

CHEMICAL REFERENCE CRITERIA FOR EXPORTED FROZEN FISHERY PRODUCTS OF THAILAND (สิทธิพิเศษ)

October 2018

Item	Bivalve Mollusc	Cephalopod (without viscera)	Cephalopod (whole or with viscera or ink sac)	Wild caught Crab	Aquaculture Crab	Crocodile	Wild caught Fish	Histamine poisoning fish (รวม Tuna loin)	Aquaculture fish/ Salmon	Salmon fillet	Aquaculture fish fillet	Wild caught Fish fillet	Surimi / Surimi based and / or mix with aquaculture fishery products	Lobster	Aquaculture shrimp	Wild caught shrimp	Snapping turtle	Seafood mix	Seafood mix with Aquaculture fishery products	Seweed
Hist (µg/g)								100 (EU,Viet,Sing n=9, c=2 m=100 M=200)												
Biotoxin * (µg/g) :																				
- PSP	0.8																			
- ASP	20																			
- Sum of DSP and DSPV	0.16																			
- YTX	3.75																			
- AZA	0.18																			
Hg (µg/g)	0.5 (Rus 0.2)	0.5 (Rus 0.2)	0.5 (Rus 0.2)	0.5 (Rus 0.2)	0.5 (Rus 0.2)	0.5	0.5 (Rus 0.2)	0.5 <sup>E</sup>  1.0 <sup>F</sup>	0.5	0.5	0.5	0.5 (Rus 0.2)	0.5	0.5	0.5	0.5		0.5 <sup>G</sup>	0.5 <sup>G</sup>	0.5
Cd (µg/g)	1.0 (Rus 0.2)	1.0	2.0	0.5	0.5		0.05	0.05 <sup>B</sup>  0.10 <sup>C</sup>  0.25 <sup>D</sup>	0.05	0.05	0.05	0.05	0.05	0.5	0.5	0.5		1.0 <sup>G</sup>	1.0 <sup>G</sup>	0.3
Pb (µg/g)	1.5	1.0	1.0	0.5	0.5	1.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.5	0.5		1.5 <sup>G</sup>	1.5 <sup>G</sup>	1.0
P <sub>2</sub> O <sub>5</sub> (%)				0.5	0.5					0.5	0.5	0.5	0.22 (EU 0.1, Japan 0.07, Cannada 0.69)	0.5	0.5	0.5				
SO <sub>2</sub> (µg/g)				Uncook = 100 Cook = 30	Uncook = 100 Cook = 30									Uncook = 100 Cook = 30	Uncook = 100 Cook = 30	Uncook = 100 Cook = 30				50
OTC (µg/g) (A)									0.1	0.1	0.1				0.1				0.1	
CAP (µg/kg) (A)					0.1				0.1	0.1	0.1				0.1				0.1	

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NF group (µg/kg) (A) :																				
- AOZ					1.0 (Can 0.1)				1.0 (Can 0.1)	1.0 (Can 0.1)	1.0 (Can 0.1)		1.0 (Can 0.1)		1.0 (Can 0.1)				1.0 (Can 0.1)	
- AMOZ					1.0 (Can 0.1)				1.0 (Can 0.1)	1.0 (Can 0.1)	1.0 (Can 0.1)		1.0 (Can 0.1)		1.0 (Can 0.1)				1.0 (Can 0.1)	
- AHD					1.0 (Can 0.1)				1.0 (Can 0.1)	1.0 (Can 0.1)	1.0 (Can 0.1)		1.0 (Can 0.1)		1.0 (Can 0.1)				1.0 (Can 0.1)	
- SEM					1.0 (Can 0.1)				1.0 (Can 0.1)	1.0 (Can 0.1)	1.0 (Can 0.1)		1.0 (Can 0.1)		1.0 (Can 0.1)				1.0 (Can 0.1)	
Sum of MG and LMG (µg/kg) (A)					2.0 (Can 0.5, Kor 0.1)				2.0 (Can 0.5, Kor 0.1)	2.0 (Can 0.5, Kor 0.1)	2.0 (Can 0.5, Kor 0.1)				2.0 (Can 0.5, Kor 0.1)		0.1		2.0 (Can 0.5, Kor 0.1)	
FQ group (µg/kg) (A) :																				
- Dan					100 (Can 1.0, Aus&New 2.0, USA and Vietnam 5.0)				100 (Can 1.0, Aus&New 2.0, USA and Vietnam 5.0)	100 (Can 1.0, Aus&New 2.0, USA and Vietnam 5.0)	100 (Can 1.0, Aus&New 2.0, USA and Vietnam 5.0)				100 (Can 1.0, Aus&New 2.0, USA and Vietnam 5.0)				100 (Can 1.0, Aus&New 2.0, USA and Vietnam 5.0)	
- Sum of Enr and Cip					100 (Can 1.0, Aus&New 2.0, USA and Vietnam 5.0)				100 (Can 1.0, Aus&New 2.0, USA and Vietnam 5.0)	100 (Can 1.0, Aus&New 2.0, USA and Vietnam 5.0)	100 (Can 1.0, Aus&New 2.0, USA and Vietnam 5.0)				100 (Can 1.0, Aus&New 2.0, USA and Vietnam 5.0)				100 (Can 1.0, Aus&New 2.0, USA and Vietnam 5.0)	
- Dif					300 (Can 1.0, Aus&New 2.0, USA and Vietnam 5.0)				300 (Can 1.0, Aus&New 2.0, USA and Vietnam 5.0)	300 (Can 1.0, Aus&New 2.0, USA and Vietnam 5.0)	300 (Can 1.0, Aus&New 2.0, USA and Vietnam 5.0)				300 (Can 1.0, Aus&New 2.0, USA and Vietnam 5.0)				300 (Can 1.0, Aus&New 2.0, USA and Vietnam 5.0)	
- Sar					30 (Can 1.0, Aus&New 2.0, USA and Vietnam 5.0)				30 (Can 1.0, Aus&New 2.0, USA and Vietnam 5.0)	30 (Can 1.0, Aus&New 2.0, USA and Vietnam 5.0)	30 (Can 1.0, Aus&New 2.0, USA and Vietnam 5.0)				30 (Can 1.0, Aus&New 2.0, USA and Vietnam 5.0)				30 (Can 1.0, Aus&New 2.0, USA and Vietnam 5.0)	

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- Nor					10 (Can 1.0, Aus&New 2.0, USA and Vietnam 5.0)				10 (Can 1.0, Aus&New 2.0, USA and Vietnam 5.0)	10 (Can 1.0, Aus&New 2.0, USA and Vietnam 5.0)	10 (Can 1.0, Aus&New 2.0, USA and Vietnam 5.0)				10 (Can 1.0, Aus&New 2.0, USA and Vietnam 5.0)				10 (Can 1.0, Aus&New 2.0, USA and Vietnam 5.0)	
QL group (µg/kg) (A) :																				
- Flu					200 (Can 5.0, Aus&New 2.0, USA 20, Vietnam 5.0)				600 (Can 5.0, Aus&New 2.0, USA 20, Vietnam 5.0)	600 (Can 5.0, Aus&New 2.0, USA 20, Vietnam 5.0)	600 (Can 5.0, Aus&New 2.0, USA 20, Vietnam 5.0)				200 (Can 5.0, Aus&New 2.0, USA 20, Vietnam 5.0)				600 <sup>i</sup> 200 <sup>j</sup> (Can 5.0, Aus&New 2.0, USA 20, Vietnam 5.0)	
- Oxo									20	20	20				20				20	
Sor (µg/g)																				500

Remarks :

\* กรณีหอยสองฝา โรงงานต้องสุ่มวัดดูหอยส่งตรวจ Biotoxin โดยสุ่มอย่างน้อย 2 กิโลกรัม

A = Aquaculture

D = *Sardina pilchadus*

G = Bivalve Mollusc

I = Fish

B = all histamine poisoning fish except fish in C and D

E = all fish except fish in F

H = Cephalopod

J = Shrimp

C = tuna and scomber species

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

megrin (*Lepidorhombus species*)  
mullet (*Mullus species*)  
pike (*Esox lucius*)  
plain bonito (*Oreynopsis unicolor*)  
poor cod (*Tricopterus minutes*)  
portuguese dogfish (*Centroscymnus coelolepis*)  
rays (*Raja species*)  
redfish (*Sebastes marinus, S. mentella, S. viviparus*)  
swordfish (*Xiphias gladius*)

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*)

Histamine analysis :

n = number of units comprising the sample

c = number of sample units giving values between m and M,

total number of the samples giving the value between m and M

which exceeds c is considered unsatisfactory

m = limit below which all results are considered satisfactory

M = acceptability limit beyond which the results are considered unsatisfactory