

The U.S. Non-Canned Tuna Market

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Product Forms Produced From Frozen Loin



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10 oz. Steak

Product Forms Produced From Frozen Loin



8 oz. Steak

Product Forms Produced From Frozen Loin



6 oz. Steak

Product Forms Produced From Frozen Loin



4 oz. Steak

Product Forms Produced From Frozen Loin



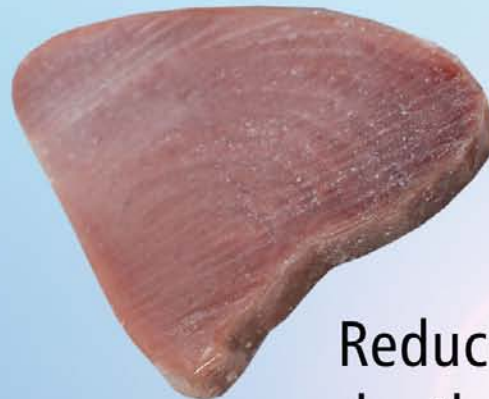
Medallion Cut

Product Forms Produced From Frozen Loin



Kebob Cut

Product Forms Produced From Frozen Loin



Reducing the cutting depth by 1/2 inch creates Sandwich Steaks

Packaging Variations for Frozen Tuna



- Vacuum Packed Steaks for Foodservice applications



Packaging Variations for Frozen Tuna



- Bagged, vacuum packed Steaks for **Club Store/Warehouse** applications



Packaging Variations for Frozen Tuna



- Bagged, vacuum packed Steaks for **Retail** applications



Packaging Variations for Frozen Tuna

- Flavored Tuna Burgers - a Retail "Value Added" selection



Red Tuna Product Forms



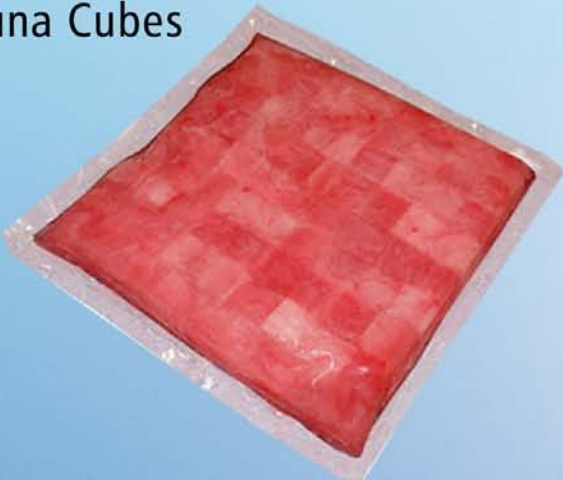
Red Tuna Steak



Red Tuna Saku Block




Red Tuna Cubes



Red Tuna Ground





(video segment on tuna production)

U.S. Food and Drug Administration



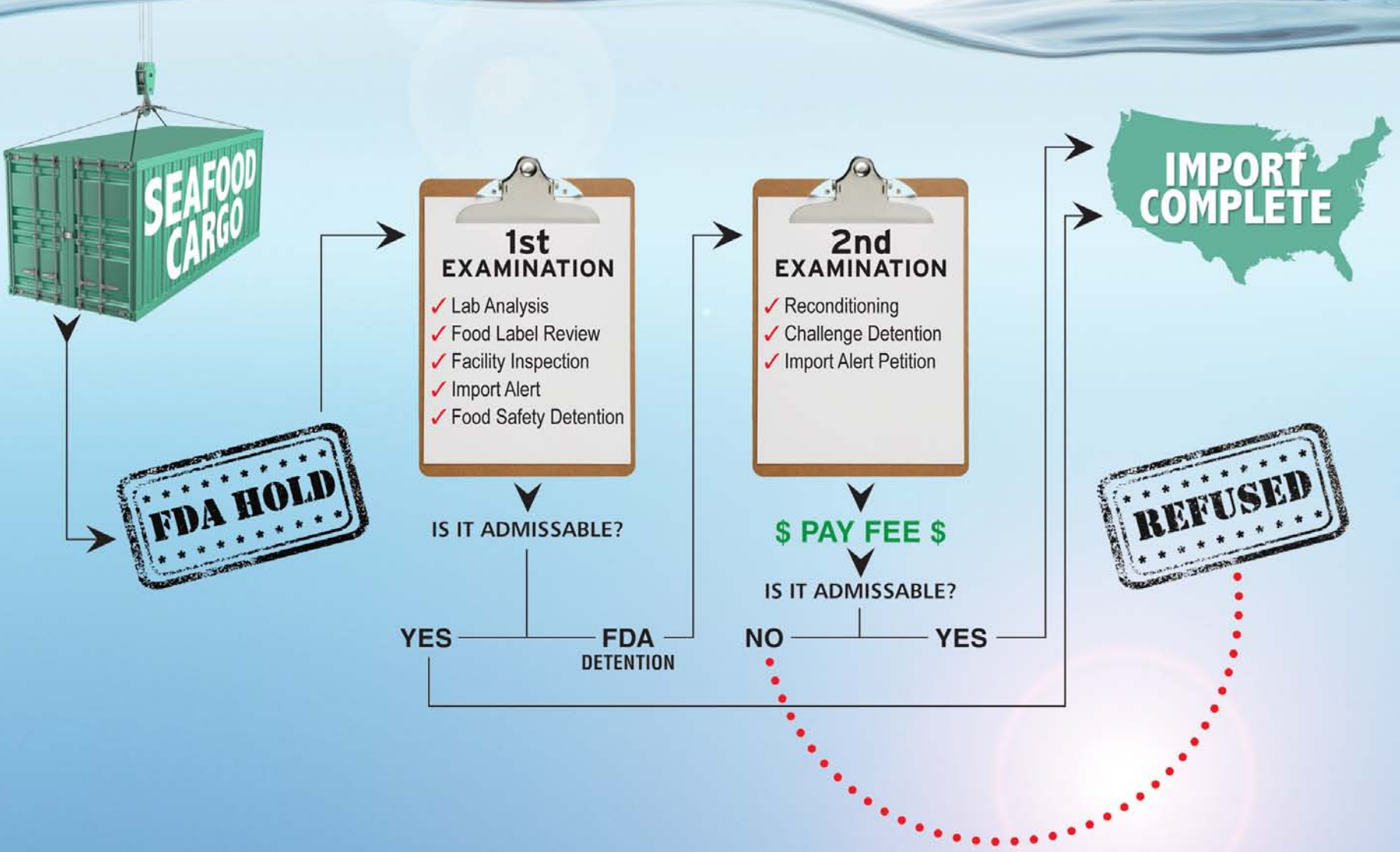
U.S. Food and Drug Administration




- FDA is the governmental agency mandated to regulate the seafood industry - both **domestic & imported seafood**.
- Approximately 80% of the seafood consumed in the U.S.A. is imported & must meet the same quality & safety standards that the domestic product has to meet.
- The primary method that FDA has used over the years to evaluate seafood for quality is the use of **sensory techniques**. They have found this to be a **cost effective & time efficient** method of determining the quality of a product.



FDA Examination Flow Chart





(video segment on fda analysis)

Super Frozen Product



The Introduction of Super Frozen Product



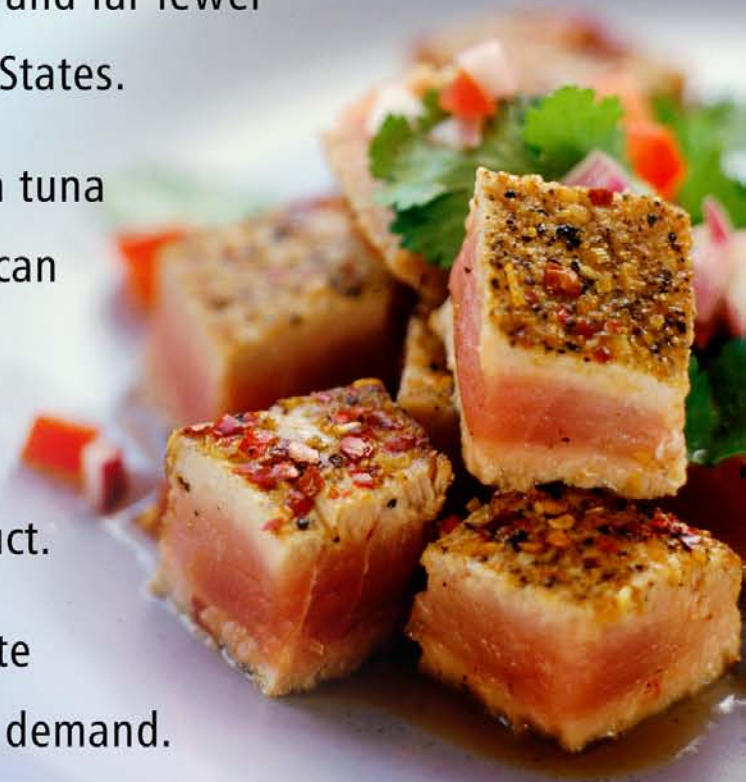
- 1960s - Developed for medical sample preservation.
- 1970s - First utilized in Japan for the seafood industry.
- Super freezing holds the tuna at a temperature of -76°F (-60°C) reaching the “Eutectic Point” at which all cellular activity ceases.
- This allows super freezing to quite literally **stop the clock** on all decomposition, oxidization and related quality loss.
- Today, 80% of all Japanese Tuna consumed as sashimi or sushi has been super frozen.



The Advantages of Super Frozen Product



- Higher quality, higher value product.
- Limited re-handling of the product in the unbroken cold chain.
- Significantly lower waste of product and far fewer rejection of shipments into the United States.
- Lower carbon footprint. Super frozen tuna transported by sea (versus air freight) can lower this footprint by 50%.
- More attractive to consumers who harbor concerns over CO treated product.
- Eye towards sustainability. Less waste means fewer fish are required to meet demand.



Super Frozen Containers



- Maersk Line has developed a specialized container for super frozen shipment. These will help expand the unbroken cold chain bringing products to their final place of delivery.

An added feature to this system is the special "Stuffie" container. This is a super frozen chamber that lets seafood harvesters quickly load the tuna directly from the fishing vessel. The "Stuffie" is then transported & linked to the main super frozen container, where the load can be sorted & transferred in an orderly fashion in under -76°F conditions.



A Super Frozen Seafood Case



A major U.S. retailer marketing a variety of super frozen selections

Non-Governmental Organizations • NGOs

An overview of the most influential groups



Monterey Bay Aquarium

Publishes the “Seafood Watch” - a color coded species listing that categorizes fish as “Best Choice”, “Good Alternative” or “Avoid”.



Marine Stewardship Council

The most recognized global “Eco-Label”. Fisheries are taken under “assessment” & those “certified” can display the MSC logo.

New England Aquarium

Provides consultation regarding sourcing practices & publishes a guide of “Ocean Friendly Seafood Choices”.



Blue Ocean Institute

Conservation group employing a quantitative point system indicated by 5 color coded fish. These symbols are keyed to core criteria including **species life history, abundance, habitat quality/gear impacts, fisheries management & bycatch.**



FishWise

Provides sustainable sourcing & policy recommendations to retailers & other partners. Closely aligned with MBA, MSC & interfaces with other NGOs.

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World Wildlife Fund

World's leading conservation group & founder of the MSC & the ISSF. Works with partners & industry to develop sustainable sourcing policies & fishery improvement projects.



Friend of the Sea

Certifies products & suppliers based on audits by independent international certification bodies against FAO guidelines & only certifies fish from stocks that are not overexploited.



Sustainable
Fisheries
Partnership



Sustainable Fisheries Partnership

Science-based group focusing on providing strategic & technical guidance to the seafood supply chain to rebuild fish stocks & reduce environmental impacts of fishing by participating in fishery improvement projects.



Environmental Defense Fund

Multi-stakeholder activist organization that promotes policy change using science, economic incentives, partnerships & nonpartisan politics. Publishes a list of ✓ ECO-BEST, = ECO-OK, ✗ ECO-WORST.

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Greenpeace

Activist group that ranks retailers in their “**Carting Away the Oceans**” publication & publishes a “**Red List**” species fact sheet.



Conservation Alliance for Seafood Solutions

A “Super NGO” made up of BOI, MBA, SFP, WWF, NEA, EDF, FishWise, Ecology Action Center, Living Oceans Society, Ocean Wise (Vancouver Aquarium), Shedd Aquarium & Fish Choice. This group developed the presentation: **A Common Vision for Environmentally Sustainable Seafood.**



FishChoice

Another “Super NGO” with partners MSC, MBA, Sea Multi-stakeholder activist organization that promotes policy change using science, economic incentives, partnerships & nonpartisan politics. Publishes a list of **✓** ECO-BEST, **-** ECO-OK, **✗** ECO-WORST.



International Seafood Sustainability Foundation

A collaboration between scientists, NGOs & leading tuna industry members who work in conjunction to address various sustainability issues.

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Ocean Conservancy

Works with governments, industry, scientists, policy makers, conservation organizations & citizen advocates on issues affecting the health of our oceans.



Ocean Trust

Conservation foundation building partnerships between science, industry & conservation groups.



Conservation International

Conservation foundation that builds partnerships using government policy, field work, corporate partnerships & science to affect change.



Gulf of Maine Research Institute

Fisheries research group that provides sustainability consulting services.



Food Marketing Institute Sustainable Seafood Committee

Ahold USA, Fresh & Easy, Giant Eagle, Delhaize USA, Haggen, Harris Teeter, H-E-B, Hy-Vee, King Supermarkets, Kroger, Loblaw's, Price Chopper, Publix, Raley's, Safeway, Schnucks, Sobey's, Supervalu, Target, Wakefern, Wal-Mart, Wegman's, Winn-Dixie.

Retail NGO Partners



Costco - WWF, MSC, ISSF

Wal-Mart/Sam's - Msc, WWF, or programs with equivalent standards

Target - MSC, FishWise

Kroger - WWF, MSC

SUPERVALU - WWF, MSC

Safeway - FishWise

Publix - SFP, Ocean Conservancy, Ocean Trust

Ahold - NEA, MSC, WWF, or programs with equivalent standards

Delhaize - Gulf of Maine Research Institute

Whole Foods - MBA, BOI, MSC

Trader Joe's - Internal policy but no "official" alignment

BJ's Wholesale Club - SFP, MSC

Topco - MSC

Aldi - MSC

Wegman's - MSC, SFP, EDF, GMRI

HEB - Ocean Trust

A & P - No published policy

Foodservice NGO Partners



Sysco - WWF

US Foods - MSC

Darden - NEA, Conservation International

Compass - MBA

Aramark - MBA

Sodexo - MSC

McDonalds - MSC, Conservation International

YUM Brands - MSC

SUBWAY - MSC

Burger King - No published affiliation



NGO Compliant Packaging?



NGO Compliant Packaging?



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thank you