DECLARATION

M/s.Prime Bio Proteins, Gujarat, India brings out this HACCP Manual under the authority of its Managing Partner. This HACCP Manual is original, authenticated and the procedures and activities detailed in it, are true and correct. This HACCP Manual is in compliance with the code mentioned in the Hazard Analysis and the HACCP Plan. The procedures outlined in this Manual are mandatory and shall be complied by all the employees ofM/s.Prime Bio Proteins, Gujarat, India. The product description, process flow charts, hazard analysis and HACCP plans of the plant envisaged in this Manual shall be strictly complied by all the personnel of this establishment.

Any changes or modifications to be incorporated in this Manual shall be made only upon authentication by the Managing Partner and the details of the modifications by the HACCP team leader. The details of the modifications shall be indicated in the record of Amendments.

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Date	01.02.2023		Date	01.02.2023

Prime Bio Proteins, Gujarat, India, is the most modern integrated plant, manufacturing Shrimp Meal. It is locatedat Veraval,Gujarat,India. The company is manufacturing Shrimp Meal which is marketed to National and International Markets.

The unit has been able to create a unique position in its commodity itemthat isShrimp Meal.

Prime Bio Proteins, Gujarat, India has developed a proprietary system of selection of good quality dry shrimps, drying, cooling and packing the products under controlled manufacturing parameters for each process, smooth industrial relations and continuous up gradation of facilities, amenities, tools and equipments. We strive towards continuous improvements and promote fair operating practices in all the operations carried out. The company has implemented a Quality Management System in every function to achieve efficiency and effectiveness of the system.

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Amnt No.	Date of amendment	Page No.	Nature of change	Authority

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QUALITY POLICY

Prime Bio Proteins is committed to providing adequate, safe and best qualityShrimp Meal. We ensure that we meet the requirements of our customers on a consistent basis.We shall endeavour to achieve this through establishment of quality objectives and shall ensure this policy is communicated to all members of the staff in the organisation. We shall continually maintain and improve, efficient and effective Quality Management Systems, meeting both the regulatory and Food and Feed Safety Management Systems.

QUALITY OBJECTIVES

1. To detect and prevent any non-conformance during production and implement means to prevent its recurrence.
2. To reduce the incidence of customer complaints through systematic monitoring of customer feedback.
3. To develop highly motivated and skilled human resource with strong sense of values and commitment of quality.
4. We strive to continually improve upon our companies' Quality, Customer Base and Area Growth.
5. Provide continual training to employees to enhance their skills, knowledge and technical competency.
6. We strive to improve company growth and our Customer Base.
7. Cost reduction through continual improvement and waste elimination.

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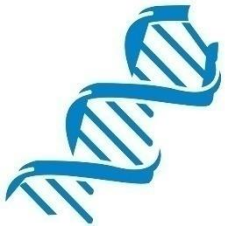
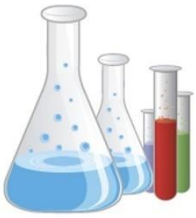
The HACCPsystem of M/s. Prime Bio Proteins, Gujarat, India, ensures to produce qualityend products by identifying it at various processing steps. Its main goal is to supply consistent quality &continuous supply of Shrimp Meal as a rich protein source, and is used as an ingredient in feedstuff in theaquaculture and poultry industries.The assessment of operational HACCP system is specified to ensure during preparation, processing, packaging, storage and dispatch of the Shrimp Meal.

The HACCP is developed based on the following terms of references:



Biological aspect



Chemical aspect

Physical aspect

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M/s. Prime Bio Proteins, Gujarat, India is firmly committed to adopt the principle of HACCP System in their processing plant for processing and supply of marine foods. In order to develop an effective HACCP design, implementation and management of the HACCP Plan, the company shall focus on the following aspects:

1. Management Commitment
2. HACCP Training
3. HACCP Team Assembly
4. Description of Intended Use of Product
5. Development and Verification of Product Flow Diagram

1. Management Commitment:

The top officials of M/s.Prime Bio Proteins, Gujarat, India; i.e. the Managing Partner, extends strong support and considers HACCP System implementation a priority in the company. Prime Bio Proteins, Gujarat, India is firmly committed to adopt the principle of HACCP System in their processing plant for processing and supply of marine foods. In order to develop an effective HACCP design, implementation and management of the HACCP Plan, the company shall focus on the following aspects.

2. HACCP Training:

For the implementation of the HACCP System at M/s.Prime Bio Proteins, Gujarat, India; the company has constituted the HACCP Team. The details of the HACCP Team Assembly are mentioned in ensuing chapter. The team is trained on a periodic basis to keep a check on all HACCP related norm implementation.

3. HACCP Team Assembly:

Keeping in line with the latest quality control methods and ensuring its standard, a HACCP team has been formed which comprises of the following members of the organization.

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NAME	DESIGNATION	RESPONSIBILITY
Mr. Iqbal Virani **Experience** **8 years**	Managing Partner	• Generating further enquires and new business for the company and thereby enhancing the overall growth of the organization. • Evaluating the overall marketing activity and the degree of communication with all the other departments for providing quality services and delivering the same to the customer. • Periodically reviewing customer complaints and quality issues identified. • Planning appropriate strategies and action plans for purchase of materials in coordination with the production/ service provision department. • Maintaining all the relevant records with regard to purchase including supplier list, supplier evaluation and stock. • Controlling and maintaining all the pertinent and specified quality records at the concerned work place.
Mr. Adnan Salim Abajumma **Qualification** **HSC**	Plant Manager	• Responsible for supervision of daily jobs. • Responsible for handling of customer complaints & non-conformances. • Responsible for monitoring of quality objectives. • Responsible for monitoring of Daily Work Book. • Responsible for updating status of daily jobs to the top management. • Authorized to interact with suppliers.

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NAME	DESIGNATION	RESPONSIBILITY
		• Ensure Smooth facilitation of the workflow and production process. • Ensure all the work activities are undertaken as per safety norms. • To meet deadlines in terms of forecasted Production volume, monthly and annually.
Mr. Imtiyaz **Qualification** **HSC** **Experience** **10 years**	Export Executive	• Receiving enquiry from foreign customers and providing quotations for the same. • Preparing Export documents. • Corresponding according to the requirement of the foreign buyers. • Arrangements for shipments. • Arrangements for samples • Authorized to interact with foreign customers & suppliers
Mr. ASIF **Qualification** **P.U.C** **Experience** **10 years**	Plant Operator	• Monitor the equipment under the charge of all operators. • Control of instruments and ensure their proper functioning • Schedule and coordinate maintenance efforts if necessary. • Authorized to shut down or otherwise handle any equipment during an emergency. • Perform other administrative tasks, such as record test results and other data related toplant operation.

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NAME	DESIGNATION	RESPONSIBILITY
		• Checking test results over time in order to suggest adjustments to the manufacturing process as necessary and reporting these findings to supervisors and other managerial personnel.
Mr. Rathod Piyush. J **Qualification** **B.Sc.** **Experience** **2.5 years**	Lab Technologist	• Responsible for implementation of QMS. • Responsible for supervision of daily jobs. • Responsible for handling customer complaints & non-conformances. • Responsible for monitoring of Quality Objectives. • Responsible for implementation of kaizen. • Responsible for updating status of daily jobs to top management. • Authorized to interact with suppliers. • Controlling and maintaining all the pertinent and specified quality. • Records at the concerned workplace. • Controlling document and data as applicable. • HACCP training by MPEDA, ISO Standards. • HACCP trained person.

4. Description of intended use of product:

The Shrimp Meal is used as an ingredient in feed for aquaculture and poultry industries.

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5. Development and verification of the product flow diagram:

The HACCP team has developed the steps required to manufacture and distribute each product produced in the factory. A clean, simple and complete description of the process is mentioned for each product.HACCP team members have evaluated and made onsite verification of plant layouts, personnel flow, installation of equipments, maintenance, location of rooms (change room, rest room etc), storeroom, subcontract services (pest control, waste management), pre-requisite program of cleaning and disinfection, practices of personnel on food hygiene & food safety (including visitors and external service providers), product descriptions, process flow charts, packaging, dispatch, etc. have found to be accurate, systematic, no adverse effect on food products and is an actual presentation of what is practical in the processing plant.

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Verified by HACCP team

Sl. No.	Name	Designation
1	Mr. Iqbal Virani	Managing Partner
2	Mr.AbrarUlHuq	Management representative
3	Mr.Adan Salim Abajuma	Plant Manager
4	Mr. Imtiyaz Gazipura	Export Executive
5	Mr. Asif Chauhan	Operators / Technicians
6	Mr.Rathod Piyush. J	Lab Technologist
7	Mr.Balubhai	Boiler Operator

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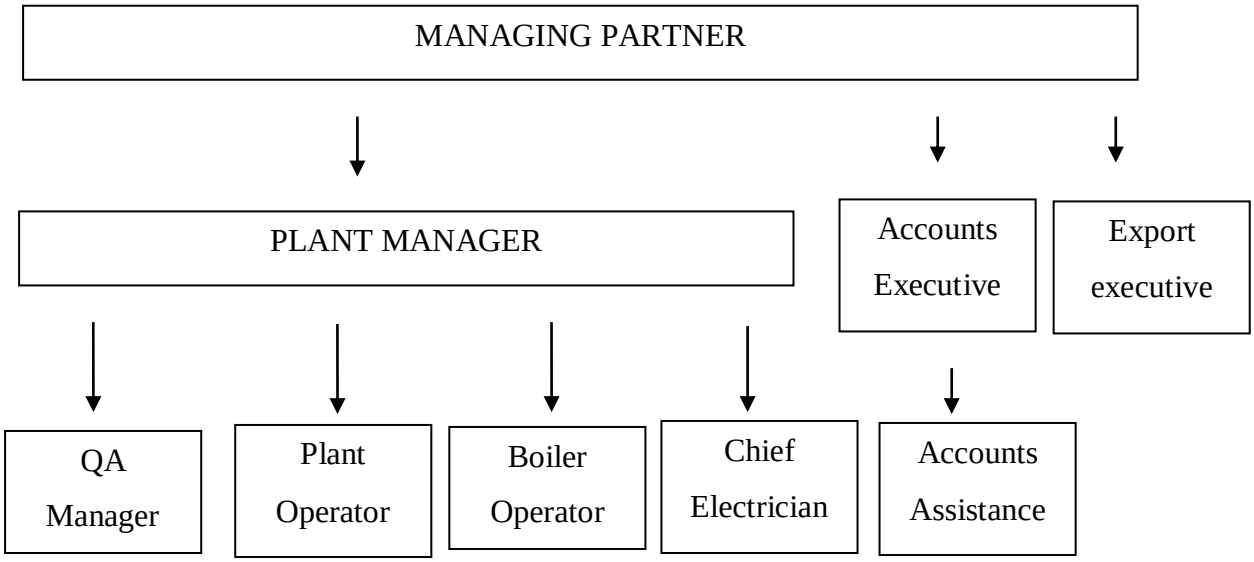

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MANAGING PARTNER:

The Managing Partner takes all financial & administrative policy decisions for the entire company & its operations. He analyses the day-to-day marketing strategy, purchase, prices and coordinates between plant and procurement centres. He provides adequate resources, formally constitutes and conducts the management review, overall direction towards total production & quality improvement. In his absence, the Management Representative is responsible for smooth operations.

MANAGEMENTREPRESENTATIVE:

The Management Representative is responsible for administration, coordinates with the Managing Partner on Production, and purchase strategy. He closely monitors the profit & loss made by the company, advises the Managing Partner in day-to-day operations, scrutinizes the maintenance of the plant, machinery, vehicles and supervise the purchase goods & procurement of raw material in the factory. In his absence, the Plant Manager coordinates for smooth and normal functioning of the daily activities.

PLANT MANAGER:

The Plant Manager is responsible for general administration of the plant. He is responsible for day-to-day production planning, quality of the product being produced in the factory and dispatch of the product. He is the HACCP coordinator. He reviews the HACCP Plan and is also responsible for the implementation of GMP's, SSOP's and SOP's. In the absence of the Plant Manager, the QA Manager shall take responsibility.

EXPORT EXECUTIVE:

The Export Executive is responsible for receiving enquiry from foreign customers and sending quotations for the same. He is responsible for preparing of export documents and arrangements for shipments and samples. He is authorized to interact with foreign customers & suppliers, to lay down the company's Quality policy & Quality objectives and becommitted to the same. In his absence, the Management Representative & Plant Manager will coordinate forsmooth and normal functioning of the daily activities.

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ACCOUNTS EXECUTIVE:

The Accounts Executive is responsible for handling all the work like, accounting, billing, tax and preparing all the documents for the annual audit.

QUALITY ASSURANCE MANAGER:

The QA Manager is responsible for assuring the quality of the product & sanitation of the unit. He shall monitor the GMP's & SSOP's on a regular basis. He reports to the Plant manager and reviews the HACCP Plan.

PLANT OPERATOR:

The Plant Operator is responsible for the operation of the machinery as and when needed by the production department. He also does the regular maintenance and proper working of the machinery in their respective shifts. He is also responsible for the maintenance of records pertaining to the processing equipments.

BOILER OPERATOR:

The Boiler Operator is responsible for the operation of the boiler as and when needed by the production department. He also does the regular maintenance and proper working of the boiler in their shifts.

CHIEF ELECTRICIAN:

The Chief Electrician is responsible for the electrical systemof the unit as and when needed by the concerned department. He also does the regular maintenance and proper working when necessary.

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RESPONSIBILITY

The Plant Manager/Quality Team is responsible for implementing the specific area of GMP as mentioned in the procedure below.

GENERAL MAINTENANCE

- General maintenance of the building is done in an effective manner to keep the building structure intact to carry out regular activities.
- The outside premises are cleaned for waste or debris and properly disposed in an environment friendly manner.
- The building is painted at a regular time and all the plumbing lines are checked for leakage.

1. PERSONNEL

A.DISEASECONTROL

- The employees are not permitted with open wounds, running nose, sores, infections and other noticeable illness.
- Once a year, a complete medical checkup is conducted for all employees. Blood test shall be conducted to identify the carriers of certain pathogens like *Salmonella, Vibriocholerae*.
- A medical surveillance programme is conducted for the personnel handling the product before entering into the processing hall.
- Persons who are not fit to handle the product are advised to see a doctor. Upon doctors' fitness certificate, they shall be allowed to resume their duties.

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B. CLEANLINESS

All personnel in the Tiny Shrimp Meal processing activities maintain a high degree of personnel cleanliness. This includes:

- Wearing a clean uniform.
- Maintaining adequate personal cleanliness.
- Storing clothing and their personal belongings separately away from the processing area.
- Taking all precautions to protect the product from being contaminated by micro-organisms or foreign substances by avoiding cosmetics, chemicals and medicines applied to the skin.
- Providing suitable uniforms to work and protect against contamination of food and food contact surfaces (dress, cap, gumboot, shoes, and rubber gloves).
- Hand washing and sanitizing facilities shall be provided at the entry.
- The staff who are wearing ornaments/ jewelry shall not be allowed inside the processing area and the same can be kept inside a locker provided to them with the exception of a plain nose stud and earrings.
- Smoking, Eating, chewing, drinking beverages, eating tobacco and spitting shall be prohibited in the processing areas/ plant surroundings and necessary action shall be taken to avoid the same. All the food handlers are under strict instructions that they shall not wear any
  - ✓ Visible jewelry especially hanging or studded with stones, while on work.
  - ✓ It includes wrist watch, holy threads, finger rings on hands or foot.
- It is also not permitted to use medicinal balms, perfumes or heavy cosmetics.
- All are advised to use the facility of individual lockable cupboards arranged in the change rooms to keep such valuables before entering to the work place.

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C.EDUCATION AND TRAINING

- A kind of interview shall be conducted before inducting a worker so as to know his / her education &experience about processing perishable commodities.
- Guidelines shall be given to fresher's about the nature of work, importance of cleanliness, importance of keeping product and personnel hygiene.
- Supervisors and housekeeping staff are trained regarding high level of compliancy to achieve for cleanand safe food.
- The management provides and conducts trainings for the staff as per the schedule, on relevant topics.
- The training is given by the HACCP team to company employees on relevant topics such as, Quality policy, Importance of personnel hygiene, plant sanitation, safety measures in Shrimp Meal factory, Cleaning/maintenance of warehouse, Container Loading/unloading activities, CCP monitoring &importance of product temperature. Water tank cleaning, premises housekeeping, hazard preventing systems, prevention of cross contamination, employee traffic control, glass/extraneous physical hazard prevention, safety measures, hazard awareness, critical limits & deviation, action plans, Operating systems of various equipments, emergency safety measures, etc.
- Training shall be given to all the workers based on their nature of work in their known language.

D.SUPERVISION

- A periodic health checkup is carried out and health cards of all employees shall be maintained. The QA personnel verify the routine checkups and records at regular intervals.
- Visual inspection by the supervisor is done to ensure that the people infected with open wounds and minor illnesses are not present within the food handling areas.
- **Frequency of audit**: Daily, before the start of the production, the plant condition is verified.
- The Sanitation Manager shall regularly check & assess personnel hygiene and sanitation at all stages.

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2. PLANT AND GROUNDS

A. GROUNDS

- The entire premises are concreted and it is suitable for easy cleaning and maintenance.
- All plantations shall be cut and maintained on regular basis and weeds are controlled so that it does notconstitute as a source of contamination.
- The outside drainage is completely closed and manholes are provided for removing solid wasteparticles and grills are provided to avoid rodent entry.
- The outside drainages are cleaned on a daily basis to avoid pests and facilitate breeding.

B. PLANT CONSTRUCTIONAND DESIGN

- The plant is ideally situated, facilitating good ventilation by the surrounding open area.
- The plant has a clearly defined perimeter, free from accumulation of litter or any waste matter thatmay contribute to atmospheric pollution.
- The operations shall be strictly adhered to the Glass Policy to avoid any haphazard event, where in breakage or damages shall be noticed and informed to supervisors or Quality Assurance persons immediately. The area shall be cordoned off. All the production activities of that area shall be stopped until it is cleaned completely. Upon clearance from the Quality Assurance personnel, production shall be restarted. Based on the risk assessment, documented procedures detailing the action to be taken in case of breakage of glass, brittle or hard plastic, which includes glass packaging and similar material, shall be implemented.

  1. Quarantining the products and production area that were potentially affected.
  2. Cleaning the production area.
  3. Inspecting the production area and authorizing to continue production, changing of work wear.
  4. Inspection of footwear specifying those staff authorized to carry out the above points.
  5. Recording the breakage incident.

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- The plant surroundings and the road to the premises is concreted and neatly maintained to prevent windblown dust contaminating the inside area. Fence has been constructed on the walls to prevent any kind of ingression of animals.
- The plant layout and construction is such that it facilitates a smooth working line. Care has been taken to prevent cross contamination. It influences employees to perform their duties well and protect against contaminating Shrimp Meal.
- The entrance door, opening outside has controlled devices and plastic curtain to prevent entry of pests. The windowsills are sloped to prevent accumulation of dust.
- Sufficient space is provided for placement of equipments and storage of materials as per the maintenance of sanitary operations and safe production.
- Separate storages are provided for stacking the materials, with sufficient place, ventilation, light facilities, pallets, etc. to reduce the potential hazards of products, contact surfaces and packaging materials.
- The raw material receiving area has been provided with raw material receiving tank or fish tank to unload the raw material for further processing.
- There are two raw material receiving tanks or fish tanks provided for the supply of raw material to each individual Shrimp Meal unit for processing.
- Dispatch areas are provided with a mesh/net to prevent pest entry. The walls are made of cement and roof ceiling is made of cement sheet which is designed to prevent dust accumulation or condensation.
- The Shrimp Meal processing takes place with closed equipments hence contamination from external source does not happen in the entire processing activities.
- Adequate lighting is provided in all the areas including hand-washing areas, change rooms, toilets, receiving area, processing area, packing area, ware house, generator room, machinery areas etc.
- Working area is properly illuminated. Exhaust fans are provided to the roof of the processing area for adequate ventilation.
- All equipments, cables and switchboards of the plant are maintained clean and tidy.

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3. SANITARY OPERATIONS

A. GENERAL MAINTENANCE

- The factory is maintained in good condition so as to avoid contamination. The floor, walls, machineries, forklift and utensils are cleaned once in a day.
- The outside premises are cleaned for wastes or debris and properly disposed in an environment friendly manner.
- All the machineries & equipments are serviced as per service requirements through preventive maintenance schedule and timely maintenance.

B. SUBSTANCES USED FOR CLEANING AND SANITIZING& STORAGE OF TOXIC MATERIALS

- The sanitizers, detergents and other cleaning chemicals are being used in limited quantity and are stored in a separate store room with proper labeling.
- The machinery related oils, grease, lubricants; toxic chemicals (pesticides) are stored in a separate area with proper labeling and locked to avoid free access to others.

C.PEST CONTROL

- Effective measures are taken to exclude pests from inside and outside of the premises area.
- Daily check and operations are carried out to keep the pests and rodents outside the premises.
- Rodent traps are placed at different accessible locations to control the rodents.
- The entrance is provided with air plastic curtains and mesh net to avoid entry of pests and flies. The external agency is performing annual pest control services for spider, flies, mosquitoes, cockroach, lizard and rodent control. The services are performed in a professional manner by using approved pesticides and insecticides. The Pest Control monitoring is done fortnightly.

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D.SANITATION OF FOOD CONTACT SURFACES

- Easy cleanable equipments & machineries are provided, the food contact equipment surfaces are cleaned during idle time.
- Packing materials are kept on pallets and stored in a separate room with proper ventilation.
- Shrimp Meal packing employees are provided with clean uniform, cap and shoes. Clean gloves are provided for packing the Shrimp Meal and are replaced every shift.
- Rubber gloves and clean samplers/ spoons are provided to the customer during sampling of the product.

E.STORAGE AND HANDLING OF CLEANED EQUIPMENT AND UTENSILS

- Clean moveable equipments like forklift, air compressor and utensils are provided.
- Packing materials are stored in closed areas.

4. SANITARY FACILITIES AND CONTROLS

A. WATER SUPPLY

- Potable water is used for cleaning equipments, hand washing, sanitizing and toilets and the source of water is from the bore well.
- The water is supplied through pipelines taken with proper safety measures and avoiding the chance of contamination.
- Once in two years, the water is tested for microbiological parameters as per IS-4251from an EIC approved external laboratory. The water used in the processing area is tested regularly for potability.
- The capacity of the overhead tank is 12,000 liters and that of the boiler water tank is8,000 liters.
- The water tanks are cleaned once in a month under the supervision of the sanitation in charge.

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B. PLUMBING

- Systemized plumbing lines are provided; the lines are carrying sufficient water to required location.
- Water is carried to all necessary places through plumbing lines and taps are provided at required points.
- The taps are serially numbered and hoses are provided for easy access of water.
- Only one plumbing system is established in the processing plant.

C.SEWAGE DISPOSAL

- Rain water is drained through the natural drain.
- The solid waste is collected periodically and disposed in a proper manner.
- Suitable slope is provided to prevent back flow.
- The water from wash, rainwater, etc. is directly drained off to municipal gutters.
- The septic tank is located away from the sewage lines.

D.TOILET FACILITIES

- Sufficient numbers of toilets are provided.
- The toilets are situated away from the processing hall and are cleaned and sanitized as per the predetermined schedule.
- The toilets are well-ventilated and are provided with adequate space.
- Adequate water facilities, self door closers and hand washing facility with disposable papers are provided in toilet areas.

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E.HAND WASHING FACILITY

- Hand wash facilities are provided for the workers at the entrance.
- Taps, liquid soap, single use napkins, hand driers and foot operated waste bins are provided in the hand wash area.
- Easy to understand signboards and hand washing & hand sanitizing procedures are provided at suitable locations for better understanding of the concept of personnel hygiene.

F. RUBBISH AND OFFAL DISPOSAL (WASTE MANAGEMENT)

- The waste from packing material and other wastes are disposed into the provided dustbins. The housekeeping employees remove these kinds of wastes during the break and dispose it on regular intervals.
- The solid and wet wastes are disposed completely with enclosed or covered vehicle so it is not accessible for birds and animals.
- The Waste is segregated as Dry waste, Wet waste, Chemical Waste and Bio Hazard Waste.
- Solid waste generated during the production especially in the raw material receiving are systematically collected in the crates and removed and is transported by clean, disinfected vehicles and disposed off after each break or when needed.
- Depending on the perish ability, rejected materials should be disposed as soon as possible.
- The dry waste is collected and stored in the dry waste located in the non-operating area and disposed off.
- Waste is also segregated as chemical, glassware, and general waste and is collected by an approved contractor.

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5. EQUIPMENTS AND UTENSILS

A. MATERIAL AND DESIGN

- The equipments are established permanently and provided with adequate washing facility.
- Manual operating forklifts are designed and used for loading & unloading the Shrimp Meal bags.
- Utensils such as steel spoon/ samplers, plastic basins are used for Shrimp Meal inspection.
- The entire system is designed with automated machineries from raw material to final end product.
- The material is moved from one equipment to another after each processing step through noncorrosive conveyors.
- The cooler is designed to circulate the water through the coil without coming in contact with or contaminating the Tiny Shrimp Meal during the cooling process.
- The sieving machine is designed to eliminate the foreign particles, big bones and metal/plastic particles while sieving the Shrimp Meal.
- A single Shrimp Meal processing line is being used for production.

B.SEAMS

- All contact surfaces and their joining are smooth, with no ridges or crevices to avoid the source of contamination.
- All measuring devices are protected from breakage or misuse by unauthorized personnel.

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C.EASY TO CLEAN

- The equipments are erected so as to facilitate the smooth flow of work and are designed tofacilitate easy cleaning.
- Utensils which are used in the packing area, are made of non-corrosive material and are easily cleanable.
- The cleaning and sanitation of equipments and utensils is carried out on a regular basis.

D. TEMPERATURE MEASURING DEVICE

- Temperature reading devices are used in the laboratory and for raw material and Shrimp Meal finished product checking.
- Calibrated pressure gauges are used for various equipments.
- Calibrated electronic balances are used for weighing the raw material and final products.

E. ACCURATE & ADEQUATE INSTRUMENTS

- The equipments and measuring gauges are calibrated as per regulatory standards by government recognized agencies with national and international standards.

F. PREVENTION OF CONTAMINATION

- The machinery is designed and constructed in such a way that the lubricants do not come in contact with the material under process.
- Proper care is taken from condensation and contamination of the products from overhead pipes.

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6. PRODUCTION AND PROCESS CONTROL

A.RAW MATERIAL AND INGREDIENTS

- The storage and dispatch is carried out in shifts under the control of the Supervisor.
- The raw material is inspected vehicle wise by the supervisor.
- The raw materials are inspected for organoleptic parameters and temperature.

B.MANUFACTURING OPERATIONS

- Sanitation of all the equipments and utensils is done as per the sanitary operating procedures.
- The processing of Shrimp Meal is carried out in automated equipments with effective measuring devices and instruments.
- Adequate power generators are provided during power failure.
- The workflow is designed in such a way that there is no cross contamination to the finished products.
- Identification of critical control points are carried out prior to operations.

7. WAREHOUSING AND DISTRIBUTION

- The equipments and utensils used, are made of non-corrosive material, having smooth surfaces and are easyto clean.
- The weighed Shrimp meal bags are stored on pallets in the warehouse and are stacked in such a waythat it facilitates flow of air all round.
- The transportation of Shrimp Meal is by means of closed containers at ambient temperature.
- At the time of exports, each shipment is accompanied by a Health Certificate issued by the Export Inspection Agency or a zoo sanitary export certificate endorsed by a veterinary authority, whichever is applicable, depending on the country of export and its requirements.
- The vehicles/ containers used for dispatch are dedicated only for the transportation of material of Shrimp origin.

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PLANT SANITATION:

- Sanitation of the unit is monitored by the Q.A personnel and it is carried out on a daily basis depending on the various areas and requirements, as per the concerned activities.
- All areas are monitored on removal of solid & liquid wastes, cobwebs, dust, etc. This includes cleaning of drains, roads, gardens, toilets, etc. All waste materials are disposed on a daily basis.

1. SAFETY OF WATER

- The water used in this industry is fresh water and is suitable for Shrimp Meal production.
- The water received is pumped to the overhead tank, which is kept closed alwaysto prevent bird droppings.
- The water is used for hand wash, toilets, floor cleaning, steam purpose and equipment cleaning.
- The Boiler water is treated with Chemical OLKLIN PHBC, OLKLIN AS(BW)-1for reducing the hardness, maintaining the pH, avoiding corrosion and settling down the suspended solids being present in the water.
- The steam is generated using condensed water which is collected in the cooker and drier during processing.
- Cleaning schedule for water systems: The overhead tank is emptied and the sidewalls and floor is scrubbed using brush, soap & disinfectant, and the wastewater is pumped out. The boiler water tank is drained, rinsed, scrubbed and washed with clean water.
- The overhead tank is washed twice in a month and the boiler water tank is washed every 30 days and the same is recorded.
- There is no water comingin contact directly with the product. The entire production takes place with the use of steam.
- All taps are numbered serially.

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2. SANITATIONOF FOOD CONTACT SURFACES:

The processing area is cleaned as per the cleaning schedule and the following procedure by the hygiene team.

Area	:	**Surrounding/yards**
Procedure	:	Remove solid wastes, weeding out bushes etc. and wash with water.
Frequency	:	Daily
Responsibility	:	Workers / Sanitation Supervisor / QA personnel
Area	:	**Shrimp Meal processing section /warehouse /machinery store/packing area/ Boiler area.**
Procedure	:	Cleaning the floor, roof, corners and insect proofing thoroughly using a broom. Checking for inhabitation of rodents/ insects and taking adequate measures to prevent such agents as and when required.
Frequency	:	Daily, every shift
Responsibility	:	Section worker /Sanitation Supervisor / QA personnel.
Area	:	**Oil section / Decanter area**
Procedure	:	Rinse the floor with soap solution, scrub and wash with water
Frequency	:	Daily and when required
Responsibility	:	Section worker/ Sanitation Supervisor, QA personnel
Area	:	**Office**
Procedure	:	Sweeping and removing of solid waste, and general upkeep
Frequency	:	Daily
Responsibility	:	Housekeeping helper

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Area	:	**Toilets**
Procedure	:	Scrubbing with detergent and washing with water and then apply disinfectant
Frequency	:	Daily
Responsibility	:	Housekeeping helper

Area	:	**Generator room**
Procedure	:	Cleaning of the equipment and section thoroughly to remove oil/ grease etc.
Frequency	:	Daily
Responsibility	:	Generator operator / QA personnel

Area	:	**Insect catcher**
Procedure	:	Remove dead insects if any, and wipe with wet/ dry cloth
Frequency	:	Daily
Responsibility	:	Housekeeping helper

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SN	Type of equipment	Cleaning Procedure	Frequency	Responsibility
1	Unloading Pit	Apply water – Manually wash	Every shift	Supervisor, QA personnel
2	RM Screw conveyor	Apply water – Manually wash	Every shift	Supervisor, QA personnel
3	conveyor	Manually wash with normal water	Every shift	Supervisor, QA personnel
4	Drier	High pressure stream wash	Every shift	Supervisor, QA personnel
5	Pulveriser	High pressure air compressor	Every shift	Supervisor, QA personnel
6	Cooler	High pressure air compressor	Every shift	Supervisor, QA personnel
7	Sieving machines	High pressure air compressor	Every shift	Supervisor, QA personnel

Note: Cleaning agents and disinfectants are stored separately under lock and key. The entire schedule is verified by the Plant In charge.

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3. PREVENTION OF CROSS CONTAMINATION:

- The processing layout is such that the product is protected from all types of contamination.
- A separate area is provided for raw material storage, feeding, processing, packing and warehouse.
- The workers are trained to abstain from bad habits and hence refrain from behavior that contaminates the product.
- The entry of the processing area is provided with change rooms, separate shelves are provided to keep uniforms so that there is no contamination from street clothes.
- The movement of personnel from different sections is totally restricted to avoid any possible contamination.
- The layout of the unit is such that the product is protected from contamination.
- Separate storage areas are provided for sanitizing agents to avoid cross contamination.
- Waste is segregated and disposed off separately.
- Gloves and outer garments are made of impermeable material and are used and cleaned regularly.
- Equipments, utensils and machinery are cleaned before commencing the production.
- Cleaning and sanitation procedures are monitored daily by the Supervisor and QA personnel.
- Trainings on importance of cross contamination are carried out for different section employees on relevant topics.
- The raw material receiving section employees and packing section employees are in two different areas hence, no chance of contamination.
- The products are packed in clean, single use, tightly sealed, water/leak proof bags and stored such that there are no chances of cross contamination.
- The containers used for export are sealed with seals denoted by a number which can be traced by Government authorities/Customs and cannot be opened thus ensuring zero chances of cross contamination or adulteration of the product.

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- The product, Shrimp Meal is not meant for human consumption; hence frequent microbiological analysis is not required for this industry.
- Color coding is maintained for employees as mentioned below.
  - Raw material receiving / Fish tank area –Black color pant, red shirt and black boots
  - Packing area –Black color pant, orange shirt and rubber shoes.

4. MAINTENANCE OF HAND WASHING, SANITIZING AND TOILET FACILITY:

- Hand washing facility is provided at required places in the factory and sufficient number of toilets are provided and are situated away from the processing hall and are cleaned and sanitized as per the pre determined schedule.
- Well ventilated rest rooms with adequate area are provided to the workers.
- Hand washing and sanitizing facilities are provided at the entrance point.
- Foot operated wash taps, liquid soap, nailbrushes and single use towels, foot operated waste bins are provided.
- The hand wash area is checked intermittently and before start of work by the supervisor to provide adequate quantity of soap solution, towels etc. The cleanliness of these areas is also checked by the supervisor and noted in the "Daily Sanitation Audit Form.
- Sufficient number of toilets is provided in the change rooms & office. The toilets are cleaned daily by the sanitary team. First liquid soap is applied and scrubbed with the brush for few seconds and washed with water and disinfectant is applied.

Responsibility: Sanitation Supervisor, QA personnel

5. PROTECTION FROM FOOD ADULTERANTS:

- The food and food contact surfaces and food packing materials are protected from adulteration with non-sanitizing and sanitizing agents, metal fragments, lubricants, pesticides, fuels etc.
- All food grade and non-food grade belongings are stored separately with proper labeling. The supervisor & QA person inspects the areas, for proper labeling on daily basis.

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- The products do not contain any prohibited material that originates from mammals/animals and the same is labeled on the packing material of the product.
- All food packaging materials are stored in a separate packing material store such as poly bags, etc.
- Poly bags are covered with polythene sheets to prevent entry of dust and dirt.

Responsibility: Supervisor, QA personnel.

Record: Daily sanitation audit form.

6. PROPER LABELING, STORAGE AND USE OF TOXIC COMPOUNDS:

- Toxic compounds are not used in the unit. The lubricants, pesticides, fuels etc. are stored away from the storage area.
- Chemicals, fuels, and other possible contaminants are stored strictly outside the processing hall only and with proper labeling.
- All items are stored with proper labeling with compound name, manufacturer/distributor name with date and instructions for proper use.
- All chemicals are stored in the limited access room, away from the Shrimp meal storage and Shrimp meal products handling equipment.
- The chemicals are monitored by the Supervisor/ QA personnel on a daily basis.

Responsibility: Supervisor, QA personnel

Record: Daily Sanitation Audit Form.

7. CONTROL OF EMPLOYEE HEALTH CONDITIONS

- The employees are trained on routine hygienic practices before entering the processing area.
- Smoking, spitting, chewing while handling the Shrimp Meal is completely prohibited.

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- The supervisor/ QA personnel observe the employees for symptoms of illness (running nose, diarrhea, fever, vomiting, jaundice, sore throat with fever, contagious disease etc.) and for wounds (open skin sores or cuts, boils, etc.) that could potentially contaminate the products.
- Person having any open wounds or illness is not allowed to work until the wound or sickness or infection is healed. Such personnel can resume the duty only after being certified by a Medical practitioner that they are fit to work.
- Once a year, a complete medical checkup is carried out for all employees. The tests are conducted as per Indian regulations for stool test, blood culture shall be conducted to identify the carriers of all parameters including pathogens like *Salmonella*, *Vibriocholerae*.
- Training is conducted for all employees on routine hygiene practices like, hand wash, hand dip, importance of personnel hygiene, reporting illness, hand washing after sneezing/ coughing /scratching, etc.
- Signboards providing information to the workers on correct hygienic practices are hung in the processing hall and change rooms.
- Fingernails shall be kept short, clean and unvarnished, false fingernails shall not be permitted. Workers are educated on the importance of keeping short fingernails through hygiene training.

  Responsibility: Supervisor, QA Personnel, Plant Manager

  Record: Daily sanitation audit form, Personnel hygiene, Employee health card, Training record.

8. EXCLUSION OF PESTS:

- Pest control measures are taken in order to prevent entry of pests into the storage area.
- The possible pests are rodents, flies, cockroaches, birds, moths, pet animals, lizards, spiders, etc.
- Flycatchers are provided at strategic areas, curtains and blinds are provided at all entry doors toprevent any flies, insects, etc.
- The outlets are provided with grills to prevent rodent entry and robust traps are provided at various locations to control the rodents, safe baits are used (Onion, coconut, dry fish, etc.) for the trap.

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- Various pest control methods are adopted in the plant and are monitored on a daily basis by the supervisor& QA personnel and noted in a relevant record to prevent transmission of pathogenic microorganisms to the products and packaging materials.
- The main pests are the insects, the rodents, birds and lizards. They cause damage in different ways. Some of them eat up the food and thus cause economic damage. Besides, they contaminate the product with their excreta, hair, body parts, dead bodies, feathers, eggs etc.Also their presence creates an offensive smell in the food. They can also lead to fungal growth and spoilage in the commodity.
- Birds, rodents and flying insects enter the processing units from the vicinity. The smaller insect pests are carried to the processing units from far off places. The following sources are identified.
  a. Bags carrying Shrimp Meal
  b. During transportation
  c. Open processing sheds
  d. The workers

KEY POINTS WHERE PESTS GROW

a. Raw material receipt
b. Bags – if not properly dried and stored
c. Waste stores
d. Cracks and crevices on walls and floors
e. Surroundings if not properly cleaned
f. The drainage systems

INSECT INFESTATION:

a. The presence of adult insects on sacks and on food materials.
b. Webbing of the insects.
c. Pest monitoring can be done by equipments like rat traps, gum traps, fly catchers.
d. The presence of cockroaches is indicated by a typical smell.

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RODENT INFESTATION

a. Presence of rodent excreta on containers and also on the Shrimp Meal bags.
b. The foot marks of rodents are also indicative. They exhibit a characteristic phenomenon of the igmotaxis.
c. Presence of rodent hair and urine.
d. The disappearance of baits.
e. Gnawing marks
f. Rat burrows near the processing hall.
g. By filth analysis.

ANTS

The common ants found are: Argentine ant, Pharaoh antand little black ant; House flies, cockroaches and lizards.

RODENTS

a. The common rodents found are the rats.
b. The common house rat
c. The house mouse
d. The bandicoots

BIRDS

Birds also create problems. They not only eat up the Shrimp Meal but also create nuisance and are responsible for spreading microorganisms.

They contaminate the food with their excreta and feathers.

The commonly found birds are: Eagle, Crow, Sparrow

Physical control of insects:

a. By erecting physical barriers.
b. By manipulating the physical or environmental conditions.
c. By proper drying.
d. By proper sieving before packing.

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Physical Control of Rodents:

a. Rat proofing with rat traps .
b. Doors should be closely fitted.
c. Doors should have 9" metal sheet lining at the bottom.
d. The walls and floor should be plastered smooth with cement.
e. Self-closing devices should be fixed to the doors.
f. Any rat holes found should be immediately closed with cement.
g. Food materials should always be kept in closed conditions only.
h. Rodent traps should be used and checked daily.
i. Proper waste disposal has to be practiced in the processing.

Physical control of Birds:

a. Bird proofing.
b. Destroy bird nests.
c. Scare away the birds.

Chemical Control of Rodents:

Many chemicals can be effectively used for control of pests. Traps and Glue pads are also used.

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PARAMETER	LIMIT	STANDARD
Protein	Min.	40%
Moisture	Max.	10%
Sand	Max.	4%
A/O (ppm)	Min.	150 ppm

(*) – Free from vegetable / Leguminous & other source of Animal Protein

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PROCEDURE FOR USE & MAINTENANCE OF ELECTRONIC WEIGHING BALANCE

Usage Limit: 1mg – 200g

1. Adjust the bubble to the center of the circle to set the balance on a uniform platform.
2. Switch on the electronic weighing balance.
3. Press the power button to switch on the balance and press Cal button to get the balance internally calibrated.
4. Press tare to set to zero reading.
5. Place the butter paper and tare the weight of the paper.
6. Weigh the substance and tare the weight after removing the material and switch off the balance.

PROCEDURE FOR USE & MAINTENANCE OF MUFFLE FURNACE

1. Ensure the cleanliness of the instrument before use.
2. The furnace can be operated to a maximum temperature of 1100℃
3. Switch on the main power supply.
4. Set the required temperature by rotating the knob provided on the digital box.
5. The required temperature can be set by turning the screw provided while still holding the ‘press key’.
6. Place the sample to be ignited as per specification.
7. Put off the furnace after use.

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PROCEDURE FOR PROTEIN ANALYSIS

Aim : To determine the protein content in the given sample

Chemical Required : Potassium Sulphate, Copper Sulphate, Conc. Sulphuric Acid (98%) HCl (0.1 N), Sodium Hydroxide (40%), Boric Acid Solution (4%) Methyl Red Solution, Bromocresol Green (Indicator).

Instruments Required : PELICAN distillation unit, Pelican digestion unit DT 208, and weighing balance

Apparatus Required : Digestion Tube, 25ml Pipette, 25ml Burette, Conical Flask, and spatula

Procedure:

Digestion:

1. Add 0.3g of sample to the digestion tube, then add 0.8g of copper sulphate and 7g of potassium sulphate. A blank tube is also prepared that is without the sample.
2. Add 15ml of Conc. sulphuric acid to the mixture.
3. Keep it for digestion in (Digestion Chamber) at 400 to 600 ℃ for 1hour.
4. Allow the solution to cool to room temperature.

Distillation:

1. Press reset button of the Foss machine to reset the programme. Set the parameters reaction time (20 seconds).
2. Add 40% NaOH auto/ manually.
3. Set the distillation time (240 seconds).
4. Conical flask containing 4%boric acid and methyl red indicator is kept to the outlet tube of distillation unit.
5. After distillation, the collected solution is titrated against 0.1N HCl.

End Point: Colorless to pink

Calculation: % of Nitrogen = (Sample Reading – Blank Reading)×1.4007× 0.1)/ (Wt. of the sample)

% of Protein = (% Nitrogen × 6.25)

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PROCEDURE FOR SAND SILICA TEST

Aim : To determine the percentage of sand silica

Chemical Required : Conc. HCl, Distilled water, Ash (from ash test).

Instruments Required : Hot plate, Muffle furnace.

Apparatus Required : Silica crucible, Pipette, Measuring cylinder, conical flask, Whatman filter paper, Funnel, etc.

Procedure:

1. Collect the ash sample.
2. Add 1:2 Conc. HCl (i.e. 13ml Conc. HCl + 26mL distilled water) to the ash sample.
3. Boil on the hot plate for 10 minutes.
4. Filter the sample with Whattman filter paper by adding 250mL of distilled water.
5. Collect the filter paper, place it in the crucible and keep in the muffle furnace for 2hours at 600℃.
6. Cool the crucible at room temperature and note down the weight.

Calculation:

% of Sand Silica = (Final weight – initial weight of crucible)/ weight of sample (ash test) × 100)

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PROCEDURE FOR USE & MAITENANCE OF HOT AIR OVEN

1. Ensure the instrument is clean and free from dust.
2. Switch on the main power supply.
3. The green indication light will be 'ON'.
4. The required temperature can be set by a thermostatically controlled knob by rotating it in clockwise or anticlockwise direction.
5. Place the object or material to be dried on the trays present in the oven and close it.
6. A small thermometer port is provided on top right corner to note the temperature of the chamber.
7. Vapor or fumes can be released by the vent provided on the top middle part of the instrument.

Note: Do not keep open the door of the equipment when it is in 'ON' mode.

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PROCEDURE FOR MAINTENANCE AND USE OF MOISTURE ANALYSER

Aim : To determine the moisture content in the given sample.

Instruments Required : Metter Toledo Moisture Analyzer.

Apparatus Required : Sample pan, spatula.

Procedure:

1. Ensure the cleanliness of the instrument and connect the electric power plug to the main power socket.
2. Open the cover, place the empty sample pan in it. Close the cover and tare the weight.
3. Open cover to add 5g of sample and close.
4. Heating temperature and time is adjusted at 105℃ and 10 minutes respectively.
5. Métier Toledo will display the temperature, time and percentage of moisture in the given sample.
6. Note down the reading once the instrument gives a beeping sound and the End of process message, flashes.

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PROCEDURE FOR SHRIMP MEAL SAMPLING

Aim : Shrimp meal sampling.

Apparatus Required : Sampler (Spoon)

Procedure:

1. Ensure that the sampling container is clean, dry, leak-proof and wide mouthed.
2. Label the sampling container appropriately with details such as batch number and production date.
3. Spoon out little amounts of sample from each bag of Shrimp Meal of a batch comprising of 400 bags in the sampling container.
4. Pour this composite sample in a tray.
5. Mix the sample thoroughly by making pyramids.
6. Then spray it equally in a tray.
7. Divide the sample into 8 equal parts.
8. Spoon out little amount of sample from each part, twice one after another back in the sampling container.
9. Use the sample for analysis.

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PROCEDURE FOR SHRIMP MEAL SAMPLING FOR CONSIGNMENT

Aim : Shrimp meal sampling for consignment.

Apparatus Required : Personal Protective Equipments (PPEs), Sampling containers/ bags, Sampler (Spoon), Ethanol, seals.

Procedure:

Requirements:

- Wear your Personal protective equipment (PPE) prior to sampling of the consignment.
- Check the batches physically for verification of number of bags, labelling which includes the batch number, production date, expiry date, packing style, net weight, product name, EIA approval number, Q mark, etc.
- Export of Shrimp meal bags without the approval number is allowed in case there is a specific request to that effect from the foreign buyer and the approval number shall be legibly printed on the bags.
- The sample should be drawn only from a completed, ready to export consignment/ batch numbers concerned, even if the characteristics, source, variety and processing conditions are uniform for all batches.
- For export to the Custom Union, ensure that all the containers to be exported are sealed with the seal of the establishment and also that of the EIC in such a way that the bags cannot be opened without breaking the seals. The details of the seals shall be recorded.

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Sampling plan:

- Use the following formula to draw samples from a consignment ready for export.

$$\sqrt{n}+1/2 = x$$

'n' is the total number of bags in one consignment.

'x' is the number of bags drawn at random from which the composite sample shall be drawn.

- If 'x' is a fractional number, it shall be rounded off to the nearest whole digit i.e. the value of 'x' originating from the above calculation may be rounded off to the whole number of higher digit if the value is 0.5 or more than 0.5.
- Draw a composite sample from a maximum of 4 batches.
- If there are more than 4 batches to be exported, then draw a composite sample from each set of 4 batches. And draw from the remaining batches as a separate composite sample.
- Record the details of each composite sample drawn.
- Ensure that all the batches in the consignment are covered while sampling.

Sample collection:

- Take aside the entire selected bags for sampling and take photographs according to the number of bags selected and specified for sampling.
- Before sampling, clean the entire area thoroughly.
- Clean the sampling tool with ethanol.
- Open and close the sampling bag/container with utmost care ensuring that any contamination is avoided.
- Draw at least 700 grams (350 grams for testing and 350 grams for reference) of composite sample from all the selected bags for a single type of test.

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Sampling Points

- The below swab samples shall be drawn once in 15 days either before the start of work or after cleaning.
- Collect 1 swab sample from each of the following surfaces:

1. Uniform
2. Worker's hand (Fish feeding)
3. Screw conveyor
4. Cooker
5. Drier
6. Cooler
7. Screw conveyor (before packing)
8. Worker's hand (Packing area)
9. PP bags (Packing material)
10. Sampling bottle

A. Total Plate Count (TPC)

- Mix the normal saline containing the swab sample.
- Inoculate 1 ml of each sample in a sterile petriplate.
- Pour plate with Plate Count Agar (PCA) and rotate firmly in clockwise and anticlockwise direction.
- Incubate at 35^0C – 37^0c for 48 hours.Count the colonies and report the result as follows:
- TPC/sq.cm = No. of colonies x 4
- **Limit**: 100 CFU/sq.cm

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PROCEDURE FOR COVID 19 AWARENESS AND FOOD SAFETY

The company should have a Food Safety Awareness System (FSMS) in place, based on the Hazard Analysis and Critical Control Point (HACCP) principles in place to manage food safety risks and prevent food contamination.

Pre-requisite programmes such as good hygiene practices, cleaning and sanitation, zoning of processing areas, supplier control, storage, distribution and transport, personnel hygiene and fitness to work policies should be in place.

Potential transmission of COVID- 19 via food:

It is highly unlikely that people can contract COVID 19 from food or food packaging. Corona viruses cannot multiply in food. They need an animal or human host to multiply. Covid- 19 is a respiratory illness and the primary transmission route is through person-to-person contact and through direct contact with respiratory droplets generated when an infected person coughs or sneezes and through fomites. Alternatively, as the respiratory droplets are too heavy to be airborne, they land on objects and surfaces surrounding the infected person.

- It is possible that someone may be infected by touching a contaminated surface such as door knobs, objects or the hand (shaking hands) of an infected person and then touching their own mouth, nose or eyes.
- The virus can remain viable for up to 72 hours on plastic and stainless steel, up to 4 hours on copper and up to 24 hours on cardboard.
- Personal hygiene measures should be reinforced and refresher training should be provided on food hygiene principles to eliminate or reduce the risk of food surfaces and food packaging materials becoming contaminated with the virus from food workers.
- Personal protective equipments (PPE), such as masks and gloves should be provided and used appropriately to reduce the spread of the virus and disease within the industry.

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- Physical distancing should be introduced and stringent hygiene and sanitation measures such as effective hand washing and sanitation at each stage of food processing, manufacture and marketing should be put into practice.
- Hand washing after using the toilet is an essential practice to prevent the spread of any infectious disease.

COVID 19 Symptoms:

- Employees, who are feeling unwell, should stay at home.
- The common symptoms of Covid 19 include fever (37.5^0C or above), cough, shortness of breath, breathing difficulties and fatigue.
- The employees should be able to recognise symptoms early so that they can seek appropriate medical care and testing and minimise the risk of infecting fellow workers.

Preventing the spread of COVID 19 in the work environment:

- Ensure that the infected workers are excluded from the premises.
- Employees, who are unwell or have symptoms of Covid 19, should not be at work and should be informed about how to contact medical professionals.
- In some cases, infected people may be asymptomatic or pre-symptomatic and may not display any signs or symptoms of disease or may present with mild symptoms that are easily overlooked.
- Employees should be allowed to report illness by phone (or e-mail) so that those with early stages of Covid 19 can receive reliable information and can be quickly excluded from the work environment.
- Proper hand hygiene that is washing hands with normal soap and warm running water for at least 20 seconds and frequent use of alcohol based hand sanitizers should be strictly followed.
- Good respiratory hygiene such as covering the mouth and nose when coughing or sneezing, tissues used should be disposed of immediately and washing of hands.
-

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- The work surfaces and touch points such as door handles and knobs should be cleaned/ disinfected frequently.
- Close contact should be avoided with anyone showing symptoms of respiratory illness such as coughing and sneezing.

Use of disposable gloves:

- Workers wearing gloves must change them frequently and hands must be washed between glove changes and when gloves are removed, since microbes can accumulate on the surface of hands while wearing gloves.
- Gloves must be changed after carrying out non-food related activities such as opening/closing doors by hand and emptying of bins.
- One should avoid touching their mouth and eyes when wearing gloves.
- Gloves should not be used as a substitute for hand washing. Hand washing is a greater protective barrier to infection than wearing disposable gloves.
- Hand sanitizers can be used as an additional measure, but should not replace hand washing.

Physical distancing in the work environment:

- At least 1 metre (3 feet) distance is to be maintained between fellow workers.
- Limit the number of staff in the food production area at any one time.

Covid 19 illness in the workplace:

- If any infected employee is identified, he should be isolated immediately and sent for medical advice.
- All surfaces that the infected employee has come in contact with, must be cleaned, including all surfaces and objects visibly contaminated with body fluids/ respiratory secretions and all potentially contaminated with body fluids/ respiratory secretions.
- If any employee is confirmed to have Covid 19, it will be necessary to notify all close contacts so that they too can take measures.

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- The contacts should be quarantined for 14 days from the last point of exposure to the confirmed case.

Transport of Raw material & ingredients and dispatch of finished goods:

- Suppliers involved in delivery of raw material and ingredients and transporters involved in the dispatch of goods should not leave their vehicles during delivery.
- They should be provided with an alcohol based sanitizer and disinfectant and paper towels.
- Drivers should use hand sanitizer before passing delivery documents to the staff concerned.

Canteen:

- Maintaining hand hygiene and physical distancing of at least 1 metre is mandatory.
- Staggering staff work and break times, to reduce staff members in the canteen at any one time.
- Restrict non-essential physical contact.
- Cleaning and disinfection of surfaces.

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HACCP DETAILS

FOR

SHRMP MEAL

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Date	01.02.2023		Date	01.02.2023

TINY SHRIMP MEAL

Shrimp meal is a coarse powder obtained from drying and grinding dry shrimps. Shrimp meal is a rich protein source, and is used as an ingredient in feed in the Aquaculture, Dairy and Poultry industries.

SHRIMP MEAL

Product Name	Shrimp Meal
Source of raw material and Scientific name	Indian Ocean, locally obtained sea catch, Jawla (*Acetus Indicus)*
Composition	Shrimp Meal powder
End Product Characteristics	Shrimp Meal in semi powder form
Ingredients	Tiny Shrimp Meal
Method of Preservation	Stored in normal condition, Not wet &too warm
Packaging – Dispatch	Packed in HDPE bags/ poly propylene (PP) woven sack with laminated bags
Storage conditions	Ambient temperature at 30°C +/- 5°C, not be stored and transported in hot condition. Ideally Cool and dry condition
Distribution Method	Distribution through trucks and containers in covered condition. The transportation is by road and sea
Shelf Life	One and half year, at ambient temperature
Special Labelling	As per National and Importing countries regulations
Intended Use	To be used as an ingredient in animal feed, not for human consumption

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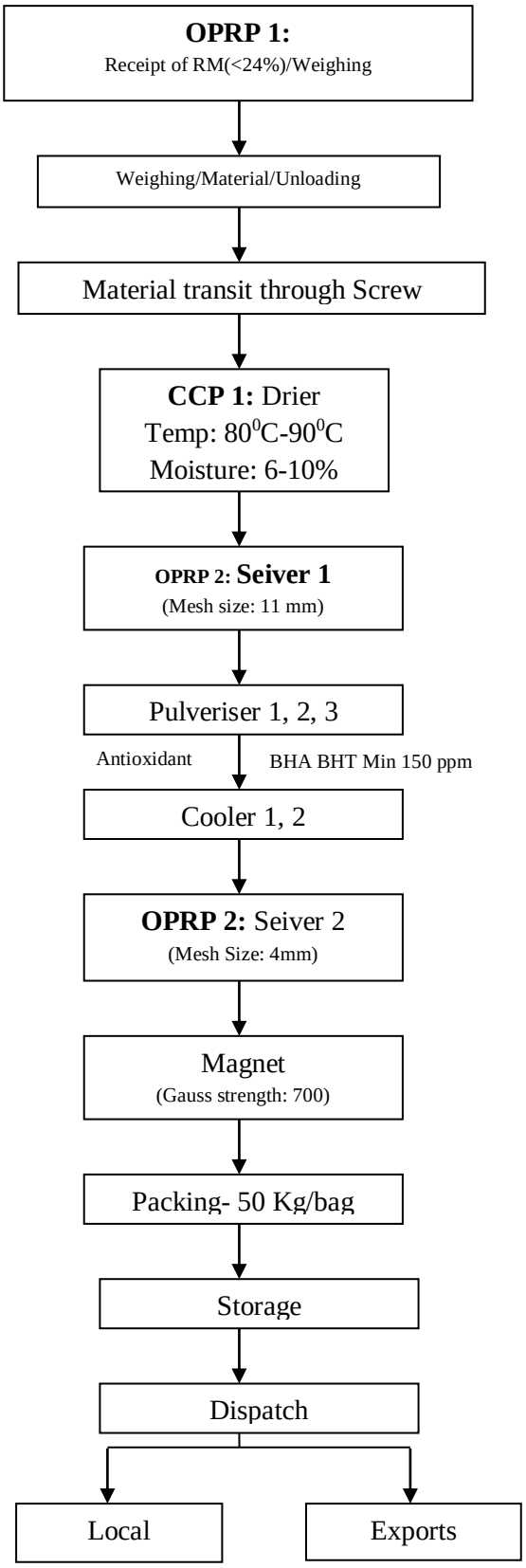
PROCESS FLOW CHART

1. SHRIMP MEAL



DONE BY: QA MANAGER

APPROVED BY: PARTNER

DATE: 01.02.2023

RAW MATERIAL

The Raw material required for processing is purchased from the approved suppliers of the local purse seiners/boats/trawlers and are transported to the factory in enclosed trucks. Upon arrival, the allotteddate, purchase center and arrival number, etc. is noted down. The raw material is then accepted or rejected after evaluation bythe QA staff. For every one vehicle or 10000 kg of raw material 10 kg sample is checked for quality parameters like spoilage, size, etc. is checked randomly at different locations at the vehicle top, bottom, side, corner, etc.

MATERIAL TRANSMIT BY SCREW CONVEYOR

The screw conveyor is used to transmit the raw material evenly and continuously into the drier for drying. The principal of the conveyor is that the spiral axis evenly rotates with the reducer motor and the material goes forward with the push of the screw vane. The quantity and length of the conveyor can be adjusted, according to different production places.

DRYING

The drier is composed of a horizontal crust, rot disc type, with steam coils attached to it. It heats the Shrimp Meal and simultaneously pushes it towards the outlet. The temperature constantly maintained is 80^0C to 100^0C for 20 minutes and steam is evenly scattered to the heating plate by the allotter. Steam and condensed water flows respectively in the pipeline so as to stabilize the high temperature. The moisture attained of the product post drying must be between 6 to 10 percent .

SIEVE SCREEN

The cooled Shrimp Meal is passed through the sieving machine where bones and foreign materials are removed.

PULVERISER (MILLER)

After drying, the Shrimp meal is pulverized in the grinder and made into Shrimp Meal powder. The pulverized or milled Shrimp Meal is sent to the cooler for cooling.

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COOLER

The pulverized Shrimp Meal is cooled in the cooler by circulating water inside the coil.No contact takes place between the water and theShrimp Meal. The temperature of the Shrimp meal is maintained below 35°C continuously and the same is recorded.

STORAGE OF SHRIMP MEAL

Shrimp Meal is not readily spoiled by bacterial action because of its low water content. Shrimp Meal is stored at ambient temperature either in poly propylene (PP) bags, HDPE bags, sacks made of paper, etc. Shrimp Meal does not require any refrigeration during its storage. ShrimpMeal in bulk is sometimes palletized to make mechanical handling easier, since it does not flow readily as a powder.

PACKING

The cooled Shrimp Meal is weighed as per specification using calibrated weighing balances. The weighed Shrimp Meal is packed in specified poly propylene (PP) bags, HDPE bags, sacks made of paper, etc.

STORAGE

Shrimp Meal is not readily spoiled by bacterial action because of its low water content. Shrimp meal is stored at ambient temperature either in poly propylene (PP) bags, HDPE bags, sacks made of paper, etc. Shrimp Meal does not require any refrigeration during storage. Shrimp meal in bulk is sometimes palletized to make mechanical handling easier, since it does not flow readily as a powder.

DISPATCH

Shrimp Meal is transported in poly propylene (PP) bags, HDPE bags, sacks made of paper, or in bulk through trucks or containers at ambient temperature.

ADDITIVES AND INGREDIENTS: Antioxidant is added using dosing pump as per the customer specification. The dosage is set and adjusted at the start of every production shift and monitored throughout the day to ensure the correct dosage amount. The Antioxidant is stored in a designated locked room to avoid free access to any worker. BHA,BHT is used as an antioxidant.

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INSPECTION OF PACKAGING MATERIAL/LABELLING:

Purpose: To ensure the safe, legality of packaging.

Scope: Applicable to the Production and Quality Assurance departments.

Responsibility: Production In charge and Quality Assurance In charge.

Procedure:

Specification: For the development of the packaging material such as PP bags, ingredients labels etc., are designed by the Managing Partner or Quality Assurance In charge, depending on the buyer's specifications. The design of the packing materials/label for the product is such that it provides adequate protection and minimizes contamination, prevents damage and has all the necessary labeling required by the standards.

Inspection: The color or printing of the relevant information on the packaging material/label are designing by the Managing Partner and Quality Assurance In charge and are explained to the packing material supplier. Printing matter on the packaging material are examined by the Technologist and verified by Quality Assurance In charge / Production In charge and required changes are made in the designing and printing and are explained to the supplier. All the raw materials and packing materials are inspected on receipt. Approved items are used and others that are not within the specification are rejected immediately. FIFO is being followed for all packing materials, which will be used within the shelf life period. Packing materials used in the factory are not re-usable. Packing materials are randomly checked for any damage, off odor etc. during packing. If any deviation is found, it is brought to the notice of the HACCP team leader and the top management. Any new supplier of the Packing material is approved based on the evaluation, to assess the ability of the supplier to meet the organization's quality and delivery requirements. Store head maintains a list of approved suppliers of packing materials. Batch wise Inspection is done by the Technologist and verified by the Quality Assurance In charge on each arrival. Inspection results are entered in the stores register. Guarantee letter from all the suppliers for food grade material were taken. The organization has developed specifications for all raw materials and packing materials.

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EQUIPMENT AND PROCESS VALIDATION

This is a four step process:

1) DESIGN QUALIFICATION:

This is done with the help of the manufacturer. The Partner provides input to the manufacturer regarding equipment details like capacity, speed, temperature range, etc. The manufacturer provides the design which is reviewed, modified if required and approved by the top management.

2) INSTALLATION QUALIFICATION:

Once the equipment is received, the following checks are conducted:

a) Condition at arrival i.e. right and complete order, no damage.

b) Placement i.e. did it fit location specified?, did the power requirement match?, (plug fit, correct voltage, /amperage).

c) Does it pass initial setup i.e. initial startup? (self-check), electricity safety test.

d) Establish maintenance, calibration, cleaning schedule.

3) OPERATIONAL QUALIFICATION:

During the first operation, the following specific desired parameters are checked:

a) Does it run at the speed and temperature that was set?

b) Does it hold temperature?

c) Does it stop or alarm when specific limits are exceeded?

The equipment operation, maintenance and cleaning is to be finalized at this stage.

PERFORMANCE QUALIFICATION:

This is done through process validation through observation of actual production for a planned period and then standardizing process parameters like time, temperature, pressure, and species. This is done every year atthe start of the season.

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FREQUENCY:

Design & installation qualification is to be done as and when a new equipment is to be procured or in case of major modification of existing equipment. Operational and performance qualification are to be done annually during the start of the season. Process validation is done on completion of equipment validation at the start of the season annually. (Ref: Process validation chart). The equipment validation is undertaken by external agency once in a year.

PROCESS CONTROLS

PROCESS	DESIRED LIMIT	PROCESS CONTROL METHOD	RESPONSIBILITY	FREQUENCY
Raw Material receiving OPRP-1	Material moisture to be less than or equal to 24% while receiving.	Consistent monitoring of raw material using a calibrated moisture analyser.	Lab Technologist/QA	Every new material lot
Drying OPRP-2	Moisture content of the final product should be between 6-10%.	Moisture content of Shrimp Meal obtained after the drying process is checked and recorded.	Production in charge/ Lab Technologist/QA	Every one hour
Drying CCP-1	Temperature Maintained must be between 80 to 90 degree C	Temperature is monitored on a regular basis . Dryer Log maintained	Production in charge/ Lab Technologist/ QA	Every one hour
Siever	Sieveing 2mm size	Daily sieve condition checklist	Production in charge/ Lab Technologist/ QA	Every Shift

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HAZARD ANALYSIS AND HACCP PLAN

Doc. No : HACCP
Issue No. : 03
Date : 01.02.2023

(Sl. No.)	(1) Process step	(2) Identify potential Hazards introduced, controlled or enhanced at this step	(3) Are any potential food safety / Quality hazards significant ?	(5) Justify your decision for cot. 3	(6) What preventive measures can be applied to prevent the significant hazard?	(7) Is this sep a critical control Point/ Critical Quality Point Yes/ No
1	Receipt of Raw material (oprp1)	BIOLOGICAL Presence of Pathogens	Yes	The pathogen a significant hazard in raw material since higher moisture cn cause microbial load as well as impact the storage conditions	Purchase specification, Time and temp control. If decomposition found, the lot will be rejected	
		CHEMICAL Histamine poisoning Decomposed fish	No	-		No
		PHYSICAL Metal fragments	No	Removed in the step Demetal magnet		
2	Material transmit by screw conveyor	BIOLOGICAL Pathogen growth	No	Not likely to occur, controlled by SOP's & SSOP's		
		CHEMICAL None				
		PHYSICAL None				
		CHEMICAL None				
		PHYSICAL None				
3	Drier	BIOLOGICAL None				
		CHEMICAL None				
		PHYSICAL None		Moisture should be less than10 % ,then the meal comes out of the drier		
4	Pulverizer (Hammer Mill)	BIOLOGICAL None				
		CHEMICAL None				
		PHYSICAL None				

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5	Cooler	BIOLOGICAL None				
		CHEMICAL None				
		PHYSICAL None				
		CHEMICAL None				
		PHYSICAL None				
		PHYSICAL None				
6	Centrifuge	BIOLOGICAL Pathogen	NO	Not likely to occur ,controlled by SOP's & SSOP's		
		CHEMICAL None				
		PHYSICAL None				
7	Packing	BIOLOGICAL Pathogen	NO	Not likely to occur ,controlled by SOP's & SSOP's		
		CHEMICAL None				
		PHYSICAL None				
8	Meal Storage	BIOLOGICAL None	NO	Not likely to occur ,controlled by SOP's & SSOP's		
		CHEMICAL None				
		PHYSICAL None				
9	Cooler	**BIOLOGICAL None**				
		CHEMICAL None				
		PHYSICAL				
		CHEMICAL None				
		PHYSICAL None				

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9	Dispatch	BIOLOGICAL None				
		CHEMICAL None				
		PHYSICAL None				
10	Labeling	BIOLOGICAL None				
		CHEMICAL None				
		PHYSICAL None				
11	Packing Material	BIOLOGICAL None				
		CHEMICAL None				
		PHYSICAL None				

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Process Step	Significant Hazard	Critical Limits	Monitoring Procedures				Corrective Action	Records
			What	How	Frequency	Who		
Raw Material Receiving OPRP 1	High moisture content leading to microbial growth	Moisture below 24 degree C of the incoming shrimp.	Moisture content	By checking moisture of every lot using calibrated moisture meter	Every lot of incoming raw material	Operator/ Supervisor/ QA personnel	If moisture exceeds desired limit. It is rejected	Incoming Register
Drying OPRP-2	Microbial growth	Moisture content: 6-10%	Moisture content	Using a calibrated Moisture Analyzer	Every hour	Operator/ Supervisor/ QA personnel	Re-drying, Drier validation	Hourly drier log
Sieve screen OPRP-3	Retention of fine particles	Sieve integrity and condition should be good	Sieve integrity and condition	Visual inspection	Daily	Operator/ Supervisor/ QA personnel	Cleaning/ changing the sieve screen	Machinery cleaning records, maintenance of machinery register
Drying Temp-CCP1	Microbial growth if heating not done properly .	80 to 90 degree C for 15-20 minutes	Heating Temperature	Hourly Monitoring	Hourly	Operator/ Supervisor/ QA personnel	Exceeding temperature and time	Dryer log, Moisture Log

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The Company has a policy of regularly updating the knowledge and skills of the employees on HACCP. Training is given to all the workers based on their working area / location, with their known languages by the HACCP team. All employees are trained on the Company's Management policy and all kinds of pre requisite programs. The areas covered are, hygiene in work place (plant and personnel), safe operations of equipments, first-aid, firefighting, pest control, security. Whenever competent authorities conduct any related or sophisticated programs, we make our staff available to attend the gatherings.

Audit is a powerful tool to measure the effectiveness of the quality system. It actually identifies the areas of low performance where corrective action needs to be taken. Internal audits are necessary to crosscheck what is supposed to happen, is happening. Trained Internal auditors are carrying out the internal audit as per the schedule and the auditor clearly identifies and ensures the conformity and non-conformity of the audited area. Results of the audit are brought to the attention of the personnel responsible for the activity audited. Corrective actions and time scales for their implementation shall be agreed. The internal audit programs and associated corrective actions are maintained and verified to ensure satisfactory completion.**The internal audits are undertaken on the frequency of once in six months** by a **designated competent person**. Internal audit are conducted on effectiveness of the trainings related to product, purchase, personnel, security, etc.

INTERNAL AUDIT FORMATS

RECORDS	FORMAT NO.	RESPONSIBILITY	RETENTION PERIOD	LOCATION
Annual audit plan	PBP/8.4.1/F/01	MR	1 Year	MR
Audit schedule	PBP/8.4.1/F/02	MR	1 Year	MR
Audit observation sheet	PBP/8.4.1/F/01	MR	1 Year	MR
NCR	PBP/8.4.1/F/01	MR	1 Year	MR

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The HACCP Plan is verified at appropriate intervals, to prevent food-safety hazards, and to provide a level of confidence that the processing of Shrimp Meal in the plant is based on solid scientific principles. It is modified suitably to control the hazards associated with the product and process, based on the review of the HACCP Plan. These systems shall be reviewed/ verified by the HACCP leader when major changes are made to a product formulation, its process, process controls or any other factors that can have an inspection the food safety, legality and quality arise. Changes to a HACCP plan shall be developed, validated and documented by the quality controllers. All system plan reviews and changes are documented.

The HACCP will be reviewed once in a year before the expiry of the previous one and when needed.

Responsibility: Food safety Team and Leader

- The HACCP Leader along with the HACCP Team will review the HACCP as and when changes will occur in either the source and type of raw material or changes in the process line or changes in products or any complaint received for a particular kind of product etc.In the absence of the same, the HACCP will be reviewed once in a year before expiry of the previous one and when needed. In that review, the team members will discuss and review the 12 steps of HACCP, HACCP Plan, SSOP, CGMP etc.
- HACCP review meetings will be chaired by the Managing Partner or his representative. During the review, the management will effectively utilize all available information.
- The HACCP team and the leader will go through each and every step in detail, from receipt to finished product and shipment. The team will note any discrepancies if available, between the actual process and the steps laid out in the process flow charts for all the products. The HACCP plan should be reviewed once in a year or whenever needed, such as in situations like,

1. Change in raw materials or supplier of raw material
2. Change in ingredients
3. Change in processing conditions or equipment
4. Change in packing, storage or distribution conditions
5. Change in staff or management responsibilities
6. Change in consumer use

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M/s.Prime Bio Proteins, Gujarat, India has a systematic procedure for ensuring product identification, traceability and recall in case of deficiencies observed during production. The procedures ensure traceability of the product up to the centers of procurement.

The processing operations are in two shifts identified as A & B. Following details is an example for the traceability. During the on-line process control or in the final inspection stage, any deviation/ defects if noticed, can be traced back to the raw material stage and also to the responsible person, so that timely corrective action / recall can be initiated.

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PROCEDURE FOR TRACEBILITY

Purpose : To identify the product when it is produced.

Scope : Applicable to the production department and Quality Assurance department.

Responsibility : In charge (Quality Assurance).

RAW MATERIAL (DRY SHRIMPS):

- An agreement is entered into with every supplier against hygiene and Quality standards of the raw material. The supplier is approved based on his credibility by periodic surveillance of their practices.
- When a particular lot of raw material is received in the receiving section, it will be subjected to raw material evaluation.
- On approval of the material, the supplier details and the vehicle number on that day is recorded and makes the traceability lot number. For each arrival such a lot number is allotted.
- Variety and type of product, quantity, date and time of arrival, vehicle number etc.

INGREDIENTS & PACKING MATERIAL:

Details of antioxidant added and packing material used is also noted along with lot no. to know which lot supplied by which supplier was used on that day's production.

FINISHED PRODUCT:

The finished product will be given a code number denoting the date of production. From the batch number and production code number, the entire history of the product can be traced back from the records. This will be useful if any complaint is received from the buyer.

LOT NUMBER SHRIMP MEAL:

Every 20 tons of Shrimp Meal leads to 400 bags and is given one lot number e.g. A1. This number is mentioned on raw material receiving and dispatch records to know how many lots have been dispatched to a particular customer and which fish has been used to manufacture that particular lot.

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PROCEDURE FOR PRODUCT RECALL

Purpose: To identify or to trace out the finished product affected by nonconformance of food safety standards or buyers' specification or company standards.

Scope: All finished products stored in the company's warehouse or sold to the buyer.

Responsibility: Warehouse supervisor/ Production in charge/ Q.A, for all Shrimp mealsold to the buyers.

Procedure:

• Responsible person should be independent from seller or marketing.
• Must have an effective recall in place, must be tested.
• Must notify all the distributors and retail shops to which the product may have been distributed.
• Distribution records should be readily available to the responsible person.
• Secure storage of goods awaiting disposition.
• Progress recorded and final report issued.
• Reconciliation between delivered and recovered quantities.

Product recall is a process taken by the responsible person who places the product on the market, to remove or withdraw a particular product from all links of distribution.

The removal or withdrawal may be due to critical quality defects discovered or serious adverse reactions/complaints reported which might cause health risks to users during and after the distribution of the product.

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Recall for product correction: the removal of product for rework corrective action may take place at the user's or the manufacturer's premises or at any other agreed locations. All corrective actions should be reported to the person responsible who placed the product on the market.

Safety Alert: Advice regarding a specific situation of a product, which is not conforming to the safety specification. When there is a risk of significant hazard to consumers of a product which has been distributed on the market, the manufacturer should disseminate the safety alert through mass communication media available including newspaper, mobile, radio and television.

Product Notification: The issue of precautionary information about a product, in a situation that is unlikely to involve significant adverse health consequences.

Withdrawal: Removal of product from sale or use for reasons not connected with quality and safety such as change of packaging etc. as a marketing strategy.

Classification of Recall

The class of recall is classified according to the seriousness of quality defects and adverse events of the products.

- ***Class I:*** Products with major health risks that might be present.
  (Should be under an embargo within 24 hours).
- ***Class II:*** Products with Minor/ unlikely health risks or substandard.
  (Should be under an embargo within 72 hours).

LEVEL OF RECALL

The level of the recall depends on the nature of the problem, the extent of the product's distribution and the degree of hazard involved.

- LEVEL A: To all consumers (end users)
- LEVEL B: To all points of sales (e.g. distributors)
- LEVEL C: To all sub distributors (Wholesalers)

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NOTIFICATION OF RECALL

A sample of the recall notice must exist. Recall notices must be mailed in envelopes of faxed which can be clearly recognized as such.

The notification of recall should include:

• The name of the product, and pack size

• The product batch number

• The nature of the defect

• The action to be taken

The urgency of the action (with reasons, indication of health risk, as appropriate)

DESCRIPTION:

To address unexpected outbreak of food borne diseases, due to microbial and chemical residue contamination and also contamination with pathogenic toxin, a product recall procedure is developed and being followed.

Immediately when an outbreak is noticed or potential for major food safety issue arises, the entire quantity of finished product whose integrity is under doubt shall be taken back. Production manager and HACCP team leader are authorized to recall the product.

The deal with product complaints received from the buyers on receipt of the cargo or during inspections undertaken by them for incoming material or complaints received from customers or end product manufactures, the following system has been instituted to address the complaint in question as well as to ensure proper rectification is done in house either to the process line or to the process flow system to ensure that the problem does not arise in the future. The management ensures customer satisfaction and the same is communicated to the concerned staff. The appropriate complaints are identified, listed and taken proper corrective actions to implement and improve the ongoing product safety, legality, and quality to avoid the recurrence. An effective and appropriate corrective action is taken based on the frequency and seriousness of the complaints.

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CORRECTIVE AND PREVENTIVE ACTION

Purpose: This procedure lays down the method to initiate and implement corrective and preventive action.

Scope: To establish and maintain a uniform method for taking correction and corrective action and applicable to all non-conformities identified during any stage of the processes and also for problems encountered during implementation of FSMS and for any feedback/ complaint from the customer.

Responsibility: Food Safety Team Leader.

Procedure:

- Corrective actions detailing the root cause & its resolution
- Corrective actions needed in the course of production identification of its root cause & its resolution based on pre-determined corrective actions. Elimination of mistakes is nothing but nearly cost saving in business any deviation is identified in the line, corrective action can be taken and greater will be the potential for minimizing the non-compliance product. The action plan relating to, safety, legality or quality shall only be agreed by HACCP leader or QA in change for control of these areas.
- Action Procedure: Any deviations/ defects occurred in the process/ construction/ whatever reason that can be noticed and written in the corrective action request form. Through corrective action request form, Non- Conformances are acknowledged to the concerned departments/ area's functions. The responsible person of the department has to take timely corrective action and that has to be recorded in proposed action with the completion date and signature. Effectiveness of the actions or comments shall be verified by the concerned management person with the signature and closing date.

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Sl. No.	ACTIVITY	Responsibility / Authority	Records / References
1.	General a) Corrective actions may be taken on : Customer Complaints (Significant /Recurring) Non Conformances from NC Registers IQA Findings Various other non-conformances as identified via Inspection and Test Reports, GRN's, CCP's Monitoring Forms, etc. Corrective actions identified during MRM's Any short comings found or up gradation required by any of our business partners.	Section In charge	Customer complaint-
2.	Correction and Corrective Action		
2.1	a) Based on the nature of the non-conformances, action to eliminate a detected nonconformity and action to eliminate the cause of a detected nonconformity or other undesirable situation are planned and implemented	Section In charge	CAPA
2.2	b) The steps involved in taking corrective action are : • Reviewing non-conformances and identifying their cause. • Evaluating the need for action in order to ensure that the same non-conformance does not reoccur. • Deciding the action to be taken, assigning responsibility for taking actions, and target dates, and implementing the action. • Reviewing of action taken and its effectiveness (This may be done in subsequent IQA's)	Section In charge	CAPA
2.3	c) Records of Correction and corrective Action are maintained in NC Registers , CAPA Forms, or various process records such as CCP Monitoring records, inspection and Test records at different stages, GRN's MRM Output Reports, etc.	Section In charge	CAPA

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2.4	d) On dealing with Corrective Action, due attention is given to : • Accurate description of the non-conformance • Short term fix • Long term corrective action to prevent recurrence • Verification that corrective action undertaken has been effective • Corrective Action may Involve, for example : • Changes in documented processes / procedures to reflect the corrective action and • Up gradation of competence to ensure changed documented processes / procedures are implemented in practice.	Section In charge / FSTL	CAPA
3.	Customer Complaints		
3.1	Customer Complaints are addressed as per the procedure for Customer Complaint Handling	Facility In-charge	Customer complaint Handling

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Complaints may be notified to

MANAGING PARTNER

M/s. PRIME BIO PROTEINS

PLOT NO. 610/1

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The HACCP manual is released under the authority of the Managing Partner of M/s.Prime Bio Proteins, Gujarat, India.All revisions to this manual are to be reviewed by the HACCP Team leader and approved by the Managing Partner. All the departments are to implement this manual as per the latest revisions. Details of all changes are recorded in the amendment sheet.

Records are legible and demonstrating essential production or process inspections. All records are retained for a minimum period of two- years or shelf-life of the product to enable effective internal and external auditing system so that they can be reviewed. The lists of records are maintained for easy convenience. On the expiry of the retention period, the records are disposed off.

Audit Schedule

Date:

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Date	01.02.2023		Date	01.02.2023

Sl.No.	Function/ Department	Auditor	Date	Time From - To	Scope	Last audit date
1	Management Representative				Management review Internal Audit Control of Documents Control of Records	
2	Marketing				Contract review – Order Enquiry	
3	Purchase				Supplier evaluation, Purchase order	
4	Production Maintenance/ Stores				Production plan, maintenance Schedule, control of stores	
5	Testing and Laboratory				Customer related process, service provision, control of monitoring and measuring device, control of non conforming products	
6	Management Responsibility & Resource Management				Infrastructure, human resources training	
7	Top Management				Quality policy Quality objectives	
8	Inspection & Certification				All activities relating to inspection and certification	

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RECORDS