Hazard Analysis -- Pasteurized Crabmeat

(1) Ingredient / Processing Step	(2) Identify potential hazards introduced, controlled or enhanced at this step.	(3) Are any potential food safety hazards significant? (Yes/No)	(4) Justify your decision for column 3.	(5) What preventive measure(s) can be applied to prevent significant hazards?	(6) Is this step a Critical Control Point? (Yes/No
Receipt	BIOLOGICAL Bacterial and viral pathogens CHEMICAL Environmental contaminants PHYSICAL None	Yes No	Raw crabs can be a source of pathogens No history of problems for crabs in harvest areas	Pasteurization destroys pathogens Stay current with pollution incidence or health advisories	No
Raw Crab Cooler	BIOLOGICAL Bacterial pathogens CHEMICAL None PHYSICAL None	Yes	Raw crabs contain pathogens that can grow under refrigeration	Pasteurization destroys pathogens	No
Retort	BIOLOGICAL Pathogens CHEMICAL Boiler chemicals PHYSICAL None	Yes No No	Improper cook will not kill or inactivate human pathogens SSOP	Pasteurization destroys pathogens	No
Air Cool	BIOLOGICAL Pathogens CHEMICAL None PHYSICAL	Yes	Pathogens may be introduced and grow if crabs are contaminated and time-temperature abused	Recontamination controlled by SSOP (move crabs to cooler according to schedule; crabs not handled until picked); pasteurization	No

	None			destroys pathogens	
Cooked Crab Cooler	BIOLOGICAL Bacterial Pathogens CHEMICAL None PHYSICAL None	Yes	Temperature abuse could lead to pathogen growth if present	Pathogens destroyed by pasteurization	No
Picking / Deboning / Weigh-up	BIOLOGICAL Bacterial pathogen growth; Introduction of viruses *Staphylococcus aureus* CHEMICAL Introduction of unapproved compounds PHYSICAL Shell	Yes No No No	Bacterial growth if excessive exposure to room temperature; Fecal viruses from workers hands Although growth sufficient for toxin production is possible if severe time and temperature abuse, it is unlikely and best controlled by SSOP SSOP Inherent to product, quality defect only	Pasteurization destroys pathogens; Heat-stable toxin controlled with SSOPs	No No No No
Can Seaming	BIOLOGICAL Bacterial pathogen recontamination from loss of package integrity CHEMICAL None PHYSICAL None	Yes	Defective seams or can could allow introduction of pathogens (*Clostridium botulinum* type E and other pathogens, post-process)	Proper seam formation	**Yes**
Pasteurization (heating step)	BIOLOGICAL Bacterial or viral pathogen survival CHEMICAL	Yes	Pathogens may survive an inadequate thermal process	Heat all crabmeat according to established process schedule	**Yes**

	None PHYSICAL None				
Pasteurization (cooling step)	BIOLOGICAL Recontamination with pathogens CHEMICAL None PHYSICAL None	Yes	Pathogens could be drawn in through seams although this is less likely than for canned foods due to lower processing temperatures	Chlorinate cooling water	**Yes**
Packed Product Cooler	BIOLOGICAL Bacterial pathogen growth CHEMICAL None PHYSICAL None	Yes	Proteolytic types of *Clostridium botulinum* could grow if temperature abused	Proper refrigeration	**Yes**

Firm Name: Glorious Crab, Inc.
Firm Address: 123 Harvest Way, Seaside MD 12345
Signature: _____
Date: _____

Product Description: Pasteurized Crabmeat (ready to eat); cans
Method of Storage and Distribution: Refrigerated storage and distribution
Intended Use and Consumer: Ready to eat: retail and institutional