

Antibiotic Drug and chemical residue	Products	MRL	References
Oxolinic acid	Fin fish	100 μg/kg (this MRL relates to muscle and skin in natural proportions)	- COUNCIL REGULATION (EEC) No 2377/90 of 26 June 1990 laying down a Community procedure for the
Tetracyclines : - Chlortetracycline	Aquaculture product	100 µg/kg	establishment of maximum residue limits of veterinary medicinal products in
- Oxytetracycline	Aquaculture product	100 µg/kg	foodstuffs of animal origin - COMMISSION
- Tetracycline	Aquaculture product	100 µg/kg	REGULATION (EU) No 37/2010 of 22 December
Diamino pyrimidine derivatives : Trimethoprim	Aquaculture product	50 µg/kg	2009 on pharmacologically active substances and their classification regarding maximum residue limits in
Quinolones: - Danofloxacin	Aquaculture product	100 µg/kg	foodstuffs of animal origin
- Difloxacin	Aquaculture product	300 µg/kg	
- Sum of Enrofloxacin and Ciprofloxacin	Aquaculture product	100 µg/kg	
- Flumequine	Fin fish	600 μg/kg (this MRL relates to muscle and skin in natural proportions)	
	Aquaculture product	200 µg/kg	
- Sarafloxacin	Salmonidae	30 µg/kg (This MRL relates to muscle and skin in natural proportions)	
Macrolides: - Erythromycin	Aquaculture product	200 µg/kg	
- Tilmicosin	Aquaculture product	50 µg/kg	1
- Tylosin	Aquaculture product	100 µg/kg	



Antibiotic Drug	Products	MRL	References
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residue			
Florfenicol and related compounds: - Florfenicol	Aquaculture product	1000 µg/kg	- do -
Lincosamides: - Lincomycin	Aquaculture product	100 µg/kg	
Aminoglycosides: - Neomycin (including framycetin)	Aquaculture product	500 μg/kg	
- Paromomycin	Aquaculture product	500 μg/kg	
- Spectinomycin	Aquaculture product	300 µg/kg	
Polymyxins: - Colistin	Aquaculture product	150 µg/kg	
Pyrethroids: - Deltamethrin	Fin fish	10 μg/kg (This MRL relates to muscle and skin in natural proportions)	
- Cypermethrin	Salmonidae	50 μg/kg (This MRL relates to muscle and skin in natural proportions)	
Acyl urea derivatives: - Diflubenzuron	Salmonidae	1000 μg/kg (This MRL relates to muscle and skin in natural proportions)	
- Teflubenzuron	Salmonidae	500 μg/kg (This MRL relates to muscle and skin in natural proportions)	



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Antibiotic Drug and chemical residue	Products	MRL	References
Avermectins: - Emamectin	Fin fish	100 μg/kg (This MRL relates to muscle and skin in natural proportions)	- do -

Antibiotic Drug and chemical residue	Products	MRPL	References
Sum of malachite green and leucomalachite green	Meat of aquaculture products	2 µg/kg	COMMISSION DECISION of 22 December 2003 amending Decision 2002/657/EC as regards the
Chloramphenicol	Aquaculture products	0.3 µg/kg	setting of minimum required performance limits
Nitrofuran metabolites of : - Furazolidone - Furaltadone - Nitrofurantonin - Nitrofurazone	Aquaculture products	1 μg/kg 1 μg/kg 1 μg/kg 1 μg/kg	(MRPLs) for certain residues in food of animal origin

Maximum Residue Limits (MRL) means the maximum level of a residue of a chemical which is permitted to be present in food

Minimum Required Performance Limits (MRPL) are defined as "minimum content of an analyst in a sample, which at least has to be detected and confirmed

eq. = equivalents

^a For OA, dinophysistoxins and PTX, current regulation specifies a combination; however the CONTAM Panel concluded that PTX should be considered separately

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Toxin	Products	Maximum limits	References
Total paralytic shellfish poison (PSP)	Edible parts of molluscs (the whole body or any part	800 μg PSP/kg SM	- Regulation (EC) No 853/2004 of the European Parliament and of the
Sum of Okadaic acid (OA),Dinophysisto xins (DTX) and Pectenotoxin (PTX) Azaspiracid (AZA)	edible separately)	160 μg OA eq./kg SM ^{a} 160 μg AZA eq. b /kg SM	Council of 29 April 2004 les for food of animal origin COMMISSION REGULATION (EC) No 786/2013 of 16 August 2013
Yessotoxin (YTX)		3.75 mg YTX eq./kg SM	
Amnesic shellfish poison (ASP)		20 mg DA/kg SM	
Histamine D	Fishery products from fish species associated with a high amount of histidine $^{\underline{c}}$ Fishery products, except fish sauce, which have undergone enzyme maturation treatment in brine, manufactured from fish species associated with a high amount of histidine $^{\underline{c}}$	n = 9, c = 2 m = 100 mg/kg M = 200 mg/kg n = 9, c = 2 m = 200 mg/kg M = 400 mg/kg	 COMMISSION REGULATION (EC) No 2073/2005 of 15 November 2005 on microbiological criteria for foodstuffs COMMISSION REGULATION (EC) No 1019/2013 of 23 October 2013 amending Annex I to Regulation (EC) No 2073/2005 as regards histamine in fishery products
	Fish sauce produced by fermentation of fishery products	400 mg/kg	

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- **b** The CONTAM Panel assumed that AZA equivalent should refer to AZA1 equivalents
- ^c Particularly fish species of the families: Scombridae, Clupeidae, Engraulidae, Coryfenidae, Pomatomidae, Scombresosidae
- D Histamine in fishery products from fish species associated with a high amount of histidine except fish sauce produced by fermentation of fishery product :
 - Satisfactory, if the following requirements are fulfilled
 - 1. The mean values observed is $\leq m$
 - 2. A maximum of c/n values observed are between m and M
 - 3. No values observed excess the limit of M
 - Unsatisfactory, if the mean value observed exceeds m or more than c/n valued are between m and M or one or more of the values observed are > M







Contaminant	Products	Maximum level	References
Dioxins and PCBs : - Sum of dioxins (WHO-PCDD/ F-TEQ) ^{<u>d</u>}	Muscle meat of fish and fishery products and products thereof, excluding eel $\frac{\mathbf{a}, \mathbf{b}}{\mathbf{b}}$. The maximum level for crustaceans applies to muscle meat from appendages and abdomen $\frac{\mathbf{c}}{\mathbf{c}}$. In case of crabs and crab-like crustaceans (<i>Brachyura and Anomura</i>) it applies to muscle meat from appendages.	4.0 pg/g wet weight	COMMISSION REGULATION (EU) No 420/2011 of 29 April 2011 amending Regulation (EC) No 1881/2006 setting maximum levels for certain contaminants in foodstuffs
	Muscle meat of eel (<i>Anguilla anguilla</i>) and products thereof	4.0 pg/g wet weight	
- Sum of dioxins and dioxin-like PCBs (WHO-PCDD/ F-PCB-TEQ) ^{<u>d</u>}	Muscle meat of fish and fishery products and products thereof, excluding eel $\frac{\mathbf{a}, \mathbf{b}}{\mathbf{b}}$. The maximum level for crustaceans applies to muscle meat from appendages and abdomen $\frac{\mathbf{c}}{\mathbf{c}}$. In case of crabs and crab-like crustaceans (<i>Brachyura and Anomura</i>) it applies to muscle meat from appendages.	8.0 pg/g wet weight	
	Muscle meat of eel (<i>Anguilla anguilla</i>) and products thereof	12.0 pg/g wet weight	
Polycyclic aromatic hydrocarbons: - Benzo(a)pyrene	Muscle meat of smoked fish and smoked fishery products, excluding fishery products listed below. The maximum level for smoked crustaceans applies to muscle meat from appendages and abdomen. In case of smoked crabs and crab-like crustaceans (<i>Brachyura</i> and <i>Anomura</i>) it applies to muscle meat from appendages.	2.0 ppb	COMMISSION REGULATION (EU) No 835/2011 of 19 August 2011 amending Regulation (EC) No 1881/2006 as regards maximum level for polycyclic aromatic hydrocarbons in foodstuffs



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Contaminant	Products	Maximum level	References
Polycyclic aromatic hydrocarbons: - Benzo(a)pyrene (continued)	Smoked sprats and canned smoked sprats (<i>sprattus sprattus</i>); bivalve molluscs (fresh, chilled or frozen)	5.0 ppb	- do -
	Bivalve molluscs (smoked)	6.0 ppb	
- Sum of benzo(a)pyrene, benz(a)anthracene, benzo(b)fluoranthene and chrysene (45)	Muscle meat of smoked fish and smoked fishery products, excluding fishery products listed below. The maximum level for smoked crustaceans applies to muscle meat from appendages and abdomen. In case of smoked crabs and crab-like crustaceans (<i>Brachyura</i> and <i>Anomura</i>) it applies to muscle meat from appendages.	12.0 ppb	
	Smoked sprats and canned smoked sprats (<i>sprattus sprattus</i>); bivalve molluscs (fresh, chilled or frozen)	30.0 ppb	
	Bivalve molluscs (smoked)	35.0 ppb	
3-MCPD	Oyster sauce, Fish sauce	0.02 ppm	

 $\frac{a}{a}$ Where fish are intended to be eaten whole, the maximum level shall apply to the whole fish.

^b Foodstuffs listed in this category as defined in categories (a), (b), (c), (e) and (f) of the list in Article 1 of Regulation (EC) No 104/2000 with the exclusion of fish liver falling under code CN 0302 70 00

 $\mathbf{\underline{c}}$ This definition excludes the cephalothorax of crustaceans

d Dioxins (sum of polychlorinated dibenzo-para-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs), expressed as World Health Organisation (WHO) toxic equivalent using the WHO-toxic equivalency factors (WHO-TEFs)) and sum of dioxins and dioxin-like PCBs (sum of PCDDs, PCDFs and polychlorinated biphenyls (PCBs), expressed as WHO toxic equivalent using the WHO-TEFs). WHO-TEFs for human risk assessment based on the conclusions of the WHO meeting in Stockholm, Sweden, 15 to 18 June 1997 (Van den Berg et al., (1998) Toxic Equivalency Factors (TEFs) for PCBs, PCDDs, PCDFs for Humans and for Wildlife



Food additive	Products	Maximum level	References
Sulphur dioxide and sulphites	Dried salted fish of the 'Gadidae' species	200 mg/kg (or mg/l)	COMMISSION REGULATION (EU) No 1129/2011 of 11
	Crustaceans and cephalopods: - fresh, frozen and deep- frozen	150 ^{a}	November 2011 amending Annex II to Regulation (EC) No 1333/2008 of the
	Crustaceans and cephalopods: - cooked	50 mg/kg ^{a}	European Parliament and of the Council by establishing a Union list of food additives
	Crustaceans, <i>panaeidae</i> <i>solenceridae</i> , <i>aristeidae</i> family:	a	of food additives
	 o up to 80 units o between 80 and 120 units 	150 mg/kg <mark>-a</mark> 200 mg/kg <mark>-a</mark>	
	$_{\circ}$ over 120 units	300 mg/kg <mark>-a</mark>	
The combination of phosphoric acid-	Surimi and similar products	1 g/kg	
phosphates di, tri and polyphosphate	Fish and crustacean paste	5 g/kg	
Polyphosphates : Calcium polyphosphates	Fillets of unprocessed fish, frozen and deep-frozen	5 g/kg	
	Unprocessed and processed molluscs and crustaceans frozen and deep-frozen	5 g/kg	
	Canned crustacean products	1 g/kg	
Calcium disodium ethylene diamine tetraacetate	Canned and bottled crustaceans and molluscs	75 mg/kg	
(EDTA)	Canned and bottled fish	75 mg/kg	
	Frozen and deep-frozen crustaceans	75 mg/kg	
Benzoic acid	Only cooked crustaceans and mollusks	1000 mg/kg (or mg/l)	
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Food additive	Products	Maximum level	References
Sum of Sorbic acid and Benzoic acid	Only salted, dried fish	200 mg/kg (or mg/l)	- do -
	Only semi-preserved fish and fisheries products including crustaceans, molluscs, surimi and fish/crustacean paste; cooked crustaceans and mollusks	2000 mg/kg (or mg/l)	
	Only cooked Crangon crangon and Crangon vulgaris	6000 mg/kg (or mg/l)	

^{**a**} Maximum levels are expressed as SO_2 in mg/kg or mg/l as appropriate and relate to the total quantity, available from all sources.

GNS



Metal	Products	Maximum level	References
Lead	Muscle meat of fish ^{a,b}	0.30 mg/kg wet weight	- COMMISSION REGULATION (EC) No 1881/2006
	Crustaceans ^c : muscle meat from appendages and abdomen ^d In case of crabs and crab-like crustaceans (<i>Brachyura and</i> <i>Anomura</i>) muscle meat from appendages	0.50 mg/kg wet weight	of 19 December 2006 setting maximum levels for certain contaminants in foodstuffs - COMMISSION
	Bivalve molluscs ^c	1.5 mg/kg wet weight	REGULATION (EU) No 420/2011 of 29 April 2011
	Cephalopods (without viscera) ^{c}	1.0 mg/kg wet weight 2.0	amending Regulation (EC) No 1881/2006 setting maximum levels for certain
Cadmium	Muscle meat of fish ^{a} , <u>b</u> excluding fish species listed below	0.05 mg/kg wet weight	 contaminants in foodstuffs COMMISSION
	Muscle meat of the following fish $\underline{\mathbf{a}}, \underline{\mathbf{b}}$:	0.10 mg/kg wet weight	REGULATION (EU) No 488/2014 of 12 May 2014
	mackerel (Scomber species), tuna (Thunnus species, Katsuwonus pelamis, Euthynnus species), bichique (Sicyopterus lagocephalus)		amending Regulation (EC) No 1881/2006 as regards maximum levels of cadmium in foodstuffs
	Muscle meat of the following fish <u>a</u> , <u>b</u> :	0.15 mg/kg wet weight	
	bullet tuna (<i>Auxis species</i>) Muscle meat of the following fish a , b :	0.25 mg/kg wet weight	
	anchovy (<i>Engraulis species</i>) swordfish (<i>Xiphias gladius</i>)		
	sardine (Sardina pilchardus)Crustaceans $^{\underline{c}}$: muscle meat fromappendages and abdomen $^{\underline{d}}$. Incase of crabs and crab-likecrustaceans (Brachyura andAnomura)muscle meat fromappendages.	0.50 mg/kg wet weight	



Metal	Products	Maximum level	References
Cadmium (continued)	Bivalve molluscs [£]	1.0 mg/kg wet weight	- do -
	Cephalopods (without viscera) ^{c}	1.0 mg/kg wet weight	
Mercury	Fishery products ^{C} and muscle meat of fish ^{a} , ^{b} , excluding species listed below. The maximum level for crustaceans applies to muscle meat from appendages and abdomen ^{d} . In case of crabs and crab-like crustaceans (<i>Brachyura and</i> <i>Anomura</i>) it applies to muscle meat from appendages.	0.5 mg/kg wet weight	
	Muscle meat of the following fish a , b : 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) megrim (Lepidorhombus species) mullet (Mullus species) pike (Esox lucius) plain bonito (Orcynopsis unicolor) poor cod (Tricopterus minutes) portuguese dogfish (Centroscymnus coelolepis) rays (Raja species) redfish (Sebastes marinus, S. mentella, S. viviparus) sail fish (Istiophorus platypterus)	1.0 mg/kg wet weight	



Metal	Products	Maximum level	References
Mercury (continued)	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)		- do -

- ^a Fish listed in this category as defined in category (a), with the exclusion of fish liver falling under code CN 0302 70 00, of the list in Article 1 of Council Regulation (EC) No 104/2000 (OJ L 17, 21.1.2000, p. 22) as last amended by the Act concerning the conditions of accession of the Czech Republic, the Republic of Estonia, the Republic of Cyprus, the Republic of Latvia, the Republic of Lithuania, the Republic of Hungary, the Republic of Malta, the Republic of Poland, the Republic of Slovenia and the Slovak Republic and the adjustments to the Treaties on which the European Union is founded (OJ L 236, 23.9.2003, p. 33). In case of dried, diluted, processed and/or compound foodstuffs Article 2(1) and 2(2) apply.
- \mathbf{b} Where fish are intended to be eaten whole, the maximum level shall apply to the whole fish.
- ^c Foodstuffs falling within category (c) and (f) of the list in Article 1 of Regulation (EC) No 104/2000, as appropriate (species as listed in the relevant entry). In case of dried, diluted, processed and/or compound foodstuffs Article 2(1) and 2(2) apply.
- $\underline{\mathbf{d}}$ This definition excludes the cephalothorax of crustaceans.