

CHEMICAL REFERENCE CRITERIA FOR TRADITIONAL FISHERY PRODUCTS OF THAILAND EXPORTED TO EUROPEAN UNION AND NORWAY (lot by lot)

Item	Dried/ Smoked histamine poisoning fish	Dried Mollusc	Dried Cephalopod	Dried Crocodile	Dried/ Smoked aquaculture fish (except histamine poisoning fish)	Dried/ Smoked wild caught fish (except histamine poisoning fish)	Dried shrimp/ Instant rice porridge with dried shrimp	Fermented crab	Fermented fish	Fish roe products	Tai-Pla, Budoo	Fish sauce	Fish sauce powder	Oyster sauce	Salted mackerel	Seasoning sauce	Shrimp paste	Shrimp powder with chili	Shrimp/ crab paste with soybean oil	Fish powder with chili, Fish paste	Chili paste and Fish paste with soybean oil	Salted Jelly fish	Dried algae	gelatine / collagen	Fish oil	
Hist (µg/g)	n=9, c=2 m = 200, M = 400											400	400		n=9, c=2 m = 200, M = 400											
Biotoxin* (µg/g) :																										
- PSP		0.8												0.8												
- ASP		20												20												
- Sum of DSP, DTX and PTX		0.16												0.16												
- YTX		3.75												3.75												
- AZA		0.16												0.16												
Hg (µg/g)	1.0 ^F 0.5 ^E	0.5	0.5		0.5	1.0 ^F 0.5 ^E	0.5	0.5	0.5	1.0 ^F 0.5 ^E	0.5			0.5		0.5	0.5	0.5	0.5	0.5	0.5		0.15			
Cd (µg/g)	0.10 ^{(B)(W)} 0.15 ^{(C)(W)} 0.25 ^{(D)(W)} 0.05 ^{(E)(W)}	1.0 ^W	1.0 ^W		0.05 ^W	0.10 ^{(B)(W)} 0.15 ^{(C)(W)} 0.25 ^{(D)(W)} 0.05 ^{(E)(W)}	0.5 ^W	0.5	0.05	0.05	0.05			0.1		0.5	0.5	0.5	0.05	0.05		3.0 ^W	0.5			
Pb (µg/g)	0.3 ^G	1.5	0.3		0.3 ^G	0.3 ^G	0.5	0.5	0.3	0.3	0.3			0.3		0.5	0.5	0.5	0.3	0.3			5.0			
Sum of Ben and Sor (µg/g)	200 ^I				200 ^I	200 ^I		2000	2000	2000	2000			2000	200	2000	2000	2000	2000	2000						
CAP (µg/kg) (A)					0.3		0.3		0.3									0.3	0.3	0.3	0.3					
NF group (µg/kg) (A) :																										
- AOZ					1.0		1.0		1.0									1.0	1.0	1.0	1.0					
- AMOZ					1.0		1.0		1.0									1.0	1.0	1.0	1.0					
- AHD					1.0		1.0		1.0									1.0	1.0	1.0	1.0					
- SEM					1.0		1.0		1.0									1.0	1.0	1.0	1.0					
Sum of MG and LMG (µg/kg) (A)					2.0		2.0		2.0									2.0	2.0	2.0	2.0					

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FQ group (µg/kg) (A) :																									
- Dan							100											100	100						
- Sum of Enr and Cip							100											100	100						
- Dif							300											300	300						
- Sar																									
QL group (µg/kg) (A) :																									
- Flu					600		200		600									200	200	600	600				
- Oxo							100											100	100						
TC group (µg/g) (A) :																									
- OTC							0.1											0.1	0.1						
- TTC							0.1											0.1	0.1						
- CTC							0.1											0.1	0.1						
SO ₂ (µg/g)																								50	
3-MCPD (µg/kg)																									2500

EU Remarks :

* = test in raw material (edible tissue)

E = other fish and all snack products

A = Aquaculture

G = Including snack products

B = mackerel (*Scomber species*), tuna (*Thunnus species* , *Katsuwonus pelamis* , *Euthynnus species*), bichique (*Sicyopterus lagocephalus*)

I = Excluding snack products

C = bullet tuna (*Auxis species*)

W = ผลิตภัณฑ์แห้ง ราชอาณาจักรไทย Cd ในรูป wet weight

D = anchovy (*Engraulis species*), sword fish (*Xiphias gladius*), sardine (*Sardina pilchardus*)

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F = anglerfish (*Lophius species*)

atlantic catfish (*Anarhichas lupus*)

bonito (*Sarda sarda*)

eel (*Anguilla species*)

emperor, orange roughy, rosy soldierfish (*Hoplostethus species*)

grenadier (*Coryphaenoides rupestris*)

halibut (*Hippoglossus hippoglossus*)

kingklip (*Genypterus capensis*)

marlin (*Makaira species*)

megrim (*Lepidorhombus species*)

mullet (*Mullus species*)

pink cusk eel (*Genypterus blacodes*)

pike (*Esox lucius*)

plain bonito (*Orcynopsis unicolor*)

poor cod (*Tricopterus minutus*)

portuguese dogfish (*Centroscyllium coelelepis*)

rays (*Raja species*)

redfish (*Sebastes marinus, S. mentella, S. viviparus*)

sail fish (*Istiophorus platypterus*)

scabbard fish (*Lepidopus caudatus, Aphanopus carbo*)

seabream, pandora (*Pagellus species*)

shark (all species)

snake mackerel or butterfish (*Lepidocybium flavobrunneum*,

Ruvettus pretiosus, Gempylus serpens)

sturgeon (*Acipenser species*)

swordfish (*Xiphias gladius*)

tuna (*Thunnus species, Euthynnus species, Katsuwonus pelamis*)

Histamine analysis :

c = number of sample units giving values between m and M, total number of the samples giving the value between m

M = all type of fish product except for tuna, swordfish and sturgeon species

n = number of units comprising the sample