

Appendix 3.1-1: Summary of lower bound, middle bound and upper bound mean and median levels of PFOS in foods analysed in the 27th ATDS (brief version)

27th ATDS food	N	Detection rate	Mean concentration in µg/kg (water µg/L)			Median concentration in µg/kg (water µg/L)		
			LB	MB	UB	LB	MB	UB
Eggs, chicken	16	6%	0.0069	0.030	0.054	0	0.025	0.050
Fish fillets, saltwater	16	6%	0.011	0.035	0.058	0	0.025	0.050
Liver or other offal, non-poultry	16	81%	0.63	0.64	0.64	0.21	0.21	0.21
Prawns, cooked	16	19%	0.018	0.038	0.059	0	0.025	0.050
Tuna, canned in brine	8	50%	0.070	0.083	0.095	0.046	0.058	0.071
All other foods except water	1240	0%	0	0.025	0.050	0	0.025	0.050
Water (tap and bottled)	24	0%	0	0.0005	0.001	0	0.0005	0.001

N denotes number of composite samples analysed.

Appendix 3.1-2: Summary of lower bound, middle bound and upper bound mean and median levels of PFOS in foods analysed in the 27th ATDS (full version)

27th ATDS food	N	Detection rate	Mean concentration in µg/kg (water µg/L)			Median concentration in µg/kg (water µg/L)		
			LB	MB	UB	LB	MB	UB
Almonds	8	0%	0	0.025	0.050	0	0.025	0.050
Apples	16	0%	0	0.025	0.050	0	0.025	0.050
Avocados	16	0%	0	0.025	0.050	0	0.025	0.050
Bacon	8	0%	0	0.025	0.050	0	0.025	0.050
Baked beans in tomato sauce	8	0%	0	0.025	0.050	0	0.025	0.050
Bananas	16	0%	0	0.025	0.050	0	0.025	0.050
Beef mince, lean	16	0%	0	0.025	0.050	0	0.025	0.050
Beer, full strength	8	0%	0	0.025	0.050	0	0.025	0.050
Beetroot, canned	8	0%	0	0.025	0.050	0	0.025	0.050
Biscuits, plain, sweet	8	0%	0	0.025	0.050	0	0.025	0.050
Biscuits, savoury	8	0%	0	0.025	0.050	0	0.025	0.050

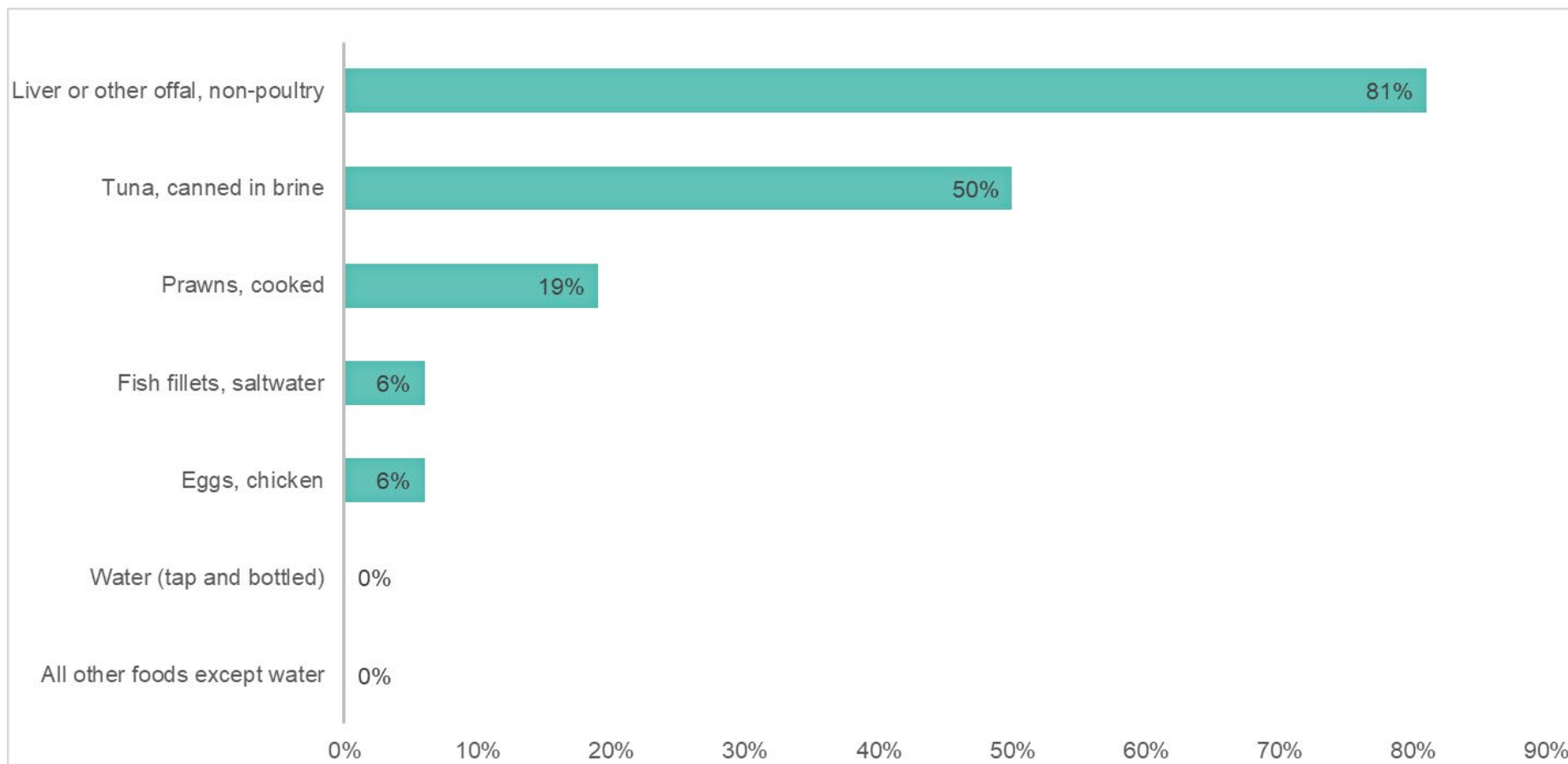
27th ATDS food	N	Detection rate	Mean concentration in µg/kg (water µg/L)			Median concentration in µg/kg (water µg/L)		
			LB	MB	UB	LB	MB	UB
Bok choy	16	0%	0	0.025	0.050	0	0.025	0.050
Bread, multigrain	16	0%	0	0.025	0.050	0	0.025	0.050
Bread, white	16	0%	0	0.025	0.050	0	0.025	0.050
Breakfast cereal, muesli/granola, including fruit and/or nuts or seeds	8	0%	0	0.025	0.050	0	0.025	0.050
Breakfast cereals, rice based	8	0%	0	0.025	0.050	0	0.025	0.050
Breakfast cereals, single grain (wheat or corn) or mixed grain	8	0%	0	0.025	0.050	0	0.025	0.050
Broccoli	16	0%	0	0.025	0.050	0	0.025	0.050
Butter	8	0%	0	0.025	0.050	0	0.025	0.050
Cabbage, raw	16	0%	0	0.025	0.050	0	0.025	0.050
Cake, chocolate, iced	8	0%	0	0.025	0.050	0	0.025	0.050
Capsicum	16	0%	0	0.025	0.050	0	0.025	0.050
Carrots	16	0%	0	0.025	0.050	0	0.025	0.050
Cauliflower	16	0%	0	0.025	0.050	0	0.025	0.050
Celery	16	0%	0	0.025	0.050	0	0.025	0.050
Cheese, cheddar	16	0%	0	0.025	0.050	0	0.025	0.050
Cheese, soft	16	0%	0	0.025	0.050	0	0.025	0.050
Chicken breast	16	0%	0	0.025	0.050	0	0.025	0.050
Chicken, whole, BBQ	16	0%	0	0.025	0.050	0	0.025	0.050
Chocolate drinking powder	8	0%	0	0.025	0.050	0	0.025	0.050
Chocolate, plain, milk	8	0%	0	0.025	0.050	0	0.025	0.050
Coconut, desiccated	8	0%	0	0.025	0.050	0	0.025	0.050
Coffee, instant	8	0%	0	0.025	0.050	0	0.025	0.050
Cream, thickened	16	0%	0	0.025	0.050	0	0.025	0.050
Cucumber	16	0%	0	0.025	0.050	0	0.025	0.050
Duck, skin and fat	16	0%	0	0.025	0.050	0	0.025	0.050
Eggs, chicken	16	6%	0.0069	0.030	0.054	0	0.025	0.050
Fish fillets, freshwater	16	0%	0	0.025	0.050	0	0.025	0.050
Fish fillets, saltwater	16	6%	0.011	0.035	0.058	0	0.025	0.050
Fish portions, crumbed	8	0%	0	0.025	0.050	0	0.025	0.050
Garlic	16	0%	0	0.025	0.050	0	0.025	0.050
Grapes	16	0%	0	0.025	0.050	0	0.025	0.050
Green beans	16	0%	0	0.025	0.050	0	0.025	0.050
Ham, leg	8	0%	0	0.025	0.050	0	0.025	0.050
Hamburger	16	0%	0	0.025	0.050	0	0.025	0.050
Herbs, fresh	16	0%	0	0.025	0.050	0	0.025	0.050
Honey	8	0%	0	0.025	0.050	0	0.025	0.050
Ice cream, vanilla	8	0%	0	0.025	0.050	0	0.025	0.050

27th ATDS food	N	Detection rate	Mean concentration in µg/kg (water µg/L)			Median concentration in µg/kg (water µg/L)		
			LB	MB	UB	LB	MB	UB
Infant cereal, mixed	8	0%	0	0.025	0.050	0	0.025	0.050
Infant dessert, milk based	8	0%	0	0.025	0.050	0	0.025	0.050
Infant dinner	8	0%	0	0.025	0.050	0	0.025	0.050
Infant formula	8	0%	0	0.025	0.050	0	0.025	0.050
Juice, fruit	8	0%	0	0.025	0.050	0	0.025	0.050
Kangaroo, loin fillet	16	0%	0	0.025	0.050	0	0.025	0.050
Kiwifruit	16	0%	0	0.025	0.050	0	0.025	0.050
Lamb chops, loin	16	0%	0	0.025	0.050	0	0.025	0.050
Legumes, canned e.g. chickpeas, lentils	8	0%	0	0.025	0.050	0	0.025	0.050
Lemon	16	0%	0	0.025	0.050	0	0.025	0.050
Lettuce	16	0%	0	0.025	0.050	0	0.025	0.050
Lettuce, mixed leaves	16	0%	0	0.025	0.050	0	0.025	0.050
Liver or other offal, non-poultry	16	81%	0.63	0.64	0.64	0.21	0.21	0.21
Liver, chicken	16	0%	0	0.025	0.050	0	0.025	0.050
Mango	8	0%	0	0.025	0.050	0	0.025	0.050
Margarine spread, monounsaturated	8	0%	0	0.025	0.050	0	0.025	0.050
Milk, full fat	16	0%	0	0.025	0.050	0	0.025	0.050
Mushrooms	16	0%	0	0.025	0.050	0	0.025	0.050
Nectarine	8	0%	0	0.025	0.050	0	0.025	0.050
Nori seaweed, dried	8	0%	0	0.025	0.050	0	0.025	0.050
Oats, rolled	8	0%	0	0.025	0.050	0	0.025	0.050
Oil, olive	8	0%	0	0.025	0.050	0	0.025	0.050
Oil, vegetable	8	0%	0	0.025	0.050	0	0.025	0.050
Olives	16	0%	0	0.025	0.050	0	0.025	0.050
Onions	16	0%	0	0.025	0.050	0	0.025	0.050
Orange	16	0%	0	0.025	0.050	0	0.025	0.050
Oysters, fresh	16	0%	0	0.025	0.050	0	0.025	0.050
Pasta, dried	8	0%	0	0.025	0.050	0	0.025	0.050
Peaches, canned in natural juice	8	0%	0	0.025	0.050	0	0.025	0.050
Peanut butter	8	0%	0	0.025	0.050	0	0.025	0.050
Pear	16	0%	0	0.025	0.050	0	0.025	0.050
Peas, frozen	8	0%	0	0.025	0.050	0	0.025	0.050
Pie, meat, individual size	8	0%	0	0.025	0.050	0	0.025	0.050
Pineapple, canned in natural juice	8	0%	0	0.025	0.050	0	0.025	0.050
Pizza	8	0%	0	0.025	0.050	0	0.025	0.050
Pork, loin steaks	16	0%	0	0.025	0.050	0	0.025	0.050
Potato	16	0%	0	0.025	0.050	0	0.025	0.050
Potato crisps	8	0%	0	0.025	0.050	0	0.025	0.050

27th ATDS food	N	Detection rate	Mean concentration in µg/kg (water µg/L)			Median concentration in µg/kg (water µg/L)		
			LB	MB	UB	LB	MB	UB
Prawns, cooked	16	19%	0.018	0.038	0.059	0	0.025	0.050
Pumpkin	16	0%	0	0.025	0.050	0	0.025	0.050
Rice, white, long grain	8	0%	0	0.025	0.050	0	0.025	0.050
Salmon fillets	16	0%	0	0.025	0.050	0	0.025	0.050
Sauce, tomato	8	0%	0	0.025	0.050	0	0.025	0.050
Sausages	16	0%	0	0.025	0.050	0	0.025	0.050
Simmer sauce, savoury	8	0%	0	0.025	0.050	0	0.025	0.050
Soft drink	8	0%	0	0.025	0.050	0	0.025	0.050
Soy beverage, full fat	8	0%	0	0.025	0.050	0	0.025	0.050
Spring rolls	8	0%	0	0.025	0.050	0	0.025	0.050
Squid products, frozen	16	0%	0	0.025	0.050	0	0.025	0.050
Strawberries	16	0%	0	0.025	0.050	0	0.025	0.050
Sugar, white	8	0%	0	0.025	0.050	0	0.025	0.050
Sultanas	8	0%	0	0.025	0.050	0	0.025	0.050
Sweetcorn, kernels, frozen	8	0%	0	0.025	0.050	0	0.025	0.050
Teabags	8	0%	0	0.025	0.050	0	0.025	0.050
Tomatoes, canned	8	0%	0	0.025	0.050	0	0.025	0.050
Tomatoes, raw	16	0%	0	0.025	0.050	0	0.025	0.050
Tuna, canned in brine	8	50%	0.070	0.083	0.095	0.046	0.058	0.071
Water, bottled	8	0%	0	0.0005	0.001	0	0.0005	0.001
Water, tap	16	0%	0	0.0005	0.001	0	0.0005	0.001
Watermelon	16	0%	0	0.025	0.050	0	0.025	0.050
Wine, red	8	0%	0	0.025	0.050	0	0.025	0.050
Wine, white	8	0%	0	0.025	0.050	0	0.025	0.050
Yoghurt, fruit	8	0%	0	0.025	0.050	0	0.025	0.050
Zucchini	16	0%	0	0.025	0.050	0	0.025	0.050

N denotes number of composite samples analysed.

Appendix 3.2: Frequency of detections of PFOS in foods analysed in the 27th ATDS



Appendix 3.3-1: PFOS detections in foods analysed in the 27th ATDS and associated trigger points (PFOA, PFOS, PFOS + PFHxS combined)

Food type with established trigger points	27th ATDS food	N	PFAS congener	Number of samples with detection	Min-max UB concentration (ug/kg)	Mean UB concentration (ug/kg)	FSANZ trigger points* (µg/kg)	Number of samples with detections exceeding trigger points
Crustaceans	Prawns, cooked	16	PFOA	0	0.10 - 0.10	0.10	520	0
			PFOS	3	0.050 - 0.11	0.059	65	0
			PFOS+PFHxS	3	0.10 - 0.16	0.11	65	0
Finfish (all)	Tuna, canned in brine	8	PFOA	0	0.10 - 0.10	0.10	41	0
			PFOS	4	0.050 - 0.19	0.095	5.2	0
			PFOS+PFHxS	4	0.10 - 0.24	0.15	5.2	0
	Fish fillets, saltwater	16	PFOA	0	0.10 - 0.10	0.10	41	0
			PFOS	1	0.050 - 0.18	0.058	5.2	0
			PFOS+PFHxS	1	0.10 - 0.23	0.11	5.2	0
Offal mammalian	Liver or other offal, non-poultry	16	PFOA	0	0.10 - 0.10	0.10	765	0
			PFOS	13	0.050 - 5.5	0.64	96	0
			PFOS+PFHxS	13	0.10 - 5.6	0.69	96	0
Poultry eggs	Eggs, chicken	16	PFOA	0	0.10 - 0.10	0.10	85	0
			PFOS	1	0.050 - 0.11	0.054	11	0
			PFOS+PFHxS	1	0.10 - 0.16	0.10	11	0

N denotes number of composite samples analysed.

* While these trigger points were established to determine the need for further assessment and management of contaminated sites, and were not for foods from the general food supply, the comparison is made to simply demonstrate the magnitude of PFAS chemicals detected in this study, both in general and for PFOS in particular. The comparison also provides an indication of areas that may warrant follow-up investigation and management by the Food Regulation System.

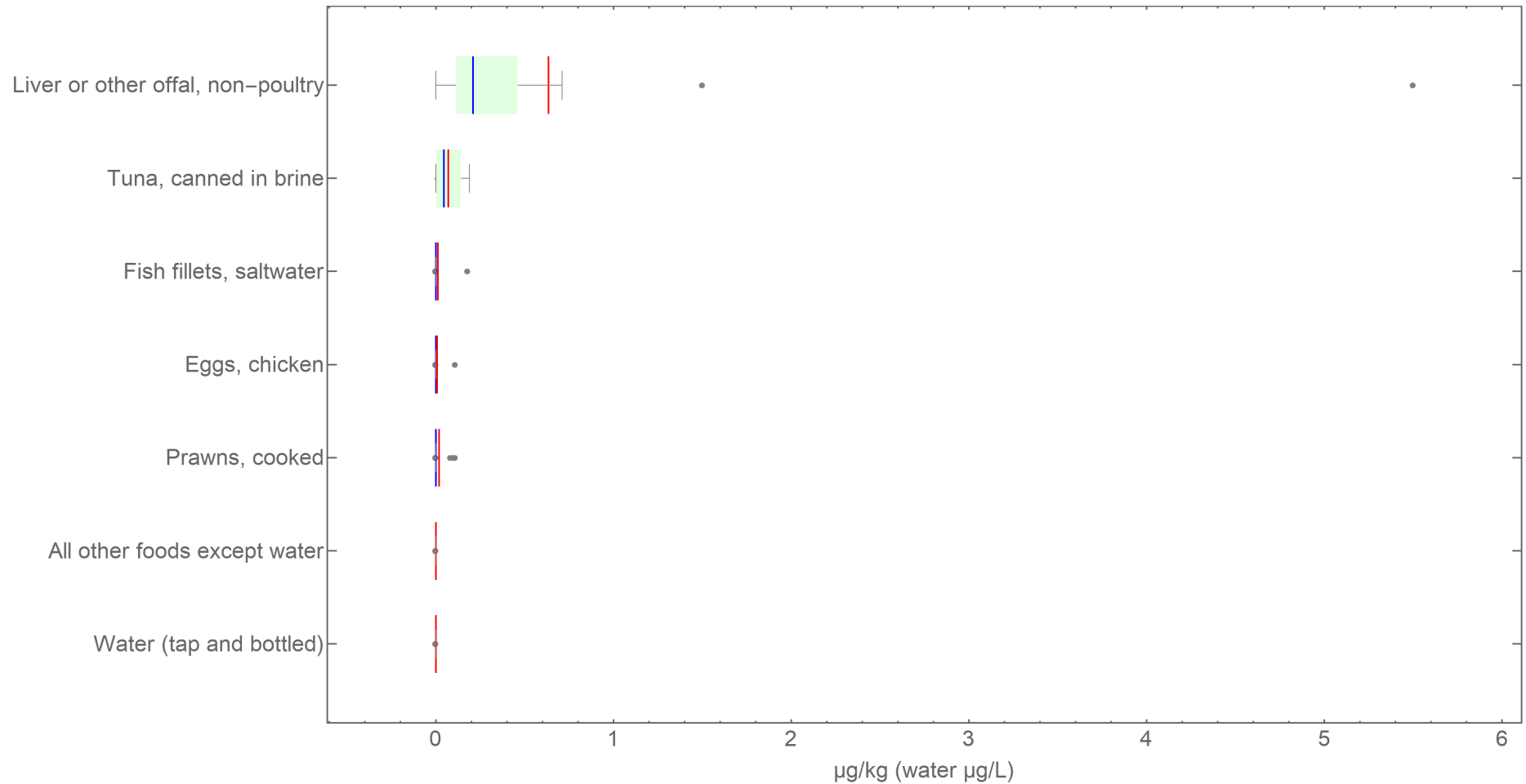
Appendix 3.3-2: PFOS detections in water in the 27th ATDS and associated drinking water guideline values (NHMRC, 2019¹)

PFAS congener	N (tap and bottled water)	Detection rate	Minimum UB concentration in ug/L or ppb	Maximum UB concentration in ug/L or ppb	Mean UB concentration in ug/L or ppb	Guideline value in µg/L (ppb)
PFOA	24	0%	0.001	0.001	0.001	0.56
PFOS+PFHxS		0%	0.002	0.002	0.002	0.07

N denotes number of composite samples analysed.

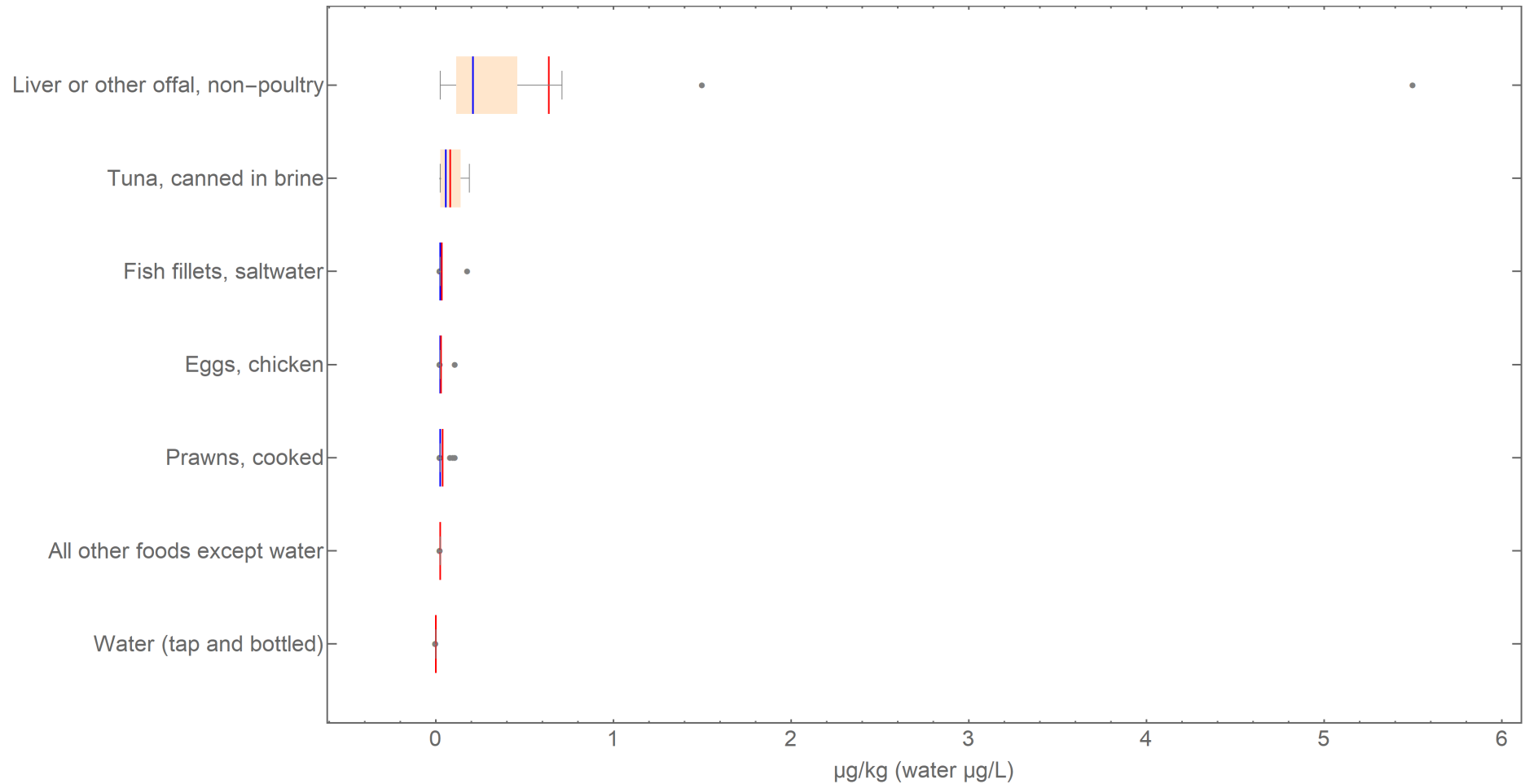
¹ [Australia Drinking water quality guideline values \(NHMRC, 2019\)](#)

Appendix 3.4-1: Lower bound (ND = 0) concentration of PFOS in foods analysed in the 27th ATDS



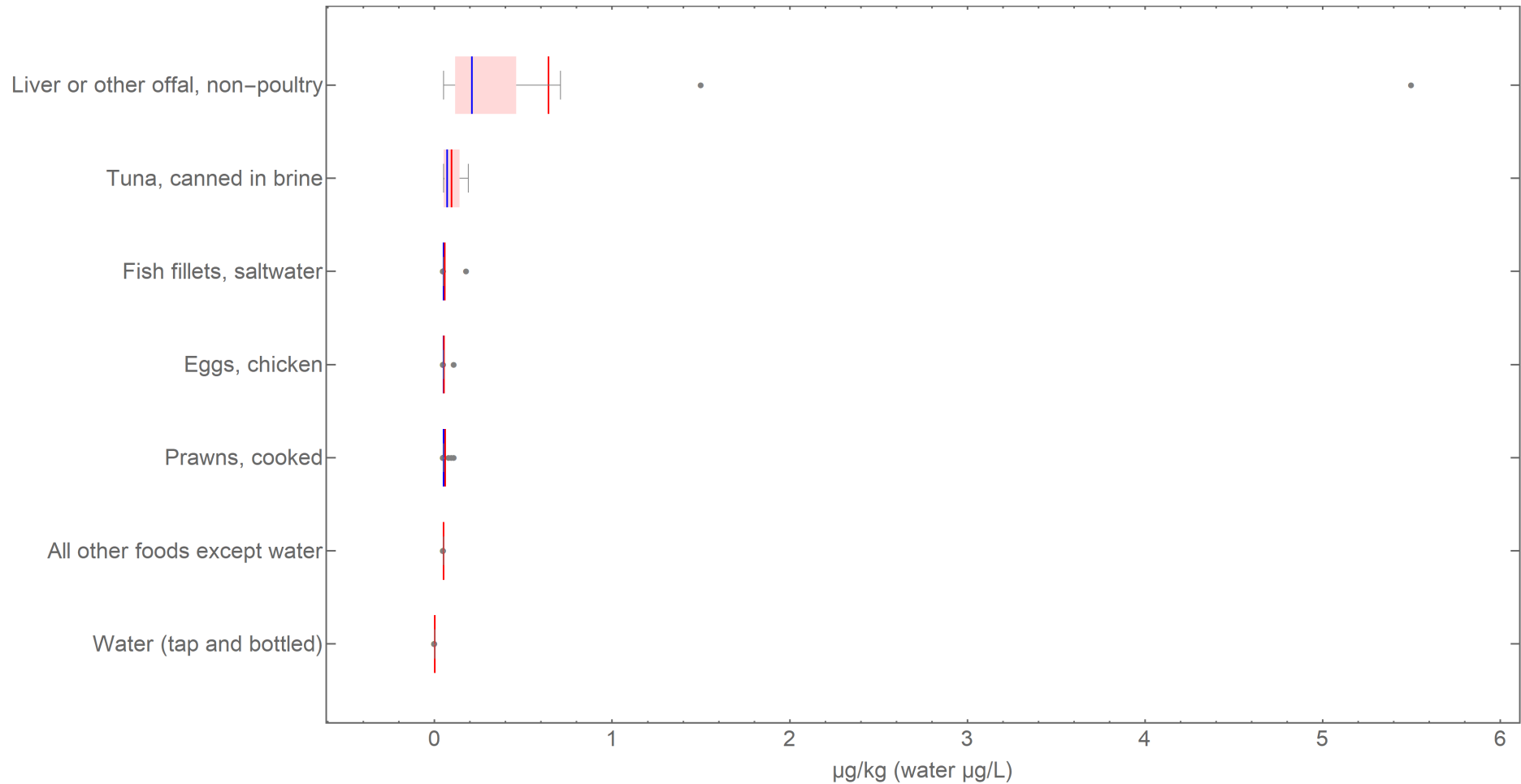
The box shows where the data points are concentrated and represents at the lower and upper ends of the box, the 25th and 75th percentiles respectively. The mean (red) and median (blue) are presented as vertical lines. The whiskers extend to minimum and maximum excluding any outliers. Outliers are presented as grey dots. Outlying values are defined as any data points greater than 1.5 times the inter-quartile range (IQR) above the third quartile ($Q3+1.5*IQR$) or smaller than 1.5 times the IQR below the first quartile ($Q1-1.5*IQR$).

Appendix 3.4-2: Middle bound (ND = ½ LOR) concentration of PFOS in foods analysed in the 27th ATDS



The box shows where the data points are concentrated and represents at the lower and upper ends of the box, the 25th and 75th percentiles respectively. The mean (red) and median (blue) are presented as vertical lines. The whiskers extend to minimum and maximum excluding any outliers. Outliers are presented as grey dots. Outlying values are defined as any data points greater than 1.5 times the inter-quartile range (IQR) above the third quartile ($Q3+1.5*IQR$) or smaller than 1.5 times the IQR below the first quartile ($Q1-1.5*IQR$).

Appendix 3.4-3: Upper bound (ND = LOR) concentration of PFOS in foods analysed in the 27th ATDS



The box shows where the data points are concentrated and represents at the lower and upper ends of the box, the 25th and 75th percentiles respectively. The mean (red) and median (blue) are presented as vertical lines. The whiskers extend to minimum and maximum excluding any outliers. Outliers are presented as grey dots. Outlying values are defined as any data points greater than 1.5 times the inter-quartile range (IQR) above the third quartile ($Q3+1.5*IQR$) or smaller than 1.5 times the IQR below the first quartile ($Q1-1.5*IQR$).