



I. Microbiological Requirements of Fishery Products Based on Countries

USA

Product		<i>S. aureus</i> MPN/g	<i>Vibrio</i> spp. / 25g	<i>V. cholerae</i> / 25g	<i>L. monocytogenes</i> / 25g	<i>Salmonella</i> spp. / 25g	<i>Clostridium</i> <i>botulinum</i>
All Fish ¹	1. Products that will support their growth ²	-	-	-	-	-	ND/g
	2. Cooked (Ready to eat)	1 x 10 ⁴	n = 5 c = 0 m = 0	-	n = 5 c = 0 m = 0	n = 5 c = 0 m = 0	-
	3. Raw (Ready to eat)	1 x 10 ⁴	-	n = 5 c = 0 m = 0	n = 5 c = 0 m = 0	n = 5 c = 0 m = 0	-
	4. ผลิตภัณฑ์ที่นอกเหนือจากข้อ 2 และ 3	1 x 10 ⁴	-	-	-	n = 5 c = 0 m = 0	-

Product	<i>V. vulnificus</i> MPN/g	<i>V. parahaemolyticus</i> MPN/g
5. Post-harvest processed clams, mussels, oysters, and whole and roe-on scallops, fresh or frozen, that make a label claim of “processed to reduce <i>Vibrio parahaemolyticus</i> to non-detectable levels”.	-	< 30
6. Post-harvest processed clams, mussels, oysters, and whole and roe-on scallops, fresh or frozen, that make a label claim of “processed to reduce <i>Vibrio vulnificus</i> to non-detectable levels”.	< 30	-



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คำจำกัดความ :¹ Fish หมายถึง Fresh or saltwater finfish, crustaceans, other forms of aquatic animal life (including, but not limited to, alligator, frog, aquatic turtle, jellyfish, sea cucumber, and sea urchin and the roe of such animals) other than birds or mammals, and all mollusks, where such animal life is intended for human consumption.

Fishery products หมายถึง any human food product in which fish is a characterizing ingredient.

² Examples of products that will support *Clostridium botulinum* growth :

1. Refrigerated (not frozen), reduced oxygen packaged smoked and smoke-flavored fish
2. Refrigerated (not frozen), reduced oxygen packaged, pasteurized fishery products
3. Refrigerated (not frozen), reduced oxygen packaged pickled fish, salted fish, caviar, and similar products
4. Refrigerated (not frozen), reduced oxygen packaged raw, unpreserved fish and unpasteurized, cooked fishery products e
5. Frozen, reduced oxygen packaged raw, unpreserved fish and unpasteurized, cooked fishery products
6. Control in unrefrigerated (shelf-stable), reduced oxygen packaged fishery products e.g., shelf-stable, reduced oxygen packaged fishery products are dried fish, acidified fish, canned fish, and salted fish

อ้างอิง : U.S. Department of Health and Human Services, Food and Drug Administration. Fourth Edition- AUGUST 2019. Fish and Fishery Products Hazards and Controls Guidance.