Product Specification
For D´CAM SHRIMP Brand
Peeled and Deveined, Tail Off (P&D, IQF)

1. Raw Material Information

Shrimp:

Species White Shrimp (*Litopenaeus vannamei*)
Country of origin Ecuador

Production Method Farm Raised

Shrimp must meet FDA-mandated chemical tolerance levels. At our plant, we perform the necessary controls to ensure that each batch of shrimp meets the following:

Chemical	Tolerance Level in Edible Portion	Preferred Method of Analysis	Minimum Monitoring Frequency	Laboratory
Heavy Metals (To be determined)				
Aquaculture Drugs				
Nitrofurans (AH,SEM,AOZ, AMOZ)	Zero Tolerance	LC/MS/MS Modified FDA Method	Once a year	Third Party Lab
Chloramphenicol	Zero Tolerance	LC/MS/MS	Once a year	Third Party Lab
Tetracyclines and related antibiotics (oxyteatracycline, chlortetracycline)	Zero Tolerance	AOAC 995.09	Once a year	Third Party Lab
Floroquinolones (Enroflozacin, Ciprofloacin,Serafloxacin,Difloxain, Flumequine, Oxilinic acid)	Zero Tolerance	LC/MS/MS Modified LIB $4405	Once a year	Third Party Lab
Malachite Green and Gentian Violet (crystal violet)	Zero Tolerance	LC/MS/MS FDA method LIB #4395	Once a year	Third Party Lab
Pesticides and Other Contaminants				
Aldrin & Dieldrin	< 0.3 ppm	PAM I 301	Once a year	Third Party Lab
Chlordane	< 0.3 ppm		Once a year	Third Party Lab
Chlordecone	<0.3 ppm		Once a year	Third Party Lab
DDT, TDE & DDE	< 5 ppm	PAM I 301	Once a year	Third Party Lab
Heptachlor & Heptachlor Epoxide	< 0.3 ppm	PAM I 301	Once a year	Third Party Lab
Mirex	<0.1 ppm	PAM I 301	Once a year	Third Party Lab
PCBs (Aroclor 1254, Aroclor 1260)	< 2 ppm	Mod GC-ECD	Once a year	Third Party Lab
2, 4 – Dechlorophenoxyacetic acid	< 1.0 ppm		Once a year	Third Party Lab

Other Ingredients

Sodium Metabisulfite:

Functionality:

- To prevent melanosis or black spots in shrimp.

Requirements:

- Must be food grade (contains less than 10 ppm of heavy metals).
- Each batch of sodium metabisulfite purchased must be accompanied by a certificate of analysis to be kept on file for two years.

Usage:

Unless previously specified by the customer, our processing plant may use sodium metabisulfite in accordance with good manufacturing practices. The final residual level in the edible portion may not exceed 100 ppm of sulfur dioxide (SO_2).

Sodium Phosphates:

Functionality:

- To prevent dehydration or moisture migration in **peeled shrimp.**

Requirements:

- Must be food grade (contains less than 10 ppm of heavy metals). **Carnal 659 S Advance**. Each batch of Carnal 659 S Advance purchased will be accompanied by a certificate of analysis which will be kept in our archives for two years.

Usage:

- As processors, we apply **Carnal 659 S Advance** to peeled shrimp using previously established procedures, provided that the finished raw product has a moisture level below 82%.
  The established procedure consists of the following methodology:
- Additives: **3% Carnal 659 Advance and 2.5% food grade salt.**

Treatment:

- Additives are dissolved in water (60% of weight of solution), phosphate first and then the salt, and then ice is added to complete weight. Temperature of treatment solution MUST BE MAINTAINED between 2°C (32°F) and 4 °C (39°F) throughout the entire treatment. Internal temperature of shrimp should never exceed 5°C (40°F) throughout the entire treatment.

A 1:1.5 shrimp to solution ratio is preferred. However, this ratio can be adjusted on the shape of treatment container. As a general rule, product should not appear to be crowded during the treatment and the treatment solution must cover the entire product. Static treatment with periodic agitation 3 or 4 times during treatment to ensure complete exposure of shrimp to treatment solution is highly recommended. Treatment time depends on the size of the shrimp.

Shrimp Size	Treatment Time
13/15, 16/20	120 minutes
21/25, 26/30	90 minutes
31/40, 41/50, 51/60	60 minutes
61/70, 71/90,91/120	45 minutes
100/200,200/300 etc	30 minutes

Chemical	Tolerance	Preferred Method	Monitoring Frequency
Sodium Metabisulfite	$Na_2S_2O_5 \geq 98\%$	Certificate of analysis from supplier	Every lot purchased
Phosphate based moisture retention agents	P2O5≥ 58%; Food Grade: < 10 ppm of heavy metals	Certificate of analysis from supplier	Every lot purchased
Salt	NaCl > 97%. Food Grade. No extraneous matter	Certificate of analysis from supplier; Visual examination by plant lab.	Every lot purchased

1. Finished Product Information

A. Products: raw, peeled and deveined, tail off, individually quick frozen shrimp (IQF)

B. **Net Weight:** Must comply with the net weight requested by the customer.

NET Weight Determination

The following method, AOAC Official Method 967.1, Net Contents of Frozen Seafood, must be used to determine the net weight:

1. **Apparatus**

(a) Balance. – Sensitive to 0.25 g or 0.01 oz.

(b) Sieves. – U.S. No. 8, 20 cm (8”) and 30cm (12”) diameter.

2. **Determination**

Place contents of individual package in wire mesh basket and immerse in ≥ 15 L (4 gal.) container of fresh H2O at 26 ± 3°C (80± 5°F) so that top of baskets extends above H2O level. Introduce H2O of same temperature at bottom of container at flow rate of 4-11 L (1-3 gal)/min. As soon as product thaws, as determinated by loss of rigidity, transfer all material to 30 cm (12”) (for package 450 g - 1lb) or 20 cm (8”) (for package ≤ 1lb) No.8 sieve, distributing evenly. Without shifting material on sieve, incline sieve to approximately 30 °C (12”) (for package 450 g – 1lb) or 20 cm (8”) (for package ≤ 1lb No.8 sieve, distributing evenly. Without shifting material on sieve, incline sieve to approximately 30°C from horizontal to facilitate drainage. Two minutes from placed on sieve, transfer product from previously weighed pan, and weigh. Weight so found minus weight of pan is drained weight product.

SIZE	COUNT TOLERANCE	UNIFORMITY TOLERANCE
21-25	**23 ± 1**	**1.3**
26-30	**28 ± 1**	**1.3**
31-35	**33 ± 1**	**1.35**
36-40	**38 ± 1**	**1.35**
41-50	**45 ± 2**	**1.4**
51-60	**55 ± 2**	**1.5**
61-70	**65 ± 2**	**1.5**
71-90	**80 ± 5**	**1.6**
91-110	**100 ± 5**	**1.6**

2. Finished Product Attributes

Physical Attributes	Tolerance	Monitoring Frequency	Laboratory
Broken	< 3% by wt.	Every Lot	Processing Plant Lab
Extraneous/foreign material	< 0% by wt.	Every Lot	Processing Plant Lab
Deep cut / Wrong cut	< 5% by wt.	Every Lot	Processing Plant Lab
Freezer burn/dehydration	Severe < 0% / Slight 20% by wt.	Every Lot	Processing Plant Lab
Heat stress	Severe < 0% / Slight 20% by wt.	Every Lot	Processing Plant Lab
Glaze	As agreed with customer (IQF)	Every Lot	Processing Plant Lab
Improperly peeled	< 3% by wt.	Every Lot	Processing Plant Lab
Pieces (< 5 segments)	< 3% by wt.	Every Lot	Processing Plant Lab
Throat Meat	< 3% by wt. (shall not be longer than the first segment or be discolored)	Every Lot	Processing Plant Lab
Vein residue	< 3% by wt.	Every Lot	Processing Plant Lab
Melanosis on meat	None	Every Lot	Processing Plant Lab
Total Defects	**< 20 %**		

Sensorial Attributes	Tolerance	Monitoring Frequency	Laboratory
Decomposition	None	Every Lot	Processing Plant Lab
Color	Uniform color in the package.	Every Lot	Processing Plant Lab
Flavor	Salty, slightly sweet, typical shrimp flavor.	Every Lot	Processing Plant Lab
Odor	Typical shrimp aroma: briny, ocean like. No decomposition odors like, ammonia, fecal, putrid or rancid.	Every Lot	Processing Plant Lab
Texture	Firm, not rubbery, tough, or mushy when bitten)	Every Lot	Processing Plant Lab

4. **Finished Product Chemical Parameters**

Additives	Use	Tolerance	Laboratory
Sodium Metabisulfite	Permitted	< 100 ppm SO_2	Processing Plant Lab
Moisture Retention Agents (Carnal 659S Advance)	Permitted	< 82%moisture in edible portion	Processing Plant Lab

5. Product Shelf-life

Raw, peeled and deveined, tail off, IQF shrimp is expected to have a shelf-life of 24 months when stored at -18°C (0°F) or below.

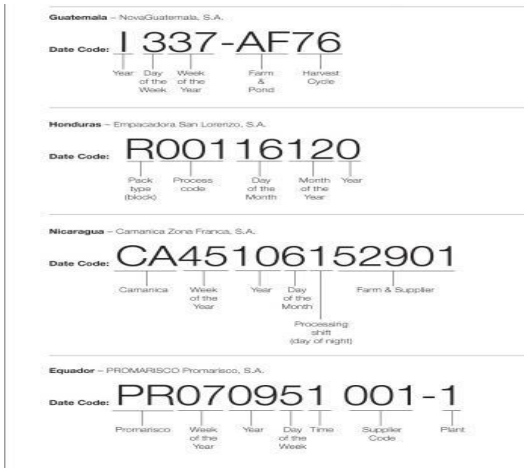
6. Packaging Information

A. Master Packaging: Customer requirements

B. Inner Packaging: Customer requirements

C. Ingredient Labeling: Customer requirements

D. Lot Identification Description



E. Nutrition Facts: Customer will provide and/or must approve the nutrition facts panel for each product prior to printing on packaging. Please request label to or email label for approval to

F. Allergens: The following allergen(s) must be specified below the ingredient statement.

Does this Product Contain any of these Allergens or Is this product produced in a facility that also processes any of the following ingredients?	YES/NO	If YES, Please Specify
Milk and Milk By-products	No	
Eggs	No	
Legumes/Tree Nuts (soy, peanuts, walnuts, pecans, etc)	No	
Wheat	No	
Shellfish	Yes	Shrimp
Fish	No	

