

Kentucky State University Mobil Processing Unit (MPU)
Standard Operating Procedures for Prawn, Finfish, Smoked fish and Caviar Processing

Introduction

The processing lab was built with the intention of providing research and market access to small farmers while at the same time assuring that consumers are receiving a safe product. Prior to operation of the ARC lab, each oversight person operating in the lab must have successfully completed training sanctioned by the KSU ARC staff in operation of the facility. Individuals who have successfully completed this training are designated as “Facility Managers.”

KSU MPU use

Each Facility Manager of the MPU wishing to use the Lab must contact the KSU MPU Coordinator at the KSU MPU and request a date of operation. The Facility Manager will be given confirmation of that date of the request along with a copy of the Operating and Use Agreement, specifying the terms and conditions under which the Facility Manager may operate the MPU. KSU will contact the Kentucky Department of Public Health to approve date prior to confirmation. The Operating and Use Agreement must be completed and returned to KSU prior to the date of lab use. Restrictions on usage may apply depending on scheduling or other factors as determined by the KSU MPU faculty.

Harvesting Requirement

Producers wishing to use the KSU MPU for aquaculture species must first sign a document stating that agricultural or industrial practices in the area immediately surrounding the production area are not reasonably likely to cause contamination of aquaculture species above the estimated tolerance levels/action levels. Samples may be required. All products are harvested from bodies of water permitted under a propagation permit.

KSU MPU Work Stations

There will be four primary work areas for the MPU. They are:

1. Processing room
2. Receiving and De-Heading
3. Quality Control
4. Weighing, Packaging, Labeling

Operations at each station will be detailed.

Avoiding Cross Contamination

After each processed product lot is completed, there will be a wash and sanitize before brining in another process or product. Example: fish to shrimp, or fish to caviar, fish to smoking.

Processing room operations: Prawn

This station will be operated by a minimum of one person and a maximum of six persons. All activities following action #2, chill killing, will be conducted inside the MPU.

1. Prawns will be purged with potable water in tanks.
2. Prawns will be chill killed in ice water for 10 minutes.
3. Prawns will be placed through the access door of the MPU in poly totes
4. Prawn will be de-headed.
5. Tails will be placed on rinsing sink and rinsed thoroughly with potable water.
6. Head and guts will be placed in inedible bucket.
7. Tails will be inspected for abnormalities or contamination at quality control table.
Size or other sorting, if desired, will occur at the quality control table.
8. Normal tails will be placed in baskets and submerged in chill tank filled with ice/water.
9. Once the tails are below 40°F, they should be packaged and weighed. They must reach 40°F within one hour, but we suggest taking them out of the chill tank once they have reached 40°F for quality purposes.
10. Record weights and affix required labels to package or bag, add potable water if freezing, let drain if fresh and seal.
11. Place tail in freezer or refrigeration for customer pickup.
12. Tails must be transported under refrigeration or on ice at less than 40°F.

Sulfites/Salt will not be allowed in the production or processing of freshwater prawn in the MPU!

Processing room operations: Finfish: catfish, tilapia, trout, bass (Largemouth, Hybrid striped) paddlefish.

This station will be operated by a minimum of one person and a maximum of six persons. All activities following action #3, chill killing, will be conducted inside the MPU.

1. Fish will be harvested from clean, non-contaminated water and would have been properly purged or off feed.
2. Fish will be chill killed in ice water for 10 minutes.
3. Fish will be transported to the MPU directly from the pond or on ice or under refrigeration.
4. Fish will be placed through the access door of the MPU in poly tote.
5. Fish will be filleted, steaked, bulleted, gutted, or headed, gutted and skinned.
6. Processed fish products will be placed on rinsing sink and rinsed thoroughly with potable water.
7. Heads, viscera and racks will be placed in inedible bucket.
8. Products will be inspected for abnormalities or contamination at quality control table.
Size or other sorting, if desired, will occur at the quality control table.
9. Products will be placed in baskets and submerged in chill tank filled with ice/water.
Once the products are below 40°F, they should be packaged and weighed.
10. Any Vacuum packed product will reach 38°F prior to packaging and must be frozen or held below 38°F

11. Record weights and affix required labels to package or bag, add potable water if freezing, and seal. Fresh product should be drained, bagged and held on ice or in refrigeration.
12. Place products in freezer or refrigeration for customer pickup.
13. All fish products must be transported under refrigeration or on ice at less than 40°F.

Sulfites/Salt will not be allowed in the production or processing of fresh or frozen finfish in the MPU!

Processing room operations: Smoked Finfish: catfish, tilapia, trout, bass (Largemouth, Hybrid striped) paddlefish.

This station will be operated by a minimum of one person and a maximum of six persons. All activities following action #3, chill killing, will be conducted inside the MPU.

1. Fish will be harvested from clean, non-contaminated water and would have been properly purged or off feed.
2. Fish will be chill killed in ice water for 10 minutes.
3. Fish will be transported to the MPU directly from the pond or on ice or under refrigeration.
4. Fish will be placed through the access door of the MPU in poly tote.
5. Fish will be filleted, steaked, bulleted, gutted, or headed, gutted and skinned.
6. Processed fish products will be placed on rinsing sink and rinsed thoroughly with potable water.
7. Heads, viscera and racks will be placed in inedible bucket.
8. Products will be inspected for abnormalities or contamination at quality control table. Size or other sorting, if desired, will occur at the quality control table.
9. Products will be placed in brine through: vacuum, tumbler or soaked.
10. Once the products has brined for the appropriate time directed by thickness and method, it will be placed in the prepared smoker.
11. Record weights and affix required labels to package or bag, add potable water if freezing, and seal. Product should be cooled, bagged and held on ice, frozen or in refrigeration.
12. Place products in freezer or refrigeration for customer pickup.
13. All fish products must be transported under refrigeration or on ice at less than 40°F.

Processing room operations: Caviar: paddlefish, trout, and sturgeon eggs

This station will be operated by a minimum of one person and a maximum of six persons. All activities following action #3, chill killing, will be conducted inside the MPU.

1. Fish will be harvested from clean, non-contaminated water and would have been properly purged or off feed.
2. Fish will be chill killed in ice water for 10 minutes.
3. Fish eggs will be removed and placed in a stainless steel pan and passed through the access window into the MPU on the receiving table.
4. Fish will be de-headed. Viscera will be removed and placed in a discard bin. Fish will be held on ice to be processed under the **Finfish processing procedures**.

5. Eggs will be weighed
6. Eggs will be screened to remove membrane using stainless steel screens.
7. Eggs will be rinsed and re-weighed.
8. Eggs will be mixed with 3.5% WPS salt and set aside for up to 15 min.
9. Eggs will be then be placed in containers and placed in the chill tank.
10. Once the eggs reach 40°F in the center, the eggs can be transferred to other containers.
11. These containers are weighed, labeled with contact information, date, facility, weight, contents and safety instructions.
12. The labeled containers may be moved to a freezer or refrigeration.
13. Product must remain in freezer or refrigeration for customer pickup.
14. Product must be transported under refrigeration or on ice at less than 40°F.

MPU Closeout

Once MPU usage is complete, thoroughly clean and sanitize following the Sanitation Standard Operating Procedures.

The MPU Coordinator will inspect the MPU upon completion for proper inventory and cleanliness. They will also inspect all required paperwork.