



REVISED October 2025 using FDA’s *Fish and Fishery Products Hazards and Control Guidance (June 2022)*

### Commercial Processing Example: *Fresh/Raw mahi-mahi fillets*

**Note:** This is a Special Training Model for illustrative purposes only. The SHA models are based on guidance contained in FDA’s Hazards Guide. 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.

#### Narrative

<b>Company</b>	XYZ Seafood Company, Anywhere, USA
<b>Market Name</b>	Mahi-mahi ( <i>Coryphaena species</i> )
<b>Source of Fishery Product</b>	Fresh/Raw Wild Mahi-received from several domestic suppliers
<b>Describe the Food</b>	Fresh/Raw mahi-mahi fillet
<b>Method of Receiving, Storage and Distribution</b>	Received, stored and distributed on ice
<b>Finished Packaging Type</b>	Air packed, stored and distributed on ice
<b>Intended Use and Consumer</b>	To be cooked and consumed by the general public

#### Description of Process:

**Receive Fresh/Raw Fillets**-Fresh/Raw caught mahi-mahi (*Coryphaena species*, not aquacultured) fillets are received from several domestic suppliers. Delivery truck transit times range from 2 to 8 hours. Tubs or other containers of mahi-mahi fillets are received along with other fresh seafood products packed in ice and delivered by refrigerated truck. After receipt, products are re-iced if necessary and moved into refrigerated storage.

**Refrigerated storage** - Individual mahi-mahi fillets are completely buried in ice and stored in a refrigerated cooler until needed.

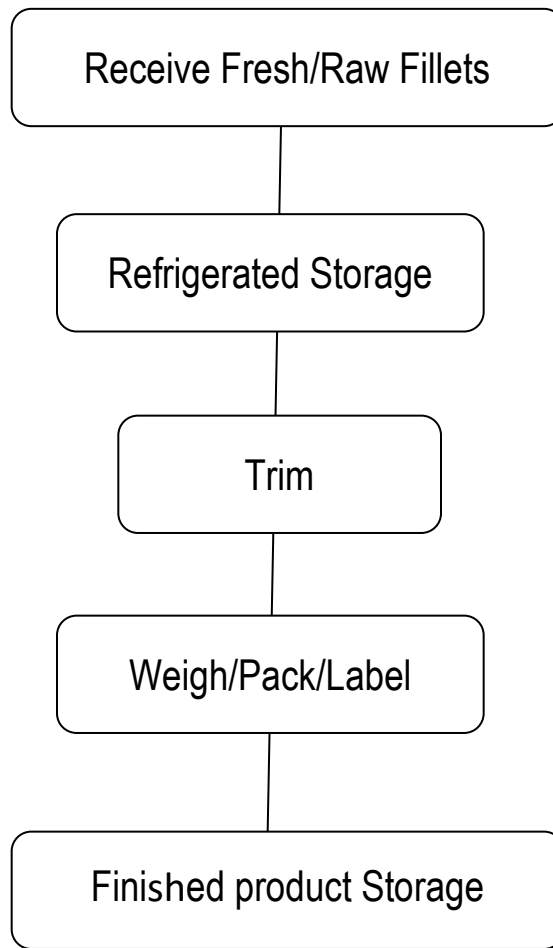
**Trim**- Individual tubs or containers of mahi-mahi fillets are removed from the cooler as needed to pack customer orders. Fillets are trimmed by hand with knives if necessary to meet customer specifications. Trimming is

completed in 30 minutes or less.

**Weigh/Pack/Label** Per customer order, mahi-mahi fillets are weighed, packed into containers, and each container is labeled with a handwritten or printed label that contains the market name of the species of fish that it contains. Individual containers are completely surrounded by ice and assembled into master cartons for each customer order. These containers are moved to finished product refrigerated storage. The weigh/pack/label steps are completed in 30 minutes or less.

**Finished Product Refrigerated Storage** - Master cartons will be placed in refrigerated storage until it is moved directly to refrigerated trucks for delivery to retail or restaurant customers

# Fresh mahi-mahi fillets Process Flow Chart



## Commercial Processing Example: *Fresh/Raw mahi-mahi fillets*

**NOTE:** For Illustrative Purposes Only. Models are based on current guidance contained in FDA Hazards Guide. Keep in mind that this model does not apply to all situations.

Description	Company: ABC Sushi Rolls Company																					
	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	ROP*	Raw to be cooked	Raw RTE*	Cooked RTE*	General Public	At Risk Population
<b>Common Name:</b> mahi-mahi(wild) <b>Market Name:</b> mahi-mahi <b>Scientific Name:</b> <i>Corphaens</i> sp.			√	√	√		√	√				√	√			√		√			√	

\*ROP = Reduced Oxygen Packaging; or RTE = Ready-to Eat

**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 hazards) and 3-4 (process-related hazards) in the FDA *Hazards Guide*. 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.

1. Scombrotoxin (Histamin) (species-related hazard, Chapter 7)
2. Pathogenic Bacteria Growth – Temperature Abuse – (process-related hazard, Chapter 12)
3. Food Allergens – (process-related hazard, Chapter 19)
4. Food Intolerance Substances – (process-related hazard, Chapter 19)
5. Metal Inclusion (process-related hazard, Chapter 20)

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

## Hazard Analysis Worksheet

Hazard Analysis Worksheet	
<b>Firm Name:</b> XYZ Seafood Company	<b>Product Description:</b> Fresh/Raw Mahi-Mahi Fillets
<b>Firm Address:</b> 238 Coastal Lane, Happy Beach, XX	<b>Method of Storage &amp; Distribution:</b> Stored and distributed on ice
	<b>Intended Use &amp; Consumer:</b> To be cooked and consumed by general public.

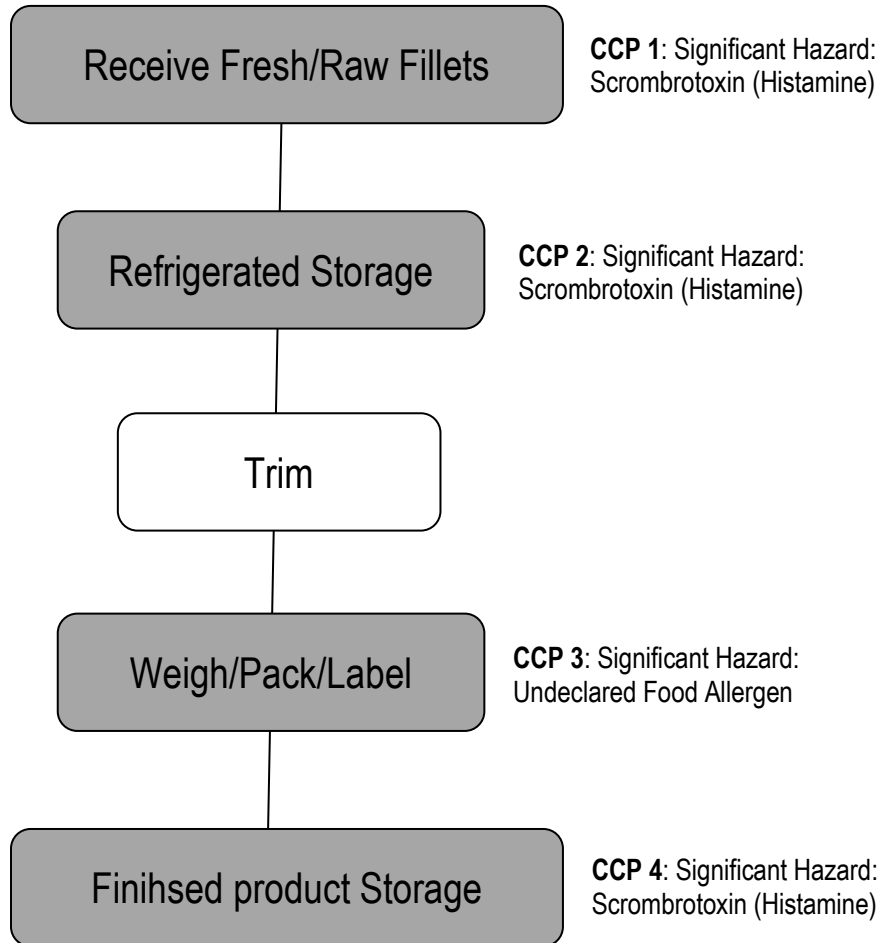
(1) Processing Step	(2) List all potential <b>food safety hazards</b> that could be associated with this product and process.	(3) Is the potential food safety hazard <b>significant</b> (introduced, enhanced or eliminated) at this step? <b>(Yes or No)</b>	(4) <b>Justify the decision</b> that you made in column 3	(5) What <b>control measure(s)</b> can be applied to prevent this significant hazard?	(6) Is this step a <b>Critical Control Point?</b> <b>(Yes or No)</b>
<b>Receiving</b>	Histamine	YES	Time/temp. abuse during transit could cause histamine to form in the fish	Tubs or containers of Mahi-mahi fillets are shipped in containers packed in ice	<b>YES</b>
	Pathogen Growth-Temp. Abuse	NO	Not likely to cause illness as the intended use for the product is to be cooked by or for the consumer prior to consumption		
	Food Allergens	YES	Mahi is a food allergen	Fillets will be labeled with market name at weigh/pack/label step	<b>NO</b>
	Food Intolerance Substances	NO	No FIS are used on fresh fillets		
	Metal Inclusion	NO	Not likely to occur at this step		
<b>Refrigerated Storage</b>	Histamine	YES	Time/temp. abuse during storage could cause histamine to form in the fish	Mahi fillets are buried in ice & stored in a refrigerated cooler	<b>YES</b>
	Pathogen Growth-Temp. Abuse	NO	Not likely to cause illness as the intended use for the product is to be cooked by or for the consumer prior to consumption		
	Food Allergens	YES	Mahi is a food allergen	Fillets will be labeled with market name at weigh/pack/label step	<b>NO</b>

(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 <b>significant</b> (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 <b>Critical Control Point?</b> (Yes or No)
	Food Intolerance Substances	NO	No FIS are used on fresh fillets		
	Metal Inclusion	NO	Not likely to occur at this step		
Trim	Histamine	NO	Not likely to occur, time at this trim step is 30 min or less		
	Pathogen Growth-Temp. Abuse	NO	Not likely to cause illness as the intended use for the product is to be cooked by or for the consumer prior to consumption		
	Food Allergens	YES	Mahi is a food allergen	Fillets will be labeled with market name at weigh/pack/label step	<b>NO</b>
	Food Intolerance Substances	NO	No FIS are used on fresh fillets		
	Metal Inclusion	NO	Not reasonably likely to expect metal fragments would enter food from knives used for manual cutting		
Weigh/Pack/Label	Histamine	NO	Not likely to occur, time at this labeling step is 30 min or less		
	Pathogen Growth-Temp. Abuse	NO	Not likely to cause illness as the intended use for the product is to be cooked by or for the consumer prior to consumption		
	Food Allergens	YES	Mahi is a food allergen	Fillets are labeled with market name at this step (Proper Labelling)	<b>YES</b>
	Food Intolerance Substances	NO	No FIS are used on fresh fillets		
	Metal Inclusion	NO	Not likely to occur at this step		
Finished product Storage	Histamine	YES	Time/temperature abuse could occur during storage	Mahi fillets containers are buried in ice and stored in a refrigerated cooler (proper icing)	<b>YES</b>

(1) <b>Processing Step</b>	(2) List all potential <b>food safety hazards</b> that could be associated with this product and process.	(3) Is the potential food safety hazard <b>significant</b> (introduced, enhanced or eliminated) at this step? <b>(Yes or No)</b>	(4) <b>Justify the decision</b> that you made in column 3	(5) What <b>control measure(s)</b> can be applied to prevent this significant hazard?	(6) Is this step a <b>Critical Control Point?</b> <b>(Yes or No)</b>
	Pathogen Growth-Temp. Abuse	NO	Not likely to cause illness as the intended use for the product is to be cooked by or for the consumer prior to consumption		
	Food Allergens	NO	Fillets were labeled with market name at weigh/pack/label step		
	Food Intolerance Substances	NO	No FIS are used on fresh fillets		
	Metal Inclusion	NO	Not Likely to occur at this step		

# Fresh mahi-mahi fillets Process Flow Chart

*Shaded steps are critical control points*



**HACCP Plan Worksheet**

<b>Firm Name</b> <i>XYZ Seafood Company</i>	<b>Product Description:</b> <i>Fresh/Raw Mahi-Mahi Fillets</i>
<b>Firm Location</b> <i>238 Coastal Lane, Happy Beach, XX</i>	<b>Method of Storage &amp; Distribution:</b> Stored and distributed on ice
	<b>Intended Use &amp; Consumer:</b> To be cooked and consumed by general public.

<b>Critical Control Point (CCP)</b>		RECIEVING
<b>Significant Hazard(s)</b>		Histamine
<b>Critical Limits for each Control Measure</b>		Tubs or containers of Mahi-mahi fillets are completely surrounded with ice at receipt
<b>Monitoring</b>	<b>What</b>	Adequacy of ice surrounding tubs or containers of mahi-mahi fillets at delivery
	<b>How</b>	Visual check of adequacy of ice in representative number of containers in each delivery
	<b>Frequency</b>	Every Delivery
	<b>Who</b>	Receiving Manager
<b>Corrective Action</b>		<b>IF</b> the amount of ice is not adequate; <b>Then:</b> reject product, and call supplier to let them know CL was not met and provide product delivery specifications and discontinue use of supplier until their transport procedures are corrected.
<b>Verification</b>		Weekly review of Receiving Log (Monitoring record) and Corrective Action. Review of the Verification records within a reasonable time frame. Check internal temperature of fish at delivery for each new supplier and quarterly thereafter to ensure that ice maintains product temperature Check the accuracy of the thermometer before each use. Annual calibration of thermometer used to check internal temp.
<b>Records</b>		<u>Receiving Log</u> that documents: the number of containers examined; the number of containers in each delivery; and the results of checks for adequacy of ice. <u>Corrective Action records</u> <u>Verification Record</u> • Accuracy Check Log • Calibration Log
<b>Signature:</b>		<b>Date:</b>

<b>Critical Control Point (CCP)</b>		REFRIGERATED STORAGE
<b>Significant Hazard(s)</b>		Histamine
<b>Critical Limits for each Control Measure</b>		Tubs or containers of Mahi-mahi fillets are completely surrounded with ice throughout the storage time
<b>Monitoring</b>	<b>What</b>	Adequacy of ice surrounding tubs or containers of mahi-mahi fillets
	<b>How</b>	Visual check of adequacy of ice in a representative number of containers in cooler storage
	<b>Frequency</b>	At the beginning and end of the workday
	<b>Who</b>	Cooler Manager
<b>Corrective Action</b>		<b>IF</b> the amount of ice is not adequate; <b>Then:</b> chill and hold the product until it can be evaluated based on its total time and temperature exposure, including exposures during prior processing operations, and add ice and make adjustments to the ice application process.
<b>Verification</b>		Weekly review of Cooler Ice Log (Monitoring record) and Corrective Action. Review of the Verification records within a reasonable time frame. Check internal temperature of fish quarterly to ensure that ice maintains product temperature Check the accuracy of the thermometer before each use. Annual calibration of thermometer used to check internal temp.
<b>Records</b>		Cooler Ice Log that documents: the number of containers examined, the approximate number of containers in storage, and the results of checks for adequacy of ice. Corrective Action records Verification Record • Accuracy Check Record • Annual Calibration Log
<b>Signature:</b>		<b>Date:</b>

<b>Critical Control Point (CCP)</b>		WEIGH/PACK/ LABEL
<b>Significant Hazard(s)</b>		Undeclared Food Allergen
<b>Critical Limits for each Control Measure</b>		All finished products containers will be labelled with the correct market name of the fish
<b>Monitoring</b>	<b>What</b>	The market name on each container of finished product
	<b>How</b>	Visual comparison of the label against the product specification for accuracy
	<b>Frequency</b>	At the start of the production AND at least every 2 hours OR when new containers of labels are opened or rolls of labels
	<b>Who</b>	Packing Manager
<b>Corrective Action</b>		<b>IF</b> a container is improperly labeled, <b>Then:</b> Hold and isolate labeled product since the last acceptable inspection of labels; Inspect 100% of affected product and relabel mislabeled products; Inspect remaining labels staged for use and remove inaccurate labels from processing area; Review a representative sample of labels in storage, and hold and isolate inaccurate labels, if appropriate; Discontinue use of label supplier; Modify label procedures, as appropriate.
<b>Verification</b>		Weekly review of Packing Room Log, Monitoring record and Corrective Actions and verification
<b>Records</b>		<u>Packing Room Log</u> that document: the number of containers checked, the number of containers in the order, and the results of the label check. <u>Corrective Action records</u> <u>Verification Records</u>
<b>Signature:</b>		<b>Date:</b>

<b>Critical Control Point (CCP)</b>		FINISHED PRODUCT REFRIGERATED STORAGE
<b>Significant Hazard(s)</b>		Histamine
<b>Critical Limits for each Control Measure</b>		Containers of Mahi-mahi fillets are completely surrounded with ice throughout the storage time
<b>Monitoring</b>	<b>What</b>	Adequacy of ice surrounding containers of mahi-mahi fillets
	<b>How</b>	Visual check of representative number of containers in cooler storage
	<b>Frequency</b>	At the beginning and end of the workday
	<b>Who</b>	Cooler Manager
<b>Corrective Action</b>		<b>IF</b> finished product containers do not have adequate ice; <b>Then:</b> chill and hold the product until it can be evaluated based on its total time and temperature exposure, including exposures during prior processing operations, and determine if there is a problem with the cooler and fix it.
<b>Verification</b>		Weekly review of Cooler Ice Log Corrective Actions and Verifications Check internal temperature of fish quarterly to ensure that ice maintains product temp. temperature Check the <b>Accuracy of the</b> thermometer before each use. <b>Annual calibration</b> of thermometer used to check internal temp.
<b>Records</b>		<u>Cooler Ice log</u> that documents: the number of containers examined, the approximate number of containers in storage and the results of checks for adequacy of ice. <u>Corrective Action records</u> <u>Verification Records</u> • Accuracy Check Record • Annual Calibration Log
<b>Signature:</b>		<b>Date:</b>