



**I. Microbiological Requirements of Fishery Products Based on Countries**

**SAUDI ARABIA**

Product	TVC CFU/g	<i>E. coli</i> MPN/g	<i>S. aureus</i> CFU/g	<i>Salmonella</i> spp. in 25 g	<i>L. monocytogenes</i> in 25 g	<i>V. paraheamolyticus</i> MPN/g	<i>C. botulinum</i>	<i>Aeromonas</i> spp. CFU/g
Raw fish and its products (chilled/frozen) e.g. fish blocks, comminuted minced, and sliced	n = 5 c = 2 m = 10 <sup>5</sup> M = 10 <sup>6</sup>	n = 5 c = 3 m = 10 M = 5 x 10 <sup>2</sup>	-	-	-	n = 5 c = 0 m = 10 <sup>2</sup> M = 10 <sup>3</sup>	n = 5 c = 0 m = 0	n = 5 c = 0 m = 10 <sup>2</sup> M = 10 <sup>3</sup>
Raw (chilled/ frozen) crustaceans (e.g. shrimp, prawns, lobsters and crab)	n = 5 c = 2 m = 5 x 10 <sup>5</sup> M = 10 <sup>7</sup>	n = 5 c = 3 m = 10 M = 5 x 10 <sup>2</sup>	n = 5 c = 2 m = 10 <sup>2</sup> M = 10 <sup>3</sup>	n = 5 c = 0 m = 0	n = 5 c = 0 m = 0	n = 5 c = 1 m = 10 <sup>2</sup> M = 10 <sup>3</sup>	-	-
Live mollusks such as bivalve (oysters, clams, mussels, etc.), cephalopods (squids, cuttlefish, octopus, etc.), gastropods (snails, etc.)	-	n = 5 c = 1 m = 2.3 x 10 <sup>2</sup> M = 7 x 10 <sup>2</sup>	-	n = 5 c = 0 m = 0	-	n = 10 c = 1 m = 10 <sup>2</sup> M = 10 <sup>3</sup>	-	-



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Frozen/chilled breaded fish, crustaceans and mollusks products (e.g. fish stick (fingers), fish protein, and fish cakes) (Ready to Cooked)	n = 5 c = 2 m = 5 x 10 <sup>5</sup> M = 10 <sup>7</sup>	n=5 c= 2 m=10 M=5 x 10 <sup>2</sup>	n = 5 c = 1 m = 10 <sup>3</sup> M = 10 <sup>4</sup>	n = 5 c = 0 m = 0	-	n = 5 c = 1 m = 10 <sup>2</sup> M = 10 <sup>3</sup>	-	-



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Smoked fish including herring, cooked prior to eating and eaten uncooked (Ready to Cooked, Ready to eat)	n = 5 c = 3 m = 10 <sup>5</sup> M = 10 <sup>6</sup>	n = 5 c = 3 m = 10 M = 5 x 10 <sup>2</sup>	n = 5 c = 2 m = 10 <sup>3</sup> M = 10 <sup>4</sup>	-	n = 5 c = 0 m = 0	n = 5 c = 0 m = 10 <sup>2</sup> M = 10 <sup>3</sup>	-	-	-
Dried sea food, dehydrated fish and fish protein	n = 5 c = 2 m = 10 <sup>5</sup> M = 10 <sup>6</sup>	-	n = 5 c = 1 m = 10 <sup>2</sup> M = 10 <sup>3</sup>	n = 10 c = 0 m = 0	-	-	n = 5 c = 2 m = 10 <sup>2</sup> M = 10 <sup>4</sup>	n = 5 c = 1 m = 10 <sup>2</sup> M = 10 <sup>3</sup>	-
Salted and/or fermented fish	n = 5 c = 2 m = 10 <sup>5</sup> M = 10 <sup>6</sup>	n = 5 c = 1 m = 10 M = 4 x 10 <sup>2</sup>	n = 5 c = 1 m = 10 M = 10 <sup>2</sup>	n = 10 c = 0 m = 0	-	n = 10 c = 0 m = 0	-	n = 5 c = 1 m = 10 <sup>2</sup> M = 10 <sup>4</sup>	n = 5 c = 0 m = 0



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Cooked (chilled/ frozen crustaceans, molluscans	n = 5 c = 2 m = 10 <sup>5</sup> M = 10 <sup>6</sup>	n = 5 c = 1 m = 10 M = 5 x 10 <sup>2</sup>	n = 5 c = 1 m = 10 <sup>2</sup> M = 10 <sup>3</sup>	n = 5 c = 0 m = 0	n = 5 c = 0 m = 0	n = 10 c = 1 m = 10 <sup>2</sup> M = 10 <sup>3</sup>	-	-

Product	Sterility test
Canned Foods	Must be the number of cans tested 24 cans and the absence of defects; lock; welding or swelling during incubation indicates the efficiency of the commercial sterilization process and the safety of batch production ( n = 24 m = 0)

อ้างอิง : GCC STANDARDIZATION ORGANIZATION (GSO). 2015. GSO 1016 - Microbiological Criteria for Foodstuff.