibiotics and pesticide use in any farm-raised seafood product to every vendor.
- Include statements of approved antibiotics on every product specification sheet.
- Request that farm name, species and dates of antibiotic use be sent to the company prior to shipping to verify there was proper time for withdrawal. Residue levels should be below the legal requirements of the FDA and the country in which the seafood was produced. The letter should also guarantee that no banned hormones or antibiotics were used to treat the seafood products and that the products have been tested for food-borne pathogens, with the results listed.
- All suppliers must have comprehensive allergen control procedures in place, which are reviewed by the buyers, Quality Control managers and/or HACCP coordinator during the supplier verification period.
- Employees are trained on the major allergens and how to label for them. All labels are reviewed by the Packaging Coordinator and Quality Control managers.
- Conduct third-party testing for undeclared additives with the testing done twice a year and on a rotating basis among the different products. An alternate is to conduct analytical testing on each shipment with testing for indicators for abuse, such as moisture and sodium.



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MISUSE OF CHEMICALS

Chemical Misuse

As in the agricultural sector, the aquaculture (fish farming) industry employs a variety of chemicals to ensure the growth and health of their harvest. Some of these chemicals include soil and water treatments, antibacterial agents, other therapeutants, pesticides, feed additives, anesthetics, antibiotics, and hormones. When these chemicals are administered under the supervision of a veterinarian, and standard health and safety precautions are observed and documented, the risk of chemical misuse and/or abuse can be mitigated. However, where these precautions do not exist, there is the possibility for chemical misuse.

Best Practices to Prevent Misuse of Chemicals

- State to suppliers, through specifications and agreements, those products that have been raised using prohibited chemicals will be refused.
- Conduct third-party testing for chemical residues in purchased products at regular intervals and on a rotating basis.

Closing Statement

The issue of economic fraud impacts the entire supply chain including the honest players and those both knowingly and unwittingly committing fraudulent acts. Industry stakeholders are called on to implement practices within their businesses to avoid economic fraud and create an even playing field which enhances good commercial practices. FMI, its members and associate members believe strongly that by working together and embracing the best practices to prevent seafood fraud, the consumer can purchase seafood with confidence. This vital source of protein is enjoyed by millions of consumers, in our members markets, both domestic and abroad. Our goal by this collaborative work effort is to ensure that seafood at retail is responsibly sourced and all elements of fraud are prevented by best practices.



BEST PRACTICES ON HOW TO MITIGATE THE RISK OF SEAFOOD FRAUD

APPENDIX A

The following list does not represent an endorsement and each company is responsible to research and interview prospective laboratories before entering into agreements.

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike, Lancaster, PA 17605
(717) 656-2300
(Microbiological testing, Foreign Material identification)

Eurofins Analytical Laboratories
2219 Lakeshore Dr. #400, New Orleans, LA 70122
(504) 297-4330
(Chemical, Analytical testing)

FDA Testing
Certified Laboratories
200 Express Street, Plainview, NY 11803
(516) 576-1400
(Micro, Chemical, Analytical testing)
FDA testing

Michelson Laboratories, Inc.
6280 Chalet Drive, Commerce, CA 90040
(562) 928-0553

Applied Food Technologies
13420 Progress Blvd, Ste. 100, Alachua, FL 32615
(386) 418-3661
(Specification testing for all fish and shellfish)

SGS North America
291 Fairfield Avenue, Fairfield, NJ 07004
(973) 575-5252
(Undeclared Additives)

APPENDIX B

Traceability Resources

The following list of traceability resources does not represent an endorsement.

The Global Dialogue on Seafood Traceability is a business-to-business platform for establishing a unified framework for global seafood traceability practices: <http://www.traceability-dialogue.org/>

The Seafood Traceability Collaboration -- FishWise, Future of Fish (FoF), Global Food Traceability Center (GFTC), and World Wildlife Fund (WWF) have collaborated to produce a suite of actions and resources to support the adoption of best practices in seafood traceability: <https://www.fishwise.org/wp-content/uploads/2017/09/OSMI-project-descriptions-FINAL.pdf>

The Conservation Alliance for Seafood Solutions offers a comprehensive “Traceability Resources” webpage with helpful resources and links: <http://solutionsforseafood.org/resources/traceability-resources/>



BEST PRACTICES ON HOW TO MITIGATE THE RISK OF SEAFOOD FRAUD

Appreciation to the Food Marketing Institute Seafood Strategy Committee

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