

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

February 2019

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 (3 ชนิด 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 PTX	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>H</sup>  0.5 <sup>I</sup>  0.5 <sup>J</sup>	0.5 <sup>G</sup>  0.5 <sup>H</sup>  0.5 <sup>I</sup>  0.5 <sup>J</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 (USA 0.01 <sup>S</sup> )	0.05	0.05	0.05	0.05	0.5	0.5	0.5		1.0 <sup>G</sup>  1.0 <sup>H</sup>  0.05 <sup>I</sup>  0.5 <sup>J</sup>	1.0 <sup>G</sup>  1.0 <sup>H</sup>  0.05 <sup>I</sup>  0.5 <sup>J</sup>	0.3
Pb (µg/g)	1.5	1.0	1.0	0.5	0.5	1.0	0.3	0.3	0.3 (USA 0.03 <sup>S</sup> )	0.3	0.3	0.3	0.3	0.5	0.5	0.5		1.5 <sup>G</sup>  1.0 <sup>H</sup>  0.3 <sup>I</sup>  0.5 <sup>J</sup>	1.5 <sup>G</sup>  1.0 <sup>H</sup>  0.3 <sup>I</sup>  0.5 <sup>J</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, Can 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)					0.3 (Can 0.1)				0.3 (Can 0.1)	0.3 (Can 0.1)	0.3 (Can 0.1)				0.3 (Can 0.1)				0.3 (Can 0.1)	

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<b>NF group (µg/kg) (A) :</b>																				
- AOZ					1.0 (Can, Kor 0.1)				1.0 (Can, Kor 0.1)	1.0 (Can, Kor 0.1)	1.0 (Can, Kor 0.1)		1.0 (Can, Kor 0.1)		1.0 (Can, Kor 0.1)				1.0 (Can, Kor 0.1)	
- AMOZ					1.0 (Can, Kor 0.1)				1.0 (Can, Kor 0.1)	1.0 (Can, Kor 0.1)	1.0 (Can, Kor 0.1)		1.0 (Can, Kor 0.1)		1.0 (Can, Kor 0.1)				1.0 (Can, Kor 0.1)	
- AHD					1.0 (Can, Kor 0.1)				1.0 (Can, Kor 0.1)	1.0 (Can, Kor 0.1)	1.0 (Can, Kor 0.1)		1.0 (Can, Kor 0.1)		1.0 (Can, Kor 0.1)				1.0 (Can, Kor 0.1)	
- SEM					1.0 (Can, Kor 0.1)				1.0 (Can, Kor 0.1)	1.0 (Can, Kor 0.1)	1.0 (Can, Kor 0.1)		1.0 (Can, Kor 0.1)		1.0 (Can, Kor 0.1)				1.0 (Can, Kor 0.1)	
<b>Sum of MG and LMG (µg/kg) (A)</b>					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)	
<b>FQ group (µg/kg) (A) :</b>																				
- Dan					100 (Can 1.0, Aus&New 2.0, USA and Viet 5.0)				100 (Can 1.0, Aus&New 2.0, USA and Viet 5.0)	100 (Can 1.0, Aus&New 2.0, USA and Viet 5.0)	100 (Can 1.0, Aus&New 2.0, USA and Viet 5.0)				100 (Can 1.0, Aus&New 2.0, USA and Viet 5.0)				100 (Can 1.0, Aus&New 2.0, USA and Viet 5.0)	
- Sum of Enr and Cip					100 (Can 1.0, Aus&New 2.0, USA and Viet 5.0)				100 (Can 1.0, Aus&New 2.0, USA and Viet 5.0)	100 (Can 1.0, Aus&New 2.0, USA and Viet 5.0)	100 (Can 1.0, Aus&New 2.0, USA and Viet 5.0)				100 (Can 1.0, Aus&New 2.0, USA and Viet 5.0)				100 (Can 1.0, Aus&New 2.0, USA and Viet 5.0)	
- Dif					300 (Can 1.0, Aus&New 2.0, USA and Viet 5.0)				300 (Can 1.0, Aus&New 2.0, USA and Viet 5.0)	300 (Can 1.0, Aus&New 2.0, USA and Viet 5.0)	300 (Can 1.0, Aus&New 2.0, USA and Viet 5.0)				300 (Can 1.0, Aus&New 2.0, USA and Viet 5.0)				300 (Can 1.0, Aus&New 2.0, USA and Viet 5.0)	
- Sar					30 (Can 1.0, Aus&New 2.0, USA and Viet 5.0)				30 (Can 1.0, Aus&New 2.0, USA and Viet 5.0)	30 (Can 1.0, Aus&New 2.0, USA and Viet 5.0)	30 (Can 1.0, Aus&New 2.0, USA and Viet 5.0)				30 (Can 1.0, Aus&New 2.0, USA and Viet 5.0)				30 (Can 1.0, Aus&New 2.0, USA and Viet 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 Viet 5.0)	
QL group (µg/kg) (A) :																				
- Flu					200 (Can 5.0, Aus&New 2.0, USA 20, Viet 5.0)				600 (Can 5.0, Aus&New 2.0, USA 20, Viet 5.0)	600 (Can 5.0, Aus&New 2.0, USA 20, Viet 5.0)	600 (Can 5.0, Aus&New 2.0, USA 20, Viet 5.0)				200 (Can 5.0, Aus&New 2.0, USA 20, Viet 5.0)				600 <sup>I</sup> 200 <sup>J</sup> (Can 5.0, Aus&New 2.0, USA 20, Viet 5.0)	
- Oxo									20	20	20				20				20	
Sor (µg/g)																				500

Remarks :

\* กรณีหอยสองฝา โรงงานต้องสุ่มวัดดูคิบบหอยส่งตรวจ 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

S = Siluriformes fish and Product

F = anglerfish (*Lophius species*)

megrin (*Lepidorhombus species*)

sail fish (*Istiophorus platypterus*)

Histamine analysis :

atlantic catfish (*Anarhichas lupus*)

mullet (*Mullus species*)

scabbard fish (*Lepidopus caudatus, Aphanopus carbo*)

n = number of units comprising the sample

bonito (*Sarda sarda*)

pike (*Esox lucius*)

seabream, pandora (*Pagellus species*)

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

eel (*Anguilla species*)

plain bonito (*Orcynopsis unicolor*)

shark (all species)

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

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

poor cod (*Tricopterus minutus*)

snake mackerel or butterfish (*Lepidocybium flavobrunneum,*

which exceeds c is considered unsatisfactory

grenadier (*Coryphaenoides rupestris*)

portuguese dogfish (*Centroscymnus coelolepis*)

*Ruvettus pretiosus, Gempylus serpens*)

m = limit below which all results are considered satisfactory

halibut (*Hippoglossus hippoglossus*)

rays (*Raja species*)

sturgeon (*Acipenser species*)

M = acceptability limit beyond which the results are considered unsatisfactory

marlin (*Makaira species*)

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

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

swordfish (*Xiphias gladius*)