

FSIS16/06 June 2006

DIOXINS AND DIOXIN-LIKE PCBs IN FOODS – EU MONITORING 2005

Summary

Dioxins and PCBs were analysed by the Food Standards Agency in 142 retail samples of UK produced foods purchased at locations throughout the UK. This work was carried out in line with Recommendation 2004/705/EC on the monitoring of background levels of dioxins and dioxin-like PCBs in foodstuffs. The results will be submitted to the European Commission for inclusion in the next review of limits for dioxins and PCBs. Where existing limits applied, all of the samples tested were compliant with the exception of two hen egg samples. There were no concerns for human health.

Key Facts

- As part of a Europe-wide monitoring programme, dioxins and PCBs were measured in a wide range of retail foods purchased in 2005.
- Two samples of hen eggs contained levels of dioxin above the current limit.
- One sample of lamb contained dioxins above the current action level.

Background

In 1999 there was a major contamination incident in Belgium in which contaminated animal fat was incorporated into animal feed, leading to high concentrations of dioxins and dioxin-like PCBs in some animal products in several EU Member States.¹ In 2001, as a result of new information regarding the potential for dioxins and dioxin-like PCBs to cause developmental effects in the growing foetus, the Scientific Committee for Food recommended a lower Tolerable Weekly Intake (TWI) for these chemicals, but acknowledged that the average dietary intakes of a significant proportion of consumers in the EU exceeded it.² Consequently, the EU set maximum limits and action levels for dioxins with the aim of removing the most contaminated foods from the market and identifying possible problem areas, thereby reducing dietary exposure. These limits and action levels, which from November 2006 will be extended to incorporate dioxin-like PCBs, are presented in Table 1. Further background information on dioxins and PCBs can be found in Food Survey Information Sheet No 38/03.³

The European Commission intends to review the dioxin and PCB limits in 2008. In order to obtain sufficient data representative of current levels in food, the Commission has issued two recommendations to member states to conduct testing of nationally-produced foods. The Food Standards Agency has been carrying out additional monitoring in line with EC Recommendations since 2003.⁴

The present work was in response to Recommendation 2004/705/EC, amended to cover the new Member States and also giving more discretion to individual Member States regarding the selection of samples.

Methodology

Sampling

The sample selection strategy was designed to cover foods regulated under the existing dioxin regulations and those which may fall under future regulations. Farmed and wild fish were not included since these had been tested in a separate survey⁵, the results of which have been submitted to the European Commission for inclusion in the review data. All samples were selected randomly from retail sources and no particular inference should be drawn from their inclusion in the survey. The samples purchased are summarised in Table 2 and full details are provided in Annex 2.

Preparation

The vegetable, fruit, bread and cereal analyses were carried out on composites comprised of a number of individual samples of different types of product, which were homogenised prior to analysis. All other samples were of individual products. Samples were analysed either raw or cooked as purchased.

Analysis

The samples were purchased by the Central Science Laboratory and analysed by them using high resolution gas chromatography and high or low resolution mass spectrometry. Details of the method of analysis, which has been published,⁶ can be found in Food Survey Information Sheet No 60/04.⁷ All results met published analytical quality assurance criteria.⁸

Results

The results of the survey are summarised in Table 3 and Annex 1. Full details of the individual samples, including brand names, are presented in Annex 2. In both the tables and annex the results are expressed on the same basis as the appropriate maximum limit or action level i.e. fat basis with the exception of fish, fruit, vegetables and cereals, which are expressed as fresh weight. Further details, including the congener specific results, can be found in the contractor's final reports for the sampling and analysis.^{9,10} All of the results have been reported to the European Commission.

Interpretation

For the majority of samples, the upper bound concentrations of dioxins and dioxin-like PCBs were within the relevant existing and forthcoming EU limits and action levels. There were a small number of exceptions.

Two samples of hen eggs (one organic, one free range) contained dioxins above the current limit. These results have no implications for health. However, in line with normal policy, the suppliers of the samples have been notified and the relevant Local Authorities have been informed. Raised levels of dioxins have been reported in free range (including organic) eggs by a number of Member States. This may result from greater exposure of free-ranging birds to dioxins and PCBs in soil contaminated with low levels of dioxins as a

result of the use of chlorinated pesticides or various combustion activities in the past. Until 1 January 2005, semi-free and free range eggs (including organic) were covered by a derogation from the maximum permissible level. However, this no longer applies and producers must now take action to meet the regulatory limits.

One sample of lamb contained dioxins above the existing action level. Although there are no implications for health, the supplier has been notified. The action level is not a regulatory limit but is an indicator that the level found is higher than normal.

Two samples of pheasant contained dioxins above the current limit for poultry and farmed game, although it is unlikely that this limit is applicable since pheasant spend much of their life ranging free and eating a non-controlled diet.

One sample of duck eggs contained dioxins above the maximum limit currently applicable only to hen eggs. In the event that the Commission were to propose extending the regulation to cover other types of eggs, this result will be used to highlight the need for further data before agreeing a maximum level.

References

1. Bernard, A. *et al.* (2002). The Belgian PCB/dioxin incident: analysis of the food chain contamination and health risk evaluation. *Environmental Research*. **A88**, 1-18.
2. Scientific Committee for Food. (2001) Opinion of the SCF on the risk assessment of dioxins and dioxin-like PCBs in food. **SCF/CS/CNTM/DIOXIN/8 FINAL**, Scientific Committee for Food, available at http://europa.eu.int/comm/food/fs/sc/scf/out78_en.pdf.
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. Food Standards Agency. (2004). Dioxins and dioxin-like PCBs in foods – EU monitoring 2003. Summary report, available at <http://www.food.gov.uk/multimedia/pdfs/eudioxin.pdf>.
5. Food Standards Agency. (2006). Dioxins and dioxin-like PCBs in farmed & wild fish and shellfish. Food Survey Information Sheet No. **03/06**, available at www.food.gov.uk/multimedia/pdfs/foodsurvey0306.pdf.

6. Fernandes, A. *et al.* (2004), Simultaneous Determination of PCDDs, PCDFs, PCBs and PBDEs in Food. *Talanta*. **63**, 1147-1155.
7. Food Standards Agency (2004). Dioxins and dioxin-like PCBs in baby foods. Food Survey Information Sheet No. **60/04**, available at <http://www.food.gov.uk/multimedia/pdfs/fsis6004.pdf>.
8. Ambidge, P.F. *et al.* (1990). Acceptance criteria for analytical data on polychlorinated dibenzo-*p*-dioxins and polychlorinated dibenzofurans. *Chemosphere*. **21**, 999-1006.
9. Central Science Laboratory (2005). FSA survey for dioxin and PCB EU recommended monitoring programme. National retail sampling plan for purchase of representative foods for the analysis of dioxins: round-1. Central Science Laboratory Report, **FD 05/22**.
10. Fernandes, A., White, S. and Rose, M. (2005). Analysis of dioxins and PCBs in Representative food samples from the UK, as specified in the EU recommended monitoring programme. Central Science Laboratory Report, **FD 05/27**.

Further Information

Further information on this survey can be obtained from:

Mr Martin Gem

Food Standards Agency

Chemical Safety Division

Aviation House

Room 707C

125 Kingsway

London WC2B 6NH

Tel: +44 (0) 20 7276 8724

Fax: +44 (0) 20 7276 8717

E-mail: martin.gem@foodstandards.gsi.gov.uk

Further copies of this Information Sheet can be obtained from:

Library

Food Standards Agency

Ground Floor

Aviation House

125 Kingsway

London WC2B 6NH

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

Fax: +44 (0) 20 7276 8193

E-mail: library&info@foodstandards.gsi.gov.uk

A copy of the full reports of this work have been placed in the Library, Aviation House, 125 Kingsway, London, WC2B 6NH Tel. No. + 44 (0) 20 7276 8181/8282. If you wish to consult them please contact the library for an appointment giving at least 24 hours notice or alternatively copies can be obtained from the library: a charge will be made to cover photocopying and postage.

Table 1: Existing and forthcoming maximum limits and action levels (ng WHO-TEQ/kg) for dioxins and dioxin-like PCBs in foods

Foods	MAXIMUM LEVELS (ng WHO-TEQ/kg fat except for fish)		ACTION LEVELS (ng WHO-TEQ/kg fat except for fish and other foods)	
	Dioxins	Total TEQ*	Dioxins	Dioxin-like PCBs*
Meat and meat products originating from				
- Ruminants (bovine animals, sheep)	3	4.5	2 (1.5*)	1
- Poultry and farmed game	2	4	1.5	1.5
- Pigs	1	1.5	0.6	0.3
Liver	6	12	4	4
Fish and fishery products**	4 (fresh weight)	8 (fresh weight)	3 (fresh weight)	3 (fresh weight)
Milk and milk products, including butter fat	3	6	2	2
Eggs and egg products	3	6	2	2
Oils and fats				
- Animal fat				
- From ruminants	3	4.5	1.5	1
- From poultry and farmed game	2	4	1.5	1.5
- From pigs	1	1.5	0.6	0.3
- Mixed animal fat	2	3	1.5	0.75
- Vegetable oil	0.75	1.5	0.5	0.5
- Fish oil intended for human consumption	2	8	1.5	5
Other foods	-	-	0.4 (fresh weight)	0.2 (fresh weight)

Note: * Applicable from 4 November 2006 and covering dioxins plus dioxin-like PCBs.

** Excluding brown meat of crab and thorax meat of lobster.

Table 2: Summary of samples tested

Category	No. of samples	Category	No. of samples	Category	No. of samples
Meat:		Dairy:		Aquaculture products:	
Beef	7	Cows' milk	4	Fish roe	6
Pork	4	Goats' milk	3	Mussels	4
Lamb	6	Soya milk	3	Cockles	4
Mutton	3	Goats' cheese	3	Oysters	4
Chicken	8	Sheeps' cheese	3	Crab	4
Turkey	4	Cheddar cheese	3	Crayfish	2
Duck	3	Other hard cheese	3	Lobster	2
Goose	3				
Pheasant	3	Fats & oils:			
Venison	3	Animal fat	3		
Rabbit	3	Fish oils	4		
		Vegetable oil	5	Total	138
Eggs:					
Hen	4	Others:			
Hen (organic)	12	Vegetables	3		
Duck	3	Fruit	2		
Quail	3	Bread/cereal	4		

Table 3: Average concentrations of dioxins and dioxin-like PCBs in products purchased in 2005

Food	Lower bound						Upper bound											
	Dioxins		PCBs		Total		Dioxins		PCBs		Total							
<i>Meat:</i>	Average concentrations (ng WHO-TEQ/kg fat basis)																	
Beef	0.36	±	0.07	0.46	±	0.02	0.82	±	0.09	0.42	±	0.09	0.47	±	0.03	0.89	±	0.12
Pork	0.01	±	0.001	0.02	±	0.006	0.04	±	0.007	0.19	±	0.08	0.08	±	0.02	0.28	±	0.09
Lamb	1.06	±	0.12	0.47	±	0.02	1.53	±	0.14	1.07	±	0.11	0.49	±	0.03	1.56	±	0.14
Mutton	0.88	±	0.13	0.33	±	0.01	1.21	±	0.15	0.90	±	0.12	0.38	±	0.04	1.27	±	0.16
Chicken	0.28	±	0.05	0.23	±	0.008	0.51	±	0.06	0.35	±	0.08	0.27	±	0.03	0.62	±	0.11
Turkey	0.15	±	0.04	0.12	±	0.002	0.27	±	0.04	0.41	±	0.15	0.20	±	0.03	0.61	±	0.19
Duck	0.05	±	0.01	0.06	±	0.002	0.11	±	0.01	0.10	±	0.04	0.08	±	0.01	0.18	±	0.05
Goose	0.25	±	0.03	0.21	±	0.01	0.45	±	0.04	0.25	±	0.04	0.21	±	0.02	0.47	±	0.05
Pheasant	1.96	±	0.20	1.12	±	0.03	3.08	±	0.23	1.97	±	0.20	1.16	±	0.06	3.13	±	0.26
Venison	0.16	±	0.10	0.44	±	0.02	0.60	±	0.12	0.59	±	0.22	0.58	±	0.07	1.17	±	0.30
Rabbit	0.42	±	0.04	0.35	±	0.006	0.78	±	0.04	0.46	±	0.06	0.37	±	0.02	0.83	±	0.08
<i>Eggs:</i>																		
Caged hen	1.95	±	0.14	0.43	±	0.008	2.37	±	0.15	2.04	±	0.18	0.47	±	0.05	2.51	±	0.22
Organic hen	0.96	±	0.15	0.29	±	0.01	1.25	±	0.16	0.98	±	0.16	0.31	±	0.04	1.29	±	0.19
Duck	1.63	±	0.12	0.36	±	0.007	1.99	±	0.13	1.75	±	0.18	0.39	±	0.03	2.14	±	0.21
Quail	0.54	±	0.10	0.19	±	0.004	0.73	±	0.10	0.60	±	0.11	0.25	±	0.04	0.84	±	0.15
<i>Aquaculture:</i>	Average concentrations (ng WHO-TEQ/kg fresh weight)																	
Fish roe	0.11	±	0.02	0.22	±	0.005	0.33	±	0.02	0.11	±	0.01	0.22	±	0.005	0.33	±	0.02
Mussels	0.24	±	0.02	0.30	±	0.005	0.54	±	0.02	0.24	±	0.02	0.30	±	0.006	0.54	±	0.02
Cockles	0.18	±	0.01	0.12	±	0.003	0.30	±	0.01	0.18	±	0.01	0.12	±	0.006	0.30	±	0.02
Oysters	0.22	±	0.01	0.21	±	0.003	0.42	±	0.02	0.22	±	0.02	0.21	±	0.006	0.42	±	0.02
Crab	1.44	±	0.08	1.18	±	0.02	2.61	±	0.10	1.44	±	0.08	1.18	±	0.02	2.61	±	0.10
Crayfish	0.04	±	0.005	0.02	±	0.001	0.05	±	0.006	0.04	±	0.005	0.02	±	0.002	0.05	±	0.003
Lobster	0.08	±	0.008	0.11	±	0.006	0.19	±	0.01	0.08	±	0.008	0.11	±	0.006	0.19	±	0.01

Table 3: Average concentrations of dioxins and dioxin-like PCBs in products purchased in 2005 (cont)

Food	Lower bound			Upper bound		
	Dioxins	PCBs	Total	Dioxins	PCBs	Total
<i>Milk products:</i>	Average concentrations (ng WHO-TEQ/kg fat basis)					
Cows' milk	0.31 ± 0.06	0.21 ± 0.008	0.52 ± 0.07	0.37 ± 0.09	0.22 ± 0.02	0.59 ± 0.11
Goats' milk	0.36 ± 0.08	0.32 ± 0.01	0.68 ± 0.09	0.39 ± 0.09	0.33 ± 0.02	0.72 ± 0.11
Soya milk	0.001 ± 0.001	0.007 ± 0.001	0.008 ± 0.002	0.20 ± 0.08	0.04 ± 0.01	0.23 ± 0.09
<i>Cheese:</i>						
Goats' cheese	0.32 ± 0.08	0.35 ± 0.01	0.68 ± 0.09	0.34 ± 0.08	0.37 ± 0.03	0.71 ± 0.11
Sheep's' cheese	0.43 ± 0.09	0.17 ± 0.01	0.60 ± 0.10	0.45 ± 0.09	0.19 ± 0.02	0.63 ± 0.11
Cheddar cheese	0.27 ± 0.06	0.23 ± 0.01	0.50 ± 0.07	0.30 ± 0.08	0.25 ± 0.02	0.55 ± 0.09
Other hard cheese	0.64 ± 0.09	0.37 ± 0.02	1.01 ± 0.11	0.65 ± 0.09	0.38 ± 0.03	1.03 ± 0.11
<i>Fats & oils:</i>						
Animal fat	0.07 ± 0.02	0.03 ± 0.002	0.10 ± 0.02	0.13 ± 0.04	0.10 ± 0.02	0.23 ± 0.07
Fish oil dietary supplements	0.04 ± 0.006	0.01 ± 0.002	0.05 ± 0.008	0.13 ± 0.05	0.07 ± 0.01	0.20 ± 0.06
Vegetable oil	0.47 ± 0.05	1.83 ± 0.03	2.30 ± 0.08	0.53 ± 0.08	1.94 ± 0.12	2.47 ± 0.21
<i>Others:</i>	Average concentrations (ng WHO-TEQ/kg fresh weight)					
Vegetables	0.007 ± <0.001	0.004 ± 0.001	0.01 ± 0.002	0.008 ± 0.002	0.005 ± 0.002	0.01 ± 0.003
Fruit	0.02 ± 0.002	0.005 ± 0.001	0.03 ± 0.003	0.04 ± 0.01	0.007 ± 0.003	0.05 ± 0.009
Cereal	<0.001 ± <0.001	<0.001 ± 0.001	0.001 ± 0.002	0.009 ± 0.003	0.004 ± 0.002	0.01 ± 0.004

Concentrations of dioxins and dioxin-like PCBs in UK produced foods in 2005

Sample code	Description	Concentrations (ng WHO-TEQ/kg fat)					
		<i>Upper bound</i>			<i>Lower bound</i>		
		Dioxins	PCBs	Total	Dioxins	PCBs	Total
	Carcass meat						
11863	Lamb leg steaks	0.29 ± 0.07	0.13 ± 0.02	0.42 ± 0.09	0.26 ± 0.12	0.12 ± 0.01	0.38 ± 0.13
11865	Beef sandwich steaks	0.44 ± 0.12	0.46 ± 0.02	0.90 ± 0.14	0.35 ± 0.07	0.44 ± 0.01	0.79 ± 0.09
11866	Pork shoulder steaks	0.10 ± 0.04	0.04 ± 0.01	0.14 ± 0.05	0.01 ± 0.001	0.03 ± 0.006	0.04 ± 0.007
11868	Boneless beef rib joint	0.64 ± 0.10	0.76 ± 0.04	1.40 ± 0.14	0.63 ± 0.10	0.76 ± 0.04	1.39 ± 0.14
11895	Beef roasting joint	0.31 ± 0.09	0.37 ± 0.03	0.68 ± 0.12	0.22 ± 0.05	0.36 ± 0.03	0.58 ± 0.08
11896	British lamb	2.79 ± 0.18	1.19 ± 0.06	3.98 ± 0.24	2.79 ± 0.18	1.15 ± 0.03	3.94 ± 0.21
12045	Mutton – diced shoulder	0.62 ± 0.07	0.29 ± 0.02	0.91 ± 0.09	0.61 ± 0.07	0.28 ± 0.007	0.89 ± 0.08
12046	Lamb	0.62 ± 0.11	0.41 ± 0.04	1.03 ± 0.14	0.60 ± 0.14	0.41 ± 0.04	1.01 ± 0.17
12104	Half shoulder of lamb	0.34 ± 0.06	0.18 ± 0.02	0.52 ± 0.08	0.34 ± 0.06	0.17 ± 0.01	0.51 ± 0.07
12106	Diced pork	0.41 ± 0.16	0.17 ± 0.03	0.58 ± 0.19	0.01 ± 0.001	0.02 ± 0.01	0.04 ± 0.01
12190	Pork loin chops	0.07 ± 0.03	0.04 ± 0.01	0.11 ± 0.04	0.02 ± 0.001	0.01 ± 0.001	0.03 ± 0.002
12191	Mutton	1.43 ± 0.14	0.41 ± 0.02	1.84 ± 0.16	1.43 ± 0.14	0.40 ± 0.03	1.83 ± 0.16
12198	British lamb shoulder	1.51 ± 0.13	0.66 ± 0.03	2.17 ± 0.16	1.50 ± 0.13	0.65 ± 0.02	2.15 ± 0.15
12200	Beef topside/top rump	0.46 ± 0.08	0.61 ± 0.04	1.07 ± 0.12	0.46 ± 0.09	0.58 ± 0.01	1.04 ± 0.10
12282	Mutton	0.64 ± 0.16	0.43 ± 0.07	1.07 ± 0.23	0.60 ± 0.20	0.30 ± 0.004	0.90 ± 0.20
12324	Silverside beef	0.23 ± 0.07	0.15 ± 0.02	0.38 ± 0.09	0.15 ± 0.03	0.14 ± 0.01	0.29 ± 0.04
12327	Lamb	0.87 ± 0.10	0.35 ± 0.02	1.22 ± 0.13	0.86 ± 0.11	0.34 ± 0.01	1.20 ± 0.12

Annex 1 (cont.)

Sample code	Description	Concentrations (ng WHO-TEQ/kg fat)					
		<i>Upper bound</i>			<i>Lower bound</i>		
		Dioxins	PCBs	Total	Dioxins	PCBs	Total
	Poultry						
11867	Organic chicken	1.00 ± 0.12	0.81 ± 0.04	1.81 ± 0.04	1.00 ± 0.12	0.79 ± 0.04	1.79 ± 0.032
12031	Chicken breast fillets	0.20 ± 0.03	0.14 ± 0.02	0.34 ± 0.02	0.07 ± 0.08	0.10 ± 0.02	0.17 ± 0.003
12032	British chicken	0.28 ± 0.04	0.18 ± 0.05	0.46 ± 0.05	0.14 ± 0.10	0.08 ± 0.05	0.22 ± 0.002
12033	British turkey breast	0.38 ± 0.12	0.38 ± 0.03	0.76 ± 0.07	0.28 ± 0.07	0.34 ± 0.003	0.62 ± 0.07
12034	Duck fillets -skin on	0.11 ± 0.04	0.08 ± 0.02	0.19 ± 0.06	0.05 ± 0.006	0.06 ± 0.002	0.11 ± 0.008
12049	Whole Norfolk duckling	0.09 ± 0.03	0.07 ± 0.01	0.16 ± 0.04	0.06 ± 0.006	0.05 ± 0.002	0.11 ± 0.008
12057	Organic whole chicken	0.18 ± 0.02	0.08 ± 0.01	0.26 ± 0.01	0.12 ± 0.05	0.06 ± 0.01	0.18 ± 0.002
12082	Chicken	0.38 ± 0.03	0.11 ± 0.02	0.49 ± 0.02	0.12 ± 0.14	0.08 ± 0.02	0.20 ± 0.002
12101	Gressingham duck breasts	0.10 ± 0.04	0.08 ± 0.01	0.18 ± 0.05	0.04 ± 0.006	0.07 ± 0.002	0.11 ± 0.008
12102	Goose	0.27 ± 0.05	0.13 ± 0.02	0.40 ± 0.06	0.27 ± 0.06	0.12 ± 0.007	0.39 ± 0.07
12105	Turkey breast steaks	0.56 ± 0.22	0.13 ± 0.03	0.69 ± 0.03	0.13 ± 0.03	0.07 ± 0.003	0.20 ± 0.03
12185	Turkey steak	0.39 ± 0.14	0.16 ± 0.06	0.55 ± 0.06	0.19 ± 0.06	0.05 ± 0.003	0.24 ± 0.06
12189	Turkey fillets	0.31 ± 0.12	0.11 ± 0.02	0.42 ± 0.002	0.01 ± 0.001	0.007 ± 0.001	0.01 ± 0.002
12199	Free range chicken	0.26 ± 0.04	0.25 ± 0.02	0.51 ± 0.02	0.25 ± 0.04	0.23 ± 0.02	0.48 ± 0.007
12326	Whole goose	0.33 ± 0.03	0.26 ± 0.02	0.59 ± 0.04	0.33 ± 0.03	0.25 ± 0.006	0.58 ± 0.03
12328	Whole chicken	0.24 ± 0.06	0.09 ± 0.02	0.33 ± 0.02	0.24 ± 0.06	0.08 ± 0.02	0.32 ± 0.006
12330	Organic chicken	0.29 ± 0.05	0.47 ± 0.04	0.76 ± 0.04	0.29 ± 0.05	0.45 ± 0.04	0.74 ± 0.01
12336	Frozen Goose	0.16 ± 0.04	0.25 ± 0.02	0.41 ± 0.06	0.14 ± 0.02	0.25 ± 0.02	0.39 ± 0.04

Annex 1 (cont)

		Concentrations (ng WHO-TEQ/kg fat)					
		<i>Upper bound</i>			<i>Lower bound</i>		
Sample code	Description	Dioxins	PCBs	Total	Dioxins	PCBs	Total
	Game						
11869	Pheasant	2.09 ± 0.18	1.23 ± 0.04	3.32 ± 0.21	2.08 ± 0.17	1.21 ± 0.01	3.29 ± 0.18
12017	Scottish organic rabbit	0.28 ± 0.06	0.39 ± 0.03	0.67 ± 0.09	0.25 ± 0.03	0.36 ± 0.003	0.61 ± 0.03
12064	Pheasant	2.66 ± 0.17	1.49 ± 0.07	4.15 ± 0.24	2.66 ± 0.17	1.45 ± 0.03	4.11 ± 0.20
12084	Pheasant	1.16 ± 0.25	0.77 ± 0.08	1.93 ± 0.34	1.15 ± 0.27	0.70 ± 0.03	1.85 ± 0.30
12096	Rabbit	0.12 ± 0.05	0.10 ± 0.02	0.22 ± 0.06	0.03 ± 0.005	0.09 ± 0.007	0.12 ± 0.01
12107	Venison steaks	0.59 ± 0.24	0.27 ± 0.05	0.86 ± 0.29	0 ± -	0.005 ± 0.001	0.005 ± 0.002
12108	Venison leg steaks	0.46 ± 0.17	0.33 ± 0.04	0.79 ± 0.22	0.14 ± 0.12	0.28 ± 0.01	0.42 ± 0.13
12183	British venison steak	0.73 ± 0.26	1.13 ± 0.13	1.86 ± 0.39	0.33 ± 0.19	1.03 ± 0.04	1.36 ± 0.23
12193	English farmed rabbit	0.99 ± 0.07	0.62 ± 0.02	1.61 ± 0.09	0.99 ± 0.07	0.61 ± 0.009	1.60 ± 0.08

Annex 1 (cont)

Sample code	Description	Concentrations (ng WHO-TEQ/kg fat)					
		Upper bound			Lower bound		
		Dioxins	PCBs	Total	Dioxins	PCBs	Total
	Milk and milk products						
11299	English mild cheddar	0.26 ± 0.07	0.25 ± 0.02	0.51 ± 0.09	0.21 ± 0.05	0.24 ± 0.007	0.45 ± 0.06
11827	Cheshire cheese	0.61 ± 0.10	0.35 ± 0.03	0.96 ± 0.12	0.60 ± 0.12	0.34 ± 0.01	0.94 ± 0.13
11830	Coloured Cheshire	0.72 ± 0.07	0.45 ± 0.04	1.17 ± 0.11	0.71 ± 0.07	0.43 ± 0.03	1.14 ± 0.10
11831	Mature goats' cheese	0.31 ± 0.08	0.42 ± 0.03	0.73 ± 0.11	0.27 ± 0.05	0.41 ± 0.009	0.68 ± 0.05
11834	Smoked goats' cheese	0.38 ± 0.08	0.27 ± 0.03	0.65 ± 0.11	0.37 ± 0.10	0.23 ± 0.002	0.60 ± 0.10
11846	Mature cheddar	0.38 ± 0.08	0.24 ± 0.02	0.62 ± 0.10	0.38 ± 0.10	0.22 ± 0.008	0.60 ± 0.10
11849	English goats' cheese	0.34 ± 0.08	0.42 ± 0.04	0.76 ± 0.11	0.33 ± 0.09	0.42 ± 0.03	0.75 ± 0.11
11850	Pasteurised whole milk	0.48 ± 0.11	0.28 ± 0.02	0.76 ± 0.13	0.40 ± 0.05	0.27 ± 0.009	0.67 ± 0.06
11851	Whole milk	0.45 ± 0.10	0.30 ± 0.02	0.75 ± 0.12	0.44 ± 0.11	0.28 ± 0.008	0.72 ± 0.12
11852	Whole milk	0.24 ± 0.08	0.11 ± 0.01	0.35 ± 0.09	0.16 ± 0.05	0.09 ± 0.008	0.25 ± 0.05
11853	Whole milk	0.32 ± 0.09	0.19 ± 0.02	0.51 ± 0.10	0.25 ± 0.04	0.18 ± 0.008	0.43 ± 0.05
11854	Pasteurised goats' milk	0.42 ± 0.09	0.55 ± 0.03	0.97 ± 0.13	0.41 ± 0.09	0.54 ± 0.02	0.95 ± 0.13
11855	Goats' milk	0.36 ± 0.09	0.20 ± 0.02	0.56 ± 0.10	0.35 ± 0.09	0.19 ± 0.006	0.54 ± 0.10
11856	Goats' milk	0.39 ± 0.09	0.24 ± 0.02	0.63 ± 0.11	0.33 ± 0.05	0.23 ± 0.008	0.56 ± 0.11
11857	Soya milk	0.17 ± 0.07	0.04 ± 0.01	0.21 ± 0.08	0.002 ± <0.001	0.02 ± 0.002	0.02 ± 0.002
11858	Soya milk	0.19 ± 0.08	0.04 ± 0.01	0.23 ± 0.09	<0.001 ± <0.001	<0.001 ± 0.001	0.001 ± 0.002
11861	Red Leicester	0.58 ± 0.07	0.37 ± 0.03	0.95 ± 0.10	0.58 ± 0.07	0.36 ± 0.03	0.94 ± 0.10
11862	Double Gloucester	0.68 ± 0.10	0.35 ± 0.02	1.03 ± 0.13	0.66 ± 0.11	0.34 ± 0.01	1.00 ± 0.13
11897	Extra mature cheddar	0.26 ± 0.07	0.25 ± 0.02	0.51 ± 0.09	0.22 ± 0.04	0.23 ± 0.007	0.45 ± 0.05
11898	Ewes' cheese	0.39 ± 0.09	0.16 ± 0.02	0.55 ± 0.11	0.34 ± 0.05	0.14 ± 0.006	0.48 ± 0.05
11899	Ewes' cheese	0.48 ± 0.09	0.20 ± 0.02	0.68 ± 0.11	0.47 ± 0.10	0.18 ± 0.02	0.65 ± 0.12
12019	Soya Milk	0.23 ± 0.09	0.04 ± 0.01	0.27 ± 0.10	<0.001 ± <0.001	<0.001 ± 0.001	<0.001 ± 0.002
12242	Scottish ewes' blue cheese	0.47 ± 0.09	0.20 ± 0.02	0.67 ± 0.11	0.47 ± 0.11	0.19 ± 0.005	0.66 ± 0.12

Annex 1 (cont)

Sample code	Description	Concentrations (ng WHO-TEQ/kg fat)					
		<i>Upper bound</i>			<i>Lower bound</i>		
		Dioxins	PCBs	Total	Dioxins	PCBs	Total
	Eggs						
11712	Organic free range eggs	0.45 ± 0.14	0.46 ± 0.04	0.91 ± 0.18	0.43 ± 0.16	0.43 ± 0.009	0.86 ± 0.17
11713	Fresh barn eggs	0.32 ± 0.11	0.13 ± 0.02	0.45 ± 0.13	0.21 ± 0.06	0.12 ± 0.005	0.33 ± 0.07
11714	Organic free range eggs	0.25 ± 0.10	0.08 ± 0.02	0.33 ± 0.11	0.10 ± 0.02	0.06 ± 0.002	0.16 ± 0.02
11715	Organic free range eggs	0.41 ± 0.12	0.11 ± 0.02	0.52 ± 0.13	0.40 ± 0.12	0.09 ± 0.002	0.49 ± 0.12
11716	Free range duck eggs	0.20 ± 0.08	0.12 ± 0.02	0.32 ± 0.10	0.03 ± 0.002	0.09 ± 0.004	0.12 ± 0.006
11717	Organic free range eggs	1.83 ± 0.18	0.34 ± 0.03	2.17 ± 0.22	1.82 ± 0.17	0.31 ± 0.008	2.13 ± 0.18
11718	Organic free range eggs	0.34 ± 0.09	0.12 ± 0.02	0.46 ± 0.11	0.33 ± 0.11	0.11 ± 0.007	0.44 ± 0.11
11719	Duck eggs	4.74 ± 0.35	0.90 ± 0.06	5.64 ± 0.40	4.74 ± 0.35	0.86 ± 0.01	5.60 ± 0.36
11720	Yorkshire Farmhouse Organic Eggs	0.50 ± 0.11	0.14 ± 0.02	0.64 ± 0.13	0.50 ± 0.12	0.12 ± 0.006	0.62 ± 0.13
11722	Fresh organic eggs	0.81 ± 0.15	0.24 ± 0.03	1.05 ± 0.17	0.80 ± 0.15	0.23 ± 0.007	1.03 ± 0.16
11723	Eggs	0.28 ± 0.09	0.09 ± 0.01	0.37 ± 0.10	0.25 ± 0.10	0.08 ± 0.004	0.33 ± 0.10
11724	Fresh English quail eggs	0.72 ± 0.87	0.53 ± 0.09	1.25 ± 0.25	0.68 ± 0.84	0.41 ± 0.01	1.09 ± 0.17
11799	Quail eggs	0.25 ± 0.33	0.05 ± 0.02	0.30 ± 0.09	0.13 ± 0.16	0.02 ± 0.001	0.15 ± 0.03
11826	Free range medium eggs	0.38 ± 0.13	0.19 ± 0.04	0.57 ± 0.18	0.18 ± 0.01	0.10 ± 0.002	0.28 ± 0.02
11828	Organic chicken eggs	1.05 ± 0.17	0.45 ± 0.03	1.50 ± 0.20	1.05 ± 0.17	0.44 ± 0.02	1.49 ± 0.20
11829	Organic farmhouse eggs	0.45 ± 0.11	0.12 ± 0.02	0.57 ± 0.12	0.39 ± 0.05	0.10 ± 0.003	0.49 ± 0.05
11832	Free range duck eggs	0.30 ± 0.11	0.15 ± 0.02	0.45 ± 0.13	0.12 ± 0.02	0.12 ± 0.004	0.24 ± 0.02
11835	Organic eggs	4.34 ± 0.32	0.97 ± 0.05	5.31 ± 0.37	4.34 ± 0.32	0.95 ± 0.01	5.29 ± 0.33
12334	Organic eggs	0.39 ± 0.07	0.39 ± 0.05	0.78 ± 0.11	0.39 ± 0.07	0.36 ± 0.02	0.75 ± 0.08
12337	Quails eggs	0.82 ± 0.93	0.16 ± 0.01	0.98 ± 0.12	0.82 ± 0.93	0.14 ± 0.002	0.96 ± 0.11
12407	Free range chicken eggs	7.16 ± 0.38	1.48 ± 0.11	8.64 ± 0.48	7.16 ± 0.38	1.40 ± 0.02	8.56 ± 0.40

Annex 1 (cont)

		Concentrations (ng WHO-TEQ/kg fresh weight)					
		<i>Upper bound</i>			<i>Lower bound</i>		
Sample code	Description	Dioxins	PCBs	Total	Dioxins	PCBs	Total
	Shellfish and fish roe						
11298	Scottish Haddock roe	0.06 ± 0.004	0.08 ± 0.002	0.14 ± 0.006	0.06 ± 0.004	0.08 ± 0.002	0.14 ± 0.006
11833	Soft herring roes	0.05 ± 0.01	0.06 ± 0.003	0.11 ± 0.01	0.05 ± 0.01	0.06 ± 0.002	0.11 ± 0.01
11847	Soft herring roes	0.04 ± 0.01	0.06 ± 0.003	0.10 ± 0.01	0.04 ± 0.02	0.06 ± 0.003	0.10 ± 0.02
12040	Salmon caviar	0.13 ± 0.01	0.37 ± 0.007	0.50 ± 0.02	0.13 ± 0.01	0.37 ± 0.007	0.50 ± 0.02
12056	Trout caviar	0.28 ± 0.02	0.63 ± 0.01	0.91 ± 0.03	0.28 ± 0.02	0.63 ± 0.01	0.91 ± 0.03
12098	Herring roe in brine	0.09 ± 0.02	0.11 ± 0.004	0.20 ± 0.03	0.08 ± 0.03	0.11 ± 0.003	0.19 ± 0.04
12044	Cooked shelled mussels	0.32 ± 0.02	0.53 ± 0.01	0.85 ± 0.03	0.32 ± 0.02	0.53 ± 0.009	0.85 ± 0.03
12048	Anchor cooked mussels	0.24 ± 0.02	0.25 ± 0.005	0.49 ± 0.02	0.24 ± 0.02	0.25 ± 0.004	0.49 ± 0.02
12103	Fresh Scottish mussels	0.10 ± 0.007	0.06 ± 0.002	0.16 ± 0.008	0.10 ± 0.007	0.06 ± 0.002	0.16 ± 0.009
12184	Cooked shelled mussels	0.31 ± 0.02	0.36 ± 0.008	0.67 ± 0.03	0.31 ± 0.02	0.36 ± 0.007	0.67 ± 0.03
12041	Cockles, ready to eat	0.10 ± 0.007	0.05 ± 0.003	0.15 ± 0.009	0.10 ± 0.007	0.05 ± 0.002	0.15 ± 0.009
12081	Cooked Cockles	0.15 ± 0.008	0.06 ± 0.002	0.21 ± 0.01	0.15 ± 0.008	0.06 ± 0.002	0.21 ± 0.010
12083	Cockles	0.34 ± 0.02	0.30 ± 0.02	0.64 ± 0.04	0.34 ± 0.02	0.30 ± 0.006	0.64 ± 0.03
12172	Shelled cockles	0.14 ± 0.008	0.06 ± 0.002	0.20 ± 0.009	0.14 ± 0.008	0.06 ± 0.002	0.20 ± 0.009
12065	Oysters	0.11 ± 0.008	0.07 ± 0.003	0.18 ± 0.01	0.11 ± 0.007	0.07 ± 0.002	0.18 ± 0.009
12066	Fresh live oysters	0.16 ± 0.01	0.09 ± 0.005	0.25 ± 0.02	0.16 ± 0.01	0.09 ± 0.003	0.25 ± 0.01
12069	Fresh oysters	0.18 ± 0.01	0.12 ± 0.007	0.30 ± 0.02	0.18 ± 0.01	0.12 ± 0.002	0.30 ± 0.02
12332	Scottish oysters	0.42 ± 0.03	0.54 ± 0.01	0.96 ± 0.04	0.42 ± 0.03	0.54 ± 0.005	0.96 ± 0.03
12035	White orkney crabmeat	0.03 ± 0.005	0.03 ± 0.004	0.06 ± 0.008	0.03 ± 0.005	0.02 ± 0.002	0.05 ± 0.007
12039	Dressed crab	3.30 ± 0.17	2.08 ± 0.04	5.38 ± 0.20	3.30 ± 0.17	2.08 ± 0.04	5.38 ± 0.20
12097	Dressed crab	1.58 ± 0.09	1.36 ± 0.02	2.94 ± 0.11	1.58 ± 0.09	1.36 ± 0.02	2.94 ± 0.11

Annex 1 (cont)

Shellfish and fish roe (cont)							
12099	Fresh crab	0.83 ± 0.04	1.25 ± 0.02	2.08 ± 0.06	0.83 ± 0.05	1.25 ± 0.02	2.08 ± 0.07
12042	Crayfish tails in brine	0.03 ± 0.005	0.02 ± 0.002	0.05 ± 0.006	0.03 ± 0.004	0.01 ± 0.002	0.04 ± 0.006
12043	Crayfish tails peeled	0.04 ± 0.004	0.02 ± 0.002	0.06 ± 0.007	0.04 ± 0.005	0.02 ± 0.001	0.06 ± 0.006
12067	Whole lobster	0.06 ± 0.006	0.08 ± 0.005	0.14 ± 0.01	0.06 ± 0.007	0.08 ± 0.005	0.14 ± 0.01
12095	Lobster	0.10 ± 0.01	0.14 ± 0.006	0.24 ± 0.02	0.10 ± 0.009	0.14 ± 0.006	0.24 ± 0.02

		Concentrations (ng WHO-TEQ/kg fat)					
		<i>Upper bound</i>			<i>Lower bound</i>		
Sample code	Description	Dioxins	PCBs	Total	Dioxins	PCBs	Total
	Fats and oils						
11748	Tuna caps	0.12 ± 0.04	0.08 ± 0.02	0.20 ± 0.06	0.04 ± 0.01	0 ± -	0.04 ± 0.01
11749	Deep sea shark liver oil	0.21 ± 0.07	0.53 ± 0.14	0.74 ± 0.21	0.13 ± 0.04	0.30 ± 0.01	0.43 ± 0.04
11836	Salmon oil	1.47 ± 0.13	5.15 ± 0.25	6.62 ± 0.38	1.46 ± 0.12	5.08 ± 0.09	6.54 ± 0.21
11842	Sunflower oil	0.11 ± 0.05	0.07 ± 0.01	0.18 ± 0.06	0.008 ± <0.001	0 ± -	0.008 ± <0.001
11843	Vegetable oil	0.11 ± 0.04	0.06 ± 0.01	0.17 ± 0.05	0.02 ± 0.001	0 ± -	0.02 ± 0.001
11844	Rapeseed oil	0.11 ± 0.04	0.08 ± 0.02	0.19 ± 0.06	0.001 ± <0.001	0 ± -	0.001 ± <0.001
11845	Vegetable oil	0.22 ± 0.06	0.08 ± 0.01	0.30 ± 0.08	0.16 ± 0.03	0.06 ± 0.01	0.22 ± 0.04
11848	Marine fish oil	0.32 ± 0.09	1.98 ± 0.09	2.30 ± 0.18	0.25 ± 0.05	1.94 ± 0.03	2.19 ± 0.08
11859	Lard	0.11 ± 0.04	0.10 ± 0.03	0.21 ± 0.07	0.01 ± 0.001	0.01 ± 0.001	0.02 ± 0.002
11860	Beef dripping	0.15 ± 0.05	0.10 ± 0.02	0.25 ± 0.07	0.11 ± 0.03	0.06 ± 0.004	0.17 ± 0.03
12319	Pure vegetable oil	0.11 ± 0.04	0.07 ± 0.01	0.18 ± 0.06	<0.001 ± <0.001	<0.001 ± <0.001	<0.001 ± <0.001
12329	Lard	0.13 ± 0.04	0.10 ± 0.02	0.23 ± 0.06	0.09 ± 0.02	0.01 ± 0.001	0.10 ± 0.02

Annex 1 (cont)

		Concentrations (ng WHO-TEQ/kg fresh weight)					
		<i>Upper bound</i>			<i>Lower bound</i>		
Sample code	Description	Dioxins	PCBs	Total	Dioxins	PCBs	Total
	Other foods						
11334	Green vegetable composite	0.02 ± 0.001	0.02 ± 0.001	0.04 ± 0.001	0.02 ± <0.001	0.01 ± 0.001	0.03 ± 0.002
11339	Potato composite	0.003 ± <0.001	<0.001 ± 0.001	0.004 ± 0.001	0.001 ± 0.001	<0.001 ± 0.001	0.001 ± 0.002
11721	Root vegetable composite	<0.001 ± 0.005	<0.001 ± 0.003	0.001 ± 0.007	<0.001 ± 0.001	<0.001 ± 0.001	<0.001 ± 0.002
11864	Cereal composite	0.009 ± 0.003	0.006 ± 0.002	0.01 ± 0.005	<0.001 ± <0.001	0.001 ± 0.001	0.001 ± 0.002
12030	Bread composite	0.01 ± 0.004	0.004 ± 0.002	0.01 ± 0.005	0.003 ± 0.001	<0.001 ± 0.001	0.003 ± 0.002
12036	Bread Composite	0.005 ± 0.003	0.002 ± 0.002	0.007 ± 0.003	<0.001 ± <0.001	<0.001 ± 0.001	<0.001 ± 0.002
12325	UK apple composite	0.04 ± 0.01	0.001 ± 0.001	0.04 ± 0.001	0.040 ± 0.002	0.001 ± 0.001	0.04 ± 0.003
12331	Soft fruit jams and fruit composite	0.04 ± 0.02	0.01 ± 0.004	0.05 ± 0.02	0.01 ± 0.001	0.009 ± 0.002	0.02 ± 0.003
12335	Cereal Composite	0.009 ± 0.003	0.005 ± 0.002	0.01 ± 0.004	<0.001 ± <0.001	<0.001 ± 0.001	<0.001 ± 0.002

Annex 2

Sample code	Description	Retailer (name and address)	Batch code	Purchase Date	Best before date
11298	Scottish haddock roe	The Fish Society, www.thefishsociety.co.uk	-	07/03/2005	30/06/2005
11299	English mild cheddar	Tesco, Elmers End, Croydon Rd, Beckenham, BR3 4AA	UK WX020M EEC	11/03/2005	01/05/2005
11334	Green vegetables: kale, leek, spring greens, green cabbage, broccoli	ASDA, Drayton High Rd, NR6 5DT	-	21/03/2005	23/03/2005
11339	British potatoes; King Edwards, Maris Piper, Juliettes, Charlottes, Estima	Sainsburys, Mere Vale, Birmingham, B75 5BT	-	23/03/2005	-
11712	Organic free range eggs	Morrisons, 6-7 Salisbury Hall Gardens, Enfield, E4 8SA	-	23/03/2005	08/04/2005
11713	Fresh barn eggs	Tesco, Salterton Rd, Exmouth, Exeter, EX8 2NP	D0439 UK1998Y	29/03/2005	04/04/2005
11714	Organic free range eggs	Morrisons, 6-7 Castle Bromwich, BD8 9AX	UK 5666	23/03/2005	07/04/2005
11715	Organic medium free range eggs	Hopwood Organic Farm, Catherine- de-Barnes, B92 OE	-	23/03/2005	12/04/2005
11716	Free range duck eggs	Tesco, 21-35 Stratford Rd, Shirley, B90 3LU	-	22/03/2005	04/04/2005
11717	Organic free range eggs	Old Plawhatch Farm, Sharpthorpe	UK 0 156	22/03/2005	04/04/2005
11718	Organic free range eggs	Tesco, Elmers End, Croydon Rd, Beckenham, BR3 4AA	-	17/03/2005	01/04/2005
11719	Duck eggs	A Pearce and son, Puckenige, Herts	UK 1998N	38440	-
11720	Organic eggs, Yorkshire Farmhouse	Somerfield, Arndale Centre, Otley Rd, Leeds, LS6 2UE	UK1998N D0439	18/03/2005	01/04/2005
11721	Root vegetables: parsnip, carrot, swede, celeriac, onion	Tesco, 223-226 High Street, Exeter, EX4 3RH	-	29/03/2005	-
11722	Fresh free range organic eggs	Sainsburys, St Nicholas Rd, Great Yarmouth, NR30 1NN	-	21/03/2005	05/04/2005
11723	Eggs	Iceland, The Galleries Washington, NE38 7RU	32046b	23/03/2005	07/04/2005

Sample code	Description	Retailer (name and address)	Batch code	Purchase Date	Best before date
11724	Fresh English quail eggs	Teesdale Trencherman, Barnards Castle, DL12 9AB	-	15/03/2005	24/03/2005
11748	Tuna caps, Wellcene	Piscshealth.com, www.piscshealth.com	-	09/03/2005	31/08/2006
11749	Deep sea shark liver oil	Nulife UK, P O Box 54, Accrington, Lancashire BB5 1GD	-	07/03/2005	31/05/2006
11799	Quail eggs, Clarence Court	Waitrose, Tulketh St, Southport, Merseyside, PR8 1BT	-	08/05/2005	01/06/2005
11826	M&S Free range medium eggs	Marks and Spencer, Talbut Green, CF72 8RB	UK1666L	10/05/2005	23/05/2005
11827	Tesco Cheshire cheese	Tesco, Elmers End, Croydon Rd, Beckenham, BR3 4AA	UK LK002M EEC	17/03/2005	29/04/2005
11828	Organic Chicken Eggs	Mill View Farm, 33 Ballydrain Road, Comber, Newtonards, BT23 5SS	-	12/05/2005	08/06/2005
11829	Organic eggs, Yorkshire Farmhouse	Alligator Wholefoods, 104 Fishergate, York, YO10 4BB	-	13/05/2005	23/05/2005
11830	Morrisons coloured Cheshire	Morrisons, New Port, NP10 9SA	UK VY 210 EEC	21/03/2005	10/04/2005
11831	Morrisons Ribblesdale mature goats' cheese	Morrisons, 6-7 Salisbury Hall Gardens, Enfield, E4 8SA	-	23/02/2005	26/03/2005
11832	Free range duck eggs	Tesco, Seacroft, 44 Crossgates, Leeds, LS15 8EU	D0439 UK1998N	13/05/2005	30/05/2005
11833	John West soft herring roes	ASDA, Perry Barr Store	L4293 SR	21/03/2005	30/12/2007
11834	Sainsbury oak smoked goats cheese	Sainsburys, 1 Hill Barton Rd, Exeter, EX1 3DF	-	29/03/2005	-
11835	Organic eggs	Church Farm Shop, Thurstaston, Wirral, CH61 OHW	UK1666L	05/05/2005	-
11836	Powerhealth salmon oil	Supplement Warehouse, Chadwell Heath, Romford, RM6 6NY	B/N 60063	07/03/2005	31/10/2006
11842	Spar Sunflower oil	Spar, Brockham Green, Brockham, RH3 7JJ	5026 HA	22/03/2005	31/01/2006
11843	Vegetable oil	Iceland, 3 Broadfield Barton, Crawley, RH11 9BA	L+5054	21/03/2005	28/02/2006

Sample code	Description	Retailer (name and address)	Batch code	Purchase Date	Best before date
11844	Pura Rapeseed oil	Tesco, Yarmouth Rd, Caister, NR30 5DL	5073 HA	21/03/2005	31/03/2006
11845	Vegetable oil	Morrisons, Castle Bromwich, BD8 9AX	5052HA	23/03/2005	28/02/2006
11846	Morrisons West Country farmhouse mature cheddar	Morrisons, Hunslet	UK WX 020 M EEC	18/03/2005	28/03/2005
11847	Sainsburys soft herring roes	Sainsburys, The galleries, Washington, NE38 7RU	UK BB 008 FE EC	23/03/2005	18/10/2007
11848	EyeQ marine fish oil	Tesco, Stirling Rd, Clifton Moor, York	505531	01/05/2007	31/05/2007
11849	ASDA English goats cheese	ASDA, Reigate, Burgin Heath	UK RL021 M EEC	21/03/2005	23/04/2005
11850	Fresh pasteurised whole milk - standardised	Iceland, 3 Broadfield Barton, Crawley, West Sussex	LW003 UK 005 EM EEC	21/03/2005	26/03/2005
11851	Tesco whole milk	Tesco, 11 Princess Alice Drive, Sutton Coldfield, B73 6RB	G21946 UK PRO14M EEC	22/03/2005	31/03/2005
11852	Somerfield whole milk	Somerfield, Northumberland Rd, Cramlington, NE23 1XZ	NT501M	23/03/2005	26/03/2005
11853	Llaeth cymreig llawn whole milk	Tesco, Western Ave, Garalfa, Cardiff	UK CJ 008M EEC	21/03/2005	27/03/2005
11854	Delamere pasteurised goats milk	ASDA, Burgin Heath, Reigate Rd	F5076B	21/03/2005	10/04/2005
11855	St Helens Farm goats' milk	Tesco, Brunton Lane, Kingston Park, NE3 2FD	UK EY 013 M EEC	23/03/2005	01/04/2005
11856	St Helens Farm goats' milk	Morrisons, Kennedy Way, Tiverton, EX16 6RZ	D0848	03/04/2005	10/04/2005
11857	Alpro soya milk	Iceland, 3 Broadfield Barton, Crawley, West Sussex	V100808:39	21/03/2005	12/04/2005
11858	Alpro soya milk	Somerfield, Blackwall Reach, Great Yarmouth, NR31 6SA	V090414:49	08/04/2005	08/04/2005
11859	Britannia lard	Costcutter, Gorneston, Norwich	026T7	21/03/2005	31/10/2005
11860	Britannia finest beef dripping	Tesco, Brewery Lane, Bridgend, CF31 4AP	042T3	21/03/2005	31/08/2005

Sample code	Description	Retailer (name and address)	Batch code	Purchase Date	Best before date
11861	Food To Go Red Leicester	Co-op, High St, Norwich, NR13 3QJ	UK LK002M EEC	21/03/2005	21/03/2005
11862	Tesco British double Gloucester	Tesco, Kingston Park, Newcastle, NE3 2FD	/	23/03/2005	13/05/2005
11863	Sainsburys British lamb leg steaks	Sainsburys, 342A Woodchurch Rd, Prenton, Birkenhead, CH428PQ	UK 7015 EEC	09/05/2005	14/05/2005
11864	Cereal composite: Mornflake oatbran, Mornflakes oats, Weetabix, Readybrek, All Bran, Bran Flakes	Morrisons, Azalea Rd, Newport, NP10 9SA	-	21/03/2005	-
11865	Somerfield beef sandwich steaks	Somerfield, 128-134 Greaby Rd, Wirral, CH49 3NG	UK 4071 EEC	09/05/2005	14/05/2005
11866	Sainsburys 4 pork shoulder steaks	Sainsburys, 342A Woodchurch Rd, Prenton, Birkenhead, CH42 8PQ	UK 2093 EEC	09/05/2005	14/05/2005
11867	ASDA organic whole chicken	ASDA, Arroe Park, Woodchurch Rd, Birkenhead, CH49 5PD	UK 5450 N	09/05/2005	13/05/2005
11868	ASDA fresh boneless ribjoint beef	ASDA, Drayton High Rd, Norwich, NR6 5DT	UK 2458 EEC	09/05/2005	15/05/2005
11869	Pheasant	Eversfield Manor, Bratton Clovelly, Okehampton, Devonshire, EX20 4JF	-	04/02/2005	10/02/2005
11895	Fresh beef roasting joint	Iceland, Unit 2, Kirkstall Rd, Leeds, LS3 1LH	UK 9012 EEC	18/03/2005	01/07/2005
11896	Asda fresh British lamb	ASDA, Killing Beck Drive, Leeds, LS14 6UF	UK 7017 EEC	25/05/2005	28/05/2005
11897	Somerfield extra mature English Farmhouse cheddar	Somerfield, 128-138 Gresby Rd, Wirral, CH49 3NQ	UK SS 207M EEC	06/05/2005	30/06/2005
11898	Swaledale ewe's cheese	The Cheese Society, Swaledale	-	06/04/2005	03/06/2005
11899	Wigmore ewe's cheese	The Cheese Society, Wigmore	-	26/04/2005	03/06/2005
12017	Scottish organic rabbit	Craigadam Country Larder, Craigadam, Kirkcudbrightshire, DG7 3HU	-	18/06/2005	08/06/2006
12019	Soya milk, Soya Soleil	Londis, 17 Hawthorn Terrace, York, YO32 4BL	-	18/05/2005	14/03/2006

Sample code	Description	Retailer (name and address)	Batch code	Purchase Date	Best before date
12030	Bread composite: Warburtons premium brown, Allinson sunflower multigrain, Allinson wholemeal, Hovis granary, Somerfield white	Somerfield, Waltham Cross	-	29/03/2005	30/03/2005
12031	Chicken breast fillets	Tesco, Brunton lane, Kingston Park, NE3 2FP	UK 4032 EEC	23/03/2005	25/03/2005
12032	Somerfield fresh British chicken	Somerfield, 1037 Stratford Rd, Birmingham, B28 8AS	UK 5037 EEC	22/03/2005	27/03/2005
12033	ASDA Smartprice British turkey breast	ASDA, Drayton High Rd, Norwich, NR6 5DT	UK 7013 EEC	21/03/2005	25/03/2005
12034	M&S Peking duck fillets -skin on	Marks and Spencer, Sutton & Epsom	-	09/06/2005	12/06/2005
12035	M&S white Orkney crabmeat	Marks & Spencer, 39 Borough Pavement, Birkenhead, CH41 2YE	UK RH001 EC	07/05/2005	11/05/2005
12036	Bread composite	Netto, Burdesley Green, B9 5RP	-	22/03/2005	25/03/2005
12039	Dressed Crab	Morrisons, Whitwick Rd, Coalville, LE67 3JN	90600116	02/06/2005	04/06/2005
12040	Salmon Keta Caviar	Rosslyn Delicatessen, www.delirosslyn.co.uk	NW015	07/03/2005	09/05/2005
12041	Morrisons Cockles, ready to eat	Morrisons, Savins Mill Way, Leeds, LS5 3RP	UK AE 022 EEC	18/03/2005	19/03/2005
12042	Crayfish tails in brine	Simsons Fishery, Redlands, Coulsdon	EEC NN068FE 2518	17/05/2005	16/06/2005
12043	Crayfish tails, peeled	Jarvis, 56 Coombo Rd, Kingston	-	19/05/2005	-
12044	Cooked shelled mussels	ASDA, Longwood Drive, Croyton, Cardiff, CF14 7EW	-	21/03/2005	26/01/2006
12045	Halal mutton - bone in diced shoulder	ASDA, One stop shopping centre, Perry Barr, B42 1AB	UK 7017 EEC	02/06/2005	06/06/2005
12046	Sainsburys lamb	Sainsburys, 30 Mere Green Rd, Sutton Coldfield, B75 5BT	-	02/06/2005	04/06/2005

Sample code	Description	Retailer (name and address)	Batch code	Purchase Date	Best before date
12048	Anchor cooked mussels	Tesco, Bentrin Rd, Lisburn, Belfast BT28 2GB	-	11/05/2005	11/05/2005
12049	ASDA Extra Special whole Norfolk duckling	ASDA, Perry Barr store	UK 5004 EEC	21/03/2005	27/03/2005
12056	Inverawe Smokehouses Loch Etire trout caviar	Inverawe Smokehouses, www.smokedsalmon.co.uk	D-SH-EFB-031	07/03/2005	18/03/2005
12057	Tesco organic whole chicken	Tesco, Reigate Rd, Horley, Gatwick, RH6 OAT	UK 9502 EEC	21/03/2005	26/03/2005
12064	Pheasant	Robert and Edwards, Oxted, Surrey, RH8 0AX	-	23/03/2005	11/02/2007
12065	Oysters	Tesco, Stirling Rd, Clifton Moor, York, YO30 4XZ	-	07/05/2005	10/05/2005
12066	ASDA fresh live oysters	ASDA, Arrowse Park, Birkenhead, CH49 5PD	BD 185	09/05/2005	10/05/2005
12067	Whole lobster	Tesco, Hazelwick Ave, Crawley, RH10 1GY	-	17/05/2005	17/05/2005
12069	Sainsburys fresh oysters	Sainsburys, Otford rd, Sevenoaks, Kent, TN14 5EG	-	23/03/2005	24/03/2005
12081	North Atlantic cooked cockles	Tesco, New Oscott	-	22/03/2005	31/05/2006
12082	Chicken	Tesco, York Road, Seacroft, West Yorkshire, LS14 6JD	-	09/03/2005	15/03/2005
12083	Cockles	Martins Seafresh, St Columb Business Centre, Barn Lane, St Columb, Cornwall, TR9 6BU	-	07/03/2005	30/04/2006
12084	Pheasant	Butts Farm, South Cerney, Cirencester, GL7 5QE	-	04-May-05	-
12095	Lobster	Jarvis, 56 Coombe Rd, Kingston	-	19/05/2005	-
12096	Rabbit	Woldsway Foods, Scremby Road, Spilsby, Lincs, PE23 5RG	-	07/03/2005	-
12097	Dressed crab	Tesco, Yarmouth Rd, Caister, NR30 5DL	-	09/05/2005	09/05/2005
12098	John West herring roe in brine	Tesco, 5 Seacroft Ave, West Yorkshire, LS14 6JD	-	23/05/2005	30/06/2007
12099	Fresh Cromer crab	Jarvis, 56 Coombe Rd, Kingston, Surrey, KT2 7AF	-	19/05/2005	-

Sample code	Description	Retailer (name and address)	Batch code	Purchase Date	Best before date
12101	Gressingham duck breasts	Sainsburys, Crawley Ave, West Green, RH10 8NF	-	17/05/2005	18/05/2005
12102	Goose	Butts Farm Shop, South Cerney, Cirencester, GL7 5QE	-	04/05/2005	-
12103	Morrisons fresh Scottish mussels	Morrisons, Salisbury Hall Gardens, Enfield, E4 8SA	-	23/03/2005	25/03/2005
12104	Half shoulder of lamb	Tesco, Cobden Rd, St Rollox, Springburn, G21 1YL	UK 1512 EEC	30/05/2005	02/06/2005
12105	Tesco Healthy Living Turkey breast steaks	Tesco, 223-226 High St, Exeter, EX4 3RH	UK 5337 EEC	29/03/2005	31/03/2005
12106	Tesco Healthy Living Fresh British diced pork	Tesco, 5 Seacroft Ave, West Yorkshire, LS14 6JD	UK5213 EEC	17/03/2005	23/03/2005
12107	ASDA extra special venison steaks	ASDA, A1 near Edinburgh, EH14 1RJ	UK 2459 EEC	30/05/2005	31/05/2005
12108	Marks and Spencer Oisín venison leg steaks	Marks and Spencer, 157 Hillborough Road, Belfast Lisburn, BT27 5UJ	UK 9102 EEC	11/05/2005	15/05/2005
12172	Anchor Sea Food Harcross shelled cockles	Waitrose, 2 Station Ave, Caterham, Surrey, CR3 6LB	4069 EEC	09/06/2005	31/12/2005
12183	Waitrose British venison steak	Waitrose, Banstead Branch, 102 High St, Burgin Heath, Surrey	UK2459 EEC	21/03/2005	26/03/2005
12184	ASDA cooked shelled mussels	ASDA, 100 The Jewel, Edinburgh, EH15 3AR	UK GG 364 EC	30/05/2005	27/01/2006
12185	Morrisons turkey steak	Morrisons, Salisbury Hall Gardens, Enfield, E4 8SA	-	23/03/2005	26/03/2005
12189	Morrisons turkey fillets	Morrisons, Castle Bromich, BD8 9AX	-	23/03/2005	24/04/2005
12190	Strathvale pork loin chops	Lidl, Waterton IND EST, Cowbridge Rd, Bridgend, CF31 3JP	UK 2340 EEC	10/05/2005	29/11/2005
12191	Mutton	HHM, 28 Surrey St, Croydon, Surrey, CR0 1RG	-	21/03/2005	-
12193	Walter Smith English farmed rabbit,	Walter Smith, www.waltersmith.co.uk	-	07/03/2005	20/03/2005
12198	ASDA British lamb half bone in shoulder	ASDA, Drayton High Rd, Norwich, NR6 5DT	UK 4787 EEC	21/03/2005	25/03/2005

Sample code	Description	Retailer (name and address)	Batch code	Purchase Date	Best before date
12199	Morrisons fresh Grade A free range chicken	Morrisons, Salisbury Hall Gardens, Enfield, E4 8SA	-	23/03/2005	29/03/2005
12200	Tesco British beef topside/top rump	Tesco, Brunton Lane, Kingston Park, Newcastle, NE3 2FP	UK 5416 EEC	23/03/2005	27/03/2005
12242	Lanark Blue Scottish ewes' cheese	Summer Isles Foods, Ross-Shire, Achiltibuie, IV26 2YG	-	11/07/2005	04/08/2005
12282	Mutton, Northumbrian Quality Meats	WMH farm fresh meats, 4 Church St, Haydon Bridge, Hexham, NE47 6JQ	-	27/07/2005	-
12319	Pure vegetable oil	Iceland, 447 Alexander Parade, Strathclyde, G31 3AD	L5130	30/05/2005	31/05/2006
12324	Tesco silverside beef	Tesco, Unit 5-6 Bentrin Rd, Lisburn, Belfast BT28 2GB	IRL 409 EEC	11/05/2005	16/05/2005
12325	UK apples composite: Bramley/ George Cave/ James Grieve/ Discovery/ Grenadier	Eddisbury Fruit Farm, Yeld lane, Kelsall, Cheshire	-	-	23/08/2005
12326	Whole goose	Reigate Farm Foods, 6 West Rd, Reigate, Surrey RH2 7JT	-	22/03/2005	-
12327	Somerfield So Good lamb	Somerfield, 109A Hare Lanes, Claygate KT10 0QY	13222115	19/05/2005	22/05/2005
12328	Sainsburys whole chicken	Sainsburys, Hillsbrough Rd, Lisburn, Belfast BT27 5UJ	UK 9504 EEC	11/05/2005	14/05/2005
12329	Sainsburys lard	Sainsburys, Coldham Road	-	24/08/2005	-
12330	Sainsburys organic chicken	Sainsburys, Pound lane, Thorpe St Andrew, NR7 0SR	-	09/05/2005	13/05/2005
12331	Soft fruit composite, jams and fruit: blackberry, blackcurrant, plum, strawberry, raspberry	Morrisons, 6-7 Salisbury Hall Gardens, Enfield, E4 8SA	-	29/03/2005	-
12332	Scottish Oysters, 6 dozen	Ardtaraig Ltd, Riverslea, Tarholm, Annbank, Ayr, KA6 5HX	-	25/08/2005	27/05/2005
12334	ASDA organic eggs	ASDA, Sport City, Manchester, M11 4BD	-	25/08/2005	02/09/2005

Sample code	Description	Retailer (name and address)	Batch code	Purchase Date	Best before date
12335	Cereal composite: Cheerios/ Wheatos/ Frosties/ Sainsburys Crunchy Oat/ Nestle Clusters	Sainsburys, Buchancn Street, G12 GF	-	23/05/2005	-
12336	Frozen goose	Hunters of Helmsley, 13 Market Place, Helmsley, YO62 5BL	-	29/08/2005	-
12337	Quails' eggs	Hunters, 13 Market Place, Helmsley, YO62 5BL	-	05/09/2005	-
12407	Free range chicken eggs	Corrie Mains Farm, Ayrshire, KA5 5DT	-	17/09/2005	-