



REVISED JUNE 2017

Commercial Processing Example: Wholesale/Distribution/Warehouse Facilities

Example: This is a Special Training Model for illustrative purposes only. The SHA models are based on guidance contained in FDA's *Fish and Fishery Products Hazards and Control Guidance* (4th Edition, 2011) and additional information available since the 2011 edition. It was produced by the National Seafood HACCP Alliance (SHA) strictly as an example for training. This Model does not represent a specific requirement or recommendation from FDA. Keep in mind that this model may not apply to all situations.

Narrative¹

Product Market Names: FISH (fresh, not previously frozen or thawed) - Bass, Bluefish, Catfish, Cod, Flounder, Hake, Mackerel, Mahi-mahi, Monkfish, Pollock, Tuna, Salmon, Swordfish, Weakfish and Whiting; MOLLUSCAN SHELLFISH - Clams and Oysters (alive shellstock), and Scallops (fresh shucked meats); and CRUSTACEANS - Shrimp (frozen).

Receive – A variety of seafood species in different product forms are received from various suppliers to the ABC Wholesale Company.

- **FISH** are received from primary processors sourcing from vessel harvests and aquaculture farms. Farmed fish include catfish and salmon. No fish are purchased directly from fishermen or aquaculture farms except for some wild harvested hake and whiting, which are occasionally purchased directly from local fishermen in the Spring and Fall seasons. The fish arrive fresh (not previously frozen), packaged in iced containers on refrigerated trucks.
- **CLAMS** and **OYSTERS** are received from primary processors that have pre-chilled the live shellstock below 50°F/10°C before initial shipment. The clams and oysters are sold refrigerated as live products. The clams and oysters are not subject to special post-harvest processing methods to retain raw product characteristics or exposed to glass containers.
- **SCALLOPS** are received as fresh shucked meats with no attached viscera.
- **SHRIMP** can be farm-raised or wild-harvested products purchased from primary processors which freeze packaged units containing 5-pound frozen blocks that are pre-label for product content (i.e., 'Shrimp' and 'sodium bisulfite' as an ingredient).

No products are received or shipped in a reduced oxygen container.

Refrigerated Storage – Fresh fish are immediately moved into a refrigerated storage cooler. Raw fish and scallops are completely surrounded with ice and stored in the same refrigerated cooler as the live clams and oysters held at an ambient temperature of 45°F or less.

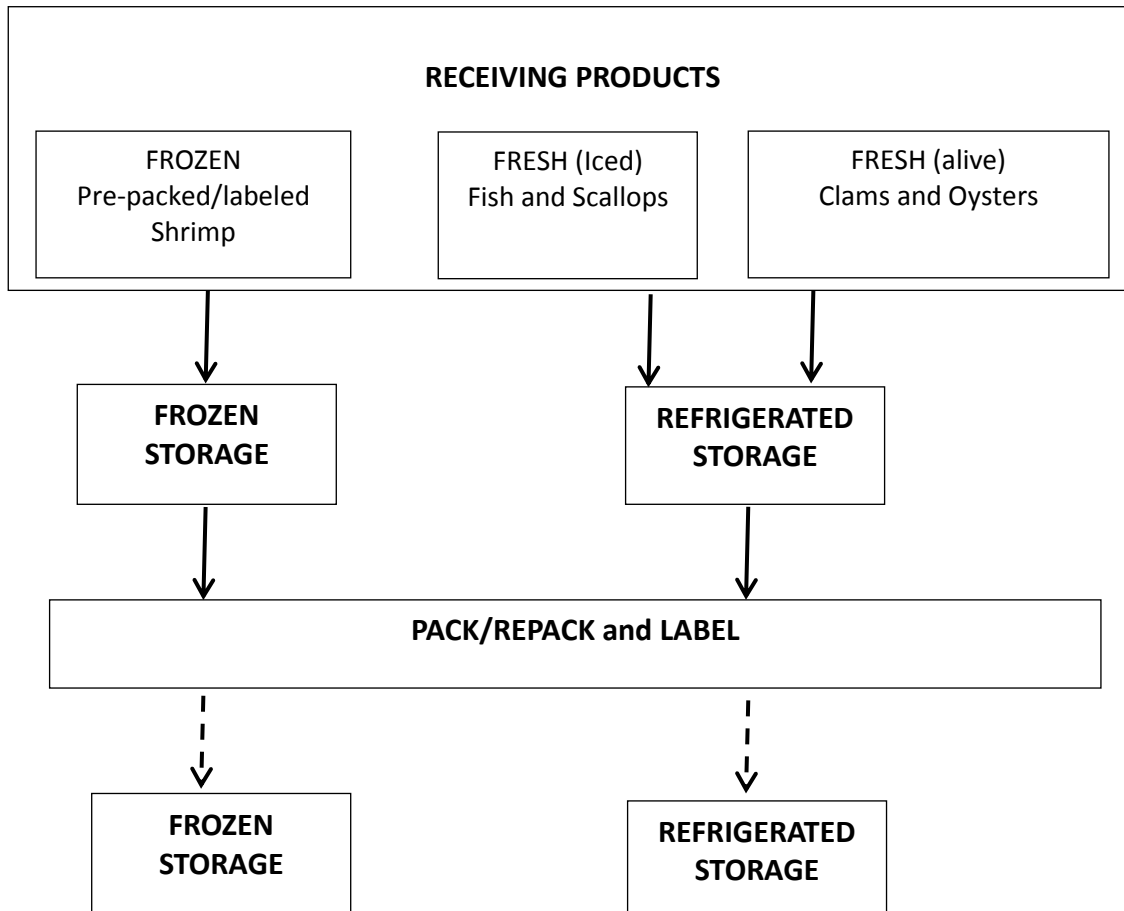
Frozen Storage – The frozen blocks of shrimp are stored in a freezer at 0°F or less.

Pack/Repack and Label – For each customer order, refrigerated products are removed from cooler storage and re-packed in containers with ice to suit the orders. The repacked containers are labeled then loaded onto company trucks or placed back into refrigerated storage overnight for delivery the next day. The maximum time out of refrigerated conditions for assembling customer orders is 30 minutes. Orders for frozen shrimp are assembled for transport on freezer trucks. Frozen shrimp blocks have been previously labeled by the primary processor. If necessary, customer orders are stored in the same storage units used for initial refrigeration or frozen storage. ABC Wholesale Company maintains a current reshippers license for molluscan shellstock¹.

Intended Use: All products are distributed with intentions to be consumed cooked except the raw clams and oysters. There is no prior knowledge that the other products will be consumed raw.

¹Molluscan shellfish product handling, storage and labeling are consistent with requirements recommended in the *FDA Hazard and Controls Guidance* (edition 2011) which include reference to specific requirements outlined in laws and regulations of States that participate in the National Shellfish Sanitation Program (NSSP; <http://www.fda.gov/Food/GuidanceRegulation/FederalStateFoodPrograms/ucm2006754.htm>)

ABC Wholesale Company Process Flow Diagram



! The dashed arrow represents product assembled for specific customer orders that can be held temporarily (less than two days) in the same storage units (refrigerated or frozen) before delivery to the customer.

PRODUCT DESCRIPTION: Wholesale/Distribution/Warehouse Facilities

Example: For Illustrative Purposes Only. Models are based in current guidance contained in FDA’s *Fish and Fishery Products Hazards and Control Guidance*. Keep in mind that this model does not apply to all situations.

Description	Company: ABC Wholesale Company, Anywhere, USA																						
	Where Product Is Purchased			How Product Is Received				How Product Is Stored				How Product Is Shipped				How Product is Packaged			How Product Will Be Consumed			Intended Consumer	
Fish or Shellfish Species	From Fisherman	From Fish Farm	From Processor	Refrigerated	Iced	Frozen	Shelf-Stable	Refrigerated	Iced	Frozen	Shelf-Stable	Refrigerated	Iced	Frozen	Shelf-Stable	Air Packed	Reduced Oxygen/Vacuum	Raw to be cooked	Raw Ready-to-Cooked	Cooked Ready-to-Eat	General Public	At Risk Population	
Common Name: Striped Bass or Rockfish Market Name: Bass Scientific Name: <i>Morone spp.</i>			√		√				√							√			√			√	
Common Name: Bluefish Market Name: Bluefish Scientific Name: <i>Pomatomus saltatrix</i>			√		√				√							√			√			√	
Common Name: Channel Catfish Market Name: Catfish Scientific Name: <i>Ictalurus spp.</i>			√		√				√							√			√			√	
Common Name: Atlantic Cod Market Name: Cod Scientific Name: <i>Gadus spp.</i>			√		√				√							√			√			√	
Common Name: Fluke or Summer Flounder Market Name: Flounder Scientific Name: <i>Paralichthys dentatus</i>			√		√				√							√			√			√	
Common Name: Red Hake Market Name: Hake Scientific Name: <i>Urophycis spp.</i>	√				√				√							√			√			√	
Common Name: Atlantic Mackerel Market Name: Mackerel Scientific Name: <i>Scomber scombrus</i>			√		√				√							√			√			√	
Common Name: Mahi-mahi or Dolphin Market Name: Mahi-mahi Scientific Name: <i>Coryphaena spp.</i>			√		√				√							√			√			√	
Common Name: Monkfish or Goosefish Market Name: Monkfish			√		√				√							√			√			√	

Fish or Shellfish Species	Where Product Is Purchased			How Product Is Received				How Product Is Stored				How Product Is Shipped				How Product is Packaged		How Product Will Be Consumed			Intended Consumer		
	From Fisherman	From Fish Farm	From Processor	Refrigerated	Iced	Frozen	Shelf-Stable	Refrigerated	Iced	Frozen	Shelf-Stable	Refrigerated	Iced	Frozen	Shelf-Stable	Air Packed	Reduced Oxygen/Vacuum	Raw to be cooked	Raw Ready-to-	Cooked Ready-to-	General Public	At Risk Population	
Scientific Name: <i>Lophius spp.</i>																							
Common Name: Atlantic Pollock Market Name: Pollock Scientific Name: <i>Pollachius spp.</i>			√		√				√				√			√		√				√	
Common Name: Yellowfin Tuna Market Name: Tuna Scientific Name: <i>Thunnus albacares</i>			√		√				√				√			√		√				√	
Common Name: Atlantic Salmon Market Name: Salmon Scientific Name: <i>Salmo salar</i>			√		√				√				√			√		√				√	
Common Name: Swordfish Market Name: Swordfish Scientific Name: <i>Xiphias gladius</i>			√		√				√				√			√		√				√	
Common Name: Weakfish or Sea Trout Market Name: Weakfish Scientific Name: <i>Cynoscion spp.</i>			√		√				√				√			√		√				√	
Common Name: Silver Hake or Whiting Market Name: Whiting Scientific Name: <i>Merluccius spp.</i>	√				√				√				√			√		√				√	
Common Name: Northern Clam or Quahog Market Name: Clam Scientific Name: <i>Mercenaria spp.</i>			√	√				√					√			√			√			√	
Common Name: Eastern Oyster Market Name: Oyster Scientific Name: <i>Crassostrea spp.</i>			√	√				√					√			√			√			√	
Common Name: Sea Scallop Market Name: Scallop Scientific Name: <i>Placopecten magellanicus</i>			√		√				√				√			√		√				√	
Common Name: White Shrimp Market Name: Shrimp Scientific Name: <i>Penaeus spp.</i>			√			√				√				√			√					√	

POTENTIAL FOOD SAFETY HAZARDS – All potential food safety hazards based on the product description and processing flow diagram associated with this product and process are identified using Tables 3-2 (species-related), 3-3 (species-related) and 3-4 (process-related) in *the FDA Hazards and Controls Guidance* (2011 edition). Processors should be aware that additional guidance may be periodically posted on FDA Seafood HACCP Websites, and additional hazards not covered by this guidance may be relevant to certain products under certain circumstances.

For all products in the PRODUCT DESCRIPTION, the FDA recommendations indicate 12 potential hazards that are species- or process-related. **SPECIAL NOTE:** Initially two of these hazards have been excluded from further consideration in the Hazard Analysis because they are NOT INVOLVED with the particular species, products forms or processing operations. Each of the remaining 10 potential hazards must be addressed in the Hazard Analysis.

1. Pathogens (presence; species –related, FDA Guidance Chapter 9)
2. Natural Toxins (species –related, FDA Guidance Chapter 6)
3. Environmental Chemicals (species –related, FDA Guidance Chapter 9)
4. Parasites (species-related, FDA Guidance Chapter 5)
5. Scombrototoxin (Histamine; species –related, FDA Guidance Chapter 7)
6. Aquaculture Drugs (species –related, FDA Guidance Chapter 11)
7. Pathogenic bacteria growth - thermal abuse (process-related, chapter 12)
8. Food Allergens – (process-related, chapter 19)
9. Food Additives (use of sulfites to control melanosis; process-related, chapter 19)
10. Metal Inclusion (process-related, chapter 20)
11. Glass Inclusion (process-related, chapter 21) excluded from Hazard Analysis NOT INVOLVED with products or process)
12. Pathogenic Bacteria Survival through processes designed to retain raw product characteristics (process-related, FDA Guidance Chapter 18) excluded from Hazard Analysis NOT INVOLVED with products or process)

SANITATION CONTROL PROCEDURES (SCP) are monitored throughout all processing steps and the daily SCP records accompany the HACCP records.

Species Groupings by Common Identified Hazards

Products are grouped by Market Names* for likely identified hazards based on FDA’s Seafood Hazards Guidance**

No Species Hazards**	Potential Species-Related Hazards**						Potential Process-Related Hazards**			
	Pathogens (presence)	Natural Toxins	Environ. Chemicals	Parasites	Histamine	Aquaculture Drugs	Pathogen Growth	Allergens	Food*** Additives	Metal Inclusion
Hake Swordfish Whiting	Clams Oysters Scallops	Clams Oysters Scallops	Bass Bluefish Catfish Flounder Salmon Shrimp Clams Oysters Scallops	Cod Flounder Mackerel Monkfish Pollock Salmon Weakfish ****	Bluefish Mackerel Mahi-mahi Tuna (large)	Catfish Salmon Shrimp	Clams Oysters Scallops	All fish species and Shrimp; Excludes (Clams, Oyster & Scallops)**	Shrimp	All species

* Market names based on reference to FDA’s Guide to Acceptable Market Names for Seafood (Seafood List)

** Identified hazards based on reference to Tables 3-2 thru 3-4 in FDA Fish and Fishery Products Hazards and Controls Guidance (Edition 2011), plus related information;

***No food additives are used with any species except possible use of sulfites to help prevent melanosis (black spot) in shrimp;

****Supplemental information from FDA has indicated weakfish (*Cynoscion spp*) can contain parasites;

*****Supplemental information from FDA indicates scallops, as for clams and oysters, are not major food allergens (*FDA Questions and Answers Regarding Food Allergens*, October 2006).

Are Controls Required in Wholesale Operations For the Common Hazards?

Identified Hazards	Market Names from Product Grouping Worksheet	Is the Hazard significant? Yes/No	Justify your decision	Identify Preventive Measures	Controls Required? Yes/No
Pathogens (presence from the Harvest Area)	Clams and Oysters	Yes	Raw mollusk that are not from approved harvest waters may contain pathogens and the some products are consumed raw	Check all shellfish containers to ensure that all products are properly tagged and identified for certified dealers and approved harvest through distribution	Yes
	Scallops (shucked meats)	Yes	Raw, whole scallops that are not from approved sources may contain pathogens in the visceral portions	Scallop meats have been removed from the viscera and the meats are to be cooked prior to consumption	No
Natural Toxins	Clams and Oysters	Yes	Raw mollusk that are not from approved harvest waters may contain natural toxins and the products are consumed raw	Check all shellfish containers to ensure that all products are properly tagged and identified for certified dealers and approved harvest through distribution	Yes
	Scallops (shucked meats)	Yes	Raw, whole scallops that are not from approved sources may contain natural toxins in the visceral portions	Shucked scallop meats (adductor muscle removed from viscera) are not likely to contain natural toxins	No
Environmental Chemicals	Clams and Oysters	Yes	Raw mollusk that are not from approved harvest waters may contain environmental chemicals and the products are consumed raw	Check all shellfish containers to ensure that all products are properly tagged and identified for certified dealers and approved harvest through distribution	Yes
	Bass, Bluefish, Catfish, Flounder Salmon, Shrimp, and Scallops (meats)	Yes	Environmental chemicals can be associated with certain seafood farmed or harvested from certain waters	Fish and shrimp are NOT purchased directly from fishermen or fish farmers. Hazard is controlled by primary processor Scallops included shucked meats with no attached viscera (See Table 3-3, footnote $\sqrt{2}$)	No
Parasites	Cod, Flounder, Mackerel, Monkfish, Pollock, Salmon, Weakfish	Yes	Parasites have been associated with certain fish species from wild and farmed sources	Products intended to be cooked before consumption and no prior knowledge that the products will be eaten raw	No
Histamine	Bluefish Mackerel, Mahi-mahi, Tuna	Yes	Histamine could develop during transit if time-temperature abuse occurs	All histamine fish must be delivered and stored completely covered in ice	Yes
Aquaculture Drugs	Catfish, Salmon and Shrimp	Yes	Illegal or improper use of therapeutic drugs have been associated with certain farm-raised seafood products	Farm-raised products are NOT purchased directly from aquaculture production or farming operations. Associated hazards are controlled by primary processor.	No

Identified Hazards	Market Names from Product Grouping Worksheet	Is the Hazard significant? Yes/No	Justify your decision	Identify Preventive Measures	Controls Required? Yes/No
Pathogen Growth	Clams and Oysters	Yes	Pathogens present at harvest or introduced during processing could grow in absence of time and temperature controls; product likely to be consumed raw	Time and temperature controls during shellstock loading trucks, transit and storage	Yes
	All Fish, Shrimp and Scallops (shucked meats)	Yes	Pathogens present at harvest or introduced during processing could grow in absence of time and temperature controls to levels that pose a hazard for products consumed raw or without a prior kill step	All fish, shrimp and scallop meats are fully intended to be cooked prior to consumption and there is no prior knowledge they will be consumed raw	No
Allergens	All fish species but excluding the molluscan shellfish (live clams and oysters , and shucked scallop meats)	Yes	Fish are identified as a potential food allergen FDA indicates clams, oysters and scallops are NOT likely food allergens (see Table 3-3)	Fish must be properly labeled to identify the fish in a packed unit	Yes
	Shrimp	Yes	Shrimp are identified as a potential food allergen	Frozen shrimp pre-labeled by primary processor	No
Food Additives	Shrimp	Yes	Residual sulfites on edible seafood have been identified as a potential food safety hazard for certain consumers	Frozen shrimp pre-labeled by primary processor	No
Metal Inclusion	All species	No	It is reasonably unlikely that the seafood products will be exposed to metal fragments from broken blades, packing methods or other metal sources during primary processing and further wholesale handling		No

Groupings for Common Hazards that Require Controls in Wholesale Operations

Hazards Identified in Wholesale Operations	Groupings	Species Involved
Pathogens (presence)	Clams and Oysters	Clams and Oysters
Natural Toxins		
Environmental Chemicals		
Pathogen Growth		
Histamine	Certain Fish Species	Bluefish Mackerel, Mahi-mahi, Tuna
Allergens	All Fish (including Shrimp, but excluding molluscan shellfish)	All Fish and Shrimp

Hazard Analysis Worksheet - *Live Clams and Oysters*

Firm Name <i>ABC Wholesale Company</i>	Finished Product Description: <i>Live clams and oysters</i>
Firm Location <i>Anywhere USA</i>	Method of Storage & Distribution: <i>Stored and distributed under refrigeration at 45°F or less</i>
	Intended Use & Consumer: <i>Raw ready-to-eat product, to be consumed by the general public.</i>

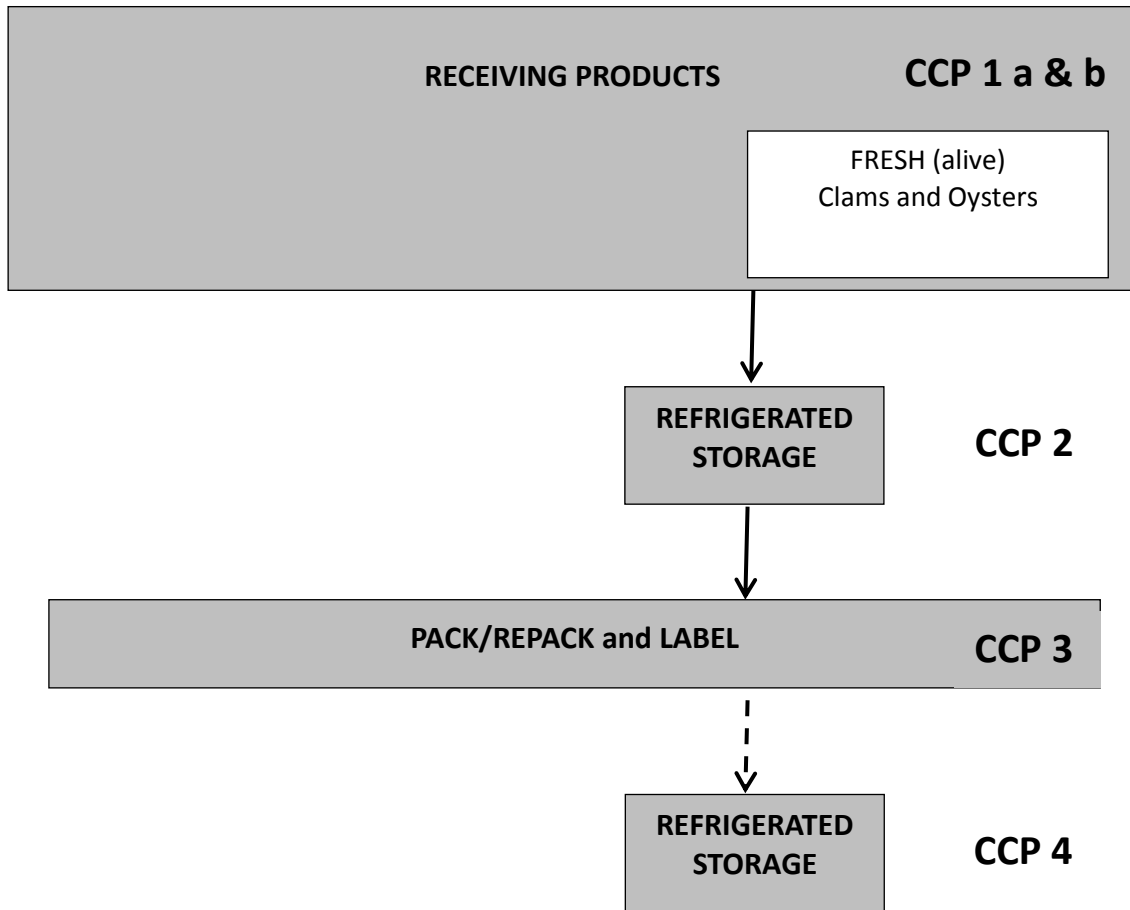
(1) Processing Step	(2) List all potential food safety hazards that could be associated with this product and process.	(3) Is the potential food safety hazard significant (introduced, enhanced or eliminated) at this step? (Yes or No)	(4) Justify the decision that you made in column 3	(5) What control measure(s) can be applied to prevent this significant hazard?	(6) Is this step a Critical Control Point? (Yes or No)
Receiving	Pathogens (presence) from harvest area	Yes	Pathogens could be present; product may be eaten raw; regulations require harvest tag and dealer information must accompany product through distribution	Check all product to ensure that it is properly tagged and from a certified dealer; assure tag and dealer information accompanies product distribution	Yes
	Environmental chemicals	Yes	Unapproved harvest areas may have contaminants; product may be eaten raw; regulations require harvest tag and dealer information must accompany product through distribution	Check all product to ensure that it is properly tagged and from a certified dealer; assure tag and dealer information accompanies product distribution	Yes
	Natural toxins	Yes	Unapproved harvest areas may have natural toxins; product may be eaten raw; regulations require harvest tag and dealer information must accompany product through distribution	Check all product to ensure that it is properly tagged and from a certified dealer; assure tag and dealer information accompanies product distribution	Yes
	Pathogenic bacteria growth - temperature abuse	Yes	Temp. abuse in transit could allow pathogens to grow	Shellstock loaded on pre-chilled trucks and temperature control during shipment	Yes
Refrigerated storage	Pathogens (presence) from harvest area	No	All 3 hazards were controlled at the receiving step and will be controlled in Pack/Repack/Label step; and the hazards are not introduced, enhanced or eliminated in the storage step		No
	Environmental chemicals				
	Natural toxins				
	Pathogenic bacteria growth - temperature abuse	Yes	RTE product; Pathogens could grow if temperature abuse occurs	Storage cooler temperature not to exceed 45°F	Yes

(1) Processing Step	(2) List all potential food safety hazards that could be associated with this product and process.	(3) Is the potential food safety hazard significant (introduced, enhanced or eliminated) at this step? (Yes or No)	(4) Justify the decision that you made in column 3	(5) What control measure(s) can be applied to prevent this significant hazard?	(6) Is this step a Critical Control Point? (Yes or No)
Pack / Repack and Label	Pathogens (presence) from harvest area	Yes	Regulations require harvest tag and dealer information must accompany product through distribution	Assure tag and dealer information accompanies product distribution, including tag to instruct retailers to inform customers regarding health risk associated with raw consumption	Yes
	Environmental chemicals	Yes	Regulations require harvest tag and dealer information must accompany product through distribution		
	Natural toxins	Yes	Regulations require harvest tag and dealer information must accompany product through distribution		
	Pathogenic bacteria growth – temperature abuse	No	Time-temp. abuse not likely because of short time at this process step		
Final storage (same unit/area as Refrigerated Storage)	Pathogens (presence) from harvest area	No	All 3 hazards were controlled at the receiving step and in the previous Pack/Repack/Label step; and the hazards are not introduced, enhanced or eliminated in the storage step		No
	Environmental chemicals				
	Natural toxins				
	Pathogenic bacteria growth - temperature abuse	Yes	RTE product; Pathogens could grow if temperature abuse occurs	Storage cooler temperature not to exceed 45°F	Yes

Wholesale/Distribution/Warehouse Facilities

Process Flow Chart - *Live Clams and Oysters*

Shaded steps are Critical Control Points



****All refrigerated storage occurs in the same cooler***

! The dashed arrow represents product assembled for specific customer orders that can be held temporarily (less than two days) before delivery to the customer.

HACCP Plan Form

Firm Name <i>ABC Wholesale Company</i>	Product Description <i>Live clams and oysters</i>
Firm Location <i>Anywhere USA</i>	Method of Storage & Distribution <i>Stored and distributed under refrigeration at 45°F or less</i>
	Intended Use & Consumer <i>Raw ready-to-eat product, to be consumed by the general public.</i>

Critical Control Point (CCP)	CCP 1a. Receiving Products		
Significant Hazard(s)	Pathogens from the harvest area	Environmental Chemicals	Natural Toxins
Critical Limits for each Control Measure	All shellfish containers are properly tagged including common name of shellfish All shellfish come from a certified dealer		
Monitoring	What	Shellfish Tags Dealer certification number	
	How	Visual	
	When	Every shipment	
	Who	Receiving manager	
Corrective Action	<p>IF required tags, bill of lading or similar papers are not observed with the product, THEN Reject any shellfish containers that are not properly tagged</p> <p>IF dealer certification not observed with product; THEN Reject any shellfish shipments that do not have proper dealer certification number</p> <p>To regain control, notify supplier to prevent future problems and document fate of rejected product. Retrain involved staff.</p>		
Verification	<p>Review Daily Shellfish Log and Corrective Actions 'daily';</p> <p>At least annually check with state shellfish agency or FDA Shellfish Shippers List to verify that dealers are certified;</p>		
Records	Daily Shellfish Receiving Log; Annual Dealer Verification Log and Corrective Actions		

Signature:	Date:
-------------------	--------------

HACCP Plan Form

Firm Name <i>ABC Wholesale Company</i>	Product Description <i>Live clams and oysters</i>
Firm Location <i>Anywhere USA</i>	Method of Storage & Distribution <i>Stored and distributed under refrigeration at 45°F or less</i>
	Intended Use & Consumer <i>Raw ready-to-eat product, to be consumed by the general public.</i>

Critical Control Point (CCP)	CCP 1b. Receiving Products								
Significant Hazard(s)	Pathogenic bacteria growth – temperature abuse								
Critical Limits for each Control Measure	1) Live shellstock transportation records show product was held in refrigeration that did not exceed 45°F/7.2°C during transit; and 2) Shipping documents or invoice stating the shellstock were loaded on trucks pre-chilled by the dealer (supplier), and date and time truck departed supplier								
Monitoring	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; padding: 5px;">What</td> <td style="padding: 5px;">Ambient temperature of truck at 45°F or less on arrival; and shipping documents or invoice information to indicate truck was pre-chilled, and date and time truck departed original supplier</td> </tr> <tr> <td style="padding: 5px;">How</td> <td style="padding: 5px;">Visual check of ambient temperature in truck upon arrival or temperature records during transit, and visual check of shipping documents or invoiced information</td> </tr> <tr> <td style="padding: 5px;">When</td> <td style="padding: 5px;">Every shipment received</td> </tr> <tr> <td style="padding: 5px;">Who</td> <td style="padding: 5px;">Dock Receiving Manager</td> </tr> </table>	What	Ambient temperature of truck at 45°F or less on arrival; and shipping documents or invoice information to indicate truck was pre-chilled, and date and time truck departed original supplier	How	Visual check of ambient temperature in truck upon arrival or temperature records during transit, and visual check of shipping documents or invoiced information	When	Every shipment received	Who	Dock Receiving Manager
What	Ambient temperature of truck at 45°F or less on arrival; and shipping documents or invoice information to indicate truck was pre-chilled, and date and time truck departed original supplier								
How	Visual check of ambient temperature in truck upon arrival or temperature records during transit, and visual check of shipping documents or invoiced information								
When	Every shipment received								
Who	Dock Receiving Manager								
Corrective Action	IF one or both CL requirements are not met; THEN reject shipment Regain control by discontinuing shipments from involved dealers and trucks until the problem can be identified, discussed and resolved; document corrections and fate of rejected product. Retrain involved staff.								
Verification	Review Daily Receiving Log and Corrective Actions ‘daily’ Periodically check internal product temperatures in comparison with recordings for ambient temperatures during transit. Check accuracy of continuous recording devices daily (if used)								
Records	Daily Cooler Log and Corrective Actions Thermometer Accuracy/Calibration Log								

Signature:	Date:
-------------------	--------------

HACCP Plan Form

Firm Name <i>ABC Wholesale Company</i>	Product Description <i>Live clams and oysters</i>
Firm Location <i>Anywhere USA</i>	Method of Storage & Distribution <i>Stored and distributed under refrigeration at 45°F or less</i>
	Intended Use & Consumer <i>Raw ready-to-eat product, to be consumed by the general public.</i>

Critical Control Point (CCP)	CCP 2. Refrigerated Storage (Initial and Final)								
Significant Hazard(s)	Pathogenic bacteria growth – temperature abuse								
Critical Limits for each Control Measure	Cooler Temperature not to exceed 45°F/7.2°C								
Monitoring	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; padding: 5px;">What</td> <td style="padding: 5px;">Cooler Temperature</td> </tr> <tr> <td style="padding: 5px;">How</td> <td style="padding: 5px;">Time and Temperature Recording Thermometer</td> </tr> <tr> <td style="padding: 5px;">When</td> <td style="padding: 5px;">Continuous with visual check at the beginning and end of the day</td> </tr> <tr> <td style="padding: 5px;">Who</td> <td style="padding: 5px;">Cooler Manager</td> </tr> </table>	What	Cooler Temperature	How	Time and Temperature Recording Thermometer	When	Continuous with visual check at the beginning and end of the day	Who	Cooler Manager
What	Cooler Temperature								
How	Time and Temperature Recording Thermometer								
When	Continuous with visual check at the beginning and end of the day								
Who	Cooler Manager								
Corrective Action	<p>IF cooler temperature exceeds 45°F/7.2°C, THEN move shellstock to alternate cooler and determine why cooler temperature is elevated, and correct the problem; Evaluate product safety based on cumulative time and temperature exposure from recording chart; Reject suspect or obviously abused products</p> <p>Regain control by determining and fixing the refrigeration problem before further storage in suspect unit or area.</p> <p>Retrain involved staff.</p>								
Verification	<p>Review Daily Cooler Log and Corrective Actions once per week</p> <p>Check accuracy check of continuous recording thermometer at initial use and then daily.</p> <p>Calibrate cooler thermometer once per year</p>								
Records	<p>Daily Cooler Log and Corrective Actions</p> <p>Thermometer Accuracy/Calibration Log</p>								

Signature:	Date:
-------------------	--------------

HACCP Plan Form

Firm Name <i>ABC Wholesale Company</i>	Product Description <i>Live clams and oysters</i>
Firm Location <i>Anywhere USA</i>	Method of Storage & Distribution <i>Stored and distributed under refrigeration at 45°F or less</i>
	Intended Use & Consumer <i>Raw ready-to-eat product, to be consumed by the general public.</i>

Critical Control Point (CCP)	CCP 3. Pack/Repack and Label		
Significant Hazard(s)	Pathogens from the harvest area	Environmental Chemicals	Natural Toxins
Critical Limits for each Control Measure	1) Harvest Tag or Bill of Lading, and Dealer information must accompany all products 2) Instructions for Retailers must accompany all products		
Monitoring	What	1) Shellfish Tags or Bill of Lading, and Dealer certification number 2) Instructions for Retailers regarding health issues associated with raw consumption	
	How	Visual	
	When	Every shipment	
	Who	Pack/Repack Manager	
Corrective Action	1) IF required tag or bill of lading, and dealer information does not accompany all products; THEN hold involved product until required information can be placed with the product 2) IF required instructions for Retailers does not accompany the product; THEN hold involved product until required information can be placed with the product IF required information cannot be located for associated product; THEN discard the involved product To regain control , determine the cause for lost information and disassociated product that was accepted at receiving, correct the problem and document the fate of any discarded product. Retrain involved staff.		
Verification	Review Daily Pack/Repack Log and Corrective Actions 'daily'; At least annually check with state shellfish agency or FDA Shellfish Shippers List to verify that dealers are certified;		
Records	Daily Shellfish Receiving Log; Annual Dealer Verification Log and Corrective Actions		

Signature:	Date:
-------------------	--------------

HACCP Plan Form

Firm Name <i>ABC Wholesale Company</i>	Product Description <i>Live clams and oysters</i>
Firm Location <i>Anywhere USA</i>	Method of Storage & Distribution <i>Stored and distributed under refrigeration at 45°F or less</i>
	Intended Use & Consumer <i>Raw ready-to-eat product, to be consumed by the general public.</i>

Critical Control Point (CCP)	Significant Hazard(s)	Critical Limits for each Control Measure	Monitoring				Corrective Action	Verification	Records
			What	How	When	Who			
Receiving	Pathogens from the harvest area Environmental Chemicals Natural Toxins	All shellfish containers are properly tagged including common name of shellfish All shellfish come from a certified dealer	Shellfish Tags Dealer certification number	Visual	Every shipment	Receiving Managers	IF required tags, bill of lading or similar papers are not observed with the product, THEN Reject any shellfish containers that are not properly tagged IF dealer certification not observed with product; THEN Reject any shellfish shipments that do not have proper dealer certification number To regain control , notify supplier to prevent future problems and document fate of rejected product. Retrain involved staff.	Review Daily Shellfish Log and Corrective Actions 'daily'; At least annually check with state shellfish agency or FDA Shellfish Shippers List to verify that dealers are certified;	Daily Shellfish Receiving Log; Annual Dealer Verification Log and Corrective Actions
Receiving	Pathogenic bacteria growth – temperature abuse	1) Live shellstock transportation records show product was held in refrigeration that did not exceed	Ambient temperature of truck at 45°F or less on arrival; and shipping documents or invoice information to indicate truck was pre-chilled,	Visual check of ambient temperature in truck upon arrival or temperature records during transit, and visual check	Every shipment received	Dock receiving manager	IF one or both CL requirements are not met; THEN reject shipment Regain control by discontinuing shipments from involved dealers and trucks until the problem can be identified, discussed and	Review Daily Receiving Log and Corrective Actions 'daily' Periodically check internal product temperatures in	Daily Cooler Log and Corrective Actions Thermometer Accuracy/Calibration Log

Critical Control Point (CCP)	Significant Hazard(s)	Critical Limits for each Control Measure	Monitoring				Corrective Action	Verification	Records
			What	How	When	Who			
		45°F/7.2°C during transit, and 2) Shipping documents or invoice stating the shellstock were loaded on trucks pre-chilled by the dealer (supplier), and date and time truck departed supplier	and date and time truck departed original supplier	of shipping documents or invoiced information			resolved; document corrections and fate of rejected product. Retrain involved staff.	comparison with recordings for ambient temperatures during transit. Check accuracy of continuous recording devices daily (if used)	
Refrigerated Storage (Initial and Final)	Pathogenic bacteria growth – temperature abuse	Cooler Temperature not to exceed 45°F/7.2°C	Cooler Temperature	Time and Temperature Recording Thermometer	Continuous with visual check at the beginning and end of the day	Cooler Manager	IF cooler temperature exceeds 45°F/7.2°C, THEN move shellstock to alternate cooler and determine why cooler temperature is elevated, and correct the problem; Evaluate product safety based on cumulative time and temperature exposure from recording chart; Reject suspect or obviously abused products Regain control by determining and fixing the refrigeration problem before further storage in suspect unit or area. Retrain involved staff.	Review Daily Cooler Log and Corrective Actions once per week Check accuracy check of continuous recording thermometer at initial use and then daily. Calibrate cooler thermometer once per year	Daily Cooler Log and Corrective Actions Thermometer Accuracy/Calibration Log

Critical Control Point (CCP)	Significant Hazard(s)	Critical Limits for each Control Measure	Monitoring				Corrective Action	Verification	Records
			What	How	When	Who			
Pack/ Repack and Label	Pathogens from the harvest area	1) Harvest Tag or Bill of Lading, and Dealer information must accompany all products	1) Shellfish Tags or Bill of Lading, and Dealer certification number 2) Instructions for Retailers regarding health issues associated with raw consumption	Visual	Every shipment	Pack/ Repack Manager	1) IF required tag or bill of lading, and dealer information does not accompany all products; THEN hold involved product until required information can be placed with the product 2) IF required instructions for Retailers does not accompany the product; THEN hold involved product until required information can be placed with the product IF required information cannot be located for associated product; THEN discard the involved product To regain control , determine the cause for lost information and disassociated product that was accepted at receiving, correct the problem and document the fate of any discarded product. Retrain involved staff.	Review Daily Pack/Repack Log and Corrective Actions 'daily'; At least annually check with state shellfish agency or FDA Shellfish Shippers List to verify that dealers are certified;	Daily Shellfish Receiving Log; Annual Dealer Verification Log and Corrective Actions
	Environmental Chemicals	2) Instructions for Retailers must accompany all products							
	Natural Toxins								

Signature:	Date:
------------	-------

Hazard Analysis Worksheet - *Certain Fish*

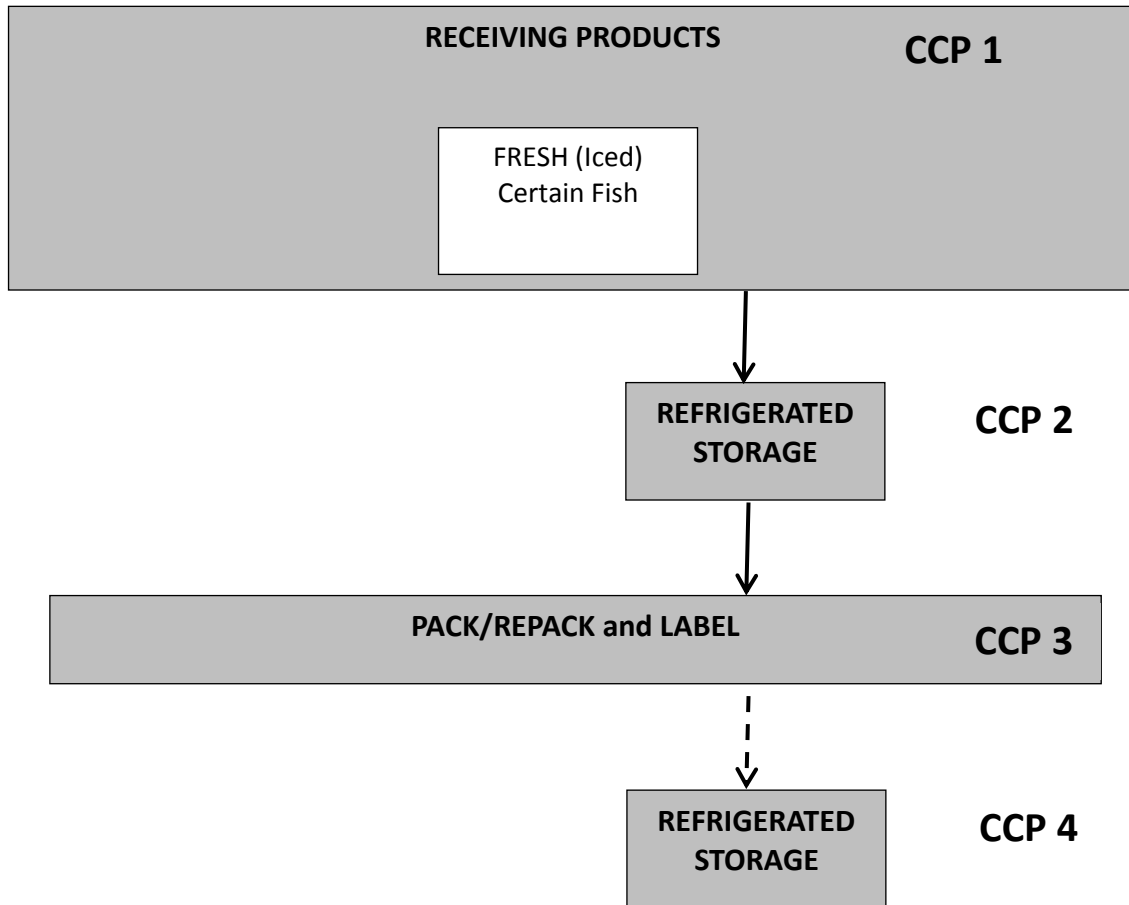
Firm Name <i>ABC Wholesale Company</i>	Finished Product Description: <i>Potential scombrotoxic fish (Bluefish, Mackerel, Mahi-mahi and Tuna/large)</i>
Firm Location <i>Anywhere USA</i>	Method of Storage & Distribution: <i>Stored and distributed packed in ice under refrigeration in oxygen permeable containers</i>
	Intended Use & Consumer: <i>Raw fish that will be cooked before it is eaten, to be consumed by the general public.</i>

(1) Processing Step	(2) List all potential food safety hazards that could be associated with this product and process.	(3) Is the potential food safety hazard significant (introduced, enhanced or eliminated) at this step? (Yes or No)	(4) Justify the decision that you made in column 3	(5) What control measure(s) can be applied to prevent this significant hazard?	(6) Is this step a Critical Control Point? (Yes or No)
Receive Raw Fish	Histamine	Yes	Temperature abuse during shipping could elevate histamine level in certain fish	Proper icing or temperature control during shipping	Yes
	Food Allergens	Yes	Fish is a potential food allergen	Each species will be labeled with the correct market name at pack/ repack & label step	No
Refrigerated storage	Histamine	Yes	Temperature abuse during storage could elevate histamine level in certain fish	Histamine fish will be stored on ice in the refrigerated cooler	Yes
	Food Allergens	Yes	Fish is a potential food allergen	Each species will be labeled with the correct market name at pack/ repack & label step	No
Pack / Repack / and Label	Histamine	No	Time-temp. abuse not likely because of short time at this step		No
	Food Allergens	Yes	Fish is a potential food allergen	Each container must be labeled with the market name of the fish species at this step	Yes
Final storage (same unit/area as Refrigerated Storage)	Histamine	Yes	Temperature abuse during storage could elevate histamine level in certain fish	Histamine fish will be stored on ice in the refrigerated cooler	Yes
	Food Allergens	No	Hazard was controlled at previous pack/ repack & label step		No

Wholesale/Distribution/Warehouse Facilities

Process Flow Chart - *Certain Fish*

Shaded steps are Critical Control Points



All refrigerated storage occurs in the same cooler



The dashed arrow represents product assembled for specific customer orders that can be held temporarily (less than two days) before delivery to the customer.

HACCP Plan Form

Firm Name <i>ABC Wholesale Company</i>	Product Description CERTAIN FISH, <i>including potential scombrotoxic fish (Bluefish, Mackerel, Mahi-mahi and Tuna/large)</i>
Firm Location <i>Anywhere USA</i>	Method of Storage & Distribution <i>Stored and distributed packed in ice under refrigeration in oxygen permeable containers</i>
	Intended Use & Consumer <i>Raw fish that will be cooked before it is eaten, to be consumed by the general public.</i>

Critical Control Point (CCP)	CCP 1. Receiving	
Significant Hazard(s)	Histamine	
Critical Limits for each Control Measure	All products are completely surrounded with ice at receipt	
Monitoring	What	Amount of ice per product containers
	How	Visual check of representative number of containers in shipment in comparison with pictured standards
	When	Every shipment
	Who	Receiving Manager
Corrective Action	<p>IF: Fillet containers do not have enough ice; THEN: reject product</p> <p>To regain control: Call supplier to let them know CL was not met and provide product delivery specifications and standards; Discontinue use of supplier until their transport procedures are corrected. Retrain involved staff.</p>	
Verification	Review Daily Receiving Log and Corrective Actions once per week. Conduct periodic internal product temperature checks with temperature probe to assess proper icing. Thermometer calibration (monthly) and accuracy checks (daily)	
Records	Daily Receiving Log; Corrective Actions and thermometer calibration and accuracy records	

Signature:	Date:
------------	-------

HACCP Plan Form

Firm Name <i>ABC Wholesale Company</i>	Product Description CERTAIN FISH , including potential scombrototoxic fish (<i>Bluefish, Mackerel, Mahi-mahi and Tuna/large</i>)
Firm Location <i>Anywhere USA</i>	Method of Storage & Distribution <i>Stored and distributed packed in ice under refrigeration in oxygen permeable containers</i>
	Intended Use & Consumer <i>Raw fish that will be cooked before it is eaten, to be consumed by the general public.</i>

Critical Control Point (CCP)	CCP 2 and 4. Refrigerated Storage (Initial and final)
Significant Hazard(s)	Histamine
Critical Limits for each Control Measure	All products are completely surrounded with ice while stored in the cooler
Monitoring	What Amount of ice per product container
	How Visual check of representative number of containers in storage in comparison with pictured standards
	When Every 4 hours during business operating hours
	Who Cooler manager
Corrective Action	<p>IF the amount of ice is not adequate; THEN: Chill and hold the product until it can be evaluated based on its total time and temperature exposure, including exposures during prior processing operations; Reject suspect and obviously abused products</p> <p>To regain control, determine and document the cause for improper icing; document the problem and corrections through further training of involved staff</p>
Verification	Review Daily Storage Log and Corrective Actions once per week. Conduct periodic internal product temperature checks with temperature probe to assess proper icing. Thermometer calibration and accuracy checks monthly
Records	Daily Receiving Log; Corrective Actions and thermometer calibration and accuracy records

Signature:	Date:
-------------------	--------------

HACCP Plan Form

Firm Name <i>ABC Wholesale Company</i>	Product Description CERTAIN FISH , including potential scombrototoxic fish (<i>Bluefish, Mackerel, Mahi-mahi and Tuna/large</i>)
Firm Location <i>Anywhere USA</i>	Method of Storage & Distribution <i>Stored and distributed packed in ice under refrigeration in oxygen permeable containers</i>
	Intended Use & Consumer <i>Raw fish that will be cooked before it is eaten, to be consumed by the general public.</i>

Critical Control Point (CCP)	CCP 3. Pack / Repack and Label
Significant Hazard(s)	Food Allergens
Critical Limits for each Control Measure	All containers or packages of fish must be identified with their market name
Monitoring	What Label on Product Containers
	How Visual check for each delivery
	When Each container for each delivery
	Who Packing Supervisor
Corrective Action	<p>IF the container does not contain the market name, THEN label the container and invoice as necessary for correct identification</p> <p>Regain control by identifying, recording and correcting the cause for the problem. Retrain involved staff.</p>
Verification	<p>Review Packing Log and Corrective Actions once per week</p> <p>Train packing room workers to correctly identify all products with appropriate labels</p>
Records	Packing Log and Corrective Actions

Signature:	Date:
-------------------	--------------

HACCP Plan Form

Firm Name <i>ABC Wholesale Company</i>	Product Description CERTAIN FISH , including potential scombrototoxic fish (<i>Bluefish, Mackerel, Mahi-mahi and Tuna/large</i>)
Firm Location <i>Anywhere USA</i>	Method of Storage & Distribution <i>Stored and distributed packed in ice under refrigeration in oxygen permeable containers</i>
	Intended Use & Consumer <i>Raw fish that will be cooked before it is eaten, to be consumed by the general public.</i>

Critical Control Point (CCP)	Significant Hazard(s)	Critical Limits for each Control Measure	Monitoring				Corrective Action	Verification	Records
			What	How	When	Who			
Receiving	Histamine	All products are completely surrounded with ice while stored in the cooler	Amount of ice per product containers	Visual check of representative number of containers in storage in comparison with pictured standards	Every shipment	Receiving managers	IF: Fillet containers do not have enough ice; THEN: reject product To regain control: Call supplier to let them know CL was not met and provide product delivery specifications and standards; Discontinue use of supplier until their transport procedures are corrected. Retrain involved staff.	Review Daily Receiving Log and Corrective Actions once per week. Conduct periodic internal product temperature checks with temperature probe to assess proper icing. Thermometer calibration (monthly) and accuracy checks (daily)	Daily Receiving Log; Corrective Actions and thermometer calibration and accuracy records
Refrigerated Storage (Initial and final)	Histamine	All products are completely surrounded with ice while stored in the cooler	Amt of ice per product container	Visual check of representative number of containers in storage in comparison with pictured standards	Every 4 hours during business operating hours	Cooler manager	IF the amount of ice is not adequate; THEN: Chill and hold the product until it can be evaluated based on its total time and temperature exposure, including exposures during prior processing	Review Daily Storage Log and Corrective Actions once per week. Conduct periodic internal product temperature checks with	Daily Receiving Log; Corrective Actions and thermometer calibration and accuracy records

Critical Control Point (CCP)	Significant Hazard(s)	Critical Limits for each Control Measure	Monitoring				Corrective Action	Verification	Records
			What	How	When	Who			
							operations; Reject suspect and obviously abused products To regain control , determine and document the cause for improper icing; document the problem and corrections through further training of involved staff	temperature probe to assess proper icing. Thermometer calibration and accuracy checks monthly	
Pack / Repack and Label	Food allergens	All containers or packages of fish must be identified with their market name	Label on Product Containers	Visual check for each delivery	Each container for delivery	Packing Supervisor	IF the container does not contain the market name, THEN label the container and invoice as necessary for correct identification Regain control by identifying, recording and correcting the cause for the problem. Retrain involved staff.	Review Packing Log and Corrective Actions once per week Train packing room workers to correctly identify all products with appropriate labels	Packing Log and Corrective Actions

Signature:	Date:
-------------------	--------------

Hazard Analysis Worksheet - ALL FISH

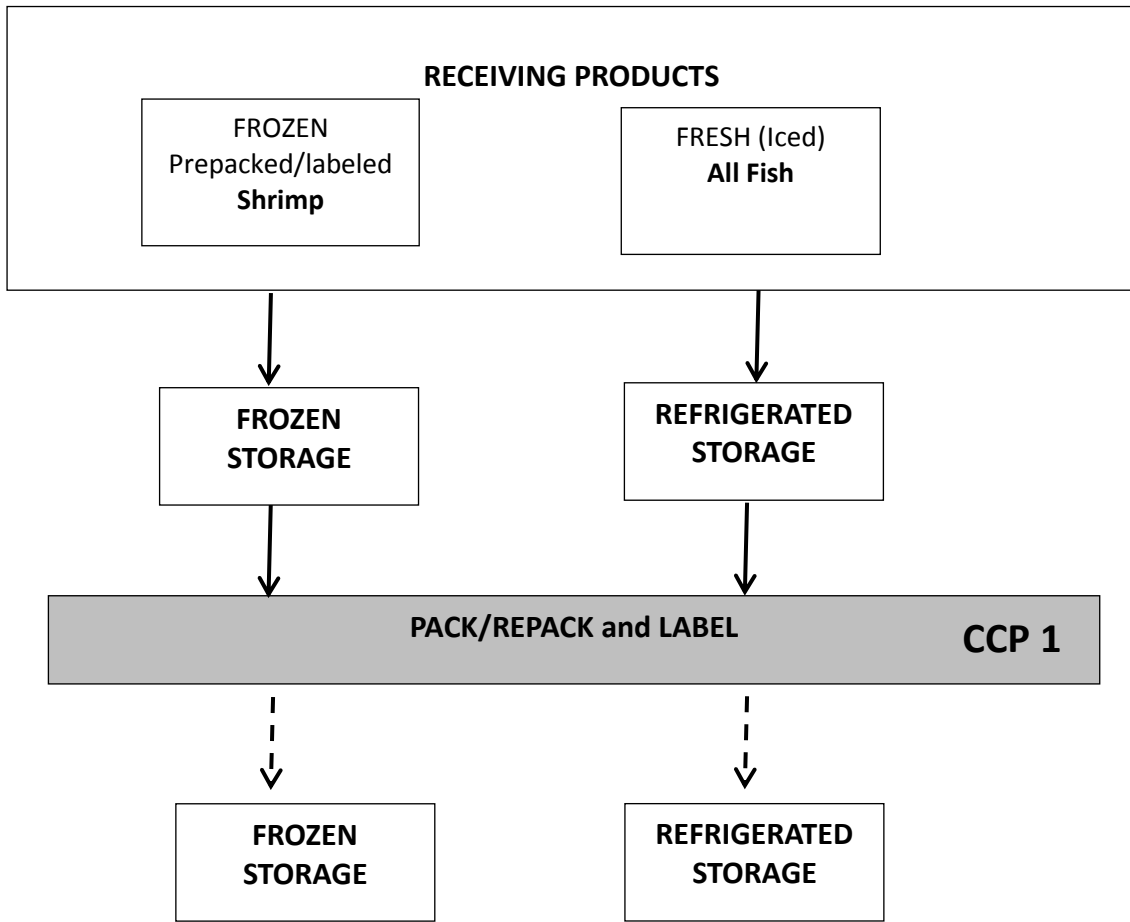
Firm Name <i>ABC Wholesale Company</i>	Finished Product Description: <i>ALL FISH and SHRIMP</i>
Firm Location <i>Anywhere USA</i>	Method of Storage & Distribution: <i>Stored and distributed packed in ice under refrigeration in oxygen permeable containers</i>
	Intended Use & Consumer: <i>Raw fish that will be cooked before it is eaten, to be consumed by the general public.</i>

(1) Processing Step	(2) List all potential food safety hazards that could be associated with this product and process.	(3) Is the potential food safety hazard significant (introduced, enhanced or eliminated) at this step? (Yes or No)	(4) Justify the decision that you made in column 3	(5) What control measure(s) can be applied to prevent this significant hazard?	(6) Is this step a Critical Control Point? (Yes or No)
Receive Raw Fish and Shrimp	Food Allergens	Yes	Fish is a potential food allergen	Each species will be labeled with the correct market name at pack/ repack & label step	No
Refrigerated Storage (Fish)	Food Allergens	Yes	Fish is a potential food allergen	Each species will be labeled with the correct market name at pack/ repack & label step	No
Frozen Storage (Shrimp only)	Food Allergens	Yes	Shrimp is a potential food allergen	Each species will be labeled with the correct market name at pack/ repack & label step	No
Pack / Repack / and Label	Food Allergens	Yes	Fish is a potential food allergen	Each container must be labeled with the market name of the fish species at this step	Yes
Final storage (same unit/area as Refrigerated Storage; Frozen Storage for Shrimp)	Food Allergens	No	Hazard was controlled at previous pack/ repack & label step		No

Wholesale/Distribution/Warehouse Facilities

Process Flow Chart - *All Fish and Shrimp*

Shaded steps are Critical Control Points



****All refrigerated storage occurs in the same cooler***

! The dashed arrow represents product assembled for specific customer orders that can be held temporarily (less than two days) before delivery to the customer.

HACCP Plan Form

Firm Name <i>ABC Wholesale Company</i>	Product Description <i>ALL FISH and SHRIMP</i>
Firm Location <i>Anywhere USA</i>	Method of Storage & Distribution <i>Stored and distributed packed in ice under refrigeration in oxygen permeable containers</i>
	Intended Use & Consumer <i>Raw fish that will be cooked before it is eaten, to be consumed by the general public.</i>

Critical Control Point (CCP)	CCP 1. Pack / Repack and Label
Significant Hazard(s)	Food Allergens
Critical Limits for each Control Measure	All containers or packages of fish must be identified with their market name
Monitoring	What Label on Product Containers
	How Visual check for each delivery
	When Each container for each delivery
	Who Packing Supervisor
Corrective Action	<p>IF the container does not contain the market name, THEN label the container and invoice as necessary for correct identification</p> <p>Regain control by identifying, recording and correcting the cause for the problem. Retrain involved staff.</p>
Verification	<p>Review Packing Log and Corrective Actions once per week</p> <p>Train packing room workers to correctly identify all products with appropriate labels</p>
Records	Packing Log and Corrective Actions

Signature:	Date:
-------------------	--------------

HACCP Plan Form

Firm Name <i>ABC Wholesale Company</i>	Product Description <i>All Fish and Shrimp</i>
Firm Location <i>Anywhere USA</i>	Method of Storage & Distribution <i>Stored and distributed packed in ice under refrigeration in oxygen permeable containers</i>
	Intended Use & Consumer <i>Raw fish that will be cooked before it is eaten, to be consumed by the general public.</i>

Critical Control Point (CCP)	Significant Hazard(s)	Critical Limits for each Control Measure	Monitoring				Corrective Action	Verification	Records
			What	How	When	Who			
Pack / Repack and Label	Food Allergens	All containers or packages of fish must be identified with their market name	Label on Product Containers	Visual check for each delivery	Each container for each delivery	Packing Supervisor	<p>IF the container does not contain the market name, THEN label the container and invoice as necessary for correct identification</p> <p>Regain control by identifying, recording and correcting the cause for the problem. Retrain involved staff.</p>	<p>Review Packing Log and Corrective Actions once per week</p> <p>Train packing room workers to correctly identify all products with appropriate labels</p>	Packing Log and Corrective Actions

Signature:	Date:
------------	-------