

DIOXINS AND DIOXIN-LIKE PCBs IN PROCESSED FISH AND FISH PRODUCTS

Summary

Dioxins and PCBs were analysed in 165 samples of processed fish and fish products purchased in the UK. The main purpose of the survey was to allow the dietary intake of dioxin and dioxin-like PCBs from processed fish and fish products to be estimated. The current survey complements a recent survey for dioxins and PCBs in wild and farmed fish and shellfish (Food Standards Agency's Food Survey Information Sheet No 03/06). Concentrations of dioxins and dioxin-like PCBs were below relevant EU regulatory limits in all of the samples analysed, with higher concentrations being found in products based on oily fish or crab. Intake calculations indicate that there is no need to make any change to the Agency's current advice on fish consumption.

Key Facts

- Dioxins and dioxin-like PCBs were analysed in 165 samples of processed fish and fish products.
- The samples analysed covered a wide range of fish and shellfish related products including canned fish and shellfish, processed fish (smoked and dried), fish fingers, prepared fish meals, fish roe, enrobed products such as calamari and fish balls, pastes and pates and seafood sticks.
- Concentrations of dioxins and dioxin-like PCBs were below relevant EU regulatory limits in all of the samples analysed. Total TEQ concentrations were found to be in the range 0.01 - 3.17 ng WHO-TEQ/kg fresh weight.

Background

Dioxins and PCBs (polychlorinated biphenyls) are highly persistent organic chemical contaminants, which are widespread in the environment and bioaccumulate in the food chain. Consequently, low levels of these compounds are detectable in foods, especially fat containing foods such as meat, fish, eggs, milk and milk products. The term 'dioxins' refers to a group of 75 polychlorinated dibenzo-*p*-dioxins (PCDDs) and 135 polychlorinated dibenzofurans (PCDFs) congeners. Dioxins are produced in small amounts as unwanted by-products during the manufacture of certain industrial chemicals and during combustion and incineration processes.

Unlike dioxins, PCBs were manufactured from the early 1930s until the 1970s for use in electrical equipment. They are no longer produced or used in the UK but remain present, for example, in some older electrical equipment. There are 209 PCB congeners, 12 of which exhibit toxicological action similar to that of the toxic dioxins and are therefore described as being 'dioxin-like'. The contamination of foods by dioxins and dioxin-like PCBs and, consequently, human exposure to them has decreased over the years.^{1,2}

Further background information on dioxins and PCBs can be found in the Food Standards Agency's Food Survey Information Sheet No 38/03, which also contains data for dioxins and PCBs in average diets and estimates of intakes.³

The Ministry of Agriculture Fisheries and Food has previously conducted surveys for dioxins and PCBs in marine fish and trout, which were, published as Food Surveillance Information Sheets No 184 and 145 respectively.^{4,5} The FSA published data for dioxins and PCBs in 47 species of farmed and wild fish and shellfish in February 2006.

Food processing methods such as skinning, smoking and preserving, and additive processes like the inclusion of sauces and oils, are likely to have an effect on the level of contaminants in the food product. For example, the modification of contaminant levels has been observed for dioxins in beef, the levels in cooked beef being significantly lower than the levels in the raw meat.⁶

Methodology

Sampling

165 samples of processed fish and fish products were analysed. An approved sampling

plan was constructed to represent the types of processed fish and fish products commonly consumed in the UK. Ventress Technical Limited collected 165 samples of processed fish and fish products from supermarkets, independent retailers and specialist retailers across the UK, together with internet sources. The choice of samples aimed to reflect both market share and the range of products available. The number of samples collected in England was 115, 20 in Scotland, 15 in Wales, and 15 in Northern Ireland. No particular inference should be drawn from the inclusion or absence of a particular product in the survey.

The sampled products included molluscs and gastropods (including whelks, mussels, winkles, scallops, squid), crustaceans (including shrimps, prawns, crevettes, crab, crayfish, lobster), ready-to-eat highly processed fish products (including pastes, pâtés, soups, sandwich fillers, crab sticks), canned/jarred products (including fish in oil, brine, tomato sauce), high fish content enrobed products (including battered fish, crumbed fillets, fish fingers, fish cakes, fish balls), smoked/salted/dried fish and specialist fish products (including caviar, salmon roe, jellied eels). The product description, brand and retailer information for each sample are summarised in Annex 2. Further details of the sampling can be found in the sampling contractor's final report.⁷

Sample preparation and analysis

Analysis of the 17 dioxins and furan congeners and 12 dioxin-like PCBs assigned toxic equivalency factors by the World Health Organization⁸ was conducted by the Central Science Laboratory (CSL). The samples were homogenised and exhaustively extracted using mixed organic solvents. Samples were then analysed using high resolution gas chromatography coupled with either low resolution mass spectrometric detection (*ortho*-PCBs) or high resolution mass spectrometric detection (*non-ortho*-PCBs and PCDDS/PCDFs).⁹

The reporting limits quoted on PCBs and dioxins are consistent with the requirements for WHO-TEQ measurement given in EU Commission Directive 2002/69/EC.¹⁰ In practical terms these were typically as low as 0.01 ng/kg fat for PCDD/Fs, 0.01 ng/kg fat for *non-ortho*-PCBs and 0.01 µg/kg fat for the *ortho*-PCBs. Measurement uncertainty estimates have been reported for all the individual PCDD/PCDF and PCB congeners.¹¹

Quality Assurance

All analytical data met published acceptance criteria for PCDDs and PCDFs and equivalent criteria for PCBs.¹² A quality control sample was included in every batch of samples analysed. The Gas Chromatography - Mass Spectrometry analytical run of each batch of purified sample extracts was preceded by the analysis of a standard reference solution used to check system performance and calibration validity. The Central Science Laboratory has participated in inter-laboratory trials for the measurement of dioxins and PCBs and regularly participates in inter-comparison exercises where the results reported by the laboratory were found to be in excellent agreement with consensus data.¹³⁻¹⁴

Results

All analytical results for dioxins and dioxin-like PCBs in the current report are expressed in terms of World Health Organisation Toxic Equivalents (WHO-TEQs).⁸ The upper bound concentrations of dioxins and dioxin-like PCBs (ng WHO-TEQ/kg fresh weight) in the fish and fish product samples are summarised in Table 2. Figure 1 gives a graphical overview of the mean upper bound concentrations by type of fish. The mean Upper bound TEQ concentrations were generally found to be higher in crab and in oily fish such as anchovies, herring, mackerel and salmon.

Annex 1 gives the individual sample results, grouped according to the fish type. Full congener-specific concentrations on a fat basis, and concentrations as WHO-TEQs on both a fat basis and fresh weight basis, for the current survey are available in the contractor's final report.¹¹

Total TEQ concentrations based on upper bound concentrations were found to be in the range 0.01 to 3.17ng WHO-TEQ/kg on a fresh weight basis. Based on upper bound concentrations, for dioxins only, TEQ levels ranged from 0 to 1.90 on a fresh weight basis. TEQ concentrations for dioxin-like PCBs ranged from 0 to 2.02 fresh weight basis. The concentrations of dioxins and PCBs found in the samples were within the EU Maximum Limit and Action Level of 4ng WHO-TEQ/kg fresh weight which applied at the time of sampling, and the limit of 8ng WHO-TEQ/kg fresh weight for dioxins plus dioxin-like PCBs which has subsequently come into force.

Discussion

The highest concentrations of dioxins and dioxin-like PCBs were found in oily fish and crab based products, rather than those based on non-oily fish. The highest level (3.17ng WHO–TEQ/kg fresh weight) was found in a sample of dressed crab. In general, the levels of dioxins and dioxin-like PCBs in molluscs (gastropods, bivalvia and cephalopods) were lower than those in oily fish and non-oily fish products, as illustrated in the graphical overview presented in Figure 1.

The higher level in crab-based products could be explained by their feeding habits. Crabs are scavengers that feed partially on decaying organic material (such as carcasses of dead fish and other organisms), which can bear relatively high pollutant loads¹⁵. Biomagnification will therefore lead to an increase in contaminant load in crab products, particularly those containing a significant proportion of brown crabmeat.

One sample of tuna and mayonnaise paste contained a higher concentration of dioxin and dioxin-like PCBs than other, similar tuna-based products. This may be attributable in part to the presence of salmon as one of the ingredients. Conversely, a 'salmon' paste product that contained one of the highest levels in products of that type in fact contained more mackerel than salmon (38% mackerel, 28% salmon and 6% cod).

The concentration of dioxin and dioxin-like PCBs in a sample of smoked catfish was comparable to the levels found in oily fish. Catfish are bottom feeders and, as such, are likely to be exposed to the higher levels of dioxins and PCBs that accumulate in sediments and the organisms that live in the sediments at the bottoms of streams, rivers, lakes and coastal waters.¹⁶

A number of the samples tested were smoked, and there are some indications that the process used may influence dioxin levels. In particular, the levels in Finnan Haddock (cold-smoked) and Arbroath Smokies (hot-smoked), although not excessive, were higher than in other samples of smoked and unsmoked haddock.¹⁷ Similar trends might be difficult to observe in smoked oily fish as the dioxins and PCB levels are higher to begin with and smoking will affect the oil content of the product.

One seafood cocktail, comprising mussels, prawns and squid had a TEQ value higher than that of similar products. A similar TEQ value was also found in a sample of pickled

mussels. Mussels are filter feeders, which accumulate organic contaminants and are commonly used as sentinel organisms to rapidly assess the status of the contamination of the marine environment for a large number of persistent pollutants. The level of contaminants would vary with the coastal environment and therefore depend on the source of the shellfish. Gastropods are the largest group of molluscs, with a large majority of the species being bottom dwellers, although information about dioxin and PCB levels is sparse. Winkles and whelks may absorb contaminants from the surrounding water by absorption across their gills or from their diet, although the results do not indicate any significant problems.

The contaminant concentration in a given species of fish depends on a range of factors such as fat content, feeding habits and its marine environment. To add to this complexity, levels of contaminants such as dioxins and PCBs will also be influenced by the size and age of individual fish. In general the degree to which the organism interacts with sediment is likely to explain much of the variation in pollutant levels among species and, in most ecosystems, the fish nearer the top of the marine food chain would be expected to contain a higher level of contaminants. In herring, the dioxin content has been found to be related to the fishing ground, where high dioxin concentrations were found in samples from the Baltic Sea compared with low concentrations in North Sea herring.¹⁸

Concentration differences in the products would also be dependent on the percentage content of fish in the products. For example, as some products, which contained as much as 100% of fish, would be expected to contain higher concentrations than products such as fishcakes that contain less than 30% fish (unless other dioxin-containing ingredients are present).

Comparison to other surveys

Concentrations of dioxins and dioxin-like PCBs were generally found to be higher in oily fish and crab, and these results are consistent with results reported in the survey on wild and farmed fish and shellfish (Information Sheet 03/06). The results of the current survey are also consistent with results reported in other surveys on fishery products.^{18, 19}

Estimation of Dietary Exposures

Dietary intakes of dioxins and dioxin-like PCBs from the processed fish and fish products were estimated from the concentrations found in the samples assuming consumption of

one to four portions per week. The dietary intakes were estimated from the weighted averages of the concentrations in the fish products. Portion sizes were categorised into 140g, 70g and 30g based on the average amount of fish that an adult would consume in a single meal event.²⁰ The portion size estimates for the different fish types are presented in Table 3. The intake from the non-fish part of the diet was estimated from the results of the 2001 Total Diet Study.³

The estimated upper bound concentration dietary intakes of dioxins and dioxin-like PCBs by adults from single weekly portions of fish products on top of the normal diet would be in the range 0.7 to 1.4 pg WHO-TEQ/kg bodyweight per day and below the TDI of 2 pg WHO-TEQ/kg bodyweight.

Conclusions

None of the 165 samples of processed fish and fish products tested exceeded the regulatory limits for dioxins in fish. In general, a higher concentration of dioxins and dioxin-like PCBs was found in oily fish and crab products. These findings are consistent with the results found in the survey on wild and farmed fish and shellfish. Based on the results of this study, the Agency's current advice on fish consumption, which was reiterated following the publication of surveys on 17 February 2006, remains unchanged.

Summary of Units

ppb	parts per billion, equivalent to one microgram per kilogram (kg)
kg	a kilogram (kg) is one thousand grams (g)
µg	microgram, one millionth of a gram
ng	a nanogram is one thousand millionth of a gram
pg/kg bw/day	picograms per kilogram of bodyweight per day; equivalent to parts per thousand million million by weight.
pg	a picogram is one million millionth of a gram

Notes on nomenclature

'**Dioxins**' means the sum of polychlorinated dibenzo-p-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs).

Upper and Lower Bound

Upper bound concentrations (and dietary intakes estimated from them) assume that all individual dioxins and PCBs that are present at concentrations below the reporting limit are present at the reporting limit, and therefore may be an overestimate of the true concentrations. 'Lower bound' calculations assume figures below the limit of determination to be zero. Although upper bound results may lead to an overestimate, the very high sensitivity of the analytical method used means that, in this case, the differences between upper and lower bound results are negligible.

TEF

The use of Toxic Equivalency Factors (TEFs) allows concentrations of the less toxic compounds to be expressed as a concentration equivalent to the most toxic dioxin - 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). These toxicity-weighted concentrations are then summed to give a single value, which is expressed as a Toxic Equivalent (TEQ). The system of TEFs used in the UK and a number of other countries is that set by the World Health Organisation (WHO) and the resulting overall concentrations are referred to as WHO-TEQs.

TDI

A Tolerable Daily Intake (TDI) is the maximum amount of a contaminant that can be ingested as a daily average over the whole lifetime without posing a significant risk to health.

References

1. Pompa G. *et al* (2003). Dioxin and PCB Contamination of Fish and Shellfish: Assessment of Human Exposure. Review of the International Situation. *Veterinary Research Communications*, **27** Suppl. 159-167
2. Gómara, B. *et al.* (2005). Levels and trends of polychlorinated dibenzo-*p*-dioxins/furans (PCD/Fs) and dioxin-like polychlorinated biphenyls (PCBs) in Spanish commercial fish and shellfish products, 1995-2003. *Journal of Agricultural and Food Chemistry*. **53**, 8406-8413.
3. Food Standards Agency. (2003). Dioxins and polychlorinated biphenyls in the UK diet – 2001 Total Diet Study samples. *Food Surveillance Information Sheet*, **38/03**. Food Standards Agency, available at http://www.food.gov.uk/multimedia/pdfs/fsis38_2003.pdf.
4. Ministry of Agriculture, Fisheries and Food (1998) Dioxins and PCBs in farmed trout in England and Wales. *Food Surveillance Information Sheet*, **145**, available at <http://archive.food.gov.uk/maff/archive/food/infosheet/1998/no145/145trout.htm>.
5. Ministry of Agriculture, Fisheries and Food (1999) Dioxins and PCBs in UK and imported marine fish. *Food Surveillance Information Sheet*, **184**, available at <http://archive.food.gov.uk/maff/archive/food/infosheet/1999/no184/184diox.htm>.
6. Thorpe, S. *et al.* (1999). The effects of cooking by various methods on concentrations of PCDDs and PCDFs in bovine meat. *Organohalogen Compounds*, **44**, 237-240.
7. Ventress Technical Limited (2005). Sampling report for the Food Standards Agency survey of metals/dioxins in processed fish products. Available from the FSA library.
8. Van den Berg, M. *et al.* (1998). Toxic equivalency factors (TEFs) for PCBs, PCDDs, PCDFs for humans and wildlife. *Environmental Health Perspectives*. **106**, 775-792.
9. Krokos, F. *et al.* (1997). Congener-specific method for the determination of *ortho*- and non-*ortho* polychlorinated biphenyls, polychlorinated dibenzo-*p*-dioxins and polychlorinated dibenzofurans in foods by carbon-column fractionation and gas chromatography-isotope dilution mass spectrometry. *Fresenius Journal of Analytical Chemistry*. **357**, 732-742.
10. European Commission (2001) Council Regulation (EC) No 2375/2001 of 29/11/2001 amending Commission Regulation No 466/2001 setting maximum levels for certain contaminants in foodstuffs, *Official Journal of the European Communities*, L 321, 06.12.2001, p1-5
11. Fernandes, A. *et al.* (2005). Survey of dioxins and PCBs in processed fish and fish products. *CSL Report*, **FD05/21**. Central Science Laboratory.

12. Ambidge, P.F. *et al.* (1990). Acceptance criteria for analytical data on polychlorinated dibenzo-*p*-dioxins and polychlorinated dibenzofurans. *Chemosphere*. **21**, 999-1006.
13. "Intercalibration on Dioxins in Food – An International Study" National Institute of Public Health, Oslo, Norway, (2000) ISBN 82-7364-167-8
14. "Interlaboratory Comparison on dioxins in food – Fourth round of an International Study" Norwegian Institute of Public Health, Oslo, Norway, (2003) ISBN 82-8082-049-3
15. Voorspoels, S. *et al.* (2004). Levels and profiles of PCBs and OCPs in marine benthic species from the Belgian North Sea and the Western Scheldt Estuary. *Marine Pollution Bulletin*. **49**, 393-404.
16. Storelli, M. M. *et al* (2003) Polychlorinated biphenyls in seafood: contamination levels and human dietary exposure. *Food Chemistry*. **82**, 491-496
17. Available on the DEFRA website – EU Protected Food Names Schemes: <http://www.defra.gov.uk/foodrin/foodname/UKingdom/arbsm.htm>
18. Karl, H. *et al* (2002) Levels of dioxins in fish and fishery products on the German market. *Chemosphere*. **49**, 765-773
19. Leonards, P.E.G. *et al* (2001) Polychlorinated Dibenzo-*p*-dioxins (PCDD), Dibenzofurans (PCDF) and Biphenyls (PCBs) in Dutch fishery products. *Organohalogen Compounds*. **52**, 161-164
20. Mills, A, Patel, S: Food Portion Sizes 3rd Edition. Food Standards Agency, HMSO, 2005
21. Department of Health. (2001). Committee on Toxicity of Chemicals in Food, Consumer Products and the Environment. Statement on dietary exposure to dioxins and dioxin-like PCBs. Department of Health, available at <http://www.food.gov.uk/science/ouradvisors/toxicity/statements>.
22. Food Standards Agency. (2003). Eat more fish. Food Standards Agency, available at www.food.gov.uk/multimedia/webpage/resolutions/eatmorefish.
23. Food Standards Agency. (2004). FSA issues new advice on oily fish consumption. News Release, **R913** – **44**, available at www.food.gov.uk/news/pressreleases/2004/jun/oilyfishadvice0604press

Further Information:

Further information on this survey can be obtained from:

Dr David Mortimer

Food Standards Agency

Chemical Safety Division

Aviation House

Room 707C

125 Kingsway

London WC2B 6NH

Tel: +44 (0) 20 7276 8731

Fax: +44 (0) 20 7276 8717

E-mail: david.mortimer@foodstandards.gsi.gov.uk

Further copies of this summary report can be obtained from:

Library

Food Standards Agency

Ground Floor

Aviation House

125 Kingsway

London WC2B 6NH

Tel: +44 (0) 20 7276 8281/8182

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Figure 1. Mean Upper Bound TEQ concentrations (whole weight) in fish products based on type of fish

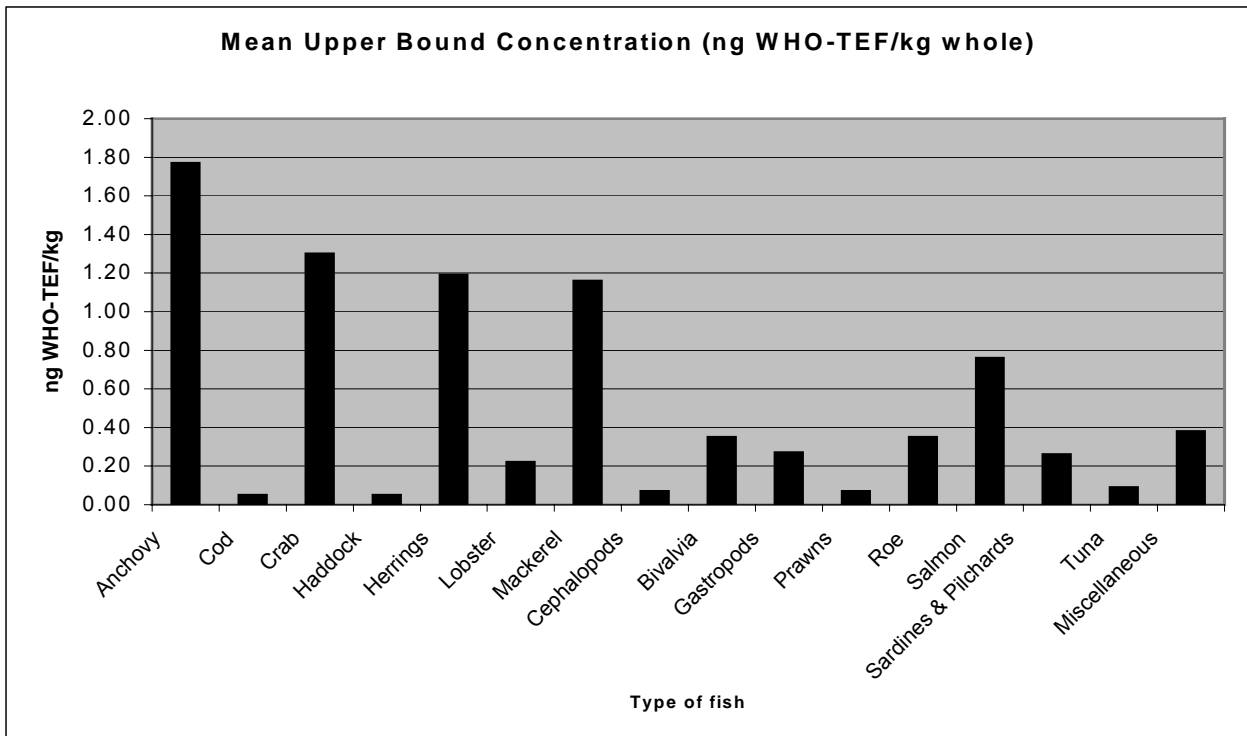


Table 1: Summary of results by type of fish

Mean Upper Bound Concentrations (ng WHO-TEF/kg whole)

Type of fish	Dioxins	PCBs	Dioxins and PCBs
Anchovy	0.27	1.50	1.77
Cod	0.02	0.03	0.05
Crab	0.73	0.57	1.30
Haddock	0.02	0.03	0.05
Herrings	0.65	0.66	1.32
Lobster	0.10	0.12	0.22
Mackerel	0.26	0.90	1.16
Cephalopods ¹	0.04	0.03	0.07
Bivalvia ²	0.20	0.15	0.35
Gastropods ³	0.14	0.13	0.27
Prawns	0.06	0.05	0.11
Roe	0.05	0.18	0.23
Salmon	0.19	0.57	0.76
Sardines & Pilchards	0.04	0.22	0.26
Tuna	0.02	0.07	0.09
Miscellaneous ⁴	0.17	0.21	0.38

1. Includes octopus and calamari

2. Includes scallops, mussels, cockles,

3. Includes winkles and whelks (gastropods).

4. Includes sild, catfish, whiting, eels, whitebait, halibut, swordfish, and unspecified fish.

Table 2: Summary of results by type of fish

Mean and Range Upper Bound Concentrations (ng WHO-TEF/kg whole basis)

Type of fish	Number of samples	max/min	Dioxins	PCBs	Total TEQ
Anchovy	2		0.27	1.50	1.77
		max	0.34	2.02	2.36
Cod	3	min	0.20	0.97	1.17
			0.02	0.03	0.05
Crab	12	max	0.03	0.06	0.08
		min	0.01	0.01	0.02
Haddock	6		0.73	0.57	1.30
		max	1.90	1.20	3.17
Herrings	7	min	0.00	0.00	0.00
			0.02	0.03	0.06
Lobster	5	max	0.03	0.05	0.07
		min	0.01	0.02	0.03
Mackerel	7		0.65	0.66	1.32
		max	1.08	1.02	2.10
Cephalopods	4	min	0.25	0.33	0.58
			0.10	0.12	0.17
Bivalvia	18	max	0.24	0.28	0.52
		min	0.02	0.01	0.03
Gastropods	7		0.26	0.90	1.16
		max	0.45	1.63	2.08
Prawns	24	min	0.11	0.37	0.48
			0.04	0.03	0.07
Roe	7	max	0.06	0.05	0.11
		min	0.01	0.01	0.02
Salmon	21		0.20	0.15	0.35
		max	0.54	0.46	0.87
Sardines & Pilchards	5	min	0.01	0.01	0.02
			0.14	0.13	0.27
Tuna	12	max	0.26	0.30	0.56
		min	0.02	0.03	0.05
Miscellaneous	25		0.06	0.05	0.11
		max	0.58	0.46	1.04
		min	0.01	0.00	0.01
			0.05	0.18	0.22
		max	0.09	0.37	0.45
		min	0.02	0.03	0.05
			0.19	0.57	0.77
		max	0.35	1.23	1.53
		min	0.01	0.02	0.04
			0.04	0.22	0.26
		max	0.06	0.51	0.56
		min	0.01	0.02	0.03
			0.02	0.07	0.10
		max	0.07	0.30	0.37
		min	0.01	0.00	0.02
			0.17	0.21	0.38
		max	1.80	0.76	2.24
		min	0.01	0	0.01

Table 3

Upper bound Intakes of dioxins and dioxin-like PCBs from processed fish and fish products and the rest of the diet

Type of fish	Anchovy	Cod	Crab	Haddock	Herrings	Lobster	Mackerel	Cephalo pods	Bivalvia	Gastropods	Prawns	Roe	Salmon	Sardines & Pilchards	Tuna
Intake from non-fish part of the diet (a)	0.7														
Intake from one portion of fish product (b)															
Sub-total	0.7														
Concentration in oily fish (ng WHO-TEQ/kg fresh weight) (c)	2.36	0.08	3.17	0.45	2.10	0.52	2.08	0.11	0.87	0.56	1.04	0.45	1.53	0.56	0.37
Fish portion size (gram) (d)	30	140	70	140	70	70	140	70	70	70	70	70	140	70	70
Daily intake from 1 weekly portion of fish	0.17	0.0	0.5	0.2	0.4	0.09	0.7	0.02	0.15	0.09	0.2	0.1	0.5	0.09	0.1
Total	0.8	0.7	1.2	0.8	1.0	0.7	1.4	0.7	0.8	0.8	0.8	0.7	1.2	0.8	0.7
Daily intake from 2 weekly portions of fish	0.3	0.1	1.1	0.3	0.7	0.17	1.4	0.04	0.29	0.19	0.3	0.2	1.0	0.19	0.1
Total	1.0	0.7	1.7	1.0	1.4	0.8	2.0	0.7	0.9	0.8	1.0	0.8	1.7	0.8	0.8
Daily intake from 3 weekly portions of fish	0.5	0.1	1.6	0.5	1.1	0.3	2.1	0.06	0.44	0.28	0.5	0.2	1.5	0.3	0.2
Total	1.2	0.7	2.3	1.1	1.7	0.9	2.7	0.7	1.1	0.9	1.2	0.9	2.2	0.9	0.8
Daily intake from 4 weekly portions of fish	0.7	0.1	2.1	0.6	1.4	0.3	2.8	0.07	0.58	0.37	0.7	0.3	2.0	0.4	0.2
Total	1.3	0.8	2.8	1.3	2.1	1.0	3.4	0.7	1.2	1.0	1.4	1.0	2.7	1.0	0.9

Annex 1: Results for individual samples of processed fish and fish products - categorised by type of fish

Type of fish	Sample Code	Product description	Dioxins	PCBs	Total TEQ	Category	Packaging Details
Anchovy	11622	Anchovy Paste	0.34	2.02	2.360	Ready-to-eat highly processed	Boxed tube
	11644	Anchovy Paste	0.20	0.97	1.170	Ready-to-eat highly processed	Glass jar
Cod	11596	10 Fish Fingers 100% Cod Fillet	0.02	0.06	0.080	High fish content enrobed	Cardboard box
	11549	Skinless & Boneless Saltfish Fillets	0.01	0.01	0.02		
	11674	4 Cod Fishcakes	0.03	0.02	0.050	High fish content enrobed	Overwrapped preformed tray
Crab	11635	White Crabmeat Chunks in Brine	0.0	0.0	0.03	Canned/ jarred	Can
	11535	Scottish 50/50 Crab Meat	0.81	0.57	1.380	Crustacean	Sealed moulded tray
	11559	Dressed Crab	1.67	1.05	2.720	Crustacean	Overwrapped cling film crab shells and extra meat in polythene bag
	11581	Crab Meat - All White	0.31	0.30	0.610	Crustacean	Cardboard box
	11586	Pure Dressed Crab	1.93	1.24	3.170	Crustacean	Overwrapped scallop shell
	11632	Dressed Cromer Crab	1.59	1.12	2.710	Crustacean	Clear bag with white paper backing
	11677	Cooked Crabs Claws	0.41	0.09	0.500	Crustacean	Polythene bag wrapped in newspaper
	11541	Crab Sticks	0.01	0.01	0.020	Ready-to-eat highly processed	Sold loose
	11562	Crab Sticks	0.01	0.01	0.020	Ready-to-eat highly processed	Individually wrapped
	11603	Crab Paste	0.40	1.17	1.570	Ready-to-eat highly processed	Glass jar
	11650	Crab Spread	0.92	0.78	1.700	Ready-to-eat highly processed	Glass jar
	11695	Luxury Orkney Crab Pate	0.73	0.49	1.220	Ready-to-eat highly processed	Plastic tub in cardboard sleeve

(Concentrations (ng WHO-TEQ/kg fresh weight))

Type of fish	Sample Code	Product description	Dioxins	PCBs	Total TEQ	Category	Packaging Details
Haddock	11566	Smoked Scottish Haddock Fillets with Butter	0.03	0.03	0.060	Smoked/salted/dried	Cardboard box
	11637	Smoked Haddock Fillets	0.01	0.02	0.030	Smoked/salted/dried	Boxed
	11661	Finnan Haddock	1.08	1.02	2.100	Smoked/salted/dried	Paper wrap
	11667	Scottish Caught Skinless Smoked Haddock Block	0.03	0.03	0.060	Smoked/salted/dried	Printed polythene bag
	11692	Undyed Smoked Haddock (at time of purchase)	0.02	0.05	0.070	Smoked/salted/dried	Plastic bag with blue tie
	11665	Arbroath Smokies	0.17	0.28	0.450	Smoked/salted/dried	Printed polythene bag
Herrings	11670	Rollmops	0.65	0.66	1.32	Smoked/salted/dried	Clear polythene bag
	11571	Traditional Bismarck Herrings	0.63	0.60	1.230	Canned/jarred	Sealed plastic tub
	11653	Kippers	0.52	0.50	1.020	Smoked/salted/dried	Vacuum pack
	11669	Kipper fillets	0.25	0.33	0.580	Smoked/salted/dried	Printed polythene bag
	11572	Bismarck Herrings	0.89	0.81	1.700	Canned/jarred	Glass jar
	11623	Herring Fillets in Tomato Sauce	0.59	0.79	1.380	Canned/jarred	Can
	11640	Herring Fillets in Brine and Own Juices	0.62	0.60	1.220	Canned/jarred	Ring pull can
Lobster	11551	Cooked Crayfish	0.06	0.02	0.080	Crustacean	Polythene bag with red tie
	11609	Lobster Cooked & Dressed	0.24	0.28	0.52	Crustacean	Sealed polystyrene tray
	11625	Cooked Lobster	0.16	0.25	0.410	Crustacean	Polythene bag wrapped in newspaper
	11565	Squat Lobster	0.02	0.01	0.030	High fish content enrobed	Sealed printed bag
	11690	Scampi Bites	0.03	0.02	0.05	High fish content enrobed	Sealed plastic bag

(Concentrations (ng WHO-TEQ/kg fresh weight))

Type of fish	Sample Code	Product description	Dioxins	PCBs	Total TEQ	Category	Packaging Details
Mackerel	11595	Smoked Mackerel Pate	0.14	0.48	0.620	Ready-to-eat highly processed	Plastic tub
	11590	Smoked mackerel (display label)	0.28	0.90	1.180	Smoked/salted/dried	Sold loose, then vacuum packed
	11654	Smoked Mackerel	0.28	1.11	1.39	Smoked/salted/dried	Paper wrap
	11659	Lemon & Parsley Smoked Mackerel Fillets	0.45	1.63	2.080	Smoked/salted/dried	Vacuum pack
	11666	Smoked Mackerel Ready to Eat - Peppered	0.29	0.95	1.240	Smoked/salted/dried	MAP
	11678	Smoked Scottish Mackerel Strips	0.28	0.87	1.150	Smoked/salted/dried	Vacuum pack
	11614	Mackerel Fillets in Brine	0.11	0.37	0.480	Canned/jarred	Can
Miscellaneous	11573	Gefilte fish	0.14	0.33	0.470	Canned/jarred	Glass jar
	11627	Sild in Sunflower Oil	0.40	0.42	0.820	Canned/jarred	Ring pull can
	11568	Unsweet Fried Fish Balls	0.05	0.20	0.250	High fish content enrobed	Overwrapped polystyrene tray
	11675	4 Breaded White Fish Portions	0.02	0.01	0.030	High fish content enrobed	Overwrapped preformed tray
	11691	Fish Cakes (at time of purchase)	0.01	0.03	0.040	High fish content enrobed	Plastic bag
	11542	16 Seafood Sticks	0.01	0.02	0.030	Ready-to-eat highly processed	Vacuum pack inside cardboard sleeve
	11574	Fish Soup	0.15	0.58	0.730	Ready-to-eat highly processed	Glass jar
	11579	16 Seafood Sticks	0.01	0.01	0.020	Ready-to-eat highly processed	Sealed bag
	11601	20 Seafood Sticks with 2 Flavoured Dips	0.01	0.00	0.010	Ready-to-eat highly processed	Sealed plastic bag
	11636	16 Seafood Sticks	0.03	0.00	0.030	Ready-to-eat highly processed	Vacuum pack in cardboard sleeve
	11641	French Fish Soup with Muscadet	0.02	0.18	0.200	Ready-to-eat highly processed	Pouch

(Concentrations (ng WHO-TEQ/kg fresh weight))

Type of fish	Sample Code	Product description	Dioxins	PCBs	Total TEQ	Category	Packaging Details
Miscellaneous	11672	20 Seafood Sticks	0.01	0.00	0.01	Ready-to-eat highly processed	Vacuum pack
	11684	Sandwich Filling Seafood Cocktail	0.01	0.01	0.02	Ready-to-eat highly processed	Plastic tub
	11685	Ocean Stix	0.01	0.00	0.01	Ready-to-eat highly processed	Cardboard box
	11543	Catfish	1.80	0.44	2.240	Smoked/salted/dried	Blue carrier bag
	11549	Skinless & Boneless Saltfish Fillets	0.01	0.01	0.02	Smoked/salted/dried	Overwrapped plastic tray
	11591	Fresh Golden Cutlets - Whiting, cold smoked (display label)	0.15	0.14	0.290	Smoked/salted/dried	Sold loose, then vacuum packed
	11582	Whitebait	0.28	0.74	1.020	Specialist fish product	Printed sealed plastic bag
	11668	Smoked Halibut	0.16	0.4	0.55	Smoked/salted/dried	Vacuum pack
	11548	Fresh Swordfish Steaks with a Red Pepper Marinade (on display)	0.04	0.21	0.250	Specialist fish product	Printed polythene bag
	11663	Hot Smoked Trout Fillets	0.12	0.4	0.47	Smoked/salted/dried	Vacuum pack
	11648	Jellied Eels	0.03	0.18	0.21	Specialist fish product	Printed polythene bag
	11658	Seafood Cocktail	0.15	0.12	0.270	Molluscs & gastropods	MAP
	11662	Seafood Selection	0.52	0.76	1.280	Molluscs & gastropods	Sealed bag
	11588	Seafood Cocktail	0.13	0.10	0.230	Molluscs and gastropods	MAP
Molluscs	11578	Scallops in Seafood Sauce with Olive Oil	0.06	0.05	0.110	Canned/ jarred	Boxed can
	11540	Cooked Irish Mussels in Mediterranean Sauce	0.01	0.01	0.020	Molluscs & gastropods	Vacuum pack inside cardboard sleeve
	11544	Cooked Winkles	0.11	0.07	0.180	Molluscs & gastropods	Polythene bag with blue tie
	11552	Cooked Whelks	0.18	0.23	0.410	Molluscs & gastropods	Polythene bag with red tie

(Concentrations (ng WHO-TEQ/kg fresh weight))

Type of fish	Sample Code	Product description	Dioxins	PCBs	Total TEQ	Category	Packaging Details
Molluscs	11553	Green Lipped Mussels - Cooked	0.04	0.05	0.090	Molluscs & gastropods	Polythene bag
	11554	Cooked Cockles	0.39	0.15	0.540	Molluscs & gastropods	Polythene bag with red tie
	11561	Cooked Mussels	0.05	0.02	0.070	Molluscs & gastropods	Polythene bag
	11563	Seafood Cocktail	0.05	0.03	0.080	Molluscs & gastropods	Lidded tubs
	11592	Traditional Mussels off the Shell Cooked - Ready to Eat (display label)	0.30	0.32	0.620	Molluscs & gastropods	Loose
	11593	New Zealand Greenshell Mussels	0.04	0.03	0.070	Molluscs & gastropods	Cardboard box
	11602	IQF Mussel Meat					
	11602	Scallops with Roasted Garlic Butter	0.01	0.01	0.020	Molluscs & gastropods	Sealed plastic tray with cardboard sleeve
	11610	Marinated Whelks	0.14	0.09	0.230	Molluscs & gastropods	Polythene bag
	11612	Cooked Mussels	0.15	0.27	0.420	Molluscs & gastropods	Printed polythene bag
	11621	Cockles	0.54	0.21	0.750	Molluscs & gastropods	Glass jar
	11673	Mussels Cooked and Shelled	0.23	0.23	0.460	Molluscs & gastropods	MAP
	11679	Cooked Winkles	0.23	0.15	0.380	Molluscs & gastropods	Polythene bag wrapped in newspaper
	11681	Bigorneaux (cooked winkles at time of purchase)	0.02	0.03	0.050	Molluscs & gastropods	Sealed plastic container
	11682	Mussels in a Garlic Butter Sauce	0.02	0.03	0.050	Molluscs & gastropods	Vacuum packed, cardboard outer
	11683	Cooked Shelled Cockles	0.49	0.21	0.700	Molluscs & gastropods	Plastic bag
	11699	Spicy Mussels	0.09	0.20	0.290	Molluscs & gastropods	Lidded tubs

(Concentrations (ng WHO-TEQ/kg fresh weight))

Type of fish	Sample Code	Product description	Dioxins	PCBs	Total TEQ	Category	Packaging Details
Molluscs	11583	Cooked Frozen Whelks	0.04	0.05	0.090	Molluscs and gastropods	Printed sealed plastic bag
	11587	Cooked Chilean Mussel Meat - 1QF Ice Glazed	0.04	0.03	0.070	Molluscs and gastropods	Plastic bag
	11633	Cooked Winkles	0.26	0.30	0.560	Molluscs and gastropods	White polythene bag
	11645	Pickled Mussels	0.41	0.46	0.870	Molluscs and gastropods	Glass jar
	11646	Pickled Cockles	0.39	0.17	0.560	Molluscs and gastropods	Glass jar
	11589	Smoked Oysters in Cottonseed Oil	0.33	0.27	0.600	Canned/ jarred	Boxed can
	11577	Octopus Chunks in Olive Oil	0.01	0.01	0.020	Canned/jarred	Boxed can
	11697	Crispy Calamari	0.03	0.05	0.080	High fish content enrobed	Sealed plastic bag
	11539	Octopus Salad	0.04	0.01	0.050	Molluscs & gastropods	Lidded tubs
	11585	Whole Cooked Spanish Octopus Vulgaris	0.06	0.05	0.110	Molluscs and gastropods	Shrink wrap
Prawns	11626	Shrimps in Brine	0.03	0.01	0.040	Canned/ jarred	Can
	11547	Prawns in Chilli Sauce	0.01	0.00	0.010	Crustacean	Polystyrene lidded tubs
	11556	Tiger Prawns	0.13	0.04	0.170	Crustacean	MAP
	11558	Cooked Crevettes	0.01	0.01	0.020	Crustacean	Polythene bag with red tie
	11560	Medium Prawns	0.01	0.01	0.020	Crustacean	Printed polythene bag
	11567	Cooked & Peeled North Atlantic Prawns	0.01	0.01	0.020	Crustacean	Printed polythene bag
	11594	Large Luxury Prawns	0.01	0.00	0.010	Crustacean	Plastic bag - opened by retailer and resealed

(Concentrations (ng WHO-TEQ/kg fresh weight))

Type of fish	Sample Code	Product description	Dioxins	PCBs	Total TEQ	Category	Packaging Details
Prawns	11599	Cooked Whole Prawns in Shell	0.06	0.07	0.130	Crustacean	MAP
	11600	Cooked King Prawns	0.05	0.03	0.080	Crustacean	Sealed plastic bag
	11611	North Atlantic Prawns	0.02	0.02	0.040	Crustacean	Printed polythene bag
	11613	North Atlantic Prawns	0.02	0.03	0.050	Crustacean	Printed polythene bag
	11628	Large King Prawns	0.03	0.03	0.060	Crustacean	Printed polythene bag
	11629	Large Prawns	0.02	0.01	0.030	Crustacean	Printed polythene bag
	11634	Cooked Brown Shrimp	0.27	0.16	0.430	Crustacean	White polythene bag
	11639	King Prawns	0.05	0.02	0.010	Crustacean	Cardboard box
	11651	North Atlantic Prawns	0.04	0.05	0.090	Crustacean	Sealed printed bag
	11660	Large Cooked & Peeled Prawns	0.04	0.09	0.130	Crustacean	Sealed bag
	11664	Prawn Cocktail	0.01	0.01	0.020	Crustacean	Lidded tub
	11671	King Prawns	0.02	0.01	0.030	Crustacean	MAP
	11676	Scottish Cooked & Peeled Cold Water Prawns	0.05	0.05	0.100	Crustacean	Sealed bag
	11680	Crevettes Grises Entieres (shrimps at time of purchase)	0.58	0.46	1.040	Crustacean	MAP
	11698	Cooked Crevette	0.02	0.01	0.030	Crustacean	Shrink wrapped in cardboard box
	11536	Cantonese 6 Prawn Spring Rolls	0.02	0.02	0.040	Ready-to-eat highly processed	MAP
	11545	Prawn Cocktail	0.02	0.01	0.030	Ready-to-eat highly processed	Plastic tub in cardboard sleeve

(Concentrations (ng WHO-TEQ/kg fresh weight))

Type of fish	Sample Code	Product description	Dioxins	PCBs	Total TEQ	Category	Packaging Details
Roe	11557	Herring Roe	0.03	0.03	0.060	Specialist fish product	Vacuum packed
	11569	Smoked Cod Roe (verbal)	0.04	0.33	0.370	Specialist fish product	Cling film
	11606	Lumpfish Caviar	0.04	0.08	0.120	Specialist fish product	Glass jar
	11607	Pressed Cod Roe	0.04	0.23	0.270	Specialist fish product	Can
	11649	Soft Cod Roes	0.09	0.16	0.250	Specialist fish product	Ring pull can
	11656	Lumpfish Caviar	0.02	0.03	0.050	Specialist fish product	Glass jar
	11694	Smoked Cooked Cod Roe (at time of purchase)	0.08	0.37	0.450	Specialist fish product	Plastic bag with blue tie
Salmon	11598	Wild Red Salmon	0.18	0.45	0.630	Canned/ jarred	Can
	11604	Pink Salmon	0.02	0.02	0.040	Canned/ jarred	Sachet
	11652	Wild Pacific Pink Salmon	0.01	0.03	0.040	Canned/ jarred	Can
	11546	Wild Red Salmon	0.19	0.36	0.550	Canned/jarred	Can
	11615	Red Salmon	0.17	0.38	0.550	Canned/jarred	Can
	11616	Red Salmon	0.17	0.37	0.540	Canned/jarred	Can
	11619	Sockeye Wild Pacific Red Salmon	0.16	0.36	0.520	Canned/jarred	Can
	11624	Pink Salmon - Wild Pacific	0.02	0.05	0.070	Canned/jarred	Can
	11538	2 Salmon Fishcakes	0.19	0.62	0.810	High fish content enrobed	Overwrapped tray with cardboard sleeve
	11575	Salmon Batons	0.05	0.15	0.200	High fish content enrobed	MAP
	11630	Salmon Fillet in Lemon & Dill Crumb	0.03	0.03	0.060	High fish content enrobed	White polythene carrier bag

(Concentrations (ng WHO-TEQ/kg fresh weight))

Type of fish	Sample Code	Product description	Dioxins	PCBs	Total TEQ	Category	Packaging Details
Salmon	11570	Salmon Pate	0.28	0.76	1.040	Ready-to-eat highly processed	Lidded tub
	11638	Poached Salmon & Cucumber	0.16	0.52	0.680	Ready-to-eat highly processed	Lidded plastic pot
	11642	Salmon Paste	0.30	1.21	1.510	Ready-to-eat highly processed	Glass jar
	11643	Smoked Salmon Pate	0.35	0.90	1.250	Ready-to-eat highly processed	Glass jar
	11655	Salmon Paste	0.23	0.84	1.070	Ready-to-eat highly processed	Glass jar
	11686	Salmon Paste	0.24	0.93	1.170	Ready-to-eat highly processed	Glass jar
	11689	Salmon Paste	0.30	1.23	1.530	Ready-to-eat highly processed	Glass jar
	11576	Organic Salmon	0.32	0.80	1.120	Smoked/salted/dried	Vacuum pack
	11647	Smoked Salmon Trimmings	0.32	1.04	1.360	Smoked/salted/dried	Vacuum pack in cardboard sleeve
	11693	Smoked Scottish Salmon	0.35	0.99	1.340	Smoked/salted/dried	Vacuum pack
Sardines	11537	Sardines in Tomato Sauce	0.05	0.51	0.560	Canned/ jarred	Boxed can
	11580	Sardines in Brine	0.04	0.15	0.190	Canned/ jarred	Ring pull can
	11597	South Atlantic Pilchards in Tomato Sauce	0.01	0.02	0.030	Canned/ jarred	Can
	11688	Sardines in Brine	0.03	0.15	0.180	Canned/ jarred	Ring pull can
	11584	Portuguese Sardine Pate	0.06	0.29	0.350	Ready-to-eat highly processed	Plastic capped ring pull can
Tuna	11605	Tuna Chunks in Brine	0.02	0.01	0.030	Canned/ jarred	Can
	11608	Tuna Chunks in Sunflower Oil	0.02	0.13	0.150	Canned/ jarred	Can
	11687	Tuna in Olive Oil with Lemon & Herbs	0.02	0.01	0.030	Canned/ jarred	Ring pull can

(Concentrations (ng WHO-TEQ/kg fresh weight))

Type of fish	Sample Code	Product description	Dioxins	PCBs	Total TEQ	Category	Packaging Details
Tuna	11696	Tuna Flakes in Brine	0.01	0.01	0.020	Canned/ jarred	Can
	11550	Tuna Steaks in Brine	0.01	0.02	0.030	Canned/jarred	Can
	11564	Tuna in Tomato & Herb Dressing	0.02	0.00	0.020	Canned/Jarred	Cans in cardboard sleeve
	11617	Tuna Flakes in Brine	0.01	0.02	0.030	Canned/jarred	Can
	11618	Tuna Chunks in Brine	0.01	0.03	0.040	Canned/jarred	Can
	11631	Tuna Chunks in Brine	0.01	0.01	0.020	Canned/jarred	Can
	11555	Tuna in a Red Chilli and Lime Dressing	0.01	0.01	0.020	Ready-to-eat highly processed	Sachet
	11620	Tuna Pate	0.02	0.02	0.040	Ready-to-eat highly processed	Plastic tub with cardboard sleeve
	11657	Tuna & Mayonnaise Paste	0.07	0.30	0.370	Ready-to-eat highly processed	Glass jar

(Concentrations (ng WHO-TEQ/kg fresh weight))

Annex 2: Processed fish and fish product samples collected — ordered by sample code

Sample Code	Product described as	Brand	Date of purchase	Name of retail outlet	Outlet type	Outlet address
11535	Scottish 50/50 Crab Meat	None declared	01.06.05	Alan Beveridge	Specialist retailer	144 Fenwick Road, Glasgow, G46 6TW
11536	Cantonese 6 Prawn Spring Rolls	Sainsbury's	10.05.05	Sainsbury's	Supermarket	Unit 14a, Forestside Shopping Centre, Upper Galwallv. Belfast. BT8 6FX
11537	Sardines in Tomato Sauce	Epicure	22.06.05	Sawers	Specialist retailer	Unit 7, Fountain Centre, Belfast, BT1 6FS
11538	2 Salmon Fishcakes	Sainsbury's	10.05.05	Sainsbury's	Supermarket	Unit 14a, Forestside Shopping Centre, Upper Galwallv. Belfast. BT8 6FX
11539	Octopus Salad	Sawers	22.06.05	Sawers	Specialist retailer	Unit 7, Fountain Centre, Belfast, BT1 6FS
11540	Cooked Irish Mussels in Mediterranean	Carrokeel	10.05.05	Sainsbury's	Supermarket	Unit 14a, Forestside Shopping Centre, Upper Galwallv. Belfast. BT8 6FX
11541	Crab Sticks	None declared	22.06.05	Sawers	Specialist retailer	Unit 7, Fountain Centre, Belfast, BT1 6FS
11542	16 Seafood Sticks	Sainsbury's	10.05.05	Sainsbury's	Supermarket	Unit 14a, Forestside Shopping Centre, Upper Galwallv. Belfast. BT8 6FX
11543	Catfish	None declared	11.06.05	Wumak Food Store	Smaller retailer	278 Barking Road, Plaistow, E13 8HR
11544	Cooked Winkles	None declared	22.06.05	Atlantic Fish	Specialist retailer	5 Atlantic Avenue, Belfast, BT15 2HN
11545	Prawn Cocktail	Sainsbury's Be Good to Yourself	10.05.05	Sainsbury's	Supermarket	Unit 14a, Forestside Shopping Centre, Upper Galwallv. Belfast. BT8 6FX
11546	Wild Red Salmon	John West	10.05.05	Sainsbury's	Supermarket	Unit 14a, Forestside Shopping Centre, Upper Galwallv. Belfast. BT8 6FX
11547	Prawns in Chilli Sauce	None declared	22.06.05	Atlantic Fish	Specialist retailer	5 Atlantic Avenue, Belfast, BT15 2HN
11548	Fresh Swordfish Steaks with a Red Pepper Marinade (on Skinless & Boneless)	Waitrose	24.06.05	Waitrose	Supermarket	92 – 96 High Road, South Woodford, London, E18 2NA
11549	Saltfish Fillets	Sunshine Saltfish Ltd	24.06.05	Golbourne Fisheries	Specialist retailer	77 Goldbourne Road, London, W10 5NP
11550	Tuna Steaks in Brine	Glenryck	18.06.05	Asda	Supermarket	10 Pencarn Way, Coedkernew, Newport. NP10 8XL
11551	Cooked Crayfish	None declared	18.06.05	Birds Fish	Specialist retailer	4 Merthyr Road, Whitchurch, Cardiff, CF14 1DG
11552	Cooked Whelks	None declared	18.06.05	Birds Fish	Specialist retailer	4 Merthyr Road, Whitchurch, Cardiff, CF14 1DG
11553	Green Lipped Mussels - Cooked	None declared	24.06.05	Golbourne Fisheries	Specialist retailer	77 Goldbourne Road, London, W10 5NP
11554	Cooked Cockles	None declared	18.06.05	Birds Fish	Specialist retailer	4 Merthyr Road, Whitchurch, Cardiff, CF14 1DG
11555	Tuna in a Red Chilli and Lime Dressing	Princes Slimming World	18.06.05	Somerfield	Supermarket	34 – 40 Merthyr Road, Whitchurch, Cardiff. CF14 1DH

Sample Code	Product described as	Brand	Date of purchase	Name of retail outlet	Outlet type	Outlet address
11556	Tiger Prawns	Somerfield	18.06.05	Somerfield	Supermarket	34 – 40 Merthyr Road, Whitchurch, Cardiff, CF14 1DH
11557	Herring Roe	None declared	18.06.05	Birds Fish	Specialist retailer	4 Merthyr Road, Whitchurch, Cardiff, CF14 1DG
11558	Cooked Crevettes	None declared	18.06.05	Birds Fish	Specialist retailer	4 Merthyr Road, Whitchurch, Cardiff, CF14 1DG
11559	Dressed Crab	None declared	24.06.05	Golbourne Fisheries	Specialist retailer	77 Golbourne Road, London, W10 5NP
11560	Medium Prawns	Somerfield	18.06.05	Somerfield	Supermarket	34 – 40 Merthyr Road, Whitchurch, Cardiff. CF14 1DH
11561	Cooked Mussels	None declared	18.06.05	K Ashton	Specialist retailer	Central Market, Cardiff, CF1 2AV
11562	Crab Sticks	None declared	18.06.05	K Ashton	Specialist retailer	Central Market, Cardiff, CF1 2AV
11563	Seafood Cocktail	None declared	18.06.05	K Ashton	Specialist retailer	Central Market, Cardiff, CF1 2AV
11564	Tuna in Tomato & Herb Dressing	Weight Watchers from Heinz	22.06.05	Centra Quickstop	Smaller retailer	8 – 9 Ferguson House, Wellington Place. Belfast. BT1 6GF
11565	Squat Lobster	Young's	04.06.05	Iceland	Supermarket	126 High Street, Barnet, EN5 5XQ
11566	Smoked Scottish Haddock Fillets with Cooked & Peeled	Young's	04.06.05	Iceland	Supermarket	126 High Street, Barnet, EN5 5XQ
11567	North Atlantic Prawns	Iceland	04.06.05	Iceland	Supermarket	126 High Street, Barnet, EN5 5XQ
11568	Unsweet Fried Fish Balls	Hoffmans	04.06.05	Cockfosters Delicatessen	Specialist retailer	19 Station Parade, Cockfosters Road, FN4 0DJ
11569	Smoked Cod Roe (verhal)	None declared	04.06.05	Cockfosters Delicatessen	Specialist retailer	19 Station Parade, Cockfosters Road, FN4 0DJ
11570	Salmon Pate	Mr. Freed's appetisers	04.06.05	Waitrose	Supermarket	16 The Spires, 111 High Street, Barnett, EN5 5XY
11571	Traditional Bismarck Herrinas	Mrs Elswood	04.06.05	Waitrose	Supermarket	16 The Spires, 111 High Street, Barnett, FN5 5XY
11572	Bismark Herrings	Simons	04.06.05	Waitrose	Supermarket	16 The Spires, 111 High Street, Barnett, FN5 5XY
11573	Gefilte fish	Manischewitz	04.06.05	Waitrose	Supermarket	16 The Spires, 111 High Street, Barnett, EN5 5XY
11574	Fish Soup	Perard du Touquet	04.06.05	Waitrose	Supermarket	16 The Spires, 111 High Street, Barnett, FN5 5XY
11575	Salmon Batons	Great Food	04.06.05	Waitrose	Supermarket	116 The Spires, 111 High Street, Barnett. FN5 5XY
11576	Organic Salmon	Kinvara	04.06.05	Waitrose	Supermarket	16 The Spires, 111 High Street, Barnett, FN5 5XY
11577	Octopus Chunks in Olive Oil	Palacio de Oriente	04.06.05	Waitrose	Supermarket	16 The Spires, 111 High Street, Barnett, EN5 5XY

Sample Code	Product described as	Brand	Date of purchase	Name of retail outlet	Outlet type	Outlet address
11578	Scallops in Seafood Sauce with Olive Oil	Palacio de Oriente	04.06.05	Waitrose	Supermarket	16 The Spires, 111 High Street, Barnett, FN5 5XY
11579	16 Seafood Sticks	Tesco	04.06.05	Tesco Express	Supermarket	186 East Barnet Road, Barnet EN4 8QX
11580	Sardines in Brine	Tesco	04.06.05	Tesco Express	Supermarket	186 East Barnet Road, Barnet EN4 8QX
11581	Crab Meat - All White	Torbay	04.06.05	Poisson	Specialist retailer	7 Station Parade, Cockfosters Road, Barnet. FN4 0DI
11582	Whitebait	Paramount	04.06.05	Poisson	Specialist retailer	7 Station Parade, Cockfosters Road, Barnet. FN4 0DI
11583	Cooked Frozen Whelks	Tuskar Rock Seafood	04.06.05	Poisson	Specialist retailer	7 Station Parade, Cockfosters Road, Barnet. FN4 0DI
11584	Portuguese Sardine Pate	Fides	04.06.05	Poisson	Specialist retailer	7 Station Parade, Cockfosters Road, Barnet. FN4 0DI
11585	Whole Cooked Spanish Octopus	None declared	04.06.05	Poisson	Specialist retailer	7 Station Parade, Cockfosters Road, Barnet. FN4 0DI
11586	Pure Dressed Crab	Spiveys	04.06.05	Poisson	Specialist retailer	7 Station Parade, Cockfosters Road, Barnet. FN4 0DI
11587	Cooked Chilean Mussel Meat - 1QF	None declared	04.06.05	Poisson	Specialist retailer	7 Station Parade, Cockfosters Road, Barnet. EN4 0DL
11588	Seafood Cocktail	Waitrose	04.06.05	Waitrose	Supermarket	16 The Spires, 111 High Street, Barnett, FN5 5XY
11589	Smoked Oysters in Cottonseed Oil	Epicure	04.06.05	Waitrose	Supermarket	16 The Spires, 111 High Street, Barnett, FN5 5XY
11590	Smoked mackerel (display label)	None declared	09.04.05	Mayers Fishmongers	Specialist retailer	Stalls 10 – 12, Blackburn Fish Market, BB1 6AS
11591	Fresh Golden Cutlets - Whiting, cold smoked (display label)	None declared	09.04.05	Mayers Fishmongers	Specialist retailer	Stalls 10 – 12, Blackburn Fish Market, BB1 6AS
11592	Traditional Mussels off the Shell Cooked - Ready to Eat (display label)	Sea Katch (display label)	09.04.05	Mayers Fishmongers	Specialist retailer	Stalls 10 – 12, Blackburn Fish Market, BB1 6AS
11593	New Zealand Greenshell Mussels IQF Mussel Meat	Six Fathoms	09.04.05	Mayers Fishmongers	Specialist retailer	Stalls 10 – 12, Blackburn Fish Market, BB1 6AS
11594	Large Luxury Prawns	Royal Greenland	09.04.05	Mayers Fishmongers	Specialist retailer	Stalls 10 – 12, Blackburn Fish Market, BB1 6AS
11595	Smoked Mackerel Pate	Bleiker's	10.04.05	Booths Supermarkets	Smaller retailer	Millbrook Way, Penwortham, Preston, PR1 0XW
11596	10 Fish Fingers 100% Cod Fillet	Birds Eye	10.04.05	Hunt's Spar Shop	Smaller retailer	11 – 15 Broadfield Drive, Leyland, Lancashire. PR5 1GJ

Sample Code	Product described as	Brand	Date of purchase	Name of retail outlet	Outlet type	Outlet address
11597	South Atlantic Pilchards in Tomato	Glenryck	10.04.05	Booths Supermarkets	Smaller retailer	Millbrook Way, Penwortham, Preston, PR1 0XW
11598	Wild Red Salmon	Princes	10.04.05	Booths Supermarkets	Smaller retailer	Millbrook Way, Penwortham, Preston, PR1 0XW
11599	Cooked Whole Prawns in Shell	Asda	11.04.05	Asda Stores Ltd	Supermarket	Lower Audley Retail Park, Grimshaw Park Road, Blackburn, BB2 3DY
11600	Cooked King Prawns	Asda Extra Special	11.04.05	Asda Stores Ltd	Supermarket	Lower Audley Retail Park, Grimshaw Park Road, Blackburn, BB2 3DY
11601	20 Seafood Sticks with 2 Flavoured Dins	Asda	11.04.05	Asda Stores Ltd	Supermarket	Lower Audley Retail Park, Grimshaw Park Road, Blackburn, BB2 3DY
11602	Scallops with Roasted Garlic Butter	Tesco Finest	11.04.05	Tesco	Supermarket	Hill Street, Blackburn, BB1 3HF
11603	Crab Paste	Asda	11.04.05	Asda Stores Ltd	Supermarket	Lower Audley Retail Park, Grimshaw Park Road, Blackburn, BB2 3DY
11604	Pink Salmon	Chicken of the Sea	11.04.05	Tesco	Supermarket	Hill Street, Blackburn, BB1 3HF
11605	Tuna Chunks in Brine	Tesco	11.04.05	Tesco	Supermarket	Hill Street, Blackburn, BB1 3HF
11606	Lumpfish Caviar	Ora Kaviar	10.04.05	Provender Delicatessen	Specialist retailer	www.provender.co.uk/sales@provender.co.uk. (3 Market Square, South
11607	Pressed Cod Roe	Princes	13.04.05	Tesco	Supermarket	Towngate, Leyland, PR25 2FN
11608	Tuna Chunks in Sunflower Oil	Sainsbury's	13.04.05	Sainsbury's	Supermarket	Cuerden Way, Bamber Bridge, Preston, PR5 6B.J
11609	Lobster Cooked & Dressed	Croft Quality Seafoods	12.04.05	Island Seafare Ltd	Specialist retailer	www.islandseafare.co.uk/enquiries@islandseafare.co.uk (Alfred Pier, Port St.
11610	Marinated Whelks	None declared	09.06.05	Eden Fisheries	Specialist retailer	1a Winchester Street, South Shields, NF33 2PS
11611	North Atlantic Prawns	Tahay	09.06.05	Heron Frozen Foods	Smaller retailer	10 The Interchange, Gateshead, Tyne & Wear, NF8 1BH
11612	Cooked Mussels	Frescot	09.06.05	Heron Frozen Foods	Smaller retailer	10 The Interchange, Gateshead, Tyne & Wear, NF8 1BH
11613	North Atlantic Prawns	Co-op	09.06.05	Co-op	Supermarket	Jackson Street, Gateshead, Tyne & Wear, NE8 1HR
11614	Mackerel Fillets in Brine	Co-op	09.06.05	Co-op	Supermarket	Jackson Street, Gateshead, Tyne & Wear, NF8 1HR
11615	Red Salmon	Ensign	09.06.05	Kwik Save	Smaller retailer	239-241 High Street, Gateshead, Tyne & Wear, NF8 1FP
11616	Red Salmon	Cucumber	09.06.05	Home Bargains	Smaller retailer	227 High Street, Gateshead, Tyne & Wear, NE8 1AS
11617	Tuna Flakes in Brine	Osprey	09.06.05	Kwik Save	Smaller retailer	239-241 High Street, Gateshead, Tyne & Wear, NF8 1FP
11618	Tuna Chunks in Brine	Puffin	09.06.05	Co-op	Supermarket	Jackson Street, Gateshead, Tyne & Wear, NF8 1HR

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11619	Sockeye Wild Pacific Red Salmon	Co-op	09.06.05	Co-op	Supermarket	Jackson Street, Gateshead, Tyne & Wear. NF8 1HR
11620	Tuna Pate	Tesco	09.06.05	Tesco Extra	Supermarket	Kingston Park Centre, Newcastle, Tyne & Wear. NF3 2FP
11621	Cockles	Van Smirren Seafoods	09.06.05	Tesco Extra	Supermarket	Kingston Park Centre, Newcastle, Tyne & Wear. NE3 2FP
11622	Anchovy Paste	GIA	09.06.05	Tesco Extra	Supermarket	Kingston Park Centre, Newcastle, Tyne & Wear. NF3 2FP
11623	Herring Fillets in Tomato Sauce	Norge	09.06.05	Netto	Smaller retailer	Kings Court, Kingston Park Centre, Newcastle. NF3 5NA
11624	Pink Salmon - Wild Pacific	Ocean Fresh	09.06.05	Netto	Smaller retailer	Kings Court, Kingston Park Centre, Newcastle. NF3 5NA
11625	Cooked Lobster	None declared	09.06.05	Eden Fisheries	Specialist retailer	1a Winchester Street, South Shields, NF33 2PS
11626	Shrimps in Brine	John West	09.06.05	Tesco Extra	Supermarket	Kingston Park Centre, Newcastle, Tyne & Wear. NF3 2FP
11627	Sild in Sunflower Oil	John West	09.06.05	Tesco Extra	Supermarket	Kingston Park Centre, Newcastle, Tyne & Wear. NF3 2FP
11628	Large King Prawns	Tesco	09.06.05	Tesco Extra	Supermarket	Kingston Park Centre, Newcastle, Tyne & Wear. NE3 2FP
11629	Large Prawns	Young's	09.06.05	Tesco Extra	Supermarket	Kingston Park Centre, Newcastle, Tyne & Wear. NF3 2FP
11630	Salmon Fillet in Lemon & Dill Crumb (On display)	Dents of Hilgay (On display)	21.05.05	Dents of Hilgay Farm Shop and Fishery	Smaller retailer	Steels Drove, West Fen, Hilgay, PE38 0QH
11631	Tuna Chunks in Brine	Princes	21.05.05	West Winch Village Stores	Smaller retailer	212 Main Road, West Winch, King's Lynn. PE33 0NP
11632	Dressed Cromer Crab	None declared	21.05.05	DC Atkinson (Licensed Market)	Specialist retailer	Saturday Market Place, King's Lynn
11633	Cooked Winkles	None declared	21.05.05	DC Atkinson (Licensed Market)	Specialist retailer	Saturday Market Place, King's Lynn
11634	Cooked Brown Shrimp	None declared	21.05.05	DC Atkinson (Licensed Market)	Specialist retailer	Saturday Market Place, King's Lynn
11635	White Crabmeat Chunks in Brine	Marks and Spencer	21.05.05	Marks and Spencer	Supermarket	57 High Street, King's Lynn, PE30 1AY
11636	16 Seafood Sticks	Young's	21.05.05	Costcutter	Smaller retailer	169 Saddlebow Road, South Lynn, PE30 5BN
11637	Smoked Haddock Fillets	Marks and Spencer	21.05.05	Marks and Spencer	Supermarket	57 High Street, King's Lynn, PE30 1AY
11638	Poached Salmon & Cucumber	Marks and Spencer	21.05.05	Marks and Spencer	Supermarket	57 High Street, King's Lynn, PE30 1AY
11639	King Prawns	La Caldera	21.05.05	Lidl	Smaller retailer	88 Austing Street, King's Lynn, PE30 1AS
11640	Herring Fillets in Brine and Own	Petri	21.05.05	Lidl	Smaller retailer	88 Austing Street, King's Lynn, PE30 1AS

Sample Code	Product described as	Brand	Date of purchase	Name of retail outlet	Outlet type	Outlet address
11641	French Fish Soup with Muscadet	Select Maree	21.05.05	Morrisons	Supermarket	Coburg Street, King's Lynn, PE30 1QB
11642	Salmon Paste	Princes	21.05.05	Morrisons	Supermarket	Coburg Street, King's Lynn, PE30 1QB
11643	Smoked Salmon Pate	Epicure	21.05.05	Morrisons	Supermarket	Coburg Street, King's Lynn, PE30 1QB
11644	Anchovy Paste	Shippam's	21.05.05	Morrisons	Supermarket	Coburg Street, King's Lynn, PE30 1QB
11645	Pickled Mussels	Parsons	21.05.05	Morrisons	Supermarket	Coburg Street, King's Lynn, PE30 1QB
11646	Pickled Cockles	Parsons	21.05.05	Morrisons	Supermarket	Coburg Street, King's Lynn, PE30 1QB
11647	Smoked Salmon Trimminas	Tesco Value	21.05.05	Tesco	Supermarket	St. Faith's Drive, Gaywood, King's Lynn, PE30 4PU
11648	Jellied Eels	Tesco	21.05.05	Tesco	Supermarket	St. Faith's Drive, Gaywood, King's Lynn, PE30 4PU
11649	Soft Cod Roes	John West	21.05.05	Tesco	Supermarket	St. Faith's Drive, Gaywood, King's Lynn, PE30 4PU
11650	Crab Spread	Shippam's	30.04.05	Tesco Extra	Supermarket	Riverway Retail Park, Ayr Road, Irvine, KA12 8DF
11651	North Atlantic Prawns	Lyons Raider	01.06.05	Alan Beveridge	Specialist retailer	144 Fenwick Road, Glasgow, G46 6XW
11652	Wild Pacific Pink Salmon	Asda	28.04.05	Asda	Supermarket	Queen's Drive, Kilmarnock, KA1 3XF
11653	Kippers	None declared	01.06.05	Alan Beveridge	Specialist retailer	144 Fenwick Road, Glasgow, G46 6XW
11654	Smoked Mackerel	None declared	01.06.05	Alan Beveridge	Specialist retailer	144 Fenwick Road, Glasgow, G46 6XW
11655	Salmon Paste	Sainsbury's	30.04.05	Sainsbury's	Supermarket	Braehead Centre, King's Inch Road, Glasgow, G51 4BP
11656	Lumpfish Caviar	Spinnaker	30.04.05	Sainsbury's	Supermarket	Braehead Centre, King's Inch Road, Glasgow, G51 4BP
11657	Tuna & Mayonnaise Paste	Sainsbury's	30.04.05	Sainsbury's	Supermarket	Braehead Centre, King's Inch Road, Glasgow, G51 4BP
11658	Seafood Cocktail	Morrison's	29.04.05	Morrisons	Supermarket	West Langlands Street, Kilmarnock, KA1 2PY
11659	Lemon & Parsley Smoked Mackerel	None declared	29.04.05	Morrisons	Supermarket	West Langlands Street, Kilmarnock, KA1 2PY
11660	Large Cooked & Peeled Prawns	Tesco Finest	30.04.05	Tesco Extra	Supermarket	Riverway Retail Park, Ayr Road, Irvine, KA12 8DF
11661	Findon Haddock	None declared	01.06.05	Alan Beveridge	Specialist retailer	144 Fenwick Road, Glasgow, G46 6XW
11662	Seafood Selection	Tesco	30.04.05	Tesco Extra	Supermarket	Riverway Retail Park, Ayr Road, Irvine, KA12 8DF

Sample Code	Product described as	Brand	Date of purchase	Name of retail outlet	Outlet type	Outlet address
11663	Hot Smoked Trout Fillets	St James Smokehouse	01.06.05	Alan Beveridge	Specialist retailer	144 Fenwick Road, Glasgow, G46 6XW
11664	Prawn Cocktail	Morrison's	29.04.05	Morrisons	Supermarket	West Langlands Street, Kilmarnock, KA1 2PY
11665	Arbroath Smokies	Tesco	30.04.05	Tesco Extra	Supermarket	Riverway Retail Park, Ayr Road, Irvine, KA12 8DF
11666	Smoked Mackerel Ready to Eat - Scottish Caught	Morrison's	29.04.05	Morrisons	Supermarket	West Langlands Street, Kilmarnock, KA1 2PY
11667	Skinless Smoked	Tesco	30.04.05	Tesco Extra	Supermarket	Riverway Retail Park, Ayr Road, Irvine, KA12 8DF
11668	Smoked Halibut	Royal Greenland	01.06.05	Alan Beveridge	Specialist retailer	144 Fenwick Road, Glasgow, G46 6XW
11669	Kipper Fillets	Morrison's	29.04.05	Morrisons	Supermarket	West Langlands Street, Kilmarnock, KA1 2PY
11670	Rollmops	None declared	01.06.05	Alan Beveridge	Specialist retailer	144 Fenwick Road, Glasgow, G46 6XW
11671	King Prawns	Lyons Seafoods	29.04.05	Morrisons	Supermarket	West Langlands Street, Kilmarnock, KA1 2PY
11672	20 Seafood Sticks	Asda	28.04.05	Asda	Supermarket	Queen's Drive, Kilmarnock, KA1 3XF
11673	Mussels Cooked and Shelled	Asda	28.04.05	Asda	Supermarket	Queen's Drive, Kilmarnock, KA1 3XF
11674	4 Cod Fishcakes	Asda	28.04.05	Asda	Supermarket	Queen's Drive, Kilmarnock, KA1 3XF
11675	4 Breaded White Fish Portions	Asda Smartprice	28.04.05	Asda	Supermarket	Queen's Drive, Kilmarnock, KA1 3XF
11676	Scottish Cooked & Peeled Cold Water	Moray	28.04.05	Asda	Supermarket	Queen's Drive, Kilmarnock, KA1 3XF
11677	Cooked Crabs Claws	None declared	09.06.05	Eden Fisheries	Specialist retailer	1a Winchester Street, South Shields, NE33 2PS
11678	Smoked Scottish Mackerel Strins	Asda	28.04.05	Asda	Supermarket	Queen's Drive, Kilmarnock, KA1 3XF
11679	Cooked Winkles	None declared	09.06.05	Eden Fisheries	Specialist retailer	1a Winchester Street, South Shields, NE33 2PS
11680	Crevettes Grises Entieres (shrimps at time of purchase)	Heiploeg	21.04.05	Ringwood Fisheries	Specialist retailer	36 High Street, Ringwood, Hampshire, BH25 1AD
11681	Bigorneaux (cooked winkles at time of purchase)	Donegal	20.04.05	Ringwood Fisheries	Specialist retailer	36 High Street, Ringwood, Hampshire, BH25 1AD
11682	Mussels in a Garlic Butter Sauce	Murphy's Irish Seafood	20.04.05	Safeway	Supermarket	Pedlars Walk, Ringwood, Hampshire, BH24 1AY
11683	Cooked Shelled Cockles	None declared	20.04.05	Ringwood Fisheries	Specialist retailer	36 High Street, Ringwood, Hampshire, BH25 1AD

Sample Code	Product described as	Brand	Date of purchase	Name of retail outlet	Outlet type	Outlet address
11684	Sandwich Filling Seafood Cocktail	Morrison's	20.04.05	Safeway	Supermarket	Pedlars Walk, Ringwood, Hampshire, BH24 1AY
11685	Ocean Stix	Macrae Seafoods	20.04.05	Ringwood Fisheries	Specialist retailer	36 High Street, Ringwood, Hampshire, BH25 1AD
11686	Salmon Paste	Morrison's	20.04.05	Safeway	Supermarket	Pedlars Walk, Ringwood, Hampshire, BH24 1AY
11687	Tuna in Olive Oil with Lemon & Herbs	Morrison's	20.04.05	Safeway	Supermarket	Pedlars Walk, Ringwood, Hampshire, BH24 1AY
11688	Sardines in Brine	Morrison's	20.04.05	Safeway	Supermarket	Pedlars Walk, Ringwood, Hampshire, BH24 1AY
11689	Salmon Paste	Tesco Value	21.05.05	Tesco	Supermarket	St. Faith's Drive, Gaywood, King's Lynn, PE30 4PU
11690	Scampi Bites	Ross	20.04.05	Safeway	Supermarket	Pedlars Walk, Ringwood, Hampshire, BH24 1AY
11691	Fish Cakes (at time of purchase)	Norvik Foods (at time of purchase)	21.04.05	Ringwood Fisheries	Specialist retailer	36 High Street, Ringwood, Hampshire, BH25 1AD
11692	Undyed Smoked Haddock (at time of purchase)	None declared	20.04.05	Ringwood Fisheries	Specialist retailer	36 High Street, Ringwood, Hampshire, BH25 1AD
11693	Smoked Scottish Salmon	Morrison's	20.04.05	Safeway	Supermarket	Pedlars Walk, Ringwood, Hampshire, BH24 1AY
11694	Smoked Cooked Cod Roe (at time of purchase)	None declared	20.04.05	Ringwood Fisheries	Specialist retailer	36 High Street, Ringwood, Hampshire, BH25 1AD
11695	Luxury Orkney Crab Pate	Castle MacLellan	21.04.05	Bookers	Smaller retailer	Yeomans Industrial Park, Bournemouth, BH8 0B.I
11696	Tuna Flakes in Brine	Chef's Larder	21.04.05	Bookers	Smaller retailer	Yeomans Industrial Park, Bournemouth, BH8 0BJ
11697	Crispy Calamari	Lyons Seafoods	21.04.05	Bookers	Smaller retailer	Yeomans Industrial Park, Bournemouth, BH8 0B.I
11698	Cooked Crevette	Booker	21.04.05	Bookers	Smaller retailer	Yeomans Industrial Park, Bournemouth, BH8 0B.I
11699	Spicy Mussels	Sawers	22.06.05	Sawers	Specialist retailer	Unit 7, Fountain Centre, Belfast, BT1 6ES