

QUALITY ISSUES IN Convenience Fishery Products



ADVISORY FOR QUALITY & SAFETY

- ♣ Use fresh fish for product preparation
- ♣ Handle raw materials and processed products hygienically
- ♣ Use suitable and effective packaging material.
- ♣ Avoid keeping raw fish and processed fish together
- ♣ Store the product at refrigerated condition once it is opened
- ♣ Expired product must be discarded immediately



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Convenience Fishery Products (CFPs)

Convenience Fishery Products are tertiary food products made of fish, which are in ready to eat form and also includes snack based items prepared from fish and fishery products meant for direct human consumption such as extruded fishery products, fried items namely fish wafers, crackers, fish cutlets, fish burgers and other such products.

Regulatory guidelines for Convenience fishery products (FSSR, 2011)

Category of CFPs

This category includes:

- ♣ Sous-vide cooked products
- ♣ Surimi-based cooked products (in-pack)
- ♣ Pasteurized crab meat
- ♣ Pasteurized molluscs which are distributed as refrigerated, but meant for direct human consumption with minimal or no cooking
- ♣ Other similar products



n = Number of units comprising a sample.
c = Maximum allowable number of units having microbiological counts above m.
m = Microbiological limit that may be exceeded number of units c.
M = Microbiological limit that no sample unit may exceed.

PARTICULARS	ORGANISM & TEST METHOD	SAMPLING		LIMITS (cfu/g)		STAGE WHERE CRITERION APPLIES
		n	c	m	M	
Hygiene Indicators	Aerobic plate count Testing: IS: 5402/ISO 4833	5	5	1×10 ³	1×10 ⁴	End of Manufacturing process
	Coagulase positive Staphylococci Testing: IS 5887 : Part 2 or IS 5887 Part 8 (Sec 1)	5	2	1×10 ²	1×10 ³	End of Manufacturing process
	Escherichia coli Testing: IS 5887 Part 1 or ISO 16649-2	5	2	1	10	-
Safety Indicators	Salmonella Testing: IS 5887 Part 3/ ISO 6579	5	0	Absent/25g		-
	V. Cholerae (O1 and O139) Testing: Vibrio, Bacteriological Analytical Manual, Chapter 9. USFDA BAM Online, May	5	0	Absent/25g		-
	L. monocytogenes Testing: IS: 14988, Part 1&2/ISO 11290-1 & 2	5	0	Absent/25g		-

Quality issues in CFPs

- ♣ Discolouration of the products
- ♣ Textural changes in the products
- ♣ Flavor changes in the products
- ♣ Development of rancid taste
- ♣ Cross-contamination with pathogens
- ♣ Quick microbial deterioration in minimal processed products

Solutions to quality issues in CFPs

- ♣ Proper blanching and minimum heating time must be followed.
- ♣ Proper packaging material should be used to prevent loss of aromatic volatile compounds.
- ♣ Suitable antioxidants should be used at recommended concentration.
- ♣ Container seal integrity should be maintained.
- ♣ Proper hygiene condition should be maintained.

Biological hazards associated with CFPs

- ♣ Clostridium botulinum type A, B, E & T
- ♣ Clostridium perfringens
- ♣ Listeria monocytogenes
- ♣ Salmonella
- ♣ Escherichia coli
- ♣ Campylobacter jejuni
- ♣ Staphylococcus aureus
- ♣ Vibrio spp.