REVISED SEPTEMBER 2016

# Commercial Processing Example: *Shrimp (farm-raised), Cooked and Frozen*

**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. This training model applies to use of Non-Integrated Farms.

## Narrative

| | |
|---|---|
| **Company** | ABC World Shrimp Company, Anywhere, World |
| **Market Name** | Farm-raised shrimp species *Penaeus vannamei* or *Penaeus monodon* |
| **Source of Fishery Product** | Pond-raised shrimp (aquaculture) are obtained directly from farmed harvest. The sources can be from **Integrated Farms** (owned and operated by ABC World Shrimp Company), or **Non-Integrated Farms** (owned and operated by a separate or independent company). The harvest is collected and delivered by **suppliers** meaning individual farmers or agents gathering shrimp from one or more farms. |
| **Describe the Food Product** | Cooked, headless, shell-on, IQF (individually quick frozen) farm shrimp packed in heat sealed plastic bags (ROP; reduced oxygen packaging) |
| **Method of Receiving, Storage and Distribution** | Received in ice and stored in ice before cooking, then freezing (IQF) for distribution as frozen, cooked shrimp |
| **Finished Packaging Type** | Frozen products in heat sealed bags - reduced oxygen packaged |
| **Intended Use and Consumer** | Frozen storage prior to thawing for consumption by the general public |

## Description of Process

**Receive raw shrimp –** Commercial lots of fresh whole raw shrimp (head-on, not previously frozen) are obtained directly from various farms. The shrimp are treated with sulfiting agents (i.e., sodium bisulfite and/or sodium metabisulfite dips) to inhibit black spot formation (melanosis). The shrimp are held in ice and delivered in refrigerated containers within 48 hours after harvest. At receiving, the incoming shrimp are identified and assigned batch numbers according to farm source, date of harvest, and segregation plan for processing. The iced product is temporarily held in refrigeration prior to further processing. Receiving time from delivery until temporary refrigerated storage is less than 30 minutes. **NOTE: All incoming lots of shrimp must be accompanied with written and signed guarantees (letters of assurance) declaring compliance with ABC World Shrimp Company's most current Guidelines for Farmed Shrimp.**

**Receive packaging materials –** Packaging is pre-labeled rollstock, which is an oxygen barrier film. Packaging materials are delivered in clean, well-maintained and covered vehicles. All materials are checked for integrity and order specifications before assigning lot codes for future use.

**Dry-store packaging materials** - All accepted materials are held in separate dry storage areas according to assigned lot codes.

**Deicing, Deheading and Grading -** The iced, whole shrimp are placed in a hopper of cold flowing water to remove the ice prior to deheading by hand (removing the shrimp heads to yield shell-on tails). The resulting shrimp tails are mechanically sorted (graded) by size. The total time for deheading and sorting is less than 60 minutes per assigned batch and ice is used to control product temperature.

**Refrigerated storage** - The graded shrimp tails are placed in insulated plastic totes with fresh ice and moved to refrigerated storage. As necessary, ice is refreshed daily by topping the totes. Shrimp may remain in refrigerated storage for up to 48 hours prior to cooking.

**Cooking** – Cooking occurs in a segregated area to control personnel and product traffic subject to Sanitation Control Procedures (SCP). The graded shell-on shrimp pass through a continuous steam cooker. The cooker's conveyor belt is equipped with flips to tumble the shrimp, ensuring a thorough uniform cook. The cook process time and temperature is based on a pre-established and validated study to cook raw, refrigerated shrimp. The shrimp are exposed to steam at 212°F (100°C) for 3 minutes in a validated cooker to achieve an internal product temperature of 165°F (73.9°C) for 36 seconds to kill *Listeria monocytogenes*. It takes less than 30 minutes to cook all the shrimp in an assigned batch. The validation applies to refrigerated shrimp no larger than 30 count (30 individual shrimp per pound).

**Cool and Inspect** - Cooling occurs in a segregated area to control personnel and product traffic subject to Sanitation Control Procedures (SCP). As cooked shrimp exit the cooker, they move on a conveyor belt to a cooling station where cold-water is sprayed on the product. After the cold water spray, workers inspect the shrimp and remove pieces and other defective product which are diverted to a non-food use. The cooling and inspection step is part of a continuous process that typically takes less than 5 minutes.

**Freeze** – The cooked and cooled shrimp move by conveyor into a spiral freezer, which is a continuous freezing process that typically takes no more than 20 minutes.

**Packing (Weigh/Pack/Seal/Label/Case)** - After freezing, the finished product is conveyed to the packing station where the product is weighed, packed, heat-sealed and labeled in an automated packaging line. A computerized system weighs the correct amount of product and bags it in pre-labeled bagging material. Rolls of bags are loaded into the packaging machine. Each primary package is identified by the production date code, batch number and proper ingredient labeling. All primary packages are master-cased as required by the customer. Each master case is marked with identical production date codes and batch numbers as used on the primary packages. As each master case is packed, it is palletized immediately in accordance with customer or company criterion. This is a short step that typically takes less than 30 minutes.

**Frozen Storage** - All finished product pallets are placed immediately into frozen storage. All finished product inventory is distributed on a first-in/first-out basis.

## DEFINITIONS

These terms are defined to clarify the content and intentions of the entire model HACCP plan.

**ABC World Shrimp Guidelines for Farmed Shrimp** are contained in an appendix for the HACCP program describing requirements for assurances to prevention of food safety hazards involving environmental chemical contaminates and illegal use of drugs and other chemical treatments.

**Lot** is defined as the amount of shrimp involved in one harvest from a single farm as designated by the supplying farm. The suppliers designated **'lot'** is further distinguished from a **'batch'** as assigned by the processing operations for internal tracking of the shrimp through processing steps.

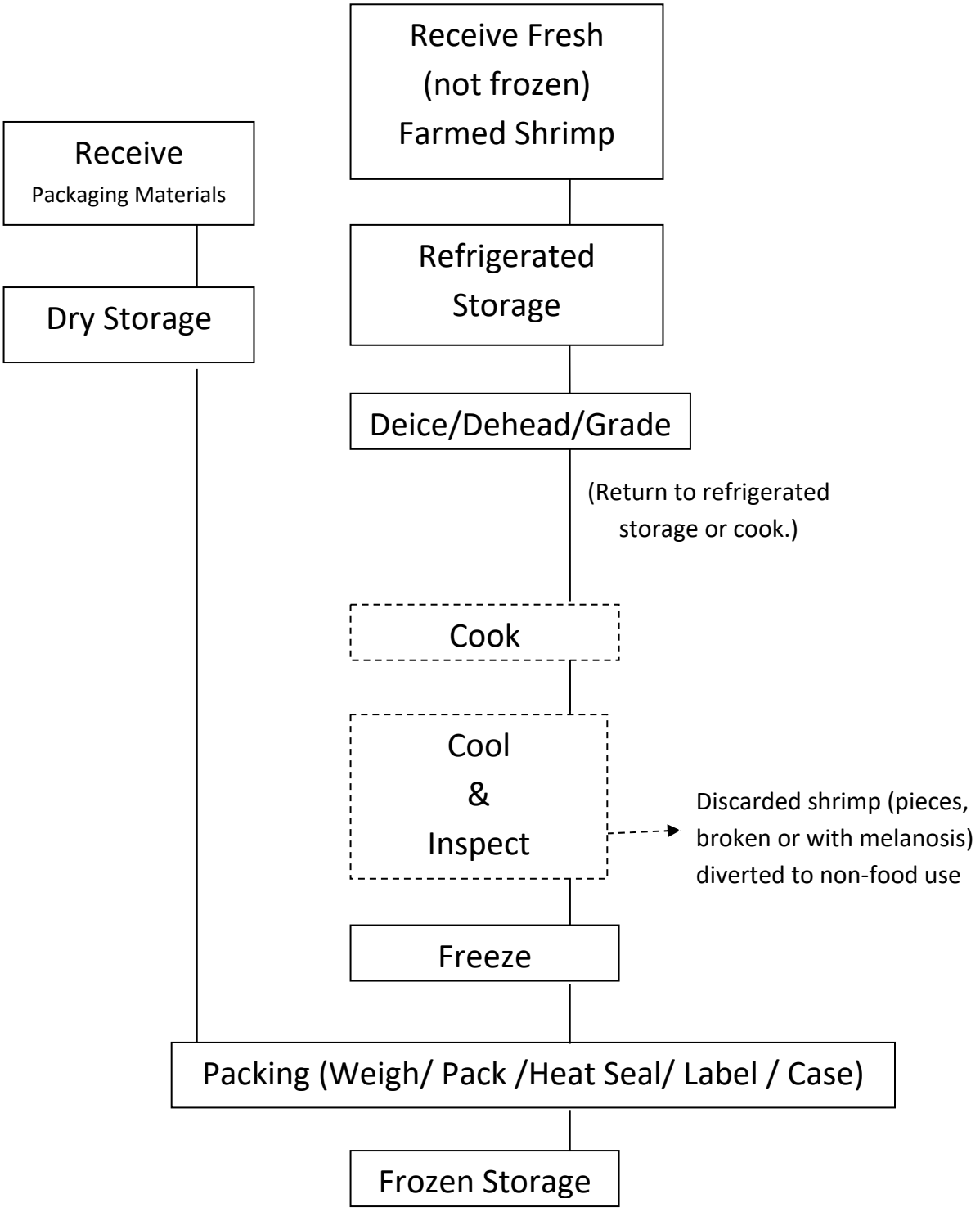
**Supplier** is the actual farm or agent collecting shrimp from one or more farms whereby the identity must designate the actual farm location and associated permits for legal operation.

All **'analysis'** will involve an appropriate sampling plan per the designated lot of shrimp according to product size and volume, and the testing methods will be in accordance with official procedures and required verifications for accuracy relative to standards and replications.

Recognition for **Third Party Auditors** will be based on experience, adherence with prevailing food safety requirements, HACCP regulations for the market nation, and any other pertinent information.

# ABC World Shrimp Company

**Process Flow Diagram**
**Shrimp (farm-raised), Cooked and Frozen**




**Key:** Dashed lines (------) indicate segregated area subject to SCP monitoring.

# Commercial Processing Example: *Shrimp (farm-raised), Cooked, Frozen*

**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 World Shrimp Company** | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **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 | ROP | Raw to be cooked | Raw, RTE | Cooked RTE | General Public | At-Risk Population |
| **Common Name:** *Shrimp (farm-raised)* **Market Name:***Shrimp* **Scientific Name:** *Penaeus spp.* | | √ | | | √ | | | | √ | √ | | | | √ | | | √ | | | √ | √ | |

**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 3-3 (species-related hazards) and 3-4 (process-related hazards) 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.

The FDA recommendations indicate 8 potential hazards that that are species or process related. Each potential hazard must be addressed in the Hazard Analysis. The hazard analysis considers all 8 hazards in an inclusive assessment whereby each hazard is addressed through each processing step.

1. Pathogenic bacteria growth (thermal abuse during processing) – (process-related, chapter 12)
2. Aquaculture Drugs (residuals from illegal or improper application) – (species-related, chapter 11)
3. Environmental Chemicals (contaminants) – (species-related, chapter 9)
4. *Clostridium botulinum* toxin formation (anaerobic packaging) – (process-related, chapter 13)
5. Pathogen survival through cooking (improper cooking) – (process-related, chapter 16)
6. Food Additives (use of sulfites to control melanosis) – (process-related, chapter 19)
7. Food Allergens (natural; no additional ingredients) – (process-related, chapter 19)
8. Metal Inclusion (if used in packaging) – (process-related, chapter 20)

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

# Hazard Analysis Worksheet

| | |
|---|---|
| **Firm Name:** *ABC World Shrimp Company* | **Finished Product Description:** *Cooked IQF Farmed Shrimp in reduced oxygen package* |
| **Firm Address:** *Anywhere, USA* | **Method of Storage & Distribution:** *Frozen* |
| | **Intended Use & Consumer:** *Ready-to-eat product to be consumed by the general public without further cooking.* |

| (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 Packaging Materials** | Pathogenic bacteria growth – temperature abuse | No | Pathogens not likely to grow on packaging | | |
| | Aquaculture drugs | No | No prior exposure to aquaculture drugs | | |
| | Environmental chemicals | No | No prior exposure to environmental chemicals | | |
| | *C. botulinum* toxin | No | *C. bot.* not present in packaging materials | | |
| | Pathogen survival through cooking | No | Cooking not involved at this step | | |
| | Food additives | No | No prior exposure to food additives | | |
| | Food allergens | No | Packaging materials do not introduce allergens | | |
| | Metal inclusion* | No | Not reasonably likely in packaging materials | | |
| **Dry Storage** | Pathogenic bacteria growth – temp. abuse | No | Pathogens not likely to grow in packaging materials | | |
| | Aquaculture drugs | No | No prior exposure to aquaculture drugs | | |
| | Environmental chemicals | No | No prior exposure to environmental chemicals | | |
| | *C. botulinum* toxin | No | Presence or growth of *C. bot.* not likely | | |
| | Pathogen survival through cooking | No | Cooking not involved at this step | | |
| | Food additives | No | No prior exposure to food additives | | |
| | Food allergens | No | Dry storage does not introduce allergens | | |
| | Metal inclusion* | No | Not reasonably likely during dry storage | | |

| (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 Raw Farmed Shrimp** | Pathogenic bacteria growth – temperature abuse | Yes | Pathogens can be present on raw shrimp and grow if time and temperature abuse occurs during harvest and shipment | Pathogens will be eliminated (killed) at the cooking step | No |
| | Aquaculture drugs | Yes | Illegal drug residues may be in farm- raised shrimp | All deliveries must be accompanied with written and signed supplier guarantee in accordance with food safety criteria in *ABC World Shrimp Company Guidelines* | Yes |
| | Environmental chemicals | Yes | Chemical contaminates can occur in the farm environment | All deliveries must be accompanied with written and signed supplier guarantee in accordance with food safety criteria in *ABC World Shrimp Company Guidelines* | Yes |
| | *C. botulinum* toxin | No | Product not in reduced oxygen environment at this step | | |
| | Pathogen survival through cooking | No | Cooking not involved at this step | | |
| | Food additives –sulfites | Yes | Sulfites are used on some raw farmed shrimp and can be present on shrimp at receiving | Product label at Packing step will identify sulfites | No |
| | Food allergens | Yes | Shrimp is a potential food allergen; hazard is introduced at receiving | Product label applied at Packing step will identify 'shrimp' | No |
| | Metal inclusion* | No | Not likely to occur at this step | | |
| **Refrigerated Storage** | Pathogenic bacteria growth – temperature abuse | Yes | Pathogens could grow if time and temperature abuse occurs in storage | Pathogens will be eliminated (killed) at the cooking step | No |
| | Aquaculture drugs | No | Not introduced, enhanced or controlled at this step | | |
| | Environmental chemicals | No | Not introduced, enhanced or controlled at this step | | |
| | *C. botulinum* toxin | No | Product not in reduced oxygen environment at this step | | |
| | Pathogen survival through cooking | No | Cooking not involved at this step | | |
| | Food additives | No | Additional food additives including sulfites not introduced or enhanced at this step | | |

| (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)** |
|---|---|---|---|---|---|
| | Food allergens | Yes | Shrimp is a potential food allergen; hazard introduced at receiving | Product label applied at Packing step will identify 'shrimp' | No |
| | Metal inclusion* | No | Introduction of metal fragments not reasonably likely at this step | | |
| **De-Ice/Dehead/ Size Grade** | Pathogenic bacteria growth – temperature abuse | No | Pathogens not likely to grow because of short time at this step; shrimp to be cooked | | |
| | Aquaculture drugs | No | Not introduced, enhanced or controlled at this step | | |
| | Environmental chemicals | No | Not introduced, enhanced or controlled at this step | | |
| | *C. botulinum* toxin | No | Not introduced at this step; Product not in reduced oxygen pack | | |
| | Pathogen survival through cooking | Yes | Cooking not involved at this step, but grading necessary to assure shrimp size (>30 count/lb.) for validated cooking method | Proper grading for shrimp size | Yes |
| | Food additives - sulfites | No | Additional food additives including sulfites not introduced or enhanced at this step | | |
| | Food allergens | Yes | Shrimp is a potential food allergen; hazard introduced at receiving | Product label applied at Packing step will identify 'shrimp' | No |
| | Metal inclusion* | No | Introduction of metal fragments not reasonably likely at this step | | |
| **Cook** | Pathogenic bacteria growth – temperature abuse | Yes | Pathogens present from previous steps will be controlled (eliminated) | Cook all shrimp using a time and temperature combination that will eliminate pathogens | Yes |
| | Aquaculture drugs | No | Not introduced, enhanced or controlled at this step | | |
| | Environmental chemicals | No | Not introduced, enhanced or controlled at this step | | |
| | *C. botulinum* toxin | No | Product not in reduced oxygen environment at this step | | |
| | Pathogen survival through cooking | Yes | Shrimp must be cooked properly to eliminate (kill) all pathogens | Cook all shrimp using a time and temperature that will kill pathogens | Yes |
| | Food additives - sulfites | No | Additional food additives including sulfites not introduced at this step | | |
| | Food allergens | Yes | Shrimp is a potential food allergen; hazard introduced at receiving | Product label applied at Packing step will identify 'shrimp' | No |
| | Metal inclusion | No | Introduction of metal fragments not reasonably likely at this step | | |

| (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)** |
|---|---|---|---|---|---|
| **Cool and Inspect** | Pathogenic bacteria growth – temperature abuse | No | Pathogenic bacteria growth is minimized because step is continuous and time at step is short; subject to SCP monitoring | | |
| | Aquaculture drugs | No | Not introduced, enhanced or controlled at this step | | |
| | Environmental chemicals | No | Not introduced, enhanced or controlled at this step | | |
| | *C. botulinum* toxin | No | Product not in reduced oxygen environment | | |
| | Pathogen survival through cooking | No | Controlled at the cook step | | |
| | Food additives | No | Additional food additives including sulfites not introduced or enhanced at this step | | |
| | Food allergens | Yes | Shrimp is a potential food allergen; hazard introduced at receiving | Product label applied at Packing step will identify 'shrimp' | No |
| | Metal inclusion | No | Introduction of metal fragments not reasonably likely at this step | | |
| **Freeze** | Pathogenic bacteria growth – temperature abuse | No | Pathogens not likely to grow at freezing temperature | | |
| | Aquaculture drugs | No | Not introduced, enhanced or controlled at this step | | |
| | Environmental chemicals | No | Not introduced, enhanced or controlled at this step | | |
| | *C. botulinum* toxin | No | Product not in reduced oxygen environment at this step | | |
| | Pathogen survival through cooking | No | Controlled at the cook step | | |
| | Food additives | No | Additional food additives including sulfites not introduced at this step | | |
| | Food allergens | Yes | Shrimp is a potential food allergen; hazard introduced at receiving | Product label applied at Packing step will identify 'shrimp' | No |
| | Metal Inclusion | No | Introduction of metal fragments not reasonably likely at this step | | |
| **Packing Step Weigh/Pack/Seal/ Label/Case** | Pathogenic bacteria growth – temperature abuse | No | Pathogens not likely to grow in frozen shrimp and time at this step is short | | |
| | Aquaculture drugs | No | Not introduced, enhanced or controlled at this step | | |
| | Environmental chemicals | No | Not introduced, enhanced or controlled at this step | | |

| (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)** |
|---|---|---|---|---|---|
| | *C. botulinum* toxin | Yes | Product is placed in a reduced oxygen package which may allow toxin to form when thawed | All unit package labels contain a "keep frozen/thaw under refrigeration" statement | Yes |
| | Pathogen survival through cooking | No | Controlled at the cook step | | |
| | Food additives | Yes | Shrimp contain sulfites; introduced at Receiving | Finished product label must declare "sulfites" on unit package label | Yes |
| | Food allergens | Yes | Shrimp is a potential food allergen introduced at Receiving step | Finished product label will contain the word "shrimp" on the unit package label | Yes |
| | Metal inclusion | No | Introduction of metal fragments not reasonably likely at this step | | |
| **Frozen Storage** | Pathogenic bacteria growth – temperature abuse | No | Pathogens not likely to grow at freezer temp. | | |
| | Aquaculture drugs | No | Not introduced, enhanced or controlled at this step | | |
| | Environmental chemicals | No | Not introduced, enhanced or controlled at this step | | |
| | *C. botulinum* toxin | No | Controlled at Packing | | |
| | Pathogen survival through cooking | No | Controlled at Cooking | | |
| | Food additives-sulfites | No | Controlled at Packing | | |
| | Food allergens | No | Controlled at Packing | | |
| | Metal inclusion | No | Introduction of metal fragments not reasonably likely at this step | | |

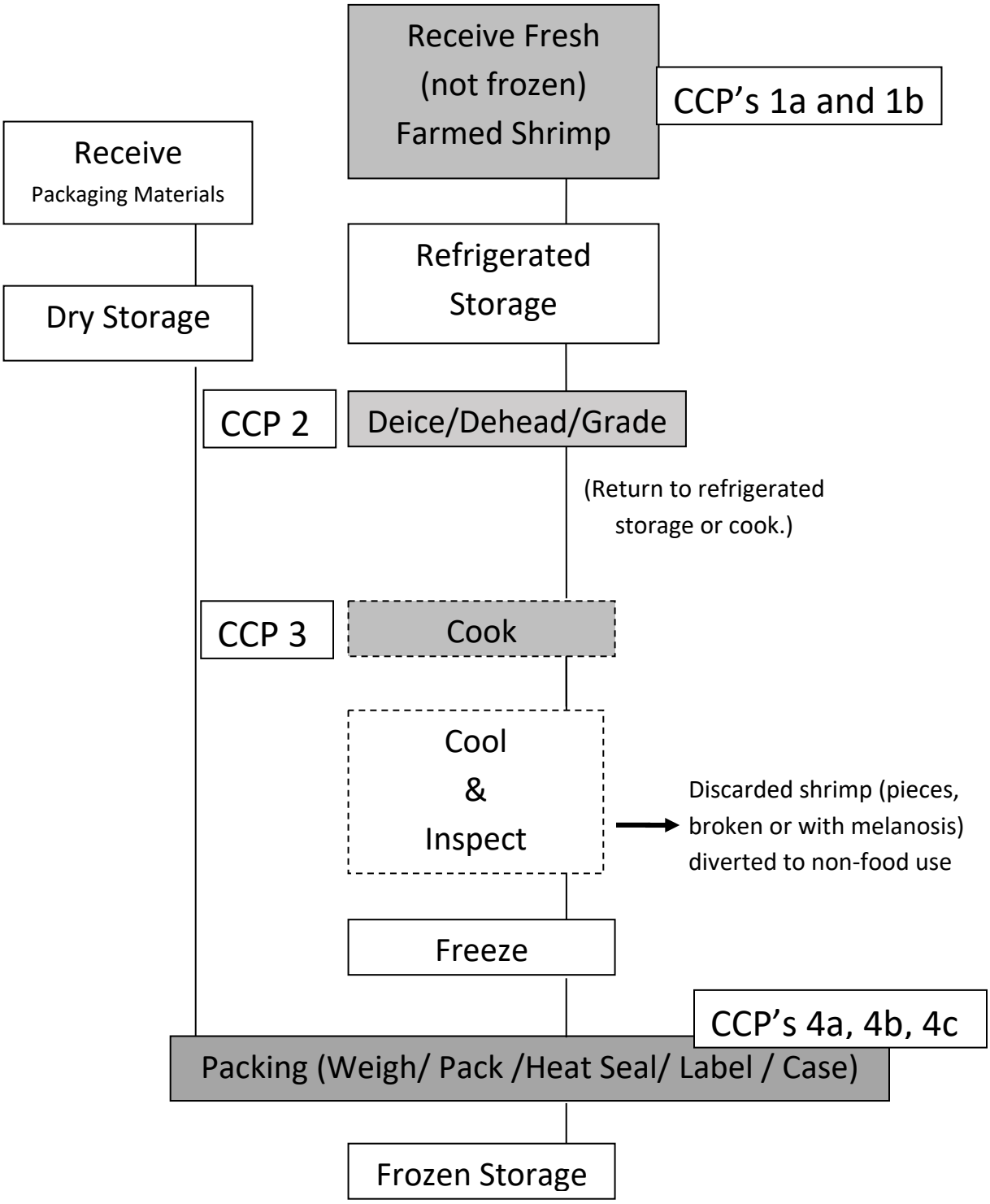
** **Metal Inclusion** was considered in the Hazard Analysis based on recommendations in FDA's Fish and Fishery Products Hazards and Control Guide (4th Edition , 2011), but the operations at ABC World Shrimp Company do not include any steps that would introduce metal fragments. Thus Metal Inclusion was not considered a significant food safety hazard that required a CCP.*

***SCP** – Sanitation Control Procedures*

***ABC World Shrimp Company Guidelines for Farmed Shrimp, page 17***

# ABC World Shrimp Company

**Process Flow Diagram**
**Shrimp (farm-raised), Cooked and Frozen**
**(Shaded steps indicate critical control points)**




**Key:** Dashed lines (------) indicate segregated area subject to SCP monitoring.

# HACCP PLAN

## Non-Integrated Shrimp Farm Sources

| | |
|---|---|
| Firm Name: *ABC World Shrimp Company* | Product: *Cooked IQF Farm Shrimp in reduced oxygen packaging* |
| Address: *Anywhere, Any Country* | Method Storage & Distribution: *Frozen* |
| Signature: <required signature> | Intended Use: *Ready-to-eat or warm for eating by the general public* |
| Printed (printed signature for clarity> | Date: <date validated and signed> |

| **CRITICAL CONTROL POINT 1a - Aquaculture Drugs** | | |
|---|---|---|
| **Critical Control Point (CCP)** | | **RECEIVING** (from Non-Integrated Shrimp Farms) |
| **Significant Hazard** | | Potential illegal aquaculture drug residuals in the farmed shrimp due to use of unapproved drugs or misuse of approved drugs |
| **Critical Limits** | | Supplier written and signed guarantee declaring compliance with food safety requirements in ABC World Shrimp Company Guidelines[1] for Farmed Shrimp regarding no use of drugs or proper use of approved drugs accompanying each lot of incoming farm-raised shrimp from identified supplier |
| **Monitoring** | **What** | Confirm supplier identity for each incoming lot of shrimp accompanied with written and signed guarantee |
| | **How** | Visual check for supplier and lot identity, and presence of accompanying guarantee |
| | **When** | Every shipment and every lot received |
| | **Who** | Assigned Coordinator for Receiving |
| **Corrective Action** | | **IF** there is no guarantee present and/or the corresponding supplier cannot be identified for any individual (each) incoming lot at the time of delivery, **THEN** reject the lot(s) in question.<br><br>**OR** to qualify acceptance of any lot in question, the lot can be held in separate refrigerated storage for 24 hours to allow time to provide the required guarantee and/or supplier identity, and the lot in question can sampled and analyzed for potential drug residues.<br><br>**To regain control**, inform suppliers that they must comply with the established guidelines for ABC World Shrimp Company Guidelines[1] before any future lots could be accepted. New suppliers or suppliers that have not been previously identified must provide information to satisfy the current ABC World Shrimp Company Guidelines[1] before receiving their delivered lots. Retrain involved staff. |
| **Verifications** | | Review of all receiving records within one week of initial monitoring; **AND** all suppliers must be validated for identity and awareness of the ABC World Shrimp Company Guidelines[1] for Farmed Shrimp prior to product receiving; **PLUS** periodic verifications through on-farm visits, review of drug use records and/or product testing. Any analytical testing must include validation of methodology. Letters of guarantee are always subject to verification through on-site farm visits, review of any drug use records, and analytical testing of the shrimp in question that can be conducted by trained staff from ABC World Shrimp Company, recognized third party auditors, and/or responsible authorities. |
| **Records** | | Copy of supplier guarantees per lots received; **AND** Receiving records documenting acceptance and rejections of shrimp, and any additional corrective actions involving advice and directives given to suppliers. Verifications; Sanitation Control Procedures; **PLUS** training records for Coordinator for Receiving and a current edition of the ABC World Shrimp Company Guidelines[1] for Farmed Shrimp |

[1] ABC World Shrimp Company Guidelines (p. 17)

# HACCP PLAN

## Non-Integrated Shrimp Farm Sources

| | |
|---|---|
| Firm Name: *ABC World Shrimp Company* | Product: *Cooked IQF Farm Shrimp in reduced oxygen packaging* |
| Address: *Anywhere, Any Country* | Method Storage & Distribution: *Frozen* |
| Signature: <required signature> | Intended Use: *Ready-to-eat or warm for eating by the general public* |
| Printed (printed signature for clarity> | Date: <date validated and signed> |

| | | |
|---|---|---|
| **CRITICAL CONTROL POINT 1b – Environmental Chemicals** | | |
| **Critical Control Point (CCP)** | | **RECEIVING** (from Non-Integrated Shrimp Farms) |
| **Significant Hazard** | | Potential exposure to environmental chemicals or pesticide contamination |
| **Critical Limits** | | Supplier written and signed guarantee declaring compliance with food safety requirements in ABC World Shrimp Company Guidelines[1] for Farmed Shrimp indicating the shrimp were **not produced or harvested** from contaminated waters |
| **Monitoring** | **What** | Confirm supplier identity for each incoming lot of shrimp accompanied with written and signed guarantee |
| | **How** | Visual check for supplier and lot identity, and presence of accompanying guarantee |
| | **When** | Every shipment and every lot received |
| | **Who** | Assigned Coordinator for Receiving |
| **Corrective Action** | | **IF** there is no guarantee present and/or the corresponding supplier cannot be identified for any individual (each) incoming lot at the time of delivery, **THEN** reject the lot(s) in question.<br><br>**OR** to qualify acceptance of any lot in question,<br>• The lot can be held in separate refrigerated storage for 24 hours to allow time to provide the required guarantee and/or supplier identity, and the lot in question can sampled and analyzed for potential drug residues<br><br>**To regain control**, inform suppliers that they must comply with the established guidelines for ABC World Shrimp Company Guidelines[1] before any future lots could be accepted. New suppliers or suppliers that have not been previously identified must provide information to satisfy the current ABC World Shrimp Guidelines[1] before receiving their delivered lots. Retrain involved staff. |
| **Verifications** | | Review of all receiving records within one week of initial monitoring; **AND** all suppliers must be validated for identity and awareness of the ABC World Shrimp Company Guidelines[1] for Farmed Shrimp prior to product receiving; **PLUS** periodic verifications through on-farm visits and product testing. All accepted shrimp lots are subject to quarterly, additional or suspect analysis to verify absence of suspect chemical residues prior to processing or shipment of finished products. Any analytical testing must include validation of methodology.<br>Letters of guarantee are always subject to verification through on-site farm visits and analytical testing of the shrimp in question that can be conducted by trained staff from ABC World Shrimp Company, recognized third party auditors, and/or responsible authorities. |
| **Records** | | Copy of certifications per lots received; **AND** Receiving records documenting acceptance and rejections of shrimp at receiving, plus any additional corrective action involving advice and directives given to suppliers. Verifications; Sanitation Control Procedures; **PLUS** training records for Coordinator for Receiving |

[1] ABC World Shrimp Company Guidelines (p. 17)

# HACCP PLAN

## Non-Integrated Shrimp Farm Sources

| | |
|---|---|
| Firm Name: *ABC World Shrimp Company* | Product: *Cooked IQF Farm Shrimp in reduced oxygen packaging* |
| Address: *Anywhere, Any Country* | Method Storage & Distribution: *Frozen* |
| Signature: <required signature> | Intended Use: *Ready-to-eat or warm for eating by the general public* |
| Printed (printed signature for clarity> | Date: <date validated and signed> |

| **CRITICAL CONTROL POINT 2** | | |
|---|---|---|
| **Critical Control Point (CCP)** | | **Deice/Dehead/Grade** |
| **Significant Hazard** | | Pathogen bacteria growth due to temperature abuse and pathogen survival through cooking |
| **Critical Limits** | | Graded shrimp must be 30 count/lb. or smaller to comply with validated cooking method |
| **Monitoring** | **What** | Grade shrimp size |
| | **How** | Measure resulting shrimp size from grader |
| | **When** | Check shrimp size for every batch graded |
| | **Who** | Assigned Coordinator for Grading Operations |
| **Corrective Action** | | **IF** shrimp larger than 30 count/lb. **THEN** regrade for proper size.<br><br>**To regain control**, evaluate and document the cause for improper grading, adjust the graders. Make necessary adjustments for proper grading. If necessary, fix or replace errant grader, and retrain involved staff. |
| **Verifications** | | Daily review and signature for grading logs and correction actions records. |
| **Records** | | Daily grading logs with continuous and visual checks for shrimp size. Process and equipment Validation Report. **PLUS** training records for Coordinator for Grading Operations |

# HACCP PLAN

## Non-Integrated Shrimp Farm Sources

| | |
|---|---|
| Firm Name: *ABC World Shrimp Company* | Product: *Cooked IQF Farm Shrimp in reduced oxygen packaging* |
| Address: *Anywhere, Any Country* | Method Storage & Distribution: *Frozen* |
| Signature: <required signature> | Intended Use: *Ready-to-eat or warm for eating by the general public* |
| Printed (printed signature for clarity> | Date: <date validated and signed> |

| **CRITICAL CONTROL POINT 3 - Pathogen Bacteria Growth** | | |
|---|---|---|
| **Critical Control Point (CCP)** | | **COOKING** |
| **Significant Hazard** | | Pathogen bacteria growth due to temperature abuse and pathogen survival through cooking |
| **Critical Limits** | | Steam cooking temperature at minimum of 212°F (100°C) for minimum of 3 minutes exposure |
| **Monitoring** | **What** | Cooker temperature and total exposure time based on conveyer speed through cooker for shrimp smaller than 30 count/lb. |
| | **How** | 1. Continuous temperature recorder per batch<br>2. Stopwatch to monitor time for test block to move through the equipment<br>3. Proper shrimp size (smaller than 30 count/pound) |
| | **When** | 1. Continuous recordings, and visual checks at least twice per day<br>2. Conveyor belt speed measured once per day and when the conveyer speed is adjusted<br>3. Recheck shrimp size for every lot |
| | **Who** | Assigned Coordinator for Cooking Operations |
| **Corrective Action** | | **IF** shrimp larger than 30 count/lb. **THEN** replace with proper size before cooking or recook.<br>**IF** cooking temperature or exposure time is less than the critical limits, **THEN** re-cook the affected product to suit the required critical limits.<br>**OR** when re-cooking is not feasible, the affected product should be discarded and not mixed or sold with properly cooked products.<br>**To regain control**, evaluate and document the cause for improper cooking and make necessary adjustments for proper grading and cooking temperature and exposure time before continuing with additional cooking. Retrain involved staff. |
| **Verifications** | | Daily review and signature for cooking logs and corrective actions records; Daily accuracy checks and annual calibration checks for the cooker temperature recording devices; plus prior cooker validation for cook performance.<br>(Cook performance should demonstrate the steam cooker provides a uniform 212°F/100°C cook for 3 minutes to achieve an internal product temperature of at least 165°F/73.9°C for 36 seconds necessary to kill *Listeria monocytogenes* for all shrimp sizes according to FDA *Hazards and Controls Guidance* Table #A-3 in Appendix 4.) This validation for ABC World Shrimp Company is for shrimp no larger than 30 count/pound. |
| **Records** | | Daily cooking logs with continuous and visual checks for shrimp size, cook temperatures and belt speeds (exposure times); and cook thermometer accuracy and calibration logs.<br>Process and equipment Validation Report. Verifications; Sanitation Control Procedures; **PLUS** training records for Coordinator for Cooking Operations |

# HACCP PLAN

## Non-Integrated Shrimp Farm Sources

| | |
|---|---|
| Firm Name: *ABC World Shrimp Company* | Product: *Cooked IQF Farm Shrimp in reduced oxygen packaging* |
| Address: *Anywhere, Any Country* | Method Storage & Distribution: *Frozen* |
| Signature: <required signature> | Intended Use: *Ready-to-eat or warm for eating by the general public* |
| Printed (printed signature for clarity> | Date: <date validated and signed> |

| **CRITICAL CONTROL POINT 4a - Sulfites** | | |
|---|---|---|
| **Critical Control Point (CCP)** | | **PACKING** |
| **Significant Hazard** | | Food Additives - Sulfites |
| **Critical Limits** | | All packaged units for sale will include 'sulfites' in the ingredients list |
| **Monitoring** | **What** | Finished product labels |
| | **How** | Visual examination of the finished product labels and ingredient statements) |
| | **When** | Representative number of packaged and labeled units per lot |
| | **Who** | Assigned Coordinator for Packaging |
| **Corrective Action** | | IF the packaged units do not have labels or labels with 'sulfites' listed in the ingredients statement; THEN Identify, segregate and relabel the improperly labeled packages.<br>Determine the cause for the problem and correct by removing and destroying the supply of incorrect labels and reviewing the label specifications with the label supplier.<br>Retrain involved staff. |
| **Verifications** | | Weekly review of packing log records and corrective action records; and annual review of label specifications, OR whenever labels are changed or replaced |
| **Records** | | Packing Report logs and corrective actions; plus copy of correct labels and label specifications; **PLUS** training records for Coordinator for Packing. |

# HACCP PLAN

## Non-Integrated Shrimp Farm Sources

| | |
|---|---|
| Firm Name: *ABC World Shrimp Company* | Product: *Cooked IQF Farm Shrimp in reduced oxygen packaging* |
| Address: *Anywhere, Any Country* | Method Storage & Distribution: *Frozen* |
| Signature: <required signature> | Intended Use: *Ready-to-eat or warm for eating by the general public* |
| Printed (printed signature for clarity> | Date: <date validated and signed> |

| **CRITICAL CONTROL POINT 4b - Shrimp Allergen** | | |
|---|---|---|
| **Critical Control Point (CCP)** | | **PACKING** |
| **Significant Hazard** | | Food Allergen - Shrimp |
| **Critical Limits** | | All packaged units for sale will include 'shrimp' in the ingredients list |
| **Monitoring** | **What** | Finished product labels |
| | **How** | Visual examination of the finished product labels and ingredient statements |
| | **When** | Representative number of packaged and labeled units per lot |
| | **Who** | Assigned Coordinator for Packaging |
| **Corrective Action** | | **IF** the packaged units do not have labels or labels with 'shrimp' listed in the ingredients statement; **THEN** Identify, segregate and relabel the improperly labeled packages.<br>Determine the cause for the problem and correct by removing and destroying the supply of incorrect labels and reviewing the label specifications with the label supplier. Retrain involved staff. |
| **Verifications** | | Weekly review of packing log records and corrective action records; and annual review of label specifications, OR whenever labels are changed or replaced |
| **Records** | | Packing Report logs and corrective actions; plus copy of correct labels and label specifications; **PLUS** training records for Coordinator for Packing. |

# HACCP PLAN

## Non-Integrated Shrimp Farm Sources

| | |
|---|---|
| Firm Name: *ABC World Shrimp Company* | Product: *Cooked IQF Farm Shrimp in reduced oxygen packaging* |
| Address: *Anywhere, Any Country* | Method Storage & Distribution: *Frozen* |
| Signature: <required signature> | Intended Use: *Ready-to-eat or warm for eating by the general public* |
| Printed (printed signature for clarity> | Date: <date validated and signed> |

| **CRITICAL CONTROL POINT 4c – *C. botulinum* toxins** | | |
|---|---|---|
| **Critical Control Point (CCP)** | | **PACKING** |
| **Significant Hazard** | | *C. botulinum* toxins |
| **Critical Limits** | | All packaged units for sale will include a statement that says 'Important: keep frozen until used, thaw under refrigeration immediately before use'. |
| **Monitoring** | **What** | Finished product labels for presence of 'keep frozen' statement |
| | **How** | Visual examination of the finished product labels |
| | **When** | Representative number of packaged and labeled units per lot |
| | **Who** | Assigned Coordinator for Packaging |
| **Corrective Action** | | **IF** the packaged units do not have a keep frozen statement; **THEN** Identify, segregate and relabel the improperly labeled packages.<br>Determine the cause for the problem and correct by removing and destroying the supply of incorrect labels and reviewing the label specifications with the label supplier to prevent future failures. Retrain involved staff. |
| **Verifications** | | Weekly review of packing log records and corrective action records; and annual review of label specifications, OR whenever labels are changed or replaced |
| **Records** | | Packing Report logs and corrective actions; plus copy of correct labels and label specifications; **PLUS** training records for Coordinator for Packing. |

# HACCP Plan Form (*landscape format)*

| | |
|---|---|
| **Firm Name** *ABC World Shrimp Company* | **Product Description** *Cooked IQF Farm Shrimp in reduced oxygen packaging* |
| **Firm Location** *Anywhere USA* | **Method of Storage & Distribution** *Frozen* |
| | **Intended Use & Consumer** *Ready-to-eat or warm for eating by the general public* |

| Critical Control Point (CCP) | Significant Hazard(s) | Critical Limits for each Control Measure | Monitoring | | | | Corrective Action | Verification | Records |
|---|---|---|---|---|---|---|---|---|---|
| | | | What | How | When | Who | | | |
| Receiving (from Non-Integrated Shrimp Farms) | Potential illegal aquaculture drug residuals in the farmed shrimp due to use of unapproved drugs or misuse of approved drugs | Supplier written and signed guarantee declaring compliance with food safety requirements in ABC World Shrimp Company Guidelines1 for Farmed Shrimp regarding no use of drugs or proper use of approved drugs accompanying each lot of incoming farm-raised shrimp from identified supplier | Confirm supplier identity for each incoming lot of shrimp accompanied with written and signed guarantee | Visual check for supplier and lot identity, and presence of accompanying guarantee | Every shipment and every lot received | Assigned Coordinator for Receiving | **IF** there is no guarantee present and/or the corresponding supplier cannot be identified for any individual (each) incoming lot at the time of delivery, **THEN** reject the lot(s) in question.<br><br>**OR** to qualify acceptance of any lot in question, the lot can be held in separate refrigerated storage for 24 hours to allow time to provide the required guarantee and/or supplier identity, and the lot in question can sampled and analyzed for potential drug residues.<br><br>To regain control, inform suppliers that they must comply with the established guidelines for ABC World Shrimp | Review of all receiving records within one week of initial monitoring; **AND** all suppliers must be validated for identity and awareness of the ABC World Shrimp Company Guidelines[1] for Farmed Shrimp prior to product receiving;<br><br>**PLUS** periodic verifications through on-farm visits, review of drug use records and/or product testing. Any analytical testing must include validation of methodology.<br><br>Letters of guarantee are always subject to verification through on-site farm visits, review of any drug use records, and analytical testing of the shrimp in question that can be conducted by trained | Copy of supplier guarantees per lots received;<br><br>**AND** Receiving records documenting acceptance and rejections of shrimp, and any additional corrective actions involving advice and directives given to suppliers. Verifications; Sanitation Control Procedures;<br><br>**PLUS** training records for Coordinator for Receiving and a current edition of the ABC World Shrimp Company Guidelines[1] for Farmed Shrimp |

| Critical Control Point (CCP) | Significant Hazard(s) | Critical Limits for each Control Measure | Monitoring | | | | Corrective Action | Verification | Records |
|---|---|---|---|---|---|---|---|---|---|
| | | | What | How | When | Who | | | |
| | | | | | | | Company Guidelines[1] before any future lots could be accepted. New suppliers or suppliers that have not been previously identified must provide information to satisfy the current ABC World Shrimp Company Guidelines1 before receiving their delivered lots. Retrain involved staff. | staff from ABC World Shrimp Company, recognized third party auditors, and/or responsible authorities. | |
| Receiving (from Non-Integrated Shrimp Farms) | Environ-mental Chemicals | Supplier written and signed guarantee declaring compliance with food safety requirements in ABC World Shrimp Company Guidelines1 for Farmed Shrimp indicating the shrimp were not produced or harvested from contaminated waters | Confirm supplier identity for each incoming lot of shrimp accompanied with written and signed guarantee | Visual check for supplier and lot identity, and presence of accompanying guarantee | Every shipment and every lot received | Assigned Coordinator for Receiving | **IF** there is no guarantee present and/or the corresponding supplier cannot be identified for any individual (each) incoming lot at the time of delivery, **THEN** reject the lot(s) in question.<br><br>**OR** to qualify acceptance of any lot in question, the lot can be held in separate refrigerated storage for 24 hours to allow time to provide the required guarantee and/or supplier identity, and the lot in question can sampled and analyzed for potential drug residues. | Review of all receiving records within one week of initial monitoring; AND all suppliers must be validated for identity and awareness of the ABC World Shrimp Company Guidelines1 for Farmed Shrimp prior to product receiving; PLUS periodic verifications through on-farm visits and product testing. All accepted shrimp lots are subject to quarterly, additional or suspect analysis to verify absence of suspect chemical residues prior to processing or shipment of finished products. Any analytical testing must include | Copy of certifications per lots received; Verifications; Sanitation Control Procedures;<br><br>**AND** Receiving records documenting acceptance and rejections of shrimp at receiving, plus any additional corrective action involving advice and directives given to suppliers.<br><br>**PLUS** training records for Coordinator for Receiving |

| Critical Control Point (CCP) | Significant Hazard(s) | Critical Limits for each Control Measure | Monitoring | | | | Corrective Action | Verification | Records |
|---|---|---|---|---|---|---|---|---|---|
| | | | What | How | When | Who | | | |
| | | | | | | | To regain control, inform suppliers that they must comply with the established guidelines for ABC World Shrimp Company Guidelines[1] before any future lots could be accepted. New suppliers or suppliers that have not been previously identified must provide information to satisfy the current ABC World Shrimp Guidelines[1] before receiving their delivered lots. Retrain involved staff. | validation of methodology.<br>Letters of guarantee are always subject to verification through on-site farm visits and analytical testing of the shrimp in question that can be conducted by trained staff from ABC World Shrimp Company, recognized third party auditors, and/or responsible authorities. | |
| Deice / Dehead/ Grade | Pathogen bacteria growth due to temperature abuse and pathogen survival through cooking | Graded shrimp must be 30 count/lb. or smaller to comply with validated cooking method | Grade shrimp size | Measure resulting shrimp size from grader | Check shrimp size for every batch graded | Assigned Coordinator for Grading Operations | **IF** shrimp larger than 30 count/lb., **THEN** regrade for proper size.<br>To regain control, evaluate and document the cause for improper grading, adjust the graders. Make necessary adjustments for proper grading. If necessary, fix or replace errant grader, and retrain involved staff. | Daily review and signature for grading logs and corrective actions records. | Daily grading logs with continuous and visual checks for shrimp sizes. Process and equipment Validation Report. **PLUS** training records for Coordinator for Grading Operations. |

| Critical Control Point (CCP) | Significant Hazard(s) | Critical Limits for each Control Measure | Monitoring | | | | Corrective Action | Verification | Records |
|---|---|---|---|---|---|---|---|---|---|
| | | | What | How | When | Who | | | |
| Cooking | Pathogen bacteria growth due to temperature abuse and pathogen survival through cooking | Steam cooking temperature at minimum of 212°F (100°C) for minimum of 3 minutes exposure | Cooker temperature and total exposure time based on conveyer speed through cooker for shrimp smaller than 30 count/lb. | 1. Continuous temperature recorder per batch<br>2.Stopwatch to monitor time for test block to move through the equipment<br>3. Proper shrimp size (smaller than 30 count/lb.) | 1.Continuous recordings, and visual checks at least twice per day<br>2.Conveyor belt speed measured once per day and when the conveyer speed is adjusted<br>3. Recheck shrimp size for every lot | Assigned Coordinator for Cooking Operations | **IF** shrimp larger than 30 count/lb. **THEN** replace with proper size before cooking or recook.<br>**IF** cooking temperature or exposure time is less than the critical limits, **THEN** re-cook the affected product to suit the required critical limits.<br>**OR** when re-cooking is not feasible, the affected product should be discarded and not mixed or sold with properly cooked products.<br>To regain control, evaluate and document the cause for improper cooking and make necessary adjustments for proper grading and cooking temperature and exposure time before continuing with additional cooking. Retrain involved staff. | Daily review and signature for cooking logs and corrective actions records; Daily accuracy checks and annual calibration checks for the cooker temperature recording devices; plus prior cooker validation for cook performance.<br>(Cook performance should demonstrate the steam cooker provides a uniform 212°F/100°C cook for 3 minutes to achieve an internal product temperature of at least 165°F/73.9°C for 36 seconds necessary to kill *Listeria monocytogenes* for all shrimp sizes according to FDA *Hazards and Controls Guidance* Table #A-3 in Appendix 4.) This validation for ABC World Shrimp Company is for shrimp no larger than 30 count/pound. | Daily cooking logs with continuous and visual checks for shrimp size, cook temperatures and belt speeds (exposure times); and cook thermometer accuracy and calibration logs. Process and equipment Validation Report. Verifications; Sanitation Control Procedures;<br>**PLUS** training records for Coordinator for Cooking Operations |

| Critical Control Point (CCP) | Significant Hazard(s) | Critical Limits for each Control Measure | Monitoring | | | | Corrective Action | Verification | Records |
|---|---|---|---|---|---|---|---|---|---|
| | | | What | How | When | Who | | | |
| Weigh/ Pack/Seal/ Label/Case | Food additives – sulfites | All packaged units for sale will include 'sulfites' in the ingredients list | Finished product labels | Visual examination of the finished product labels and ingredient statements) | Representative number of packaged and labeled units per lot | Assigned Coordinator for Packaging | IF the packaged units do not have labels or labels with 'sulfites' listed in the ingredients statement; THEN Identify, segregate and relabel the improperly labeled packages.<br>Determine the cause for the problem and correct by removing and destroying the supply of incorrect labels and reviewing the label specifications with the label supplier.<br>Retrain involved staff. | Weekly review of packing log records and corrective action records; and annual review of label specifications, OR whenever labels are changed or replaced | Packing Report logs and corrective actions; plus copy of correct labels and label specifications;<br>**PLUS** training records for Coordinator for Packing. |
| Weigh/ Pack/Seal/ Label/Case | Food allergens – shrimp | All packaged units for sale will include 'shrimp' in the ingredients list | Finished product labels | Visual examination of the finished product labels and ingredient statements | Representative number of packaged and labeled units per lot | Assigned Coordinator for Packaging | **IF** the packaged units do not have labels or labels with 'shrimp' listed in the ingredients statement; **THEN** Identify, segregate and relabel the improperly labeled packages. | Determine the cause for the problem and correct by removing and destroying the supply of incorrect labels and reviewing the label specifications with the label supplier. Retrain involved staff. | Weekly review of packing log records and corrective action records; and annual review of label specifications, **OR** whenever labels are changed or replaced |

| Critical Control Point (CCP) | Significant Hazard(s) | Critical Limits for each Control Measure | Monitoring | | | | Corrective Action | Verification | Records |
|---|---|---|---|---|---|---|---|---|---|
| | | | What | How | When | Who | | | |
| Weigh/ Pack/Seal/ Label/Case | *C. botulinum* toxins | All packaged units for sale will include a statement that says 'Important: keep frozen until used, thaw under refrigeration immediately before use'. | Finished product labels for presence of 'keep frozen' statement | Visual examination of the finished product labels | Representative number of packaged and labeled units per lot | Assigned Coordinator for Packaging | **IF** the packaged units do not have a keep frozen statement; **THEN** Identify, segregate and relabel the improperly labeled packages.<br>Determine the cause for the problem and correct by removing and destroying the supply of incorrect labels and reviewing the label specifications with the label supplier to prevent future failures.<br>Retrain involved staff. | Weekly review of packing log records and corrective action records; and annual review of label specifications, **OR** whenever labels are changed or replaced | Packing Report logs and corrective actions; plus copy of correct labels and label specifications;<br>**PLUS** training records for Coordinator for Packing. |

# ABC WORLD SHRIMP COMPANY's
# Guidelines for Farm-Raised Shrimp

*(**BRIEF EXAMPLE for TRAINING**: This outline is a reduced example of concerns that should be considered in requirements for a basic food safety program. More details and specific requirements would be expected according to the size and nature of the operations, the attributes in different locations, and requirements in various locations or nations.)*

**PURPOSE:** To maintain food safety for all farm-raised shrimp through preventative controls

**PRIMARY FOOD SAFETY CONCERNS:**

- Chemical contamination from the surrounding environment or farm practices
- Illegal or improper use of drugs and related chemicals for medicinal treatments or promotion of growth

**REQUIREMENTS:**

All lots of farm-raised shrimp must be accompanied with assurances that they have not been exposed to environmental chemical contaminants or illegal use of drugs that could be present as residual levels unacceptable for commerce in designated markets. The assurances can be provided by different options best suited for the particular farming operations. All options must comply with the ABC World Shrimp Company Guidelines for specified 'supplier guarantees' outlined in their current HACCP programs. Options for assurance include:

- **Supplier guarantees** for individual farming operations and products(subject to verifications)
- **Farm Visit Reports and guarantees** provided by assigned ABC World Shrimp Company Field Agents
- **Third Party Auditor Reports and guarantees** through services pre-recognized by ABC World Shrimp Company and respective authorities
- **Analytical Testing** with acceptable and valid methodology

The farms can be **Integrated** (owned and operated by ABC World Shrimp) or **Non-integrated** (separate or independent operations).

**ADDITIONAL VERIFICATION:**

All shrimp are subject to initial, additional, periodic, or suspect sampling and analysis for potential chemical residues in the edible portion when it is appropriate in accordance with the ABC World Shrimp Company HACCP program.

# ABC WORLD SHRIMP Company's Guidelines for Farmed Shrimp

*(**BRIEF EXAMPLE for TRAINING**: This outline is a reduced example of concerns that should be considered in requirements for a basic food safety program. More details and specific requirements would be expected according to the size and nature of the operations, the attributes in different locations, and requirements in various locations or nations)*

| **Farm Name:** | **Location:**<br>**Contact Information:** | **Qualified or Pending**<br>**Qualification Date:** |
|---|---|---|

| **Requirements** | **Explanation and Concerns** | **Status & Comments (Qualified or Pending)** |
|---|---|---|
| 1. License or other agreement to permit the farming operations | • Farm is recognized by responsible authorities and is in compliance with local regulations<br>• Farm in compliance with regulations for water and land use<br>• Farm participates in local cooperative or zone management program (if available and applicable) | |
| 2. Farm location is not subject to potential chemical contamination from surrounding conditions or activities | • Farm water source not subject to contamination (i.e., sourced from natural sources, closed operations, or other neighboring operations)<br>• Pond locations (watershed) not subject to round-off or drainage from adjacent lands that could results in potential chemical contamination of the farm ponds<br>• Pond locations not subject to aerial spray of potential chemical contaminants | |
| 3. Farm operations and practices do not allow chemical contamination of the pond waters or shrimp | • Water sources including wells do not have presence chemical contaminants<br>• Proper container labeling and secure storage dedicated for any potential chemical contaminants including fuels, lubricants, pesticides, antifouling agents and other agricultural chemicals<br>• Proper disposal for any chemicals or chemical containers<br>• Corrective action plans in case of accidents or spills<br>• Farm animals including pets not allowed access to the pond waters<br>• Human or animal waste not used as fertilizers in or about the ponds<br>• No human waste disposed in or about the shrimp ponds | |
| 4. Feed source and identification | • Records available for all feed sources that are identified and pre-qualified<br>• Records available for any on-farm feed formulations and practices<br>• No use of farm by-products for feed | |

| Requirements | Explanation and Concerns | Status & Comments (Qualified or Pending) |
|---|---|---|
| 5. Disease Management & Biosecurity Program to prevent need for drug treatments | • Stock source (certificate or evidence for disease free stock)<br>• Proper biomass limits for carry capacity of farm (avoid stress due to crowding)<br>• Proper feed levels to prevent under or overfeeding that can cause stress<br>• Biosecurity Controls for land and water traffic, plus removal and secure disposal of diseased shrimp)<br>• Water quality controls and routinely monitored and recorded<br>• Disease Alert Program (monitoring for early signs or diagnosis) and Contingency Plan for disposal of diseased shrimp | |
| 6. Drug Use Program | • No use of drugs to prevent or cure diseases unless approved in accordance with the allowed medicinal practice (TABLE 1)<br>• No use of drugs, medications, hormones or antibiotics as growth promoters | |
| 7. Product Handling and Transport | • Time and temperature control measures set to prevent shrimp stress and abuse that could elevate bacterial levels on the shrimp<br>• Use of ice must assure clean, dedicated source<br>• Transport containers pre-cleaned and partially chilled before loading<br>• Use of insulation to maintain chilled products for duration of transport and holding<br>• No use of chemical treatments during transport and storage | |
| 8. Product Identification Program | • Farm maintains program to identify harvest production per pond, dates and harvest that is linked with "lot identification" for each delivery. | |
| 9. Training | • Training program for all farm employees to include instructions for all food safety concerns on the Pre-Qualified Suppliers/Farm List | |
| 10. Records | • All farm records subject to periodic accessibility on request for verifications | |

_____ _____

(Date) (Farm Signature)

_____ _____

(Date) (Buyer/Processor Signature)

TABLE 1. Guidelines for use of drugs or chemical treatments to prevent or cure diseases

_____ No use of 'non-approved' drugs or chemicals (listed below)

_____ Use of any drugs or chemical treatments must be preapproved by the buyer and responsible authorities and must be approved for use in the importing country for intended market

_____ All feeds purchased from outside sources or feed mills must be accompanied with recorded certificates to verify the feed does not contain prohibited drugs, shrimp by-products, growth promoters, and unsafe levels of heavy metals or other chemical contaminants. The records are subject to analytical verifications.

_____ All feeds made or formulated on-site at or near the farm must be accompanied with records to verify the feed does not contain prohibited drugs, shrimp by-products, growth promoters, and unsafe levels of heavy metals or other chemical contaminants. The records may require analytical verifications.

**Non-Approved Drugs:** Chloramphenicol, Nitrofurans, Fluoroquinolones and Quinolones, Malachite Green, Steroid Hormones, and related chemical compounds that may be identified by alternative or market names.

**REFERENCES**

(Additional space for background information and supporting documents or websites.)