

## Metals in foods packaged in aluminium containing food packaging materials

Report to the Food Standards Agency  
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## **PROJECT INFORMATION**

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## SUMMARY

This report describes the concentrations of aluminium, arsenic, cadmium, chromium, copper, lead, manganese, mercury, nickel and selenium that have been determined in 225 foodstuffs packaged in aluminium containing packaging materials. Concentrations were in the range:

Aluminium	< 0.03 to 546 mg/kg
Arsenic	< 0.003 to 11.4 mg/kg
Cadmium	< 0.001 to 0.496 mg/kg
Chromium	< 0.003 to 2.67 mg/kg
Copper	< 0.01 to 17.75 mg/kg
Lead	< 0.001 to 0.344mg/kg
Manganese	< 0.001 to 516 mg/kg
Mercury	< 0.001 to 0.053 mg/kg
Nickel	< 0.01 to 5.07 mg/kg
Selenium	< 0.003 to 0.74 mg/kg

Of these 225 foodstuffs twenty five were selected for aluminium profiling studies to determine whether or not the aluminium measured in the foods is present as a consequence of migration from the food packaging materials or from other sources. For single phase solid foodstuffs there was no difference in the aluminium concentration in slices of food cut at increasing distances from the aluminium containing food packaging. For multi-phase foodstuffs the composition varied across the depth of the foodstuffs tested and therefore it was not possible to conclude whether or not any differences in aluminium concentration were due to migration of this element from the packaging.

## 1. Sample details

The sample details are provided in Table 1.

## 2. Survey sample receipt, preparation and analysis

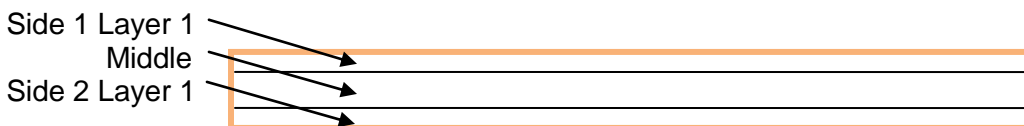
On receipt in the laboratory each sample was assigned a unique sample number using the Fera LIMS system. Details are given in Table 1. Food samples were purchased in replicate (n = 4 for solid foodstuffs and n = 3 for liquid foodstuffs). Three solid sample or two liquid samples were placed immediately in a freezer. The other sample was prepared for analysis. Any foods intended to be heated in-pack were prepared according to the instructions given. The food was removed from the packaging, homogenised and transferred to acid cleaned plastic containers for storage prior to analysis. The concentrations of aluminium, arsenic, cadmium, chromium, copper, lead, manganese, mercury, nickel and selenium in the foodstuffs were determined using UKAS accredited analytical methods. The packaging materials and an aliquot of the homogenised foodstuff were retained and stored frozen.

## 3. Profiling sample preparation

As described above four examples of each of the solid food survey samples (all of the same batch code) were purchased. One of the four samples was analysed (as above) and the other three were placed immediately in a freezer. To determine the source of the aluminium in the foods one of the three frozen samples of the 25 selected foodstuffs (Table 2 - ALU\_008, ALU\_011, ALU\_023, ALU\_026, ALU\_031, ALU\_055, ALU\_057, ALU\_107, ALU\_120, ALU\_125, ALU\_131, ALU\_132, ALU\_137, ALU\_144, ALU\_170, ALU\_174, ALU\_180, ALU\_187, ALU\_191, ALU\_195, ALU\_199, ALU\_216, ALU\_226, ALU\_237 and ALU\_240) was removed from the freezer and was prepared for analysis by ICP-MS. The method of preparation was dependent on the food type and dimensions and whether or not the food should be prepared in pack. The approaches taken for the various foodstuffs are described below:

*Samples ALU\_008, ALU\_023, ALU\_195, ALU\_216 and ALU\_226*

All surfaces of these samples were in direct contact with the aluminium foil packaging. Depending on the dimensions of the foodstuff between three and five layers were prepared for each. For the thinner chocolate samples only three layers could be obtained for each. Approximately 0.5 mm was sliced/shaved from the two flat surfaces (side one and side two) and the remainder of the sample constituted the third 'slice' (middle). Attempts to prepare additional layers were unsuccessful.





*Samples ALU\_026, ALU\_057, ALU\_131, ALU\_174, ALU\_237 and ALU\_240*

These samples were packed in aluminium foil trays.

ALU\_026 was sliced into 4 layers

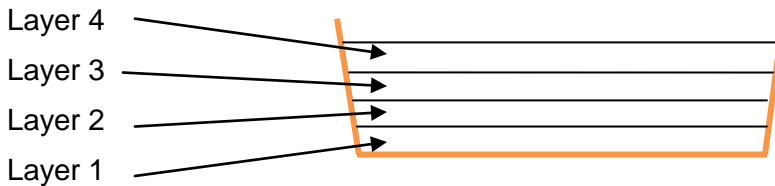
ALU\_057 was sliced into 7 layers

ALU\_131 was sliced into 7 layers. The food pack had aluminium lidding on the tray and so the top layer #7 was also in direct contact with an aluminium foil.

ALU\_174 was sliced into 3 layers

ALU\_237 was sliced into 4 layers

ALU\_240 was sliced into 4 layers



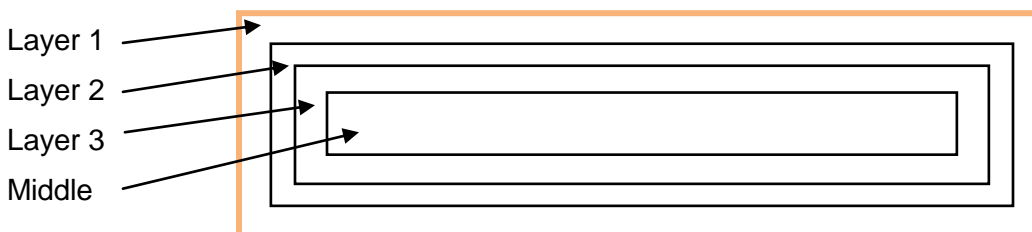
*Samples ALU\_011 and ALU\_125*

These samples were packed in aluminium foil trays and had instructions to be heated in pack. Both contained two chicken breasts. One breast was removed along with some sauce/marinade and tested unheated. The other breast was heated according to the instructions given on pack.

The sauce/marinade was separated from the chicken breast. This was labeled Layer 1. The chicken breast fillets were sliced into sections with increasing distance from the packaging contact (as for the trays above). Three or four slices were prepared for each chicken breast.

*Samples ALU\_031, ALU\_120, ALU\_132, ALU\_137, ALU\_144, ALU\_170, ALU\_180, ALU\_187, ALU\_191 and ALU\_199*

These sample were encased in aluminium containing materials such as squeezable tubes or foil-plastic laminates. Depending on the dimensions, two, three or four layers were prepared from each sample working from the outside (food contact surface – Layer 1) inwards.

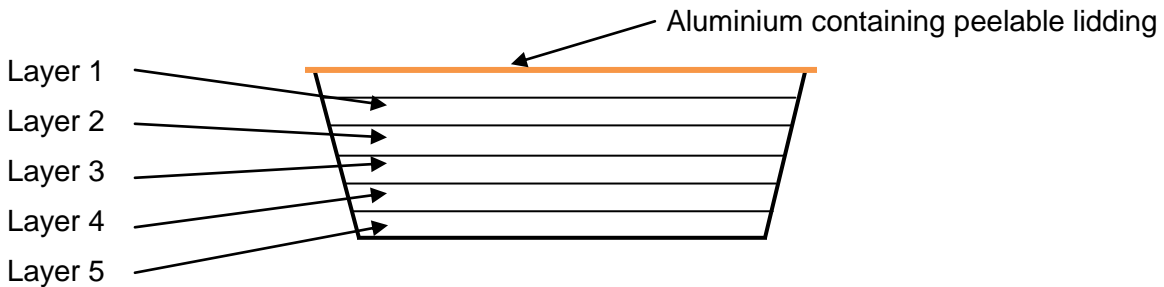


### *Samples ALU\_055 and ALU\_107*

These samples had aluminium in a peelable lidding used to seal the plastic food container.

ALU\_055 was sliced into 5 layers

ALU\_107 was sliced into 6 layers



After preparation of these 25 food types as describes, the layers obtained were homogenised (separately) and were analysed by the UKAS accredited ICP-MS analytical methods.

## **4. Results**

### *4.1 Survey samples*

The results obtained from the analysis of the 225 survey samples are given in Table 3. The mean data from the QC samples is shown in Tables 4-6 and the mean spike recovery data in Table 7. 24 of the 225 samples were analysed in duplicate. The within and between batch duplicate data is given in Table 8. Measurement uncertainty was calculated using a coverage factor of 2 (equivalent to a confidence interval of 95%) with data taken from FAPAS participation/results: Al 12%, Cr 23%, Mn 14%, Ni estimated as 15-20% (no FAPAS rounds for Ni), Cu 14%, As 20%, Se 13%, Cd 20%, Hg 17% and Pb 13%.

High levels of cadmium were found in two samples (ALU\_050 and ALU\_175) and, at the request of the FSA, individual test reports were prepared for these samples (Annexes 1 and 2).

### *4.2 Metal profiling samples*

The packaging materials of the foods used in the profiling studies, were not examined in detail to see if they provided a bare aluminium surface in contact with the food. For example, in an aluminium-plastic laminate the aluminium is normally an inner layer. Similarly, for aluminium foil trays and aluminium cans the metal may be lacquered.

The average concentrations of aluminium detected in the different layers of food are shown in Table 9. The concentration profiles are shown in Figures 1 - 25. The mean data from the QC samples is shown in Tables 10 and 11. The average spike recoveries are given in Table 12.

For the majority of the samples tested there was no apparent aluminium concentration profile (ALU\_008, ALU\_023, ALU\_026, ALU\_055, ALU\_057, ALU\_120, ALU\_131, ALU\_132, ALU\_144, ALU\_170, ALU\_180, ALU\_191, ALU\_195, ALU\_216, ALU\_226 and ALU\_240).

The two canned sardine samples (ALU\_187 and ALU\_199) showed a large difference in the aluminium levels in the two layers prepared. ALU\_187 (sardines in tomato sauce) had 21.0 mg/kg Al in the contact slice and only 5.3 mg/kg in the non-contact slice. Similarly ALU\_199 (sardines in sunflower oil) had Al concentrations of 4.7 mg/kg in the contact slice and only 0.7 mg/kg in the non-contact slice. This 4- to 7-fold difference may be attributed to the composition of the canned foodstuff rather than metal migration. The layer in contact with the packaging contained primarily oil/sauce. Of all the samples tested, these two canned fish samples might be expected to have the greatest chance of showing a concentration profile since the fish would be heat-processed in the can to cook and to sterilise and this could promote the migration of aluminium.

For ALU\_137 (chocolate hazelnut crunch protein bar) the aluminium content of the contact and the non-contact slices were 9.9 and 4.2 mg/kg. But the bar was coated with chocolate and therefore a strict like-for-like comparison could not be made between the two layers.

This was even more so for ALU\_237 (apple and blackcurrant pies) where the food contact slice (Layer 1) was mainly pastry whereas the other slices had the fruit filling too. The aluminium content of 4 slices (food contact slice first) was 2.0, 1.4, 1.7 and 3.7 mg/kg.

Likewise differences in composition of ALU\_107 (steamed chocolate puddings) do not allow any conclusion to be drawn with respect to the migration of aluminium.

The concentration of aluminium in the three layers of sample ALU\_174 (Rocky road) decreased as the distance from the food contact surface increased. However when the duplicate results is considered (Figure 26) this difference is within the variability of the measurement and is likely to be due to inhomogeneity within the samples. Six samples gave unsatisfactory replicate data. These are highlighted with a # in Table 9.

Similarly, the aluminium concentration depth profile for samples ALU\_011 (Chicken Breast in marinade) and ALU\_125 (Chicken Fillets with Sun-Dried Tomato & Mozzarella) may be attributed to differences in the composition of the different layers. Interestingly the samples cooked in-pack appeared to contained higher levels of aluminium at the food contact surface (in the sauce/marinade) than those removed from the packaging prior to cooking. As with the heat-processed canned sardine, heating is likely to strongly promote the migration of aluminium. However further work would be required to confirm this for these chicken samples, since the loss of water by evaporation during cooking may have resulted in a more concentrated sample.

Therefore for single phase foodstuffs there was no difference in the aluminium concentration in the different layers cut at increasing distances from the aluminium containing food packaging). For other foodstuffs the composition varied across the depth of the foodstuffs tested and therefore it was not possible to conclude whether or not any differences in aluminium concentration were due to migration of this element from the packaging.

Table 1. Sample details

LIMS sample number	Sample code	Product description	Brand	Packaging format	Size / product weight	Best-before-date	Batch code	Country of origin	Barcode	Date of purchase	Place of purchase
S09-021246	ALU_001	Taze Sürme Peyniri	Yayla	Aluminium containing tear open closure	200g	12/11/2009	D030909	Turkey	4 027394 003055	25/10/2009	Zaco Mini Market, 175 Upper Street, London N1 1RG
S09-021247	ALU_002	Ayran	Sütdiyari	Aluminium containing laminate	330ml	14/12/2009	08:58 G2	Denmark	5 701638 110110	25/10/2009	Zaco Mini Market, 175 Upper Street, London N1 1RG
S09-021252	ALU_003	Soft Cheese	Marks and Spencer	Aluminium containing tear open closure	150g	19/12/2009	MC57052	France	M 0240 161 S	25/10/2009	Marks and Spencer, 9-13 Cowcross Street, Farringdon, London EC1M 6DR
S09-021254	ALU_004	Apple Juice	Sainsbury's	Aluminium containing laminate	3 x 200ml	31/03/2010	9260M 02:03	None given	0102 2919	25/10/2009	Sainsbury's Local, 317-318 Upper Street, London N1 2XQ
S09-021260	ALU_005	Family Flapjack	Sainsbury's	Aluminium foil tray	None given	26/10/2009	GJB 9 233	UK	0106 6852	25/10/2009	Sainsbury's Local, 317-318 Upper Street, London N1 2XQ
S09-021261	ALU_006	Strawberry Yoghurt	Müller Light	Aluminium containing tear open closure	200g	17/11/2009	10:52 A4 08	None given	4025 5309	25/10/2009	Costcutter Food Hall, 96-98 Turnmill Street, Farringdon, London EC1M 5QP
S09-021262	ALU_007	Pure Still Apple & Cranberry juice	Sunmagic	Aluminium can	330ml	10/2009	2 09:27 L5	EC	5 013803 711009	25/10/2009	Costcutter Food Hall, 96-98 Turnmill Street, Farringdon, London EC1M 5QP
S09-021265	ALU_008	Oxford Blue Cheese	Oxford Blue	Aluminium foil wrapped	None given	10/11/2009	None given	England	None given	25/10/2009	Garnash Ltd Trading as Budgens, 213-215 Upper Street, Islington, London N1 1RL
S09-021267	ALU_009	Cornish Pilchard Fillets	The Pilchards Works	Aluminium can	100g	01/02/2014	03309 10:46 881	UK	5 060024 150087	25/10/2009	Garnash Ltd Trading as Budgens, 213-215 Upper Street, Islington, London N1 1RL
S09-	ALU_010	Sustainably-Fished	Fish 4 Ever	Aluminium can	100g	01/08/2014	22609 07:46	France	5 034210 210190	25/10/2009	Garnash Ltd Trading as

LIMS sample number	Sample code	Product description	Brand	Packaging format	Size / product weight	Best-before-date	Batch code	Country of origin	Barcode	Date of purchase	Place of purchase
021282		Filleted Sardines					002				Budgens, 213-215 Upper Street, Islington, London N1 1RL
S09-021248	ALU_011	British Chicken Breast with Portuguese-Style Piri Piri Marinade	Marks and Spencer	Aluminium foil tray – cooked in-pack	280g	28/10/2009	L5 14:40	UK	M 0689 533 S	25/10/2009	Marks and Spencer, 9-13 Cowcross Street, Farringdon, London EC1M 6DR
S09-021249	ALU_012	Instant Oat Porridge	Marks and Spencer	Aluminium containing tear open closure – cooked in-pack	55g	March 2010	09:03 9287	UK	M 0688 307 S	25/10/2009	Marks and Spencer, 9-13 Cowcross Street, Farringdon, London EC1M 6DR
S09-021250	ALU_013	Belgian Milk Chocolate Coated Honeycomb	Marks and Spencer	Aluminium containing laminate	90g	22/12/2009	L32 9265 14:24	UK	M 0682 589 S	25/10/2009	Marks and Spencer, 9-13 Cowcross Street, Farringdon, London EC1M 6DR
S09-021253	ALU_014	Steak Puff Pastry Pie	Sainsbury's	Aluminium foil tray – cooked in-pack	150g	27/10/2009	18:01 F	UK	0118 4327	25/10/2009	Sainsbury's Local, 317-318 Upper Street, London N1 2XQ
S09-021255	ALU_015	6 Apple Pies	Sainsbury's basics	Aluminium foil tray – cooked in-pack	None given	26/11/2009	288 A212 1457	UK	0057 3467	25/10/2009	Sainsbury's Local, 317-318 Upper Street, London N1 2XQ
S09-021258	ALU_016	Chicken Casserole with Rice	Ella's Kitchen organic baby food	Aluminium containing laminate – warmed in-pack	140g	30/09/2010	183	UK	5 060107 331037	25/10/2009	Sainsbury's Local, 317-318 Upper Street, London N1 2XQ
S09-021259	ALU_017	Chopped Tomatoes in Tomato Juice	Sainsbury's	Aluminium containing laminate	390g	31/7/2011	GR1 LR 208 14:47	Italy	0126 8423	25/10/2009	Sainsbury's Local, 317-318 Upper Street, London N1 2XQ
S09-021264	ALU_018	Winter Roasting Vegetables	Budgens	Aluminium foil tray – cooked in-pack	500g	27/10/2009	CHL0609	Packed in the UK	2004 1045	25/10/2009	Garnash Ltd Trading as Budgens, 213-215 Upper Street, Islington, London N1 1RL
S09-021266	ALU_019	Sweet Pastry Case	Edler's	Aluminium foil tray	None given	19/11/2009	9190	UK	5 010524 006018	25/10/2009	Garnash Ltd Trading as Budgens, 213-215

LIMS sample number	Sample code	Product description	Brand	Packaging format	Size / product weight	Best-before-date	Batch code	Country of origin	Barcode	Date of purchase	Place of purchase
											Upper Street, Islington, London N1 1RL
S09-021263	ALU_020	Milkybar White Chocolate Buttons	Nestle	Aluminium containing laminate	None given	31/05/2010	08:44 9 188 1012 H9	None given	5024 3228	25/10/2009	Costcutter Food Hall, 96-98 Turnmill Street, Farringdon, London EC1M 5QP
S09-021251	ALU_021	Halloween Ghosts Milk Chocolate Pieces	Marks and Spencer	Aluminium foil wrapped	60g	05/01/2010	L9182G	UK	M 0172 813 S	25/10/2009	Marks and Spencer, 9-13 Cowcross Street, Farringdon, London EC1M 6DR
S09-021257	ALU_022	Options Mint Madness	Ovaltine	Aluminium containing laminate	11g	30/11/2010	L9183.2 09:28	Switzerland	7 612100 054000	25/10/2009	Sainsbury's Local, 317-318 Upper Street, London N1 2XQ
S09-021256	ALU_023	Milk Chocolate Coins	Sainsbury's	Aluminium foil wrapped	84g	31/05/2010	K181D	UK	0159 0739	25/10/2009	Sainsbury's Local, 317-318 Upper Street, London N1 2XQ
S09-021347	ALU_024	Sample cancelled									
S09-021348	ALU_025	Podlaski Chicken Pâté	Drosed	Aluminium foil tray	100g	16/09/2011	9 38 3 44 1 04:30	Poland	5 901204 000733	28/10/2009	Tesco Leeds Seacroft Extra, Unit 5, Leeds LS14 6JD
S09-021349	ALU_026	Chocolate Brownie	Tesco	Aluminium foil tray	None given	28/11/2009	B1	UK	5 051898 231552	28/10/2009	Tesco Leeds Seacroft Extra, Unit 5, Leeds LS14 6JD
S09-021350	ALU_027	Mackerel Fillets	Tesco	Aluminium can	125g	01/09/2012	L507092009 08	Denmark	5 018374 363411	28/10/2009	Tesco Leeds Seacroft Extra, Unit 5, Leeds LS14 6JD
S09-021351	ALU_028	Smokey Cheese	Primula	Aluminium containing tear open closure	150g	28/05/2010	08:59	UK	5 016049 084449	28/10/2009	Tesco Leeds Seacroft Extra, Unit 5, Leeds LS14 6JD
S09-021352	ALU_029	Tropical Juice Drink	Tesco	Aluminium containing laminate	3 x 250ml	28/02/2010	9240M 00:58	UK	5 031021 337696	28/10/2009	Tesco Leeds Seacroft Extra, Unit 5, Leeds LS14 6JD
S09-	ALU_030	Summer Fruits	Capri-Sun	Aluminium	200ml	28/05/2010	08:06 L	Great	5 449000 086709	28/10/2009	Tesco Leeds Seacroft

LIMS sample number	Sample code	Product description	Brand	Packaging format	Size / product weight	Best-before-date	Batch code	Country of origin	Barcode	Date of purchase	Place of purchase
021353		Drink		containing laminate				Britain			Extra, Unit 5, Leeds LS14 6JD
S09-021454	ALU_031	Tomato Puree	Torento	Aluminium containing flexible tube	200g	31/10/2011	L R285	Italy	5 021490 827149	01/11/2009	Netto, Kirkstall Road, Leeds LS4 2EZ
S09-021455	ALU_032	Salted Peanuts	Dynamo	Aluminium containing laminate	200g	20/02/2010	R 9286 MC4 20:21	None given	5 000237 071489	01/11/2009	Netto, Kirkstall Road, Leeds LS4 2EZ
S09-021456	ALU_033	Chocolate Orange	Terry's	Aluminium foil wrapped	175g	24/08/2010	0PZ0493521 B06:01	EU	5 000136 042818	01/11/2009	Netto, Kirkstall Road, Leeds LS4 2EZ
S09-021457	ALU_034	Pringles Original	Pringles	Aluminium containing laminate	43g	31/10/2010	L 9208275540 0916	Belgium	5 410076 030705	01/11/2009	Netto, Kirkstall Road, Leeds LS4 2EZ
S09-021458	ALU_035	Cottage Cheese	Kingdom Dairy	Aluminium containing tear open closure	227g	02/12/2009	08:24/C1	UK	5 060115 550116	01/11/2009	Netto, Kirkstall Road, Leeds LS4 2EZ
S09-021459	ALU_036	Quark-Creme Peach	Ravensberger	Aluminium containing tear open closure	200g	24/11/2009	20:01 L3	None given	4 008435 240158	1/11/2009	Netto, Kirkstall Road, Leeds LS4 2EZ
S09-021460	ALU_037	Herring Fillets in Tomato Sauce	Norge	Aluminium can	200g	31/12/2013	BATCH 9209	Germany	4 001707 184709	01/11/2009	Netto, Kirkstall Road, Leeds LS4 2EZ
S09-021461	ALU_038	Sun-dried Tomato Sauce	Dolmio	Aluminium containing tear open closure	150g	25/04/2010	01:20 IST 835 S	EU	5 010034 592605	01/11/2009	S&R Jaffry Spar Store, 337-339 Kirkstall Road, Leeds LS4 2HD
S09-021462	ALU_039	Orange Drink	Capri-Sonne	Aluminium containing laminate	200ml	19/10/2010	05:33 T	None given	4 000177 816004	01/11/2009	S&R Jaffry Spar Store, 337-339 Kirkstall Road, Leeds LS4 2HD
S09-021463	ALU_040	Sample cancelled									
S09-021479	ALU_041	Cranberry Stimulation Drink	Blue Bear	Aluminium can	250ml	07/12/2010	L6B 915904:21	EU	5 000177 444237	01/11/2009	S&R Jaffry Spar Store, 337-339 Kirkstall Road, Leeds LS4 2HD
S09-	ALU_042	Instant Noodles in a	Mr. Noodles	Aluminium	77g	23/04/2010	None given	China	0 59491 00250 5	01/11/2009	S&R Jaffry Spar Store,

LIMS sample number	Sample code	Product description	Brand	Packaging format	Size / product weight	Best-before-date	Batch code	Country of origin	Barcode	Date of purchase	Place of purchase
021480		Cup		containing laminated sachet – cooked in-pack							337-339 Kirkstall Road, Leeds LS4 2HD
S09-021481	ALU_043	Export Lager	Carlsberg	Aluminium can	440 ml	14/08/2010	B9283N1B 23:04	UK and Denmark	5 010153 377671	01/11/2009	Iceland Foods Limited, Unit 2, Kirkstall Road, Leeds LS4 2AZ
S09-021482	ALU_044	Cherry Yoghurt	Nom Dairy	Aluminium containing tear open closure	175g	24/11/2009	L3 293 19:46	None given	5 051969 275201	01/11/2009	Iceland Foods Limited, Unit 2, Kirkstall Road, Leeds LS4 2AZ
S09-021483	ALU_045	Roast Flavour Chicken Bites	Mattessons	Aluminium containing laminate	65g	15/11/2009	9299 C 19:22	None given	5 000178 106066	01/11/2009	Iceland Foods Limited, Unit 2, Kirkstall Road, Leeds LS4 2AZ
S09-021484	ALU_046	Chicken Flavour Super Noodles	Batchelors	Aluminium containing laminate	100g	01/02/2011	9263 WV 17:49	None given	5 000175 410203	01/11/2009	Iceland Foods Limited, Unit 2, Kirkstall Road, Leeds LS4 2AZ
S09-021485	ALU_047	Mint Flavour Chocolate Coated Biscuits	Viscount	Aluminium foil wrapped	None given	31/07/2010	L9295 14:29 A	UK	0 72417 09391 3	01/11/2009	Iceland Foods Limited, Unit 2, Kirkstall Road, Leeds LS4 2AZ
S09-021527	ALU_048	Double Concentrate Tomato Puree	Sainsbury's	Aluminium containing flexible tube	200g	30/04/2011	PV7 R093	Italy	0035 9047	02/11/2009	Sainsbury's, 9-11 Moor Allerton Centre, Leeds LS17 5NY
S09-021528	ALU_049	Chilli Puree	Gia	Aluminium containing flexible tube	80g	31/08/2011	L9215	Italy	8 001830 533326	02/11/2009	Sainsbury's, 9-11 Moor Allerton Centre, Leeds LS17 5NY
S09-021529	ALU_050	Anchovy Paste With Olive Oil	Admiral	Aluminium containing flexible tube	56g	28/02/2010	None given	Spain	8 410333 000219	02/11/2009	Sainsbury's, 9-11 Moor Allerton Centre, Leeds LS17 5NY
S09-021734	ALU_051	2 Beef Steaks with a Peppercorn Sauce	Somerfield	Aluminium foil tray – cooked in-pack	300g	05/11/2009	None given	UK	5 000192 058877	04/11/2009	Somerfield, 459-163 Durham Road, Low Fell, Gateshead NE9 5EX
S09-021735	ALU_052	Activia Creamy Strawberry Yoghurt	Danone	Aluminium containing tear	120g	24/11/2009	Not clear on packaging	None given	5 060058 337201	04/11/2009	Somerfield, 459-163 Durham Road, Low



LIMS sample number	Sample code	Product description	Brand	Packaging format	Size / product weight	Best-before-date	Batch code	Country of origin	Barcode	Date of purchase	Place of purchase
				open closure							Fell, Gateshead NE9 5EX
S09-021736	ALU_053	Fruity Custard Banana	Heinz	Aluminium containing tear open closure	100g	06/07/2010	BANANA C 07:38 9 187	EU	5 000157 065407	04/11/2009	Somerfield, 459-163 Durham Road, Low Fell, Gateshead NE9 5EX
S09-021737	ALU_054	Cheese and Onion Quiche	Co-operative	Aluminium foil tray – cooked in-pack	400g	09/11/2009	1645K	UK	5 000128 658874	04/11/2009	Co-op, Crowhall Lane, Felling, Gateshead NE10 9PW
S09-021738	ALU_055	Chocolate Mousse	Co-operative	Aluminium containing tear open closure	62.5	15/11/2009	12:50 76329	France	5 000128 698290	04/11/2009	Co-op, Crowhall Lane, Felling, Gateshead NE10 9PW
S09-021739	ALU_056	British Salted Creamery Butter	Co-operative	Aluminium containing laminate	250g	21/12/2009	A2245B	UK	5 000128 725477	04/11/2009	Co-op, Crowhall Lane, Felling, Gateshead NE10 9PW
S09-021740	ALU_057	Chicken Tikka Pie	Tayyabah	Aluminium foil tray – cooked in-pack	None given	25/04/2010	L9115	UK	0 3003 500007	04/11/2009	H & H Convenience, 18 Crowhall Lane, Gateshead NE10 9PU
S09-021741	ALU_058	Strawberry and Banana Smoothie	St. Clements	Aluminium containing laminate	250ml	01/02/2010	M46 2 12:16 9168	None given	5 000382 021773	04/11/2009	Martin McColl Ltd. 439-443 Durham Road, Low Fell, Gateshead NE9 5EX
S09-021742	ALU_059	Whole Milk UHT	Happy Shopper	Aluminium containing laminate	500ml	04/12/2009	DC156 MV001 23:11 078175	UK	5 011295 028032	04/11/2009	Lifestyle Express, Sunderland Road, Felling, Newcastle NE8 4DU
S09-021743	ALU_060	Bitter Shandy	Ben Shaws	Aluminium can	330ml	01/07/2010	L1A 9200 12:23	UK	5 029578 000101	04/11/2009	Lifestyle Express, Sunderland Road, Felling, Newcastle NE8 4DU
S09-021744	ALU_061	Nacho Cheese Dip	Primula	Aluminium containing tear open closure – warmed in-pack	170g	17/03/2010	17:48 NACHO	UK	0 74472 70303 5	04/11/2009	Lifestyle Express, Sunderland Road, Felling, Newcastle NE8 4DU

LIMS sample number	Sample code	Product description	Brand	Packaging format	Size / product weight	Best-before-date	Batch code	Country of origin	Barcode	Date of purchase	Place of purchase
S09-021745	ALU_062	Chocolate Flavoured Dessert	Pomona	Aluminium containing tear open closure	125g	17/11/2009	GXB01	None given	5 013495 990607	04/11/2009	Lifestyle Express, Sunderland Road, Felling, Newcastle NE8 4DU
S09-021848	ALU_063	Double Concentrated Tomato Puree	Co-operative	Aluminium containing flexible tube	200g	01/02/2011	C02 L R042 08:31	Italy	5 000128 472913	04/11/2009	Co-op, Crowhall Lane, Felling, Gateshead NE10 9PW
S09-021849	ALU_064	Juicy Dried Apricots	Whitworths	Aluminium containing laminate	50g	31/07/2010	L9295B5301	Packed in UK	5 000234 045438	04/11/2009	Co-op, Crowhall Lane, Felling, Gateshead NE10 9PW
S09-021850	ALU_065	Aptamil Follow On Milk	Milupal	Aluminium containing laminate	200ml	25/06/2010	05:14:23 3A	E.U.	8 712400 556972	04/11/2009	Co-op, Crowhall Lane, Felling, Gateshead NE10 9PW
S09-021851	ALU_066	Pure Orange Juice	Co-operative	Aluminium containing laminate	3 x 200ml	30/04/2010	9254M 00:36	UK	5024 8414	04/11/2009	Co-op, Crowhall Lane, Felling, Gateshead NE10 9PW
S09-021852	ALU_067	Curry Flavour Pot Noodle	Unilever	Aluminium containing tear open closure – cooked in-pack	90g	01/03/2010	L9166PC796 20:55	None given	8 722700 264569	04/11/2009	Wellworth Food and News, 2 Carlisle Court, Gateshead NE10 0JJ
S09-021853	ALU_068	Crunchie	Cadbury	Aluminium containing laminate	40g	30/04/2010	L9197 15:00 B	EU	5 000201 468611	04/11/2009	Wellworth Food and News, 2 Carlisle Court, Gateshead NE10 0JJ
S09-021854	ALU_069	Double Concentrated Tomato Puree	Cirio	Aluminium containing flexible tube	140g	30/11/2011	L A330	Italy	8 000320 110191	04/11/2009	Martin McColl Ltd. 439-443 Durham Road, Low Fell, Gateshead NE9 5EX
S09-021855	ALU_070	Beef Jerky	Jack Link's	Aluminium containing laminate	25g	13/12/2010	100F	None given	4 047751 730219	04/11/2009	Martin McColl Ltd. 439-443 Durham Road, Low Fell, Gateshead NE9 5EX
S09-021856	ALU_071	Pork Crackles	Bobby's	Aluminium containing laminate	50g	27/02/2010	9 294 A1R	None given	5 015282 119680	04/11/2009	Deckham Supermarket, 202 Old Durham Road, Gateshead NE8 4BP

LIMS sample number	Sample code	Product description	Brand	Packaging format	Size / product weight	Best-before-date	Batch code	Country of origin	Barcode	Date of purchase	Place of purchase
S09-021857	ALU_072	Sugar Free Lemonade	Lifestyle	Aluminium can	250ml	01/05/2010	L6A 9237 19:08	UK	5 013668 401299	04/11/2009	H & H Convenience, 18 Crowhall Lane, Gateshead NE10 9PU
S09-021858	ALU_073	Sample cancelled									
S09-021859	ALU_074	Soya Milk	Somerfield simply value	Aluminium containing laminate	1 Litre	20/08/2010	F9232H 03:59	EU	5 000192 043798	04/11/2009	Somerfield, 459-163 Durham Road, Low Fell, Gateshead NE9 5EX
S09-021860	ALU_075	Long Life Skimmed Milk	Somerfield simply value	Aluminium containing laminate	1 Litre	09/03/2010	10:08 L3 091331	EU	5 000192 044702	04/11/2009	Somerfield, 459-163 Durham Road, Low Fell, Gateshead NE9 5EX
S09-022078	ALU_076	Sweet Popcorn	Best-in	Aluminium containing laminate	90g	301/01/2010	196	Packed in the UK	5 027876 305362	09/11/2009	Huttons, 222 Liverpool Road, Widnes WA8 7HY
S09-022079	ALU_077	Ridge Cut Salt and Malt Vinegar Crisps	McCoy's	Aluminium containing laminate	50g	16/01/2010	9 282 4B 16:47	UK	5 000237 048092	09/11/2009	Huttons, 222 Liverpool Road, Widnes WA8 7HY
S09-022080	ALU_078	Chocolate Chip Cookies	Maryland	Aluminium containing laminate	150g	31/07/2010	9216 B7D	UK	0 72417 12856 1	09/11/2009	Avondale Village Stores, 9 Sunningdale Avenue, Widnes WA8 7XJ
S09-022081	ALU_079	Spicy Salsa Dip	Primula	Aluminium containing tear open closure	170g	03/02/2010	20:28 SALSA	UK	0 74472 70300 4	09/11/2009	Avondale Village Stores, 9 Sunningdale Avenue, Widnes WA8 7XJ
S09-022082	ALU_080	Sour Cream & Chive Dip	Primula	Aluminium containing tear open closure	170g	21/04/2010	12:45 S/C/C	UK	5 016049 703180	09/11/2009	Avondale Village Stores, 9 Sunningdale Avenue, Widnes WA8 7XJ
S09-022083	ALU_081	Tuna Light Lunch	John West	Aluminium foil tray	250g	31/12/2011	18:57 94169	France	5 000171 032935	09/11/2009	Brodie Mini Market, 305 Brodie Avenue, Liverpool L19 7NE

LIMS sample number	Sample code	Product description	Brand	Packaging format	Size / product weight	Best-before-date	Batch code	Country of origin	Barcode	Date of purchase	Place of purchase
S09-022084	ALU_082	Mackerel Fillets in Curry Sauce	John West	Aluminium can	125g	30/06/2012	13309 R 12:00	Portugal	5 000171 002747	09/11/2009	Brodie Mini Market, 305 Brodie Avenue, Liverpool L19 7NE
S09-022085	ALU_083	Follow On Milk	SMA	Aluminium containing laminate	250ml	31/03/2010	09039K 04:58:15	None given	5047 8477	09/11/2009	J.J.S General Store, 87 Frederick Street, Widnes WA8 6 PF
S09-022086	ALU_084	Sample cancelled									
S09-022087	ALU_085	Sample cancelled									
S09-022088	ALU_086	Sample cancelled									
S09-022089	ALU_087	Alpen Light summer Fruits Cereal Bar	Alpen	Aluminium containing laminate	21g	18/08/2010	9230 19:31	England	5 010029 210897	09/11/2009	The Good News Co, 135 Albert Road, Widnes WA8 6LB
S09-022090	ALU_088	Sample cancelled									
S09-022091	ALU_089	Minced Beef & Onion Pie	Spar	Aluminium foil tray – cooked in-pack	186g	14/11/2009	307 09:50 L3	UK	5 010358 166674	09/11/2009	Alfred Jones Ltd, Spar Store, 14 Sefton Road, Litherland, Liverpool L21 7PG
S09-022092	ALU_090	Mackerel Fillets in Sunflower Oil	Princes	Aluminium can	125g	01/05/2014	L104052009 14	Denmark	5 000232 192202	09/11/2009	Alfred Jones Ltd, Spar Store, 14 Sefton Road, Litherland, Liverpool L21 7PG
S09-022093	ALU_091	Double Cream	Elmlea	Aluminium containing tear open closure	284ml	20/02/10	10:46 L92760S119 03	None given	5024 1903	09/11/2009	Alfred Jones Ltd, Spar Store, 14 Sefton Road, Litherland, Liverpool L21 7PG
S09-022094	ALU_092	Orange Juice From Concentrate	Spar	Aluminium containing laminate	200ml	30/04/2010	C 9267M 13:40	UK	5 010358 060255	09/11/2009	Alfred Jones Ltd, Spar Store, 14 Sefton Road, Litherland, Liverpool L21 7PG

LIMS sample number	Sample code	Product description	Brand	Packaging format	Size / product weight	Best-before-date	Batch code	Country of origin	Barcode	Date of purchase	Place of purchase
S09-022177	ALU_093	Sample cancelled									
S09-022178	ALU_094	Sample cancelled									
S09-022179	ALU_095	Still Vimto Mixed Fruit Juice Drink	Vimto	Aluminium containing laminate	250ml	31/03/2010	9178 17:50	None given	5 010438 003004	10/11/2009	The Village Store, 71 Main Road, Galgate, Lancaster LA2 0LA
S09-022180	ALU_096	Strawberry Juice Drink	Ribena	Aluminium containing laminate	288ml	31/05/2010	329F 04:34F	None given	5 000134 037571	10/11/2009	The Village Store, 71 Main Road, Galgate, Lancaster LA2 0LA
S09-022181	ALU_097	Sample cancelled									
S09-022182	ALU_098	Chicken & Mushroom Flavour Noodle Snack	Euro Shopper	Aluminium containing tear open closure – cooked in-pack	75g	01/10/2010	YK L9286 07:05	None given	5 020379 018067	10/11/2009	Parkfield Stores, 64 Bowerham Road, Lancaster LA1 4BN
S09-022183	ALU_099	Mackerel Fillets In Spicy Tomato Sauce	John West	Aluminium can	125g	30/06/2012	239 09 R 15:20	Portugal	5 000171 031518	10/11/2009	Parkfield Stores, 64 Bowerham Road, Lancaster LA1 4BN
S09-022184	ALU_100	Premium Lager Beer	Heineken	Aluminium can	500 ml	30/09/2010	9252528522 43	UK	8 712000 028268	10/11/2009	Parkfield Stores, 64 Bowerham Road, Lancaster LA1 4BN
S09-022185	ALU_101	Brussels Paté	Spinnaker	Aluminium foil tray	115g	15/06/2012	C-6408701 13:23 BRU	Belgium	5 037124 080057	10/11/2009	Booths, Hala Road, Scotforth, Lancaster LA1 4SG
S09-022186	ALU_102	Maltesers Super Thick Chocolate Shake	Mars	Aluminium containing tear open closure – prepared in-pack	190ml	03/04/2010	161 D 17 03:51 5	None given	5060122031257	10/11/2009	Booths, Hala Road, Scotforth, Lancaster LA1 4SG
S09-022187	ALU_103	Sample cancelled									
S09-	ALU_104	Rhubarb Pie	Bells	Aluminium foil	None	12/11/2009	None given	UK	5 028931 002547	10/11/2009	Booths, Hala Road,

LIMS sample number	Sample code	Product description	Brand	Packaging format	Size / product weight	Best-before-date	Batch code	Country of origin	Barcode	Date of purchase	Place of purchase
022188			homestyle	tray	given						Scotforth, Lancaster LA1 4SG
S09-022189	ALU_105	Fresh Loose Tea	Booths	Aluminium containing laminate	125g	04/12/2010	None given	UK	5 028440 035326	10/11/2009	Booths, Hala Road, Scotforth, Lancaster LA1 4SG
S09-022190	ALU_106	Chunky Tomato Olive & Rosemary Sauce	Schwartz	Aluminium containing laminate	300g	21/07/2011	9202 11:43	UK	5 000225 031341	10/11/2009	Booths, Hala Road, Scotforth, Lancaster LA1 4SG
S09-022191	ALU_107	Steamed Chocolate Puddings	Aunty's	Aluminium containing tear open closure – cooked in-pack	110g	31/05/2010	09044 10:37	New Zealand	9 417986 933801	10/11/2009	Booths, Hala Road, Scotforth, Lancaster LA1 4SG
S09-022192	ALU_108	Seriously Strong Spreadable Cheese	Lactalis McLelland Ltd	Aluminium containing tear open closure	125g	27/01/2010	W233 T 15:17	France	5 017838 811314	10/11/2009	Booths, Hala Road, Scotforth, Lancaster LA1 4SG
S09-022193	ALU_109	Cod Loin with Mornay Sauce	Smales	Aluminium foil tray – cooked in-pack	340g	11/11/2009	None given	UK	5 024113 000097	10/11/2009	Booths, Hala Road, Scotforth, Lancaster LA1 4SG
S09-022194	ALU_110	Potato & Meat Pie	Spar to go	Aluminium foil tray –prepared in store	None given	14/11/2009	None given	UK	2 050570 001196	10/11/2009	Parkinson Lancaster Spar Store, 146-148 Greaves Road, Lancaster LA1 4UW
S09-022195	ALU_111	Hot & Spicy Bombay Mix	Spar	Aluminium containing laminate	100g	30/04/2010	9278 L	Produce of more than one country	5 010358 121765	10/11/2009	Parkinson Lancaster Spar Store, 146-148 Greaves Road, Lancaster LA1 4UW
S09-023981	ALU_112	Chicken & Bacon Pancakes	Waitrose	Aluminium foil tray – cooked in-pack	245g	20 /11/2009	None given	UK	5 000169 130919	16/11/2009	Waitrose, Eaton Centre, Church Lane, Eaton, Norwich NR4 6NU
S09-023982	ALU_113	Aubergine Parmigiana	Waitrose	Aluminium foil tray – cooked in-pack	435g	22/11/2009	None given	UK	5 000169 137369	16/11/2009	Waitrose, Eaton Centre, Church Lane, Eaton, Norwich NR4 6NU

LIMS sample number	Sample code	Product description	Brand	Packaging format	Size / product weight	Best-before-date	Batch code	Country of origin	Barcode	Date of purchase	Place of purchase
S09-023983	ALU_114	Snow Bites	Cadbury	Aluminium containing laminate	100g	30/04/2010	L9280 18:00 HHF A	None given	5 034660 518501	16/11/2009	One Stop Convenience Stores Ltd. 37-39 Leopold Road, Norwich NR4 7AD
S09-023984	ALU_115	Sample cancelled									
S09-023985	ALU_116	Orange Flavour Jelly	Hartley's	Aluminium containing tear open closure	115g	30/06/2010	L9252H	None given	5012 6002	16/11/2009	One Stop Convenience Stores Ltd. 37-39 Leopold Road, Norwich NR4 7AD
S09-023986	ALU_117	Alpenmilch Chocolate Santa	Milka	Aluminium foil wrapped	85g	30/04/2010	ZAA0993131	EU	7 622201 002893	16/11/2009	One Stop Convenience Stores Ltd. 37-39 Leopold Road, Norwich NR4 7AD
S09-023987	ALU_118	Devon Custard	Ambrosia	Aluminium containing tear open closure – cooked in-pack	150g	30/06/2010	9272 00:30	None given	5035 4924	16/11/2009	One Stop Convenience Stores Ltd. 37-39 Leopold Road, Norwich NR4 7AD
S09-023988	ALU_119	Alert Lemon zing Energy Drink	Lucozade	Aluminium can	250 ml	30/06/2010	L2B 9248 10:14	None given	5 000347 035142	16/11/2009	One Stop Convenience Stores Ltd. 37-39 Leopold Road, Norwich NR4 7AD
S09-023989	ALU_120	Garlic Puree	Gia	Aluminium containing flexible tube	90g	31/10/2011	L9288	Italy	8 001830 533012	16/11/2009	Waitrose, Eaton Centre, Church Lane, Eaton, Norwich NR4 6NU
S09-023990	ALU_121	Tomato Puree With Chilli	Heinz	Aluminium containing flexible tube	125g	31/10/2010	L2389 09:09	EU	5015 7082	16/11/2009	Waitrose, Eaton Centre, Church Lane, Eaton, Norwich NR4 6NU
S09-023991	ALU_122	Mackerel in Olive Oil	Wairose	Aluminium can	125g	01/10/2014	L9274	Produced in Scotland from fish caught in	5 000169 129760	16/11/2009	Waitrose, Eaton Centre, Church Lane, Eaton, Norwich NR4 6NU

LIMS sample number	Sample code	Product description	Brand	Packaging format	Size / product weight	Best-before-date	Batch code	Country of origin	Barcode	Date of purchase	Place of purchase
								the North East Atlantic			
S09-023992	ALU_123	Tuna Fillets with Lime & Cracked Black Pepper	John West	Aluminium containing laminate – cooked in-pack	142g	31/08/2010	TYP4X C32288 02:14	Thailand	5 000171 050823	16/11/2009	Waitrose, Eaton Centre, Church Lane, Eaton, Norwich NR4 6NU
S09-023993	ALU_124	Chicken Fillets with Asparagus & Prosciutto Ham	Waitrose	Aluminium foil tray – cooked in-pack	336g	17/11/2009	None given	UK	5 000169 124574	16/11/2009	Waitrose, Eaton Centre, Church Lane, Eaton, Norwich NR4 6NU
S09-023994	ALU_125	Chicken Fillets with Sun-Dried Tomato & Mozzarella	Waitrose	Aluminium foil tray – cooked in-pack	300g	18/11/2009	None given	UK	5 000169 124529	16/11/2009	Waitrose, Eaton Centre, Church Lane, Eaton, Norwich NR4 6NU
S09-023995	ALU_126	Apple & Sultana Flapjack Bites	Wholebake	Aluminium containing laminate	250g	24/02/2010	15:48 L50559	None given	5 024278 001632	16/11/2009	Martin McColl Ltd, 78-80 Colman Road, Norwich NR4 7EH
S09-024446	ALU_127	Chinese Style Egg Fried Rice	Mayflower	Aluminium foil tray – cooked in-pack	227g	30/04/2011	29109	UK	5 019520 002024	20/11/2009	Ramsdens, 451-469 Cleethorpe Road Grimsby DN31 3BZ
S09-024447	ALU_128	4 Egg Custard Tarts	Ramsdens Bake & Bite	Aluminium foil tray	None given	21/11/2009	None given	UK	5 055115 811572	20/11/2009	Ramsdens, 451-469 Cleethorpe Road, Grimsby DN31 3BZ
S09-024448	ALU_129	Whole UHT Milk	Arla	Aluminium containing laminate	500ml	02/04/2010	03 34 CV001	UK	5 000181 030266	20/11/2009	Ramsdens, 451-469 Cleethorpe Road, Grimsby DN31 3BZ
S09-024449	ALU_130	Liegeois Chocolate Dessert Topped With Cream	Schweyer	Aluminium containing tear open closure	200g	06/12/2009	DP J 19	Germany	4033 8453	20/11/2009	Ramsdens, 451-469 Cleethorpe Road, Grimsby DN31 3BZ
S09-024450	ALU_131	Kaszanka wiejska Black Pudding	Agrico	Aluminium foil tray	300g	18/05/2011	33	Poland	5 904075 001113	20/11/2009	Ramsdens, 451-469 Cleethorpe Road, Grimsby DN31 3BZ
S09-	ALU_132	Double Concentrate	Valfrutta	Aluminium	135g	30/06/2012	J4 LR192	Italy	8 001440 003981	20/11/2009	Ramsdens, 451-469



LIMS sample number	Sample code	Product description	Brand	Packaging format	Size / product weight	Best-before-date	Batch code	Country of origin	Barcode	Date of purchase	Place of purchase
024451		Tomato Paste		containing flexible tube			12:29				Cleethorpe Road, Grimsby DN31 3BZ
S09-024452	ALU_133	Premium Lager Beer	Hollandia	Aluminium can	500ml	12/07/2010	13:454	Holland	8 714800 007580	20/11/2009	Ramsdens, 451-469 Cleethorpe Road, Grimsby DN31 3BZ
S09-024453	ALU_134	Cider	Frosty Jack's	Aluminium can	500ml	01/08/2010	12:46 L9236T	UK	5 012136 002709	20/11/2009	Ramsdens, 451-469 Cleethorpe Road, Grimsby DN31 3BZ
S09-024466	ALU_135	Fresh Baked Custard Tart	Coopland's	Aluminium foil tray	None given	None given	None given	None given	None given	20/11/2009	Cooplunds Bakers, 21 St Peters Avenue, Cleethorpes DN33 8HF
S09-024467	ALU_136	Fruit and Nut Flapjack	Classic Cakes	Aluminium foil tray	470g	26/04/2010	E12	None given	5 014951 800133	20/11/2009	Ticker t boo, 198 North Sea Lane, Humberstone DN36 4EP
S09-024468	ALU_137	Chocolate Hazelnut Crunch Protein Bar	Atkins	Aluminium containing laminate	60g	05/07/2010	L9093/S 22:18	Netherlands	5 060074 624781	20/11/2009	Boots The Chemist, 63-67 St Peters Avenue, Cleethorpes DN35 8HF
S09-024469	ALU_138	Energise Cereal Bar	Boots	Aluminium containing laminate	70g	30/11/2009	L8239 21:04	EU	5 000167 082630	20/11/2009	Boots The Chemist, 63-67 St Peters Avenue, Cleethorpes DN35 8HF
S09-024470	ALU_139	Baby Organic Tropical Juice Drink	Boots	Aluminium containing laminate	250ml	28/07/2010	L208 15:40	UK	5 045093 293552	20/11/2009	Boots The Chemist, 63-67 St Peters Avenue, Cleethorpes DN35 8HF
S09-024471	ALU_140	Baby Organic Apple Peach & Mango Fruit Pots	Boots	Aluminium containing tear open closure	100g	09/06/2010	00:43	Germany	5 045093 070122	20/11/2009	Boots The Chemist, 63-67 St Peters Avenue, Cleethorpes DN35 8HF
S09-024525	ALU_141	Sample cancelled									
S09-024526	ALU_142	Sundried Tomato Purée	Tesco Finest	Aluminium containing flexible tube	80g	31/07/2011	9196	Italy	5 051140 410957	20/11/2009	Tesco Leeds Seacroft Extra, Unit 5, Leeds LS14 6JD
S09-024527	ALU_143	Organic Tomato Purée	Tesco Organic	Aluminium containing	200g	30/09/2010	EC1 L A246 16:00	Italy	5 051140 411251	20/11/2009	Tesco Leeds Seacroft Extra, Unit 5, Leeds

LIMS sample number	Sample code	Product description	Brand	Packaging format	Size / product weight	Best-before-date	Batch code	Country of origin	Barcode	Date of purchase	Place of purchase
				flexible tube							LS14 6JD
S09-024528	ALU_144	Double Concentrated Tomato Purée	Trattoria Verdi	Aluminium containing flexible tube	200g	31/05/2011	C02 L R139 18:34	Italy	5 051898 294816	20/11/2009	Tesco Leeds Seacroft Extra, Unit 5, Leeds LS14 6JD
S09-024529	ALU_145	Freshly Baked Potato & Meat Pie	Asda	Aluminium foil tray	None given	22/11/2009	None given	UK	2751 2173	21/11/2009	Asda, 859 Coventry Road, Small Heath, Birmingham B10 OHH
S09-024530	ALU_146	Steak & Kidney Pie	Asda	Aluminium foil tray – cooked in-pack	150g	29/11/2009	22:01 322L7 AGR	UK	W 2039 8187 G	21/11/2009	Asda, 859 Coventry Road, Small Heath, Birmingham B10 OHH
S09-024531	ALU_147	2 Chicken Breasts in a Tomato and Basil Sauce	Asda	Aluminium foil tray – cooked in-pack	360g	26/11/2009	B1 09:14	UK	5 051413 589441 G	21/11/2009	Asda, 859 Coventry Road, Small Heath, Birmingham B10 OHH
S09-024532	ALU_148	Creamy Chicken with Bacon & Leek	Asda	Aluminium foil tray – cooked in-pack	400g	27/11/2009	None given	UK	5 051413 589953 S	21/11/2009	Asda, 859 Coventry Road, Small Heath, Birmingham B10 OHH
S09-024533	ALU_149	Hi-Impact Stimulation Drink	Red Thunder	Aluminium can	6 x 250ml	31/03/2011	L6B9262	None given	None given	21/11/2009	Aldi Stores Ltd, Interchange, Risca, Newport NP11 6BN
S09-024534	ALU_150	Spreadable Processed Cheese Triangles	Bishops Land	Aluminium foil wrapped	140g	04/04/2010	3 09:57 279	None given	25158922	21/11/2009	Aldi Stores Ltd, Interchange, Risca, Newport NP11 6BN
S09-024535	ALU_151	Tuna Flakes with Sundried Tomato & Basil	Ocean Rise	Aluminium can	85g	30/06/2012	MGKM5G 090610	Thailand	22009814	21/11/2009	Aldi Stores Ltd, Interchange, Risca, Newport NP11 6BN
S09-024536	ALU_152	Double Concentrated Tomato Purée	Cucina	Aluminium containing flexible tube	200g	30/09/2011	APE4 L R245 19:33	None given	25117691	21/11/2009	Aldi Stores Ltd, Interchange, Risca, Newport NP11 6BN
S09-024537	ALU_153	Austrian Blue Cheese	The Cheese Emporium	Aluminium foil wrapped	150g	24/11/2009	L230	None given	24004879	21/11/2009	Aldi Stores Ltd, Interchange, Risca, Newport NP11 6BN
S09-024538	ALU_154	Mediterranean Style Vegetables	Asda	Aluminium foil tray – cooked in-pack	410g	24/11/2009	BU1L7 16:24	UK	2305 7173	21/11/2009	Asda, 859 Coventry Road, Small Heath, Birmingham B10 OHH

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S09-024539	ALU_155	Quiche Lorraine	Marks & Spencer	Aluminium foil tray – cooked in-pack	170g	27/11/2009	None given	UK	M 0159 616 S	21/11/2009	Marks and Spencer, Leigh Delamere West, M4 Junction 17-18 SN14 6LB
S09-024540	ALU_156	Stilton and Pear Chutney Tartlets	Waitrose	Aluminium foil tray – cooked in-pack	260g	26/11/2009	D 19:41 9320	UK	5 000169 123140	21/11/2009	Waitrose, 121-131 Portswood Road, Southampton SO17 2FX
S09-024541	ALU_157	Whipping Cream	Londis	Aluminium containing tear open closure	200ml	08/12/2009	15:41 03	EU	5 011406 101937	21/11/2009	Londis, 107 Glasllwch Crescent, High Cross, Newport NP10 9SG
S09-024542	ALU_158	Low Fat Pasteurised Plain Yoghurt	Cool Country	Aluminium containing tear open closure	150g	23/01/2010	M5	EU	5080 5785	21/11/2009	Bainswell Express, 8 Baneswell Road, Newport NP20 4BP
S09-024543	ALU_159	Pick 'N' Mix Fruit Pies & Lattices	Morrisons	Aluminium foil tray	None given	21/11/09	None given	None given	0255147 001858	21/11/2009	Morrisons, Cribbs Causeway, Lysander Road, Bristol BS10 7UD
S09-024544	ALU_160	Crema Bel Paese Processed Cheese Spread	Galbani	Aluminium foil wrapped	28g	01/03/2010	L90245	Italy	8006 8720	21/11/2009	Morrisons, Cribbs Causeway, Lysander Road, Bristol BS10 7UD
S09-024545	ALU_161	8 Cheese Spread Triangles	Morrisons	Aluminium foil wrapped	140g	27/04/2010	08:14	Ireland	5 010251 211198	21/11/2009	Morrisons, Cribbs Causeway, Lysander Road, Bristol BS10 7UD
S09-024546	ALU_162	4 Steak Pies	Morrisons	Aluminium foil tray – cooked in-pack	4 x 150g	29/11/2009	11:20 L 3H	UK	2 318082 501987	21/11/2009	Morrisons, Cribbs Causeway, Lysander Road, Bristol BS10 7UD
S09-024547	ALU_163	Ardennes Pâté Coarse	Somerfield	Aluminium containing tear open closure	175g	29/12/09	L. 1897	Belgium	2902 9518	21/11/2009	Somerfield, Highcross Road, Rogerstone, Newport NP10 9AE
S09-024643	ALU_164	Strawberry Crumble Yoghurt	Dale Farm Spelga	Aluminium containing tear	150g	16/12/2009	None given	None given	5040 8207	20/11/2009	Shop 4 You, 256-258 Newtownards Road,

LIMS sample number	Sample code	Product description	Brand	Packaging format	Size / product weight	Best-before-date	Batch code	Country of origin	Barcode	Date of purchase	Place of purchase
				open closure							Belfast BT4 1AF
S09-024682	ALU_165	Gammon Joint with Sweet Onion Sauce	Cookstown	Aluminium foil tray – cooked in-pack	450g	08/12/2009	None given	UK	5 017326 122397	20/11/2009	Supervalu, 17 Victoria Road, Carrickfergus BT38 7JE
S09-024683	ALU_166	Fresh Lasagne	Carroll Cuisine	Aluminium foil tray – cooked in-pack	350g	07/12/2009	L462260 09H21	None given	5 099338 000610	20/11/2009	Dunnes Stores, 47 Main Street, Larne BT40 1JE
S09-024684	ALU_167	Original Salted Peanuts	KP	Aluminium containing laminate	50g	27/02/2010	R8295 MC3B 00:21	UK	5023 7043	20/11/2009	Supervalu, 17 Victoria Road, Carrickfergus BT38 7JE
S09-024685	ALU_168	Garlic Purée	Sharwood's	Aluminium containing flexible tube	90g	30/09/2011	L9260	Italy	5 000197 563512	20/11/2009	Dunnes Stores, 47 Main Street, Larne BT40 1JE
S09-024686	ALU_169	Coca-Cola	Coca-Cola	Aluminium can	330ml	31/10/2010	0100L92410 K47	Northern Ireland	5 449000 000996	20/11/2009	Mace, 270 Newtownards Road, Belfast BT4 1RD
S09-024687	ALU_170	Double Concentrate Tomato Puree	Napolina	Aluminium containing flexible tube	142g	31/07/2011	CCP L R204 D 36	Italy	5 010061 000098	20/11/2009	Mace, 270 Newtownards Road, Belfast BT4 1RD
S09-024742	ALU_171	Hollow Milk Chocolate Santa's	Kinder	Aluminium foil wrapped	3 x 15g	18/06/2010	L273MW264	None given	4 008400 511528	20/11/2009	Costcutter Larne, 47 Point Street, Larne BT40 1HU
S09-024743	ALU_172	Sweet Pastry Case	Hoppers Farmhouse Bakeries	Aluminium foil tray	None given	27/05/2010	9296B	None given	5 012813 001032	20/11/2009	Costcutter Larne, 47 Point Street, Larne BT40 1HU
S09-024744	ALU_173	Mince Pies	Greggs	Aluminium foil tray	None given	None given	None given	UK	None given	21/11/2009	Greggs 170 Portswood Road, Southampton S017 2NJ
S09-024745	ALU_174	Rocky Road	Waitrose	Aluminium foil tray	None given	25/11/2009	None given	UK	5 000169 112830	21/11/2009	Waitrose, 121-131 Portswood Road, Southampton SO17 2FX
S09-024746	ALU_175	Anchovy Paste	Lorea Gourmet	Aluminium containing	56g	28/02/2010	None given	Spain	49190 00022	21/11/2009	Waitrose, 121-131 Portswood Road,

LIMS sample number	Sample code	Product description	Brand	Packaging format	Size / product weight	Best-before-date	Batch code	Country of origin	Barcode	Date of purchase	Place of purchase
				flexible tube							Southampton SO17 2FX
S09-024747	ALU_176	Milk Chocolate Tea Cakes	Tunnock's	Aluminium foil wrapped	10 x 24g	23/01/2010	L39302	None given	5 010975 070408	21/11/2009	Farmfoods, 3 The Broadway, Portswood Road, Southampton SO17 2WE
S09-024748	ALU_177	Milk Chocolate Coins	RAM Ltd.	Aluminium foil wrapped	118g	01/09/2011	L920112	Italy	8 033028 030447	21/11/2009	Farmfoods, 3 The Broadway, Portswood Road, Southampton SO17 2WE
S09-024749	ALU_178	Candy Floss	Cukrová Vata	Aluminium containing tear open closure	20g	09/05/2011	None given	Czech Republic	8 595245 300234	21/11/2009	Redbrook Village Stores, Redbrook, Monmouth NP25 4LZ
S09-024750	ALU_179	Sample cancelled									
S09-025829	ALU_180	Original Beef Stock Cube	Kallo	Aluminium foil wrapped	72g	30/11/2010	E	Germany	5 013665 103530	21/11/2009	Asda, 859 Coventry Road, Small Heath, Birmingham B10 OHH
S09-025830	ALU_181	Double Concentrate Tomato Purée	Asda	Aluminium containing flexible tube	200g	31/10/2011	APE4 L R297 01:53	Italy	5 051413 575994 S	21/11/2009	Asda, 859 Coventry Road, Small Heath, Birmingham B10 OHH
S09-025831	ALU_182	Organic Pure Orange Juice from Concentrate	Growers Direct	Aluminium containing laminate	3 x 200ml	30/06/2010	X302B 9215 01:42	None given	5 010663 801024	21/11/2009	Asda, 859 Coventry Road, Small Heath, Birmingham B10 OHH
S09-025832	ALU_183	Unsweetened Soya Milk	Asda Smart Price	Aluminium containing laminate	1 Litre	12/10/2010	U421622:10	UK	5 050854 584565	21/11/2009	Asda, 859 Coventry Road, Small Heath, Birmingham B10 OHH
S09-025833	ALU_184	UHT Skimmed Milk	Asda Smart Price	Aluminium containing laminate	1 Litre	08/04/2010	A BCB 23:37 CV001	UK	W 2037 5232 G	21/11/2009	Asda, 859 Coventry Road, Small Heath, Birmingham B10 OHH
S09-025834	ALU_185	4 Treacle Tarts	Morrisons	Aluminium foil tray	None given	29/11/2009	None given	UK	0 275255 001199	21/11/2009	Morrisons, Cribbs Causeway, Lysander Road, Bristol BS10 7UD

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S09-025835	ALU_186	Beef Stock Cubes	Oxo	Aluminium foil wrapped	35g	31/08/2011	9255W2 2125	None given	5 000175 411200	21/11/2009	Morrisons, Cribbs Causeway, Lysander Road, Bristol BS10 7UD
S09-025836	ALU_187	Sardines in Tomato Sauce	Morrisons	Aluminium can	120g	31/12/2012	EU1653_ET1 17J	Morocco	5 010251 037170	21/11/2009	Morrisons, Cribbs Causeway, Lysander Road, Bristol BS10 7UD
S09-025837	ALU_188	Unsweetened Soya	Morrisons Value	Aluminium containing laminate	1 Litre	28/08/2010	F9269H 12:29	UK	5 010251 307037	21/11/2009	Morrisons, Cribbs Causeway, Lysander Road, Bristol BS10 7UD
S09-025838	ALU_189	UHT Long Life Skimmed Milk	Morrisons Value	Aluminium containing laminate	1 Litre	18/04/2010	291 MV001	UK	5 010251 301196	21/11/2009	Morrisons, Cribbs Causeway, Lysander Road, Bristol BS10 7UD
S09-025839	ALU_190	Tiger Energy Drink	Tiger	Aluminium can	250ml	13/03/2011	16:18 02	EU	5 900552 014713	21/11/2009	Skiep, Pod Orlem, 12 The Broadway, Portswood Southampton
S09-025840	ALU_191	Le Phare Du Cap Bon Chilli Paste	Harissa	Aluminium containing flexible tube	70g	12/10/2011	None given	Tunisia	6 194049 100044	21/11/2009	International Foods, 164-168 Portswood Road, Southampton SO17 2NJ
S09-025841	ALU_192	Canadian Style Sardines in Tomato Sauce	Brunswick	Aluminium can	106g	01/03/2011	8070CBX000	Canada	0 66613 00006 6	21/11/2009	International Foods, 164-168 Portswood Road, Southampton SO17 2NJ
S09-025842	ALU_193	Orange Juice Drink	California Garden	Aluminium can	240ml	15/10/2010	None given	Korea	0 32894 03643 8	21/11/2009	International Foods, 164-168 Portswood Road, Southampton SO17 2NJ
S09-025843	ALU_194	Poultry Pate with Mushrooms	Profi	Aluminium foil tray	131g	10/07/2011	02 B 7:37	Poland	5 901696 000068	21/11/2009	Co-op, 149 Crow Lane, Henbury, Bristol BS10 7DR

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S09-025844	ALU_195	Thomas & Friends Milk Chocolate Lollipop	Kinnerton Confectionery	Aluminium foil wrapped	None given	None given	L9287F	UK	5065 5861	21/11/2009	Co-op, 149 Crow Lane, Henbury, Bristol BS10 7DR
S09-025940	ALU_196	16 Milk Chocolate Teacakes	Marks & Spencer	Aluminium foil wrapped	280g	28/04/2010	A1 04:24	UK	M 0604 123 S	21/11/2009	Marks and Spencer, Leigh Delamere West, M4 Junction 17-18 SN14 6LB
S09-025941	ALU_197	Ginger Beer	Marks & Spencer	Aluminium can	330ml	18/03/2010	9252 17:29	UK	M 0656 252 S	21/11/2009	Marks and Spencer, Leigh Delamere West, M4 Junction 17-18 SN14 6LB
S09-025942	ALU_198	Chocolate Caramel Discs	Marks & Spencer	Aluminium foil wrapped	80g	20/04/2010	L9271B	UK	None given	21/11/2009	Marks and Spencer, Leigh Delamere West, M4 Junction 17-18 SN14 6LB
S09-025943	ALU_199	Sardines in Sunflower oil	Somerfield	Aluminium can	120g	31/12/2014	ET096J	Morocco	2903 7247	21/11/2009	Somerfield, Highcross Road, Rogerstone, Newport NP10 9AE
S09-025944	ALU_200	Pussy Natural Energy Drink	Pussy	Aluminium can	250ml	30/04/2011	L6A 928706:19	None given	5 060101 630006	21/11/2009	Bainswell Express, 8 Baneswell Road, Newport NP20 4BP
S09-025945	ALU_201	Abbott's Traditional Jamaican Style Ginger Beer	A.G.Barr PLC	Aluminium can	330ml	30/04/2011	9101 18:06	None given	5 000382 025474	21/11/2009	Bargain Booze Plus, Crow Lane, Bristol BS4 2RA
S09-025946	ALU_202	Original Natch Dry Cider	Gaymer Cider Company	Aluminium can	500ml	None given	L9282/2 12:03	None given	5 010079 881139	21/11/2009	Bargain Booze Plus, Crow Lane, Bristol BS4 2RA
S09-025947	ALU_203	Wheat Crunchies	KP Snacks	Aluminium containing laminate	30g	06/02/2010	9259 7A 12:16	UK	5 000237 091906	21/11/2009	Londis, 107 Glasllwch Crescent, High Cross, Newport NP10 9SG
S09-026376	ALU_204	Steak & Kidney Pudding	Holland's	Aluminium foil tray – cooked in-pack	None given	10/12/2009	16:05	UK	5 000242 451115	05/12/2009	Tesco Leeds Seacroft Extra, Unit 5, Leeds LS14 6JD
S09-	ALU_205	British Roast Chicken & Gravy	Tesco Finest	Aluminium foil tray – cooked	250g	06/12/2009	DD4	UK	5 052003 733435	05/12/2009	Tesco Leeds Seacroft Extra, Unit 5, Leeds

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026377		Pie		in-pack							LS14 6JD
S09-026378	ALU_206	Potato Gratin	Tesco	Aluminium foil tray – cooked in-pack	450g	12/12/2009	84C0336	UK	5 031021 780348	05/12/2009	Tesco Leeds Seacroft Extra, Unit 5, Leeds LS14 6JD
S09-026379	ALU_207	Classics Creamy Fish Pie	Tesco Finest	Aluminium foil tray – cooked in-pack	700g	08/12/2009	12:33 L2	UK	5 000462 361454	05/12/2009	Tesco Leeds Seacroft Extra, Unit 5, Leeds LS14 6JD
S09-026380	ALU_208	Premier Pie Steak & Kidney	Peter's	Aluminium foil tray – cooked in-pack	235g	12/12/2009	335 08:24 B1	UK	5 011187 102895	05/12/2009	Sainsbury's, 9-11 Moor Allerton Centre, Leeds LS17 5NY
S09-026381	ALU_209	Beef Meatballs with Tomato & Bacon Sauce	Sainsbury's	Aluminium foil tray – cooked in-pack	460g	10/12/2009	None given	UK	0154 1007	05/12/2009	Sainsbury's, 9-11 Moor Allerton Centre, Leeds LS17 5NY
S09-026382	ALU_210	Sausage & Bacon Wraps	Sainsbury's	Aluminium foil tray – cooked in-pack	266g	15/12/2009	None given	UK	0162 2706	05/12/2009	Sainsbury's, 9-11 Moor Allerton Centre, Leeds LS17 5NY
S09-026383	ALU_211	Organic Butter	Yeo Valley	Aluminium containing laminate	250g	29/01/2009	None given	UK	5 036589 200017	05/12/2009	Sainsbury's, 9-11 Moor Allerton Centre, Leeds LS17 5NY
S09-026384	ALU_212	Scottish Trout with Wild Flower Honey, Orange & Thyme Butter	Sainsbury's Taste the Difference	Aluminium foil tray – cooked in-pack	526g	08/12/2009	None given	UK	0157 2216	05/12/2009	Sainsbury's, 9-11 Moor Allerton Centre, Leeds LS17 5NY
S09-026545	ALU_213	Shortcrust Sweetmince Pies	Murdoch Allan	Aluminium foil tray	None given	04/01/2010	None given	UK	5 029912 040305	05/12/2009	Somerfield, 59 Shandwick Place, Edinburgh EH2 4SD
S09-026546	ALU_214	Crème Egg	Cadbury	Aluminium foil wrapped	None given	31/07/2010	None given	None given	5020 1600	05/12/2009	Somerfield, 59 Shandwick Place, Edinburgh EH2 4SD
S09-026547	ALU_215	Limeade	A.G.Barr PLC	Aluminium can	330ml	31/07/2011	9205 21:25	None given	5 000382 024019	05/12/2009	Poundstretcher Ltd, 42 Shandwick Place, Edinburgh EH2 4RT
S09-026548	ALU_216	Euro Medallion Milk Chocolate	Poundstretcher	Aluminium foil wrapped	25g	01/09/2011	L9167	Italy	8 033028 030256	05/12/2009	Poundstretcher Ltd, 42 Shandwick Place,



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											Edinburgh EH2 4RT
S09-026549	ALU_217	Milk Chocolate Santa	Lindt	Aluminium foil wrapped	40g	31/03/2010	L363912	Germany	4 000539 770500	05/12/2009	Boots, 5-9 St James Centre, Edinburgh EH1 3SN
S09-026550	ALU_218	Baby Summer Fruits Juice Drink	Boots	Aluminium containing laminate	250ml	28/09/2010	L260.05.39	UK	5 045093 292616	05/12/2009	Boots, 5-9 St James Centre, Edinburgh EH1 3SN
S09-026551	ALU_219	Sample cancelled									
S09-026552	ALU_220	Ferrero Rocher Chocolates	Ferrero Rocher	Aluminium foil wrapped	50g	10/04/2010	L240MA-0813	None given	8013 5500	05/12/2009	R.S McColl Ltd, 24 St. James Centre Edinburgh EH1 3SR
S09-026553	ALU_221	Rice Drink	Rice Dream	Aluminium containing laminate	200ml	27/07/2010	E 22:48 208	EU	0 084253 333207	05/12/2009	Holland and Barrett, Rose Street, Edinburgh EH2 2NN
S09-026554	ALU_222	Chocolate Flavoured Baubles	MC	Aluminium foil wrapped	150g	30/09/2010	L9316	None given	5 025066 754150	05/12/2009	Poundland, 73 St James Centre, Edinburgh EH1 3SS
S09-026555	ALU_223	Sample cancelled									
S09-026556	ALU_224	Emerge Stimulation Drink	Cott	Aluminium can	250ml	31/05/2011	L6B 9307 19:22	None given	5 000177 449638	05/12/2009	Poundland, 73 St James Centre, Edinburgh EH1 3SS
S09-026557	ALU_225	Bio-Live Greek Style Yoghurt with Honey	Tims Dairy	Aluminium containing tear open closure	175g	11/12/2009	4 T1 08:42	UK	5 022463 175915	05/12/2009	Whistlestop, Waverley Railway Station, Edinburgh EH1 1BB
S09-026558	ALU_226	Milk Chocolate Lollipop with Popping Candy Pieces	Kinnerton Confectionery	Aluminium foil wrapped	30g	None given	L9232K	None given	5064 6135	05/12/2009	Whistlestop, Waverley Railway Station, Edinburgh EH1 1BB
S09-026559	ALU_227	Canada Dry Ginger Ale	Schweppes	Aluminium can	150ml	31/10/2010	A 294SC610:5 5	Great Britain	5019 3295	05/12/2009	Whistlestop, Waverley Railway Station, Edinburgh EH1 1BB

LIMS sample number	Sample code	Product description	Brand	Packaging format	Size / product weight	Best-before-date	Batch code	Country of origin	Barcode	Date of purchase	Place of purchase
S09-026841	ALU_228	Spinach, Parsnip & Basil	Plum Organic Superfoods	Aluminium containing tear open closure – cooked in-pack	200g	19/12/2010	14:29	France	5 060116 890044	05/12/2009	Tesco Leeds Seacroft Extra, Unit 5, Leeds LS14 6JD
S09-026842	ALU_229	Flapjack	Tesco Value	Aluminium foil tray	360g	13/03/2010	A1	UK	5 000462 431614	05/12/2009	Tesco Leeds Seacroft Extra, Unit 5, Leeds LS14 6JD
S09-026843	ALU_230	6 Assorted Jam Tarts	Tesco	Aluminium foil tray	None given	29/12/2009	9335 07:36	EU	5 000119 292247	05/12/2009	Tesco Leeds Seacroft Extra, Unit 5, Leeds LS14 6JD
S09-026844	ALU_231	6 Bramley Apple Pies	Mrs Peek's	Aluminium foil tray	None given	08/12/2009	09314 04:28	None given	5 012174 007155	05/12/2009	Tesco Leeds Seacroft Extra, Unit 5, Leeds LS14 6JD
S09-026845	ALU_232	Wysoy Soya Infant Formula	SMA	Aluminium containing tear open closure	860g	21/05/2012	V9H223D09 023362 16:54	None given	5 010981 003216	05/12/2009	Tesco Leeds Seacroft Extra, Unit 5, Leeds LS14 6JD
S09-026846	ALU_233	Staydown Infant Milk	SMA	Aluminium containing tear open closure	900g	21/08/2011	P9L223A07 003412 08:11	None given	5 010981 003230	05/12/2009	Tesco Leeds Seacroft Extra, Unit 5, Leeds LS14 6JD
S09-026847	ALU_234	Blackthorn Cider	Gaymer Cider Company	Aluminium can	440ml	None given	L9321/2 14:34	UK	5 010134 006989	05/12/2009	Tesco Leeds Seacroft Extra, Unit 5, Leeds LS14 6JD
S09-026848	ALU_235	Zen Republic Energy Drink	Zen Republic	Aluminium can	250ml	28/02/2010	L2A 905706:33	None given	5 000177 452249	05/12/2009	Tesco Leeds Seacroft Extra, Unit 5, Leeds LS14 6JD
S09-026849	ALU_236	Original Ale	Caffrey's Ale	Aluminium can	440ml	30/06/2010	L9282 P3 10:48	Great Britain	5 010038 046784	05/12/2009	Sainsbury's, 9-11 Moor Allerton Centre, Leeds LS17 5NY
S09-026850	ALU_237	Apple & Blackcurrant Pies	Mr. Kipling	Aluminium foil tray – cooked in-pack	6 x 66.5g	21/12/2009	J319*E97(1)	None given	5 000221 003335	05/12/2009	Sainsbury's, 9-11 Moor Allerton Centre, Leeds LS17 5NY
S09-026851	ALU_238	Fruity Breakfast Banana and Peach	Hipp Organic	Aluminium containing tear	4 x 100g	19/08/2010	18:52	Germany	4 062300 092860	05/12/2009	Sainsbury's, 9-11 Moor Allerton Centre, Leeds

LIMS sample number	Sample code	Product description	Brand	Packaging format	Size / product weight	Best-before-date	Batch code	Country of origin	Barcode	Date of purchase	Place of purchase
		with Cereal		open closure							LS17 5NY
S09-026852	ALU_239	Hollow Chocolate Decorations	Sainsburys Basics	Aluminium foil wrapped	100g	31/05/2010	09 180 2	France	0109 7290	05/12/2009	Sainsbury's, 9-11 Moor Allerton Centre, Leeds LS17 5NY
S09-026853	ALU_240	"Tear & Share" Continental Patisserie with Chocolate Chips	Continental Classics	Aluminium foil tray	400g	27/12/2009	EMBC 321-321- 08:50	France	5 010292 913686	05/12/2009	Sainsbury's, 9-11 Moor Allerton Centre, Leeds LS17 5NY
S09-026854	ALU_241	Apple & Blueberry Fruit Pot	Organix	Aluminium containing tear open closure	4 X 100g	30/06/2010	00h43 F	France	5 024121 216206	05/12/2009	Sainsbury's, 9-11 Moor Allerton Centre, Leeds LS17 5NY

Table 2. Samples selected for the profiling studies

<b>LIMS number</b>	<b>Sample code</b>	<b>Product description</b>
S09-021265	ALU_008	Oxford Blue Cheese
S09-021248	ALU_011	British Chicken Breast with Portuguese-Style Piri Piri Marinade
S09-021256	ALU_023	Milk Chocolate Coins
S09-021349	ALU_026	Chocolate Brownie
S09-021454	ALU_031	Tomato Puree
S09-021738	ALU_055	Chocolate Mousse
S09-021740	ALU_057	Chicken Tikka Pie
S09-022191	ALU_107	Steamed Chocolate Puddings
S09-023989	ALU_120	Garlic Puree
S09-023994	ALU_125	Chicken Fillets with Sun-Dried Tomato & Mozzarella
S09_024450	ALU_131	Kaszanka wiejska Black Pudding
S09_024451	ALU_132	Double Concentrate Tomato Paste
S09_024468	ALU_137	Chocolate Hazelnut Crunch Protein Bar
S09_024528	ALU_144	Double Concentrated Tomato Purée
S09_024687	ALU_170	Double Concentrate Tomato Puree
S09_024745	ALU_174	Rocky Road
S09_025829	ALU_180	Original Beef Stock Cube
S09_025836	ALU_187	Sardines in Tomato Sauce
S09_025840	ALU_191	Le Phare Du Cap Bon Chilli Paste
S09_025844	ALU_195	Thomas & Friends Milk Chocolate Lollipop
S09-025943	ALU_199	Sardines in Sunflower oil
S09_026548	ALU_216	Euro Medallion Milk Chocolate
S09_026558	ALU_226	Chocolate lollipop with popping candy pieces
S09_026850	ALU_237	Apple & Blackcurrant Pies
S09_026853	ALU_240	“Tear & Share” Continental Patisserie with Chocolate Chips

Table 3. Concentrations of aluminium, arsenic, cadmium, chromium, copper, lead, manganese, mercury, nickel and selenium in the foodstuffs

LIMS number	Sample code	Product description	Weight (g)	Concentration (mg/kg)									
				Al	Cr	Mn	Ni	Cu	As	Se	Cd	Hg	Pb
S09-021246	ALU_001	Taze Sürme Peyniri	0.5	0.4	<0.01	0.030	<0.04	(0.08)	<0.01	(0.02)	<0.004	<0.004	<0.004
S09-021247	ALU_002	Ayran	1	<0.06	<0.006	0.060	(0.03)	(0.03)	<0.006	<0.006	<0.002	<0.002	<0.002
S09-021252	ALU_003	Soft Cheese	0.5	(0.1)	<0.01	0.029	(0.05)	0.72	<0.01	(0.03)	<0.004	<0.004	<0.004
S09-021254	ALU_004	Apple Juice	2	0.49	(0.005)	0.350	(0.01)	(0.03)	<0.003	<0.003	<0.001	<0.001	(0.002)
S09-021260	ALU_005	Family Flapjack	0.5	2.7	(0.02)	15.100	0.47	1.64	<0.01	(0.02)	(0.007)	<0.004	(0.006)
S09-021261	ALU_006	Strawberry Yoghurt	1	(0.11)	<0.006	0.266	(0.04)	0.07	<0.006	(0.015)	<0.002	<0.002	<0.002
S09-021262	ALU_007	Pure Still Apple & Cranberry juice	2	0.89	(0.004)	0.395	(0.02)	0.07	(0.008)	<0.003	(0.002)	<0.001	0.004
S09-021265	ALU_008	Oxford Blue Cheese *	0.5	5.0	<0.01	0.221	(0.10)	0.30	<0.01	0.05	<0.004	<0.004	(0.008)
S09-021267	ALU_009	Cornish Pilchard Fillets	1	(0.14)	(0.016)	0.402	(0.02)	1.36	3.960	0.416	(0.002)	0.041	0.010
S09-021282	ALU_010	Sustainably-Fished Filleted Sardines	1	(0.11)	(0.008)	0.499	<0.02	1.51	1.510	0.336	<0.002	0.038	0.010
S09-021248	ALU_011	British Chicken Breast with Portuguese-Style Piri Piri Marinade *	1	39.50	0.030	0.386	(0.03)	0.48	<0.006	0.085	(0.005)	<0.002	0.022
S09-021249	ALU_012	Instant Oat Porridge	1	<0.06	<0.006	6.880	0.20	0.89	<0.006	(0.009)	(0.004)	<0.002	<0.002
S09-021250	ALU_013	Belgian Milk Chocolate Coated Honeycomb	0.5	5.8	0.13	2.130	0.51	2.05	<0.01	(0.01)	(0.011)	<0.004	(0.006)
S09-021253	ALU_014	Steak Puff Pastry Pie	0.5	1.5	(0.01)	2.000	<0.04	0.69	<0.01	(0.03)	(0.008)	<0.004	<0.004
S09-021255	ALU_015	6 Apple Pies	0.5	2.2	(0.01)	3.110	<0.04	0.63	<0.01	<0.01	(0.011)	<0.004	(0.005)
S09-021258	ALU_016	Chicken Casserole with Rice	1	0.91	0.063	1.010	0.08	0.34	0.033	(0.008)	0.011	<0.002	(0.004)
S09-021259	ALU_017	Chopped Tomatoes in Tomato Juice	2	0.77	0.036	0.751	0.08	0.84	<0.003	(0.003)	0.016	<0.001	0.004
S09-021264	ALU_018	Winter Roasting Vegetables	2	0.32	(0.003)	1.400	0.08	0.60	(0.004)	(0.005)	0.005	<0.001	(0.001)
S09-021266	ALU_019	Sweet Pastry Case	0.5	4.6	(0.03)	6.260	(0.06)	1.01	<0.01	0.06	0.021	<0.004	(0.008)

LIMS number	Sample code	Product description	Weight (g)	Concentration (mg/kg)									
				Al	Cr	Mn	Ni	Cu	As	Se	Cd	Hg	Pb
S09-021263	ALU_020	Milkybar White Chocolate Buttons	0.5	(0.3)	<0.01	0.129	(0.06)	0.21	<0.01	0.05	<0.004	<0.004	<0.004
S09-021251	ALU_021	Halloween Ghosts Milk Chocolate Pieces *	0.5	7.2	0.15	3.250	0.84	3.33	<0.01	0.07	(0.011)	<0.004	(0.008)
S09-021257	ALU_022	Options Mint Madness	0.5	44.6	1.10	11.50	2.68	10.67	(0.01)	0.11	0.053	0.015	0.042
S09-021256	ALU_023	Milk Chocolate Coins *	0.5	12.6	0.30	4.097	1.00	4.13	<0.01	0.036	0.015	<0.004	(0.013)
S09-021347	ALU_024	Sample cancelled											
S09-021348	ALU_025	Podlaski Chicken Pâté	0.5	1.2	(0.03)	1.020	<0.04	0.58	<0.01	0.07	<0.004	<0.004	<0.004
S09-021349	ALU_026	Chocolate Brownie *	0.5	17.9	0.36	5.225	1.04	5.14	<0.01	0.06	0.015	(0.004)	0.022
S09-021350	ALU_027	Mackerel Fillets	1	1.46	<0.006	0.369	<0.02	0.95	1.250	0.245	0.011	0.021	<0.002
S09-021351	ALU_028	Smokey Cheese	0.5	(0.1)	<0.01	0.121	(0.10)	0.20	<0.01	0.04	<0.004	<0.004	<0.004
S09-021352	ALU_029	Tropical Juice Drink	2	(0.04)	<0.003	0.051	<0.01	(0.03)	<0.003	<0.003	<0.001	<0.001	<0.001
S09-021353	ALU_030	Summer Fruits Drink	2	0.84	(0.005)	0.725	(0.02)	0.05	<0.003	<0.003	<0.001	<0.001	0.005
S09-021454	ALU_031	Tomato Puree *	2	18.4	0.14	3.310	0.31	4.43	(0.009)	0.014	0.071	<0.001	0.013
S09-021455	ALU_032	Salted Peanuts	0.5	0.9	(0.01)	16.900	(0.08)	6.88	<0.01	0.42	0.021	<0.004	<0.004
S09-021456	ALU_033	Chocolate Orange	0.5	5.2	0.13	3.530	0.83	3.55	<0.01	0.06	(0.013)	<0.004	<0.004
S09-021457	ALU_034	Pringles Original	0.5	1.2	(0.03)	2.070	(0.10)	2.09	(0.02)	(0.01)	0.045	<0.004	<0.004
S09-021458	ALU_035	Cottage Cheese *	0.5	<0.1	(0.01)	0.076	<0.04	0.20	<0.01	0.074	<0.004	<0.004	<0.004
S09-021459	ALU_036	Quark-Creme Peach	1	(0.17)	<0.006	0.049	(0.03)	0.16	<0.006	0.040	<0.002	<0.002	<0.002
S09-021460	ALU_037	Herring Fillets in Tomato Sauce	1	0.94	<0.006	0.555	(0.03)	0.82	1.060	0.248	0.008	0.027	(0.003)
S09-021461	ALU_038	Sun-dried Tomato Sauce	2	6.41	0.122	1.910	0.15	0.93	(0.009)	(0.007)	0.017	(0.002)	0.007
S09-021462	ALU_039	Orange Drink *	2	<0.03	<0.003	0.029	(0.01)	0.05	<0.003	<0.003	<0.001	<0.001	<0.001
S09-021463	ALU_040	Sample cancelled											
S09-021479	ALU_041	Cranberry Stimulation Drink	2	0.91	<0.003	0.027	<0.01	(0.02)	<0.003	<0.003	<0.001	<0.001	<0.001
S09-021480	ALU_042	Instant Noodles in a Cup	1	2.54	(0.010)	1.630	0.07	0.58	<0.006	(0.008)	(0.005)	<0.002	0.007

LIMS number	Sample code	Product description	Weight (g)	Concentration (mg/kg)									
				Al	Cr	Mn	Ni	Cu	As	Se	Cd	Hg	Pb
S09-021481	ALU_043	Export Lager	2	(0.07)	(0.003)	0.040	<0.01	0.04	(0.008)	<0.003	<0.001	<0.001	<0.001
S09-021482	ALU_044	Cherry Yoghurt	1	(0.13)	(0.009)	0.246	(0.04)	0.12	<0.006	0.025	<0.002	<0.002	<0.002
S09-021483	ALU_045	Roast Flavour Chicken Bites	1	1.19	0.034	0.584	(0.02)	0.36	(0.019)	0.117	(0.002)	<0.002	(0.004)
S09-021484	ALU_046	Chicken Flavour Super Noodles	1	3.76	0.026	1.430	(0.03)	0.41	<0.006	(0.012)	0.008	<0.002	(0.004)
S09-021485	ALU_047	Mint Flavour Chocolate Coated Biscuits	0.5	5.6	0.07	4.300	0.31	1.80	<0.01	(0.03)	(0.011)	<0.004	(0.012)
S09-021527	ALU_048	Double Concentrate Tomato Puree	2	12.80	0.283	3.060	0.30	3.32	0.011	0.020	0.042	<0.001	0.016
S09-021528	ALU_049	Chilli Puree *	2	2.65	0.052	1.925	0.16	1.10	(0.006)	0.018	0.048	<0.001	0.013
S09-021529	ALU_050	Anchovy Paste With Olive Oil	0.5	6.7	0.11	4.840	0.24	1.18	1.55	0.72	0.496	0.019	(0.012)
S09-021734	ALU_051	2 Beef Steaks with a Peppercorn Sauce *	1	0.31	(0.007)	0.105	<0.02	0.90	<0.006	0.124	<0.002	<0.002	<0.002
S09-021735	ALU_052	Activia Creamy Strawberry Yoghurt	1	(0.15)	<0.01	0.362	(0.04)	0.12	<0.006	0.031	<0.002	<0.002	<0.002
S09-021736	ALU_053	Fruity Custard Banana	1	0.48	(0.015)	1.600	(0.03)	0.62	<0.006	(0.009)	<0.002	<0.002	(0.004)
S09-021737	ALU_054	Cheese and Onion Quiche	0.5	2.3	(0.02)	1.180	(0.05)	0.47	<0.01	0.08	(0.007)	<0.004	<0.004
S09-021738	ALU_055	Chocolate Mousse *	1	9.01	0.160	2.400	0.57	2.11	<0.006	0.033	0.009	(0.002)	0.008
S09-021739	ALU_056	British Salted Creamery Butter	0.5	0.6	<0.01	<0.004	<0.04	<0.04	<0.01	<0.01	<0.004	<0.004	<0.004
S09-021740	ALU_057	Chicken Tikka Pie	1	8.93	0.200	3.300	0.19	1.13	(0.010)	0.066	0.022	<0.002	0.033
S09-021741	ALU_058	Strawberry and Banana Smoothie	2	1.71	0.083	1.910	0.07	0.34	(0.004)	<0.003	(0.004)	<0.001	0.017
S09-021742	ALU_059	Whole Milk UHT	0.5	1.1	0.04	0.168	(0.06)	0.16	<0.01	(0.02)	<0.004	<0.004	<0.004
S09-021743	ALU_060	Bitter Shandy	2	(0.09)	<0.003	0.010	<0.01	<0.01	<0.003	<0.003	<0.001	<0.001	<0.001
S09-021744	ALU_061	Nacho Cheese Dip	2	<0.03	<0.003	0.028	(0.03)	0.04	<0.003	0.035	<0.001	<0.001	<0.001
S09-021745	ALU_062	Chocolate Flavoured Dessert	1	2.46	0.122	0.708	0.20	0.68	<0.006	0.028	<0.002	(0.003)	(0.003)

LIMS number	Sample code	Product description	Weight (g)	Concentration (mg/kg)									
				Al	Cr	Mn	Ni	Cu	As	Se	Cd	Hg	Pb
S09-021848	ALU_063	Double Concentrated Tomato Puree	2	4.01	0.085	2.320	0.20	2.45	(0.004)	0.028	0.039	<0.001	0.005
S09-021849	ALU_064	Juicy Dried Apricots *	0.5	7.3	0.04	1.983	0.49	2.27	(0.01)	(0.01)	<0.004	<0.004	0.019
S09-021850	ALU_065	Aptamil Follow On Milk	2	(0.06)	(0.003)	0.068	(0.02)	0.35	<0.003	0.026	<0.001	<0.001	<0.001
S09-021851	ALU_066	Pure Orange Juice	2	(0.15)	<0.005	0.314	(0.01)	0.28	<0.003	<0.003	<0.001	<0.001	<0.001
S09-021852	ALU_067	Curry Flavour Pot Noodle	1	2.05	<0.006	1.980	(0.04)	0.80	<0.006	<0.006	(0.006)	<0.002	(0.005)
S09-021853	ALU_068	Crunchie	0.5	3.5	0.07	2.360	0.60	2.64	<0.01	0.06	(0.008)	<0.004	(0.005)
S09-021854	ALU_069	Double Concentrated Tomato Puree	2	9.26	0.822	4.040	0.63	4.97	(0.006)	0.029	0.060	<0.001	0.049
S09-021855	ALU_070	Beef Jerky *	0.5	2.6	0.05	0.656	(0.07)	1.52	<0.01	0.16	<0.004	<0.004	(0.004)
S09-021856	ALU_071	Pork Crackles	0.5	1.2	0.25	0.241	(0.13)	1.57	<0.01	0.28	<0.004	<0.004	<0.004
S09-021857	ALU_072	Sugar Free Lemonade	2	0.23	<0.003	(0.003)	<0.01	<0.01	<0.003	<0.003	<0.001	<0.001	<0.001
S09-021858	ALU_073	Sample cancelled											
S09-021859	ALU_074	Soya Milk	2	0.59	0.015	0.165	(0.03)	0.33	<0.003	0.020	<0.001	<0.001	(0.002)
S09-021860	ALU_075	Long Life Skimmed Milk	2	0.11	<0.003	0.023	(0.03)	0.04	<0.003	0.028	<0.001	<0.001	<0.001
S09-022078	ALU_076	Sweet Popcorn	0.5	0.9	(0.01)	9.340	0.19	2.09	<0.01	(0.03)	(0.010)	<0.004	<0.004
S09-022079	ALU_077	Ridge Cut Salt and Malt Vinegar Crisps	0.5	0.7	(0.03)	3.320	(0.09)	2.17	(0.02)	<0.01	0.142	<0.004	<0.004
S09-022080	ALU_078	Chocolate Chip Cookies	0.5	5.6	0.14	5.020	0.61	3.05	<0.01	(0.02)	0.022	<0.004	0.018
S09-022081	ALU_079	Spicy Salsa Dip	2	1.78	0.060	1.110	0.08	0.91	<0.003	<0.003	0.012	<0.001	0.004
S09-022082	ALU_080	Sour Cream & Chive Dip	0.5	(0.1)	(0.01)	0.065	<0.04	(0.10)	<0.01	(0.02)	<0.004	<0.004	<0.004
S09-022083	ALU_081	Tuna Light Lunch	1	0.75	0.011	0.895	0.10	0.70	0.160	0.190	0.020	0.047	0.005
S09-022084	ALU_082	Mackerel Fillets in Curry Sauce	1	1.48	0.034	1.320	0.04	0.70	1.320	0.346	0.010	0.016	0.004
S09-022085	ALU_083	Follow On Milk	2	<0.03	(0.004)	0.069	(0.02)	0.52	<0.003	0.021	<0.001	<0.001	<0.001
S09-022086	ALU_084	Sample cancelled											



LIMS number	Sample code	Product description	Weight (g)	Concentration (mg/kg)									
				Al	Cr	Mn	Ni	Cu	As	Se	Cd	Hg	Pb
S09-022087	ALU_085	Sample cancelled											
S09-022088	ALU_086	Sample cancelled											
S09-022089	ALU_087	Alpen Light summer Fruits Cereal Bar	0.5	0.5	0.04	11.200	0.18	1.71	(0.06)	0.04	0.017	<0.004	<0.004
S09-022090	ALU_088	Sample cancelled											
S09-022091	ALU_089	Minced Beef & Onion Pie	1	1.25	0.016	3.000	0.04	0.64	<0.006	0.035	0.015	<0.002	0.005
S09-022092	ALU_090	Mackerel Fillets in Sunflower Oil	1	0.07	<0.006	0.091	<0.02	0.66	1.470	0.383	0.007	0.038	<0.002
S09-022093	ALU_091	Double Cream	1	<0.06	<0.006	0.046	<0.02	0.09	<0.006	0.022	<0.002	<0.002	<0.002
S09-022094	ALU_092	Orange Juice From Concentrate	2	0.19	(0.005)	0.381	(0.01)	0.30	<0.003	<0.003	<0.001	<0.001	<0.001
S09-022177	ALU_093	Sample cancelled											
S09-022178	ALU_094	Sample cancelled											
S09-022179	ALU_095	Still Vimto Mixed Fruit Juice Drink	2	(0.09)	(0.005)	0.121	<0.01	<0.01	<0.003	<0.003	<0.001	<0.001	(0.002)
S09-022180	ALU_096	Strawberry Juice Drink	2	0.15	(0.003)	0.418	<0.01	<0.01	(0.009)	<0.003	<0.001	<0.001	(0.002)
S09-022181	ALU_097	Sample cancelled											
S09-022182	ALU_098	Chicken & Mushroom Flavour Noodle Snack	1	1.18	0.009	1.690	0.03	0.53	0.006	0.048	0.005	<0.002	0.006
S09-022183	ALU_099	Mackerel Fillets In Spicy Tomato Sauce	1	0.63	0.013	0.324	0.03	0.88	1.390	0.366	0.014	0.031	<0.002
S09-022184	ALU_100	Premium Lager Beer	2	(0.08)	(0.004)	0.086	<0.01	0.04	(0.005)	<0.003	<0.001	<0.001	<0.001
S09-022185	ALU_101	Brussels Paté	0.5	0.4	<0.01	1.750	<0.04	4.88	<0.01	0.19	(0.012)	<0.004	<0.004
S09-022186	ALU_102	Maltesers Super Thick Chocolate Shake	2	1.61	0.027	0.372	0.09	0.38	<0.003	0.022	(0.001)	<0.001	(0.001)
S09-022187	ALU_103	Sample cancelled											
S09-022188	ALU_104	Rhubarb Pie	1	1.02	0.010	2.380	0.07	0.55	<0.006	0.017	0.015	<0.002	0.032

LIMS number	Sample code	Product description	Weight (g)	Concentration (mg/kg)									
				Al	Cr	Mn	Ni	Cu	As	Se	Cd	Hg	Pb
S09-022189	ALU_105	Fresh Loose Tea *	0.5	546	2.67	516	5.07	17.75	(0.03)	0.11	0.016	<0.004	0.344
S09-022190	ALU_106	Chunky Tomato Olive & Rosemary Sauce	2	1.89	0.044	0.833	0.08	0.57	0.290	0.017	0.008	(0.001)	0.007
S09-022191	ALU_107	Steamed Chocolate Puddings	0.5	459.0	0.20	2.85	0.39	1.61	<0.01	0.04	(0.008)	<0.004	0.022
S09-022192	ALU_108	Seriously Strong Spreadable Cheese	0.5	(0.3)	0.07	0.135	0.23	0.29	<0.01	0.10	<0.004	<0.004	<0.004
S09-022193	ALU_109	Cod Loin with Mornay Sauce	1	0.16	<0.006	0.114	<0.02	0.18	11.400	0.235	<0.002	0.035	<0.002
S09-022194	ALU_110	Potato & Meat Pie	1	1.07	0.014	2.600	0.05	0.70	<0.006	0.025	0.021	<0.002	0.003
S09-022195	ALU_111	Hot & Spicy Bombay Mix	0.5	7.3	0.080	14.400	2.16	5.62	(0.01)	0.21	0.059	<0.004	(0.009)
S09-023981	ALU_112	Chicken & Bacon Pancakes	1	0.74	0.07	1.160	(0.05)	0.47	(0.017)	0.072	0.009	<0.002	(0.002)
S09-023982	ALU_113	Aubergine Parmigiana	1	0.73	0.020	1.520	(0.05)	0.58	(0.012)	(0.012)	0.011	<0.002	(0.003)
S09-023983	ALU_114	Snow Bites	1	29.10	0.110	2.270	0.63	2.59	0.020	0.043	0.008	<0.002	(0.004)
S09-023984	ALU_115	Sample cancelled											
S09-023985	ALU_116	Orange Flavour Jelly	2	0.73	<0.005	0.018	<0.01	(0.01)	<0.003	<0.003	<0.001	<0.001	<0.001
S09-023986	ALU_117	Alpenmilch Chocolate Santa	2	4.85	0.247	3.800	0.73	3.04	(0.005)	0.041	0.011	<0.001	0.007
S09-023987	ALU_118	Devon Custard	2	<0.03	(0.009)	0.026	(0.03)	(0.04)	(0.004)	0.032	<0.001	<0.001	<0.001
S09-023988	ALU_119	Alert Lemon zing Energy Drink	0.5	(0.2)	<0.02	(0.005)	<0.04	<0.04	<0.01	<0.01	<0.004	<0.004	<0.004
S09-023989	ALU_120	Garlic Puree	0.5	7.3	0.13	1.470	0.24	1.30	<0.01	0.08	0.018	<0.004	0.020
S09-023990	ALU_121	Tomato Puree With Chilli	1	5.20	1.400	2.100	0.86	1.78	(0.014)	(0.009)	0.028	<0.002	0.014
S09-023991	ALU_122	Mackerel in Olive Oil	2	(0.05)	<0.005	0.105	<0.01	0.84	1.570	0.378	0.007	0.032	<0.001
S09-023992	ALU_123	Tuna Fillets with Lime & Cracked Black Pepper	0.5	(0.1)	<0.02	0.544	<0.04	0.33	0.84	0.74	(0.008)	0.053	<0.004
S09-023993	ALU_124	Chicken Fillets with Asparagus & Prosciutto Ham	2	1.45	<0.005	0.265	<0.01	0.56	0.056	0.157	0.022	(0.002)	0.013

LIMS number	Sample code	Product description	Weight (g)	Concentration (mg/kg)									
				Al	Cr	Mn	Ni	Cu	As	Se	Cd	Hg	Pb
S09-023994	ALU_125	Chicken Fillets with Sun-Dried Tomato & Mozzarella	1	6.68	0.090	1.090	0.11	0.92	0.022	0.106	0.008	<0.002	0.013
S09-023995	ALU_126	Apple & Sultana Flapjack Bites	1	1.58	<0.01	17.300	0.39	1.97	(0.007)	(0.006)	0.008	<0.002	(0.003)
S09_024446	ALU_127	Chinese Style Egg Fried Rice	1	0.42	<0.01	0.823	(0.06)	0.65	0.043	(0.019)	(0.004)	<0.002	<0.002
S09_024447	ALU_128	4 Egg Custard Tarts	1	6.33	0.030	1.820	(0.04)	0.50	<0.006	0.053	(0.005)	<0.002	0.030
S09_024448	ALU_129	Whole UHT Milk	0.5	<0.1	<0.02	0.024	<0.04	(0.05)	<0.01	(0.02)	<0.004	<0.004	<0.004
S09_024449	ALU_130	Liegeois Chocolate Dessert Topped With Cream	1	2.26	0.100	0.585	0.13	0.49	<0.006	<0.006	<0.002	(0.002)	<0.002
S09_024450	ALU_131	Kaszanka wiejska Black Pudding	0.5	5.8	0.04	2.310	<0.04	2.02	(0.02)	0.10	(0.011)	<0.004	(0.006)
S09_024451	ALU_132	Double Concentrate Tomato Paste	2	10.20	0.346	3.250	0.29	5.31	(0.008)	(0.014)	0.048	<0.001	0.037
S09_024452	ALU_133	Premium Lager Beer	0.5	<0.1	<0.02	0.046	<0.04	(0.05)	<0.01	<0.01	<0.004	<0.004	<0.004
S09_024453	ALU_134	Cider	0.5	0.4	<0.02	0.124	<0.04	<0.04	<0.01	<0.01	<0.004	<0.004	<0.004
S09_024466	ALU_135	Fresh Baked Custard Tart	1	0.75	<0.01	1.280	(0.03)	0.42	<0.006	0.055	(0.005)	<0.002	(0.003)
S09_024467	ALU_136	Fruit and Nut Flapjack	0.5	2.9	(0.02)	14.600	0.39	2.32	(0.01)	(0.02)	(0.006)	<0.004	<0.004
S09_024468	ALU_137	Chocolate Hazelnut Crunch Protein Bar	0.5	8.9	0.29	7.860	0.74	5.03	<0.01	0.23	0.019	<0.004	(0.008)
S09_024469	ALU_138	Energise Cereal Bar	0.5	5.5	0.10	7.940	0.36	2.15	(0.02)	(0.03)	(0.008)	<0.004	(0.009)
S09_024470	ALU_139	Baby Organic Tropical Juice Drink	2	0.42	(0.006)	0.593	0.04	0.05	<0.003	<0.003	<0.001	<0.001	(0.003)
S09_024471	ALU_140	Baby Organic Apple Peach & Mango Fruit Pots *	2	1.07	0.028	0.322	(0.03)	0.59	<0.006	<0.006	<0.002	<0.002	(0.002)
S09_024525	ALU_141	Sample cancelled											
S09_024526	ALU_142	Sundried Tomato Purée *	1	9.0	0.34	1.675	0.22	0.94	<0.01	<0.01	0.018	<0.004	0.041
S09_024527	ALU_143	Organic Tomato Purée	1	9.02	0.140	2.600	0.27	4.12	<0.006	0.038	0.039	<0.002	0.009

LIMS number	Sample code	Product description	Weight (g)	Concentration (mg/kg)									
				Al	Cr	Mn	Ni	Cu	As	Se	Cd	Hg	Pb
S09_024528	ALU_144	Double Concentrated Tomato Purée	0.5	26.00	0.890	4.860	0.74	4.32	(0.014)	(0.013)	0.073	<0.002	0.029
S09_024529	ALU_145	Freshly Baked Potato & Meat Pie	0.5	1.40	0.040	1.950	(0.04)	0.59	<0.006	0.038	0.007	<0.002	(0.006)
S09_024530	ALU_146	Steak & Kidney Pie	1	1.44	0.040	2.550	(0.03)	1.12	(0.006)	0.199	0.071	<0.002	0.016
S09_024531	ALU_147	2 Chicken Breasts in a Tomato and Basil Sauce	1	3.55	0.030	0.544	0.07	0.54	<0.006	0.110	0.007	<0.002	(0.003)
S09_024532	ALU_148	Creamy Chicken with Bacon & Leek	1	0.45	0.020	0.224	(0.03)	0.32	<0.006	0.123	<0.002	<0.002	<0.002
S09_024533	ALU_149	Hi-Impact Stimulation Drink	1	0.25	<0.005	(0.003)	<0.01	(0.01)	<0.003	<0.003	<0.001	<0.001	<0.001
S09_024534	ALU_150	Spreadable Processed Cheese Triangles	1	1.9	0.04	0.090	0.14	(0.12)	<0.01	0.04	(0.008)	<0.004	<0.004
S09_024535	ALU_151	Tuna Flakes with Sundried Tomato & Basil	1	1.28	(0.010)	0.415	<0.02	0.59	0.599	0.732	0.013	0.047	<0.002
S09_024536	ALU_152	Double Concentrated Tomato Purée	2	11.90	0.150	3.260	0.24	3.92	(0.012)	<0.006	0.053	<0.002	0.023
S09_024537	ALU_153	Austrian Blue Cheese	0.5	(0.2)	<0.02	0.174	0.15	0.25	<0.01	0.12	<0.004	<0.004	(0.007)
S09_024538	ALU_154	Mediterranean Style Vegetables	1	1.21	(0.009)	1.180	(0.03)	0.58	<0.003	<0.003	0.009	<0.001	(0.003)
S09_024539	ALU_155	Quiche Lorraine	1	1.5	<0.02	1.400	(0.06)	0.46	<0.01	0.10	(0.006)	<0.004	<0.004
S09_024540	ALU_156	Stilton and Pear Chutney Tartlets	0.5	1.2	(0.02)	1.620	(0.08)	0.54	<0.01	0.09	(0.008)	<0.004	<0.004
S09_024541	ALU_157	Whipping Cream	2	<0.1	<0.02	0.015	<0.04	<0.04	<0.01	(0.020)	<0.004	<0.004	<0.004
S09_024542	ALU_158	Low Fat Pasteurised Plain Yoghurt	0.5	0.56	(0.010)	0.024	(0.04)	(0.06)	<0.006	(0.015)	<0.002	<0.002	<0.002
S09_024543	ALU_159	Pick 'N' Mix Fruit Pies & Lattices	0.5	1.5	<0.02	2.330	<0.04	0.55	<0.01	(0.02)	(0.011)	<0.004	<0.004
S09_024544	ALU_160	Crema Bel Paese Processed Cheese Spread *	0.5	0.4	0.07	0.112	0.16	0.18	<0.01	0.08	(0.011)	<0.004	<0.004

LIMS number	Sample code	Product description	Weight (g)	Concentration (mg/kg)									
				Al	Cr	Mn	Ni	Cu	As	Se	Cd	Hg	Pb
S09_024545	ALU_161	8 Cheese Spread Triangles	0.5	3.0	0.07	1.280	0.34	0.29	<0.01	0.15	(0.004)	<0.004	(0.009)
S09_024546	ALU_162	4 Steak Pies	1	1.77	(0.010)	1.900	(0.03)	0.69	<0.006	0.025	0.014	<0.002	(0.004)
S09_024547	ALU_163	Ardennes Pâté Coarse	0.5	1.1	(0.03)	1.160	<0.04	4.96	<0.01	0.20	0.017	<0.004	<0.004
S09_024643	ALU_164	Strawberry Crumble Yoghurt	1	0.77	(0.03)	0.645	0.07	0.21	<0.006	0.036	(0.003)	<0.002	<0.002
S09_024682	ALU_165	Gammon Joint with Sweet Onion Sauce	1	1.62	0.08	0.427	(0.04)	0.50	<0.006	0.137	<0.002	<0.002	(0.004)
S09_024683	ALU_166	Fresh Lasagne *	1	0.77	0.066	1.465	(0.07)	0.70	<0.006	0.044	0.018	<0.002	<0.002
S09_024684	ALU_167	Original Salted Peanuts	0.5	1.1	<0.02	16.600	(0.08)	7.44	<0.01	0.42	0.025	<0.004	<0.004
S09_024685	ALU_168	Garlic Purée	0.5	1.8	0.21	2.660	0.28	0.79	<0.01	(0.03)	0.023	<0.004	0.017
S09_024686	ALU_169	Coca-Cola	2	(0.04)	<0.005	(0.001)	<0.01	<0.01	<0.003	<0.003	<0.001	<0.001	<0.001
S09_024687	ALU_170	Double Concentrate Tomato Puree *	1	20.45	0.4798	3.780	0.56	3.95	(0.011)	(0.012)	0.045	<0.002	0.022
S09_024742	ALU_171	Hollow Milk Chocolate Santa's	0.5	5.2	0.16	1.640	0.44	1.78	<0.01	0.05	(0.007)	<0.004	(0.006)
S09_024743	ALU_172	Sweet Pastry Case	0.5	1.1	<0.02	5.310	(0.05)	0.89	<0.01	(0.02)	0.023	<0.004	(0.007)
S09_024744	ALU_173	Mince Pies	0.5	4.9	(0.03)	3.800	(0.05)	1.26	(0.01)	(0.02)	(0.012)	<0.004	(0.010)
S09_024745	ALU_174	Rocky Road	0.5	29.0	0.09	6.330	0.42	2.15	<0.01	(0.02)	(0.005)	<0.004	(0.008)
S09_024746	ALU_175	Anchovy Paste	0.5	9.8	0.07	3.970	0.21	1.32	1.75	0.62	0.442	0.027	(0.013)
S09_024747	ALU_176	Milk Chocolate Tea Cakes	0.5	8.2	0.08	2.990	0.37	1.69	<0.01	0.06	0.016	(0.010)	(0.006)
S09_024748	ALU_177	Milk Chocolate Coins	0.5	8.8	0.29	3.960	0.86	3.88	(0.02)	(0.03)	(0.013)	<0.004	0.016
S09_024749	ALU_178	Candy Floss	0.5	0.7	<0.02	0.050	<0.04	0.50	<0.01	<0.01	<0.004	<0.004	<0.004
S09_024750	ALU_179	Sample cancelled											
S09_025829	ALU_180	Original Beef Stock Cube	0.5	5.6	(0.05)	1.130	(0.11)	0.66	(0.01)	(0.03)	(0.010)	<0.004	0.063
S09_025830	ALU_181	Double Concentrate Tomato Purée	1	9.00	0.17	2.940	0.23	4.31	(0.010)	(0.009)	0.077	<0.002	0.011
S09_025831	ALU_182	Organic Pure Orange Juice from Concentrate	2	(0.04)	<0.005	0.297	<0.01	0.26	<0.003	<0.003	<0.001	<0.001	<0.001

LIMS number	Sample code	Product description	Weight (g)	Concentration (mg/kg)									
				Al	Cr	Mn	Ni	Cu	As	Se	Cd	Hg	Pb
S09_025832	ALU_183	Unsweetened Soya Milk	2	0.63	(0.007)	1.740	0.08	1.03	<0.003	0.010	(0.002)	<0.001	<0.001
S09_025833	ALU_184	UHT Skimmed Milk	2	<0.03	<0.005	0.024	(0.03)	0.07	<0.003	0.021	<0.001	<0.001	<0.001
S09_025834	ALU_185	4 Treacle Tarts	0.5	3.7	<0.02	2.440	<0.04	0.41	<0.01	(0.02)	(0.009)	<0.004	(0.007)
S09_025835	ALU_186	Beef Stock Cubes	0.5	3.1	(0.06)	3.350	0.18	0.84	(0.03)	0.06	(0.012)	<0.004	0.019
S09_025836	ALU_187	Sardines in Tomato Sauce	1	10.1	0.090	1.060	0.09	1.19	1.360	0.199	0.072	0.013	0.024
S09_025837	ALU_188	Unsweetened Soya	2	0.16	<0.005	1.360	0.07	1.13	<0.003	0.012	0.004	<0.001	<0.001
S09_025838	ALU_189	UHT Long Life Skimmed Milk	2	0.68	<0.005	0.028	(0.03)	0.05	<0.003	0.021	<0.001	<0.001	<0.001
S09_025839	ALU_190	Tiger Energy Drink	2	0.81	<0.005	0.023	<0.01	(0.02)	<0.003	<0.003	<0.001	<0.001	<0.001
S09_025840	ALU_191	Le Phare Du Cap Bon Chilli Paste *	0.5	35.3	0.28	2.495	0.24	2.50	(0.01)	0.06	0.037	<0.004	0.037
S09_025841	ALU_192	Canadian Style Sardines in Tomato Sauce	1	1.11	<0.01	0.824	0.28	0.90	1.120	0.368	0.016	0.012	<0.002
S09_025842	ALU_193	Orange Juice Drink	2	1.12	(0.012)	0.094	<0.01	0.07	<0.003	<0.003	<0.001	<0.001	(0.002)
S09_025843	ALU_194	Poultry Pate with Mushrooms	0.5	1.8	(0.02)	1.150	<0.04	1.77	<0.01	0.09	(0.009)	<0.004	<0.004
S09_025844	ALU_195	Thomas & Friends Milk Chocolate Lollipop	0.5	9.2	0.2	3.69	0.82	3.71	<0.01	0.03	0.011	0.004	0.02
S09-025940	ALU_196	16 Milk Chocolate Teacakes	0.5	4.9	0.07	3.270	0.33	1.65	<0.01	(0.02)	(0.009)	<0.004	(0.009)
S09_025941	ALU_197	Ginger Beer	2	<0.03	<0.003	0.010	<0.01	<0.01	<0.003	<0.003	<0.001	<0.001	<0.001
S09-025942	ALU_198	Chocolate Caramel Discs	0.5	6.4	0.25	3.090	0.66	3.26	<0.01	(0.02)	(0.013)	<0.004	(0.009)
S09-025943	ALU_199	Sardines in Sunflower oil	0.5	5.7	(0.01)	1.290	(0.12)	0.93	1.31	0.23	0.026	(0.006)	0.030
S09_025944	ALU_200	Pussy Natural Energy Drink	2	0.35	(0.005)	0.133	<0.01	0.07	<0.003	<0.003	<0.001	<0.001	(0.001)
S09-025945	ALU_201	Abbott's Traditional Jamaican Style Ginger Beer	2	0.12	<0.003	0.015	<0.01	<0.01	<0.003	<0.003	<0.001	<0.001	<0.001
S09-025946	ALU_202	Original Natch Dry Cider	2	(0.06)	<0.003	0.065	<0.01	<0.01	<0.003	<0.003	<0.001	<0.001	<0.001
S09-025947	ALU_203	Wheat Crunchies	0.5	3.9	0.05	7.980	(0.11)	2.33	<0.01	0.14	0.033	<0.004	(0.010)
S09-026376	ALU_204	Steak & Kidney Pudding *	1	1.99	(0.018)	2.167	(0.05)	0.91	<0.006	0.085	0.036	<0.002	0.010

LIMS number	Sample code	Product description	Weight (g)	Concentration (mg/kg)									
				Al	Cr	Mn	Ni	Cu	As	Se	Cd	Hg	Pb
S09-026377	ALU_205	British Roast Chicken & Gravy Pie	1	1.46	0.037	1.800	(0.04)	0.53	<0.006	0.030	0.008	<0.002	0.009
S09-026378	ALU_206	Potato Gratin	1	2.52	0.020	1.060	(0.03)	0.57	<0.006	(0.009)	(0.005)	<0.002	(0.002)
S09-026379	ALU_207	Classics Creamy Fish Pie	1	0.38	(0.011)	0.679	(0.03)	0.61	1.070	0.092	(0.006)	0.008	<0.002
S09-026380	ALU_208	Premier Pie Steak & Kidney	1	2.18	(0.018)	3.090	(0.05)	0.87	<0.006	0.087	0.040	<0.002	(0.006)
S09-026381	ALU_209	Beef Meatballs with Tomato & Bacon Sauce	1	3.22	0.036	0.964	(0.05)	0.78	<0.006	0.031	(0.006)	<0.002	(0.004)
S09-026382	ALU_210	Sausage & Bacon Wraps	1	1.75	0.034	1.310	(0.05)	0.72	<0.006	0.086	(0.006)	<0.002	0.007
S09-026383	ALU_211	Organic Butter	0.5	<0.1	<0.01	<0.004	<0.04	<0.04	<0.01	<0.01	<0.004	<0.004	<0.004
S09-026384	ALU_212	Scottish Trout with Wild Flower Honey, Orange & Thyme Butter	1	1.18	(0.010)	1.180	(0.05)	0.56	1.380	0.158	<0.002	0.045	<0.002
S09_026545	ALU_213	Shortcrust Sweetmince Pies *	0.5	3.3	(0.03)	2.977	(0.05)	1.11	<0.01	<0.01	(0.008)	<0.004	0.015
S09_026546	ALU_214	Crème Egg	0.5	1.6	0.06	2.040	0.47	2.11	<0.01	(0.02)	(0.005)	<0.004	<0.004
S09_026547	ALU_215	Limeade	2	<0.03	<0.003	(0.002)	<0.01	<0.01	<0.003	<0.003	<0.001	<0.001	<0.001
S09_026548	ALU_216	Euro Medallion Milk Chocolate	0.5	15.9	0.52	3.870	0.90	3.63	<0.01	(0.02)	0.015	0.017	0.020
S09_026549	ALU_217	Milk Chocolate Santa	0.5	2.0	(0.03)	2.470	0.62	2.65	<0.01	(0.02)	0.016	<0.004	<0.004
S09_026550	ALU_218	Baby Summer Fruits Juice Drink	2	0.36	(0.005)	0.277	<0.01	(0.02)	<0.003	<0.003	<0.001	<0.001	(0.003)
S09_026551	ALU_219	Sample cancelled											
S09_026552	ALU_220	Ferrero Rocher Chocolates *	0.5	6.1	0.10	24.197	1.18	7.72	<0.01	(0.02)	0.026	<0.004	(0.007)
S09_026553	ALU_221	Rice Drink	2	<0.03	<0.003	0.270	(0.03)	0.06	0.020	<0.003	<0.001	<0.001	<0.001
S09_026554	ALU_222	Chocolate Flavoured Baubles	0.5	15.9	0.31	4.680	0.84	3.56	<0.01	(0.02)	0.019	(0.006)	0.023
S09-026555	ALU_223	Sample cancelled											
S09_026556	ALU_224	Emerge Stimulation Drink	2	0.13	<0.003	(0.003)	<0.01	(0.02)	<0.003	<0.003	<0.001	<0.001	<0.001

LIMS number	Sample code	Product description	Weight (g)	Concentration (mg/kg)									
				Al	Cr	Mn	Ni	Cu	As	Se	Cd	Hg	Pb
S09_026557	ALU_225	Bio-Live Greek Style Yoghurt with Honey	1	0.63	<0.006	0.282	(0.03)	0.14	<0.006	0.028	<0.002	<0.002	(0.003)
S09_026558	ALU_226	Milk Chocolate Lollipop with Popping Candy Pieces	0.5	9.0	0.22	3.240	0.78	3.17	<0.01	(0.03)	(0.009)	<0.004	0.015
S09_026559	ALU_227	Canada Dry Ginger Ale	2	(0.04)	<0.003	<0.001	<0.01	<0.01	<0.003	(0.003)	<0.001	<0.001	<0.001
S09_026841	ALU_228	Spinach, Parsnip & Basil	1	2.17	0.049	1.470	0.07	0.90	<0.006	<0.006	0.029	<0.002	0.008
S09_026842	ALU_229	Flapjack	0.5	0.5	<0.01	13.200	0.34	1.33	<0.01	(0.03)	(0.005)	<0.004	<0.004
S09_026843	ALU_230	6 Assorted Jam Tarts	0.5	1.3	(0.03)	4.890	(0.05)	0.66	<0.01	<0.01	(0.010)	<0.004	(0.007)
S09_026844	ALU_231	6 Bramley Apple Pies	0.5	1.6	<0.01	1.700	<0.04	0.48	<0.01	(0.01)	(0.007)	<0.004	(0.006)
S09_026845	ALU_232	Wysoy Soya Infant Formula	0.5	1.7	0.06	2.280	0.32	3.42	<0.01	0.09	(0.009)	<0.004	(0.004)
S09_026846	ALU_233	Staydown Infant Milk	0.5	0.4	0.04	0.529	0.14	2.90	<0.01	0.15	<0.004	<0.004	(0.005)
S09_026847	ALU_234	Blackthorn Cider	2	0.10	<0.003	0.067	<0.01	<0.01	<0.003	<0.003	<0.001	<0.001	(0.001)
S09_026848	ALU_235	Zen Republic Energy Drink	2	2.17	<0.003	1.700	(0.03)	0.05	<0.003	<0.003	<0.001	<0.001	<0.001
S09_026849	ALU_236	Original Ale *	2	<0.03	<0.003	0.073	<0.01	(0.02)	<0.003	<0.003	<0.001	<0.001	<0.001
S09_026850	ALU_237	Apple & Blackcurrant Pies	1	5.36	0.032	3.220	0.07	0.63	<0.006	(0.009)	0.021	<0.002	0.026
S09_026851	ALU_238	Fruity Breakfast Banana and Peach with Cereal	1	1.79	0.177	1.660	0.09	0.54	(0.011)	<0.006	<0.002	<0.002	0.015
S09_026852	ALU_239	Hollow Chocolate Decorations	0.5	13.7	0.37	2.600	0.66	2.66	<0.01	(0.03)	0.006	0.006	0.016
S09_026853	ALU_240	"Tear & Share" Continental Patisserie with Chocolate Chips	0.5	7.4	0.26	4.340	0.36	1.90	<0.01	(0.03)	0.010	0.005	(0.008)
S09_026854	ALU_241	Apple & Blueberry Fruit Pot	1	1.36	0.050	1.920	(0.04)	0.76	<0.006	<0.006	<0.002	<0.002	(0.004)

\* Mean concentration of the duplicate analyses

Concentrations given in brackets are less than the limit of quantification

Data in blue (Cr, As and Se) was determined using high resolution / collision cell ICP-MS



Table 4. Concentrations of aluminium, arsenic, cadmium, chromium, copper, lead, manganese, mercury, nickel and selenium in the DORM3 – fish protein reference material (9 batches)

	<b>Measured concentration (mg/kg)</b>	<b>±</b>	<b>Certified concentration (mg/kg)</b>
<b>Al</b>	1358	124	~ 1700
<b>Cr</b>	1.82	0.07	1.89
<b>Mn</b>	3.6	0.9	~ 4.6
<b>Ni</b>	1.35	0.04	1.28
<b>Cu</b>	15.6	0.1	15.5
<b>As</b>	6.88	0.6	6.88
<b>Se</b>	3.7	0.5	~ 3.3
<b>Cd</b>	0.32	0.01	0.29
<b>Hg</b>	0.432	0.010	0.409
<b>Pb</b>	0.420	0.009	0.395

Table 5. Concentrations of aluminium, arsenic, cadmium, chromium, copper, lead, manganese, mercury, nickel and selenium in the N8414 - Bovine muscle reference material (9 batches)

	<b>Measured concentration (mg/kg)</b>	<b>±</b>	<b>Certified concentration (mg/kg)</b>
<b>Al</b>	1.24	0.1	~1.70
<b>Cr</b>	0.07	0.013	0.071
<b>Mn</b>	0.36	0.02	0.37
<b>Ni</b>	0.04	0.003	0.05
<b>Cu</b>	2.72	0.08	2.84
<b>As</b>	0.011	0.001	0.009
<b>Se</b>	0.07	0.01	0.076
<b>Cd</b>	0.015	0.003	0.013
<b>Hg</b>	(0.005)	0.001	0.005
<b>Pb</b>	0.33	0.068	0.38

Table 6. Concentrations of aluminium, arsenic, cadmium, chromium, copper, lead, manganese, mercury, nickel and selenium in the N8414 – Wheat gluten reference material (9 batches)

	<b>Measured concentration (mg/kg)</b>	<b>±</b>	<b>Certified concentration (mg/kg)</b>
<b>Al</b>	10.5	1.0	10.8
<b>Cr</b>	0.04	0.000	0.053
<b>Mn</b>	13.4	0.78	14.3
<b>Ni</b>	0.13	0.002	0.13
<b>Cu</b>	5.88	0.27	5.94
<b>As</b>	(0.02)	0.001	~0.02
<b>Se</b>	2.68	0.18	2.58
<b>Cd</b>	0.073	0.004	0.064
<b>Hg</b>	<0.004		0.0019 *
<b>Pb</b>	0.08	0.005	0.10

\* Certified value is < limit of detection

Table 7. Analytical recovery of the overspiked samples for the main study (9 batches)

	<b>Spike recovery (%)</b>	<b>±</b>
<b>Al</b>	98	4
<b>Cr</b>	92	12
<b>Mn</b>	99	5
<b>Ni</b>	100	4
<b>Cu</b>	100	4
<b>As</b>	101	4
<b>Se</b>	96	5
<b>Cd</b>	98	2
<b>Hg</b>	106	2
<b>Pb</b>	98	2

Table 8. Duplicate data – within batch replicates

LIMS number	Sample code	Product description	Concentration (mg/kg)										
				Al	Cr	Mn	Ni	Cu	As	Se	Cd	Hg	Pb
S09-021265	ALU_008	Oxford Blue Cheese	Analysis 1	5.5	<0.01	0.199	(0.10)	0.29	<0.01	0.051	<0.004	<0.004	(0.009)
			Analysis 2	4.6	<0.01	0.243	(0.10)	0.31	<0.01	0.049	<0.004	<0.004	(0.007)
			Mean	5.0	<0.01	0.221	(0.10)	0.30	<0.01	0.050	<0.004	<0.004	(0.008)
			RSD (%)	12.4	NA	13.9	4.2	5.1	NA	2.3	NA	NA	17.0
S09-021248	ALU_011	British Chicken Breast with Portuguese-Style Piri Piri Marinade	Analysis 1	39.4	0.027	0.386	(0.02)	0.48	<0.006	0.082	(0.006)	<0.002	0.022
			Analysis 2	39.5	0.034	0.387	(0.03)	0.48	<0.006	0.088	(0.005)	<0.002	0.022
			Mean	39.5	0.030	0.386	(0.03)	0.48	<0.006	0.085	(0.005)	<0.002	0.022
			RSD (%)	0.1	16.5	0.2	27.5	1.1	NA	4.8	4.7	NA	2.5
S09-021251	ALU_021	Halloween Ghosts Milk Chocolate Pieces	Analysis 1	6.2	0.15	3.240	0.82	3.43	<0.01	0.06	(0.011)	<0.004	(0.007)
			Analysis 2	8.1	0.15	3.250	0.81	3.24	<0.01	0.08	(0.011)	<0.004	(0.008)
			Mean	7.2	0.15	3.250	0.84	3.33	<0.01	0.07	(0.011)	<0.004	(0.008)
			RSD (%)	18.8	0.0	0.3	5.8	2.9	NA	20.2	0.0	NA	9.4
S09-021256	ALU_023	Milk Chocolate Coins	Analysis 1	11.9	0.31	4.005	0.97	4.00	<0.01	0.037	0.014	<0.004	(0.011)
			Analysis 2	13.3	0.30	4.189	1.02	4.25	<0.01	0.035	0.016	(0.004)	0.014
			Mean	12.6	0.30	4.097	1.00	4.13	<0.01	0.036	0.015	<0.004	(0.013)
			RSD (%)	7.9	2.5	3.2	3.5	4.3	NA	5.1	12.3	NA	14.6
S09-021349	ALU_026	Chocolate Brownie	Analysis 1	18.2	0.34	5.330	1.03	5.13	<0.01	0.06	0.014	(0.004)	0.022
			Analysis 2	17.5	0.38	5.120	1.04	5.14	<0.01	0.06	0.016	<0.004	0.022
			Mean	17.9	0.36	5.225	1.04	5.14	<0.01	0.06	0.015	(0.004)	0.022
			RSD (%)	2.8	7.9	2.8	0.7	0.1	NA	0.0	9.4	NA	0.0
S09-021454	ALU_031	Tomato Puree	Analysis 1	20.8	0.14	3.470	0.32	4.66	0.010	0.013	0.071	<0.001	0.013
			Analysis 2	16.0	0.13	3.150	0.29	4.19	(0.008)	0.015	0.071	<0.001	0.012
			Mean	18.4	0.14	3.310	0.31	4.43	(0.009)	0.014	0.071	<0.001	0.013
			RSD (%)	18.4	5.7	6.8	7.0	7.5	15.7	10.1	0.0	NA	5.7
S09-021458	ALU_035	Cottage Cheese	Analysis 1	<0.1	(0.02)	0.074	<0.04	0.20	<0.01	0.065	<0.004	<0.004	<0.004

LIMS number	Sample code	Product description	Concentration (mg/kg)										
				Al	Cr	Mn	Ni	Cu	As	Se	Cd	Hg	Pb
			Analysis 2	<0.1	<0.01	0.078	<0.04	0.19	<0.01	0.083	<0.004	<0.004	<0.004
			Mean	<0.1	(0.01)	0.076	<0.04	0.20	<0.01	0.074	<0.004	<0.004	<0.004
			RSD (%)	NA	NA	3.9	NA	2.7	NA	16.9	NA	NA	NA
S09-021462	ALU_039	Orange Drink	Analysis 1	<0.03	(0.005)	0.029	(0.01)	0.04	<0.003	<0.003	<0.001	<0.001	<0.001
			Analysis 2	<0.03	<0.003	0.029	<0.01	0.05	<0.003	<0.003	<0.001	<0.001	<0.001
			Mean	<0.03	<0.003	0.029	(0.01)	0.05	<0.003	<0.003	<0.001	<0.001	<0.001
			RSD (%)	NA	NA	0.3	NA	5.0	NA	NA	NA	NA	NA
S09-021528	ALU_049	Chilli Puree	Analysis 1	2.62	0.056	1.928	0.16	1.08	(0.006)	0.018	0.048	<0.001	0.013
			Analysis 2	2.68	0.049	1.922	0.16	1.11	(0.006)	0.018	0.049	<0.001	0.012
			Mean	2.65	0.052	1.925	0.16	1.10	(0.006)	0.018	0.048	<0.001	0.013
			RSD (%)	1.4	9.9	0.2	0.1	1.7	2.9	1.6	2.3	NA	1.3
S09-021734	ALU_051	2 Beef Steaks with a Peppercorn Sauce	Analysis 1	0.34	<0.006	0.108	<0.02	0.92	<0.006	0.127	<0.002	<0.002	<0.002
			Analysis 2	0.28	(0.009)	0.102	<0.02	0.88	<0.006	0.121	<0.002	<0.002	<0.002
			Mean	0.31	(0.007)	0.105	<0.02	0.90	<0.006	0.124	<0.002	<0.002	<0.002
			RSD (%)	13.5	NA	3.7	NA	3.1	NA	3.5	NA	NA	NA
S09-021738	ALU_055	Chocolate Mousse	Analysis 1	9.04	0.168	2.419	0.56	2.08	<0.006	0.031	0.010	<0.002	0.009
			Analysis 2	8.97	0.152	2.381	0.58	2.14	<0.006	0.034	0.009	(0.003)	0.008
			Mean	9.01	0.160	2.400	0.57	2.11	<0.006	0.033	0.009	(0.002)	0.008
			RSD (%)	0.6	6.9	1.1	2.7	1.9	NA	5.8	8.3	NA	4.1
S09-021849	ALU_064	Juicy Dried Apricots	Analysis 1	7.3	(0.03)	2.017	0.50	2.37	<0.01	(0.02)	<0.004	<0.004	0.019
			Analysis 2	7.3	0.04	1.949	0.48	2.18	(0.01)	<0.01	<0.004	<0.004	0.019
			Mean	7.3	0.04	1.983	0.49	2.27	(0.01)	(0.01)	<0.004	<0.004	0.019
			RSD (%)	0.1	20.8	2.4	2.3	6.0	NA	NA	NA	NA	1.4
S09-021855	ALU_070	Beef Jerky	Analysis 1	2.6	0.06	0.638	(0.08)	1.52	<0.01	0.16	<0.004	<0.004	<0.004
			Analysis 2	2.6	0.05	0.673	(0.07)	1.51	<0.01	0.16	<0.004	<0.004	(0.005)
			Mean	2.6	0.05	0.656	(0.07)	1.52	<0.01	0.16	<0.004	<0.004	(0.004)

LIMS number	Sample code	Product description	Concentration (mg/kg)										
				Al	Cr	Mn	Ni	Cu	As	Se	Cd	Hg	Pb
			RSD (%)	0.2	7.8	3.8	3.6	0.5	NA	0.3	NA	NA	NA
S09-022189	ALU_105	Fresh Loose Tea	Analysis 1	489	2.68	523	5.03	17.10	(0.03)	0.12	0.017	<0.004	0.346
			Analysis 2	603	2.66	509	5.10	18.40	(0.03)	0.10	0.015	<0.004	0.341
			Mean	546	2.67	516	5.07	17.75	(0.03)	0.11	0.016	<0.004	0.344
			RSD (%)	15	1	2	1	5	0	13	9	NA	1
S09-024471	ALU_140	Baby Organic Apple Peach & Mango Fruit Pots	Analysis 1	1.05	0.031	0.323	(0.03)	0.59	<0.006	<0.006	<0.002	<0.002	<0.002
			Analysis 2	1.08	0.025	0.321	(0.03)	0.60	<0.006	<0.006	<0.002	<0.002	(0.002)
			Mean	1.07	0.028	0.322	(0.03)	0.59	<0.006	<0.006	<0.002	<0.002	(0.002)
			RSD (%)	2	14	0	10	2	NA	NA	NA	NA	NA
S09-024526	ALU_142	Sundried Tomato Purée	Analysis 1	9.2	0.34	1.694	0.22	0.94	<0.01	<0.01	0.019	<0.004	0.041
			Analysis 2	8.7	0.33	1.656	0.23	0.93	<0.01	<0.01	0.018	<0.004	0.041
			Mean	9.0	0.34	1.675	0.22	0.94	<0.01	<0.01	0.018	<0.004	0.041
			RSD (%)	4	2	2	2	1	NA	NA	1	#DIV/0!	0
S09-024544	ALU_160	Crema Bel Paese Processed Cheese Spread	Analysis 1	0.4	0.07	0.108	0.15	0.18	<0.01	0.09	(0.009)	<0.004	<0.004
			Analysis 2	0.4	0.08	0.115	0.17	0.18	<0.01	0.07	(0.012)	<0.004	<0.004
			Mean	0.4	0.07	0.112	0.16	0.18	<0.01	0.08	(0.011)	<0.004	<0.004
			RSD (%)	1	17	4	10	0	NA	19	18	NA	NA
S09_024683	ALU_166	Fresh Lasagne	Analysis 1	0.72	0.062	1.510	(0.07)	0.67	<0.006	0.038	0.016	<0.002	<0.002
			Analysis 2	0.81	0.070	1.420	(0.07)	0.72	<0.006	0.050	0.019	<0.002	<0.002
			Mean	0.77	0.066	1.465	(0.07)	0.70	<0.006	0.044	0.018	<0.002	<0.002
			RSD (%)	8.3	8.6	4.3	0.0	5.1	NA	19.3	12.1	NA	NA
S09_024687	ALU_170	Double Concentrate Tomato Puree	Analysis 1	21.90	0.500	3.810	0.55	4.01	(0.012)	(0.011)	0.045	<0.002	0.022
			Analysis 2	19.00	0.458	3.750	0.56	3.88	(0.009)	(0.012)	0.044	<0.002	0.021
			Mean	20.45	0.479	3.780	0.56	3.95	(0.011)	(0.012)	0.045	<0.002	0.022
			RSD (%)	10.0	6.2	1.1	1.3	2.3	20.2	6.1	1.6	NA	3.3
S09_025840	ALU_191	Le Phare Du Cap Bon	Analysis 1	34.2	0.30	2.480	0.24	2.43	<0.01	0.05	0.037	<0.004	0.037

LIMS number	Sample code	Product description	Concentration (mg/kg)										
				Al	Cr	Mn	Ni	Cu	As	Se	Cd	Hg	Pb
		Chilli Paste	Analysis 2	36.3	0.25	2.510	0.24	2.57	(0.02)	0.07	0.036	<0.004	0.037
			Mean	35.3	0.28	2.495	0.24	2.50	(0.01)	0.06	0.037	<0.004	0.037
			RSD (%)	4.2	13.3	0.9	0.0	4.0	NA	22.2	1.9	NA	0.0
S09-026376	ALU_204	Steak & Kidney Pudding	Analysis 1	2.01	(0.016)	2.247	(0.05)	0.89	<0.006	0.074	0.034	<0.002	0.009
			Analysis 2	1.97	(0.020)	2.087	(0.05)	0.93	<0.006	0.097	0.037	<0.002	0.010
			Mean	1.99	(0.018)	2.167	(0.05)	0.91	<0.006	0.085	0.036	<0.002	0.010
			RSD (%)	1.6	14.3	5.2	0.9	3.5	NA	18.7	6.0	NA	3.3
S09_026545	ALU_213	Shortcrust Sweetmince Pies	Analysis 1	3.5	(0.03)	2.977	(0.05)	1.09	<0.01	(0.01)	(0.009)	<0.004	0.015
			Analysis 2	3.1	(0.02)	2.976	(0.05)	1.13	<0.01	<0.01	(0.007)	<0.004	0.015
			Mean	3.3	(0.03)	2.977	(0.05)	1.11	<0.01	<0.01	(0.008)	<0.004	0.015
			RSD (%)	8.1	7.8	0.0	1.7	2.5	NA	NA	22.2	NA	1.2
S09_026552	ALU_220	Ferrero Rocher Chocolates	Analysis 1	5.6	0.09	25.117	1.14	8.51	<0.01	(0.02)	0.025	(0.004)	(0.007)
			Analysis 2	6.6	0.11	23.278	1.23	6.93	<0.01	(0.02)	0.026	<0.004	(0.008)
			Mean	6.1	0.10	24.197	1.18	7.72	<0.01	(0.02)	0.026	<0.004	(0.007)
			RSD (%)	12.1	15.2	5.4	5.0	14.5	NA	14.3	1.3	NA	12.3
S09_026849	ALU_236	Original Ale	Analysis 1	<0.03	<0.003	0.075	<0.01	(0.02)	<0.003	<0.003	<0.001	<0.001	<0.001
			Analysis 2	<0.03	<0.003	0.070	<0.01	(0.01)	<0.003	<0.003	<0.001	<0.001	<0.001
			Mean	<0.03	<0.003	0.073	<0.01	(0.02)	<0.003	<0.003	<0.001	<0.001	<0.001
			RSD (%)	NA	NA	4.8	NA	10.9	NA	NA	NA	NA	NA

RSD = relative standard deviation

Blue = between batch duplicates

Red = within batch duplicates

NA = not applicable. The relative standard deviation could not be calculated as  $\geq 1$  of the duplicate results was less than the limit of detection

Table 9. Average aluminium concentrations measured in the various layers of the 25 food samples selected for profiling

LIMS code	Sample code	Sample description	Aluminium concentration (mg/kg)
Oxford Blue Cheese			
S09-021265	ALU_008	Side 1 Layer 1 (direct contact with the Al containing packaging) *	0.9
		Side 1 Layer 2 *	10.4
		Middle (furthest away from the packaging) *	0.9
		Side 2 Layer 2 *	0.7
		Side 2 Layer 1 (direct contact with the Al containing packaging) *	18.1
British Chicken Breast with Portuguese-Style Piri Piri Marinade			
S09-021248	ALU_011	Uncooked Layer 1 (direct contact with the Al containing packaging) *	32.6 #
		Uncooked Layer 2 *	16.0
		Uncooked Layer 3	9.1
		Uncooked Layer 4 (furthest away from the packaging)	17.9
		Cooked Layer 1 (direct contact with the Al containing packaging)	66.0
		Cooked Layer 2 *	30.8
		Cooked Layer 3 *	9.1 #
		Cooked Layer 4 (furthest away from the packaging)	15.2

LIMS code	Sample code	Sample description	Aluminium concentration (mg/kg)
Milk Chocolate Coins			
S09-021256	ALU_023	Side 1 Layer 1 (direct contact with the Al containing packaging)	13.7
		Middle (furthest away from the packaging)	13.1
		Side 2 Layer 1 (direct contact with the Al containing packaging)	14.8
Chocolate Brownie			
S09-021349	ALU_026	Layer 1 (direct contact with the Al containing packaging)	21.1
		Layer 2	21.7
		Layer 3	21.4
		Layer 4 (furthest away from the packaging)	20.4
Tomato Puree			
S09-021454	ALU_031	Layer 1 (direct contact with the Al containing packaging)	22.2
		Layer 2	22.5
		Layer 3 *	22.4
		Layer 4	21.7
		Middle (furthest away from the packaging)	21.2



LIMS code	Sample code	Sample description	Aluminium concentration (mg/kg)
Chocolate Mousse			
S09-021738	ALU_055	Layer 1 (closest to the Al containing packaging – occasional contact)	9.0
		Layer 2 *	9.7
		Layer 3	12.0
		Layer 4	11.8
		Layer 5 (furthest away from the packaging)	12.3
Chicken Tikka Pie			
S09-021740	ALU_057	Layer 1 (direct contact with the Al containing packaging) *	4.0
		Layer 2	6.2
		Layer 3	11.3
		Layer 4	9.5
		Layer 5 *	12.6
		Layer 6 *	14.1
		Layer 7 (furthest away the from packaging)	6.6

LIMS code	Sample code	Sample description	Aluminium concentration (mg/kg)
Steamed Chocolate Puddings			
S09-022191	ALU_107	Layer 1 (closest to the Al containing packaging – occasional contact) *	721.0
		Layer 2	717.9
		Layer 3	698.3
		Layer 4	581.8
		Layer 5	455.3
		Layer 6 (furthest away from the packaging) *	188.3
Garlic Puree			
S09-023989	ALU_120	Layer 1 (direct contact with the Al containing packaging) *	7.9
		Layer 2	8.0
		Middle (furthest away from the packaging)	7.4
Chicken Fillets in Sun-Dried Tomato & Mozzarella			
S09-023994	ALU_125	Uncooked Layer 1 (direct contact with the Al containing packaging)	9.2
		Uncooked Layer 2	11.0
		Uncooked Layer 3	3.8
		Uncooked Layer 4 (furthest away from the packaging)	1.9
		Cooked Layer 1 (direct contact with the Al containing packaging) *	14.8
		Cooked Layer 2	4.0
		Cooked Layer 3 (furthest away from the packaging) *	3.0

LIMS code	Sample code	Sample description	Aluminium concentration (mg/kg)
Kaszanka Wiejska Black Pudding			
S09-024450	ALU_131	Layer 1 (direct contact with the Al containing packaging body)	3.1
		Layer 2	4.5
		Layer 3	3.3
		Layer 4	2.8
		Layer 5	6.6
		Layer 6 (direct contact with the Al containing packaging lid)	5.1
Double Concentrated Tomato Puree			
S09-024451	ALU_132	Layer 1 (direct contact with the Al containing packaging)	15.9
		Layer 2	12.8
		Layer 3	12.8
		Middle (furthest away from the packaging)	13.7
Chocolate Hazelnut Crunch Protein Bar			
S09-024468	ALU_137	Layer 1 (direct contact with the Al containing packaging) *	9.9
		Middle (furthest away from the packaging) *	4.2

LIMS code	Sample code	Sample description	Aluminium concentration (mg/kg)
Double Concentrated Tomato Puree			
S09-024528	ALU_144	Layer 1 (direct contact with the Al containing packaging)	29.5
		Layer 2 *	32.2
		Layer 3	32.9
		Middle (furthest away from the packaging)*	33.1
Double Concentrated Tomato Puree			
S09-024687	ALU_170	Layer 1 (direct contact with the Al containing packaging)	24.9
		Layer 2	24.7
		Layer 3	22.4
		Middle (furthest away from the packaging)	22.1
Rocky Road			
S09-024745	ALU_174	Layer 1 (direct contact with the Al containing packaging) *	28.9 #
		Layer 2 *	16.7
		Layer 3 (furthest away from the packaging) *	12.4 #
Original Beef Stock Cube			
S09-025829	ALU_180	Layer 1 (direct contact with the Al containing packaging) *	3.9
		Middle (furthest away from the packaging)	4.4

LIMS code	Sample code	Sample description	Aluminium concentration (mg/kg)
Sardines In Tomato Sauce			
S09-025836	ALU_187	Layer 1 (direct contact with the Al containing packaging)	21.0
		Middle (furthest away from the packaging)	5.3
Le Phare Du Cap Bon Chilli Paste			
S09-025840	ALU_191	Layer 1 (direct contact with the Al containing packaging)	45.3
		Layer 2	47.7
		Middle (furthest away from the packaging)	48.2
Thomas & Friends Milk Chocolate Lollipop			
S09-025844	ALU_195	Side 1 Layer 1 (direct contact with the Al containing packaging) *	9.8
		Side 1 Layer 2	10.7
		Middle (furthest away from the packaging)	10.4
		Side 2 Layer 2	11.2
		Side 2 Layer 1 (direct contact with the Al containing packaging)	7.8
Sardines In Sunflower Oil			
S09-025943	ALU_199	Layer 1 (direct contact with the Al containing packaging) *	4.7 #
		Middle (furthest away from the packaging)	0.7

LIMS code	Sample code	Sample description	Aluminium concentration (mg/kg)
Euro Medallion Milk Chocolate			
S09-026548	ALU_216	Side 1 Layer 1(direct contact with the Al containing packaging)	19.5
		Middle (furthest away from the packaging)	17.5
		Side 2 Layer 1 (direct contact with the Al containing packaging)	20.3
Chocolate Lollipop with popping Candy Pieces			
S09-026558	ALU_226	Side 1 Layer 1(direct contact with the Al containing packaging)	9.3
		Side 1 Layer 2	9.6
		Middle (furthest away from the packaging)	9.8
		Side 2 Layer 2 *	10.8
		Side 2 Layer 1 (direct contact with the Al containing packaging)*	10.3
Apple & Blackcurrant Pies			
S09-026850	ALU_237	Layer 1 (direct contact with the Al containing packaging)	2.0
		Layer 2 *	1.4
		Layer 3	1.7
		Layer 4 (furthest away from the packaging)	3.7

LIMS code	Sample code	Sample description	Aluminium concentration (mg/kg)
"Tear & Share" Continental Patisserie With Chocolate Chips			
S09-026853	ALU_240	Layer 1 (direct contact with the Al containing packaging) *	4.7
		Layer 2 *	9.0
		Layer 3 *	6.2
		Layer 4 (furthest away from the packaging) *	4.7 #

\* Sample analysed in replicate – average result reported

# Relative standard deviation of the replicate analyses >20% proposed to be due to the inhomogeneity within the samples

Table 10. Concentrations of aluminium in the DORM3 – fish protein reference material (7 batches)

	<b>Measured concentration (mg/kg)</b>	<b>±</b>	<b>Certified concentration (mg/kg)</b>
<b>Al</b>	1493	157	~ 1700

Table 11. Concentrations of aluminium in the NIST 1567A Wheat flour reference material (7 batches)

	<b>Measured concentration (mg/kg)</b>	<b>±</b>	<b>Certified concentration (mg/kg)</b>
<b>Al</b>	4.0	0.26	5.7

Table 12. Analytical recovery of the overspiked samples for the profiling study (7 batches)

	<b>Spike recovery (%)</b>	<b>±</b>
<b>Al</b>	98	4



Figure 1. Aluminium concentration profile for sample ALU\_008 - Oxford Blue Cheese

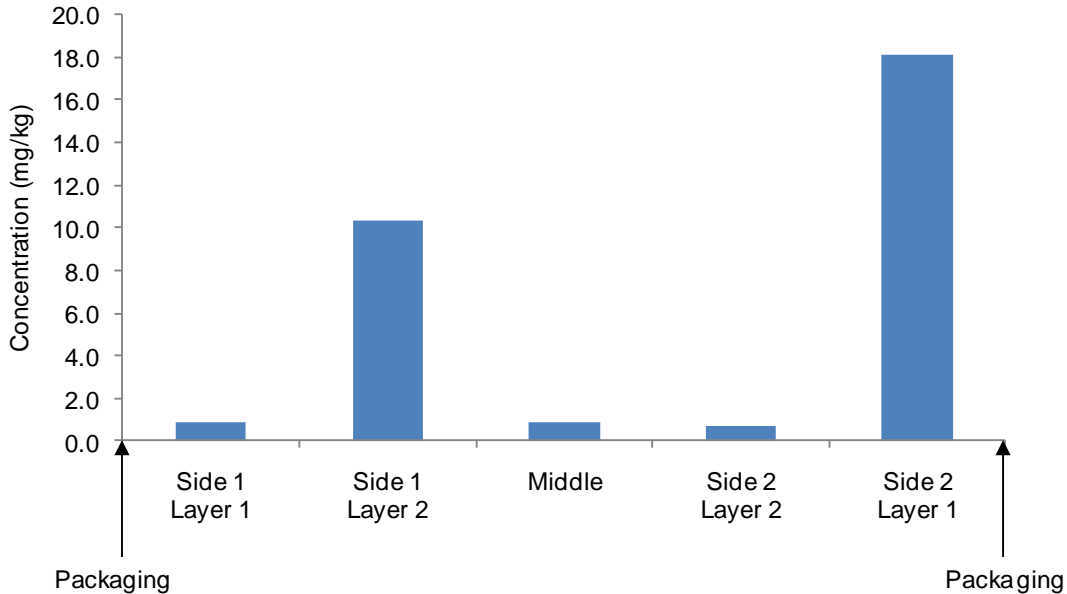


Figure 2. Aluminium concentration profile for sample ALU\_011 - British Chicken Breast with Portuguese-Style Piri Piri Marinade

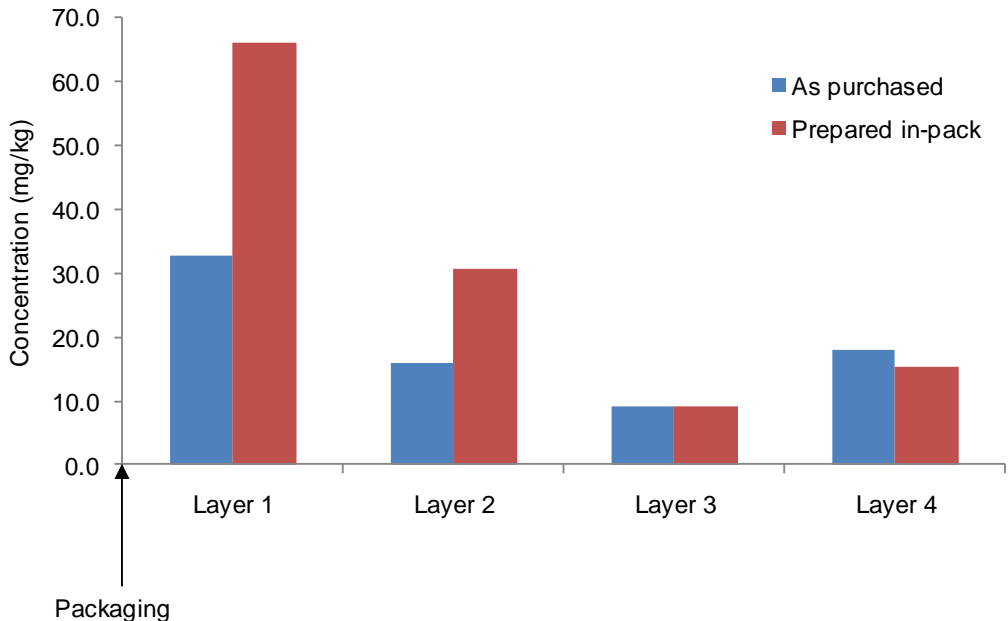


Figure 3. Aluminium concentration profile for sample ALU\_023 - Milk Chocolate Coins

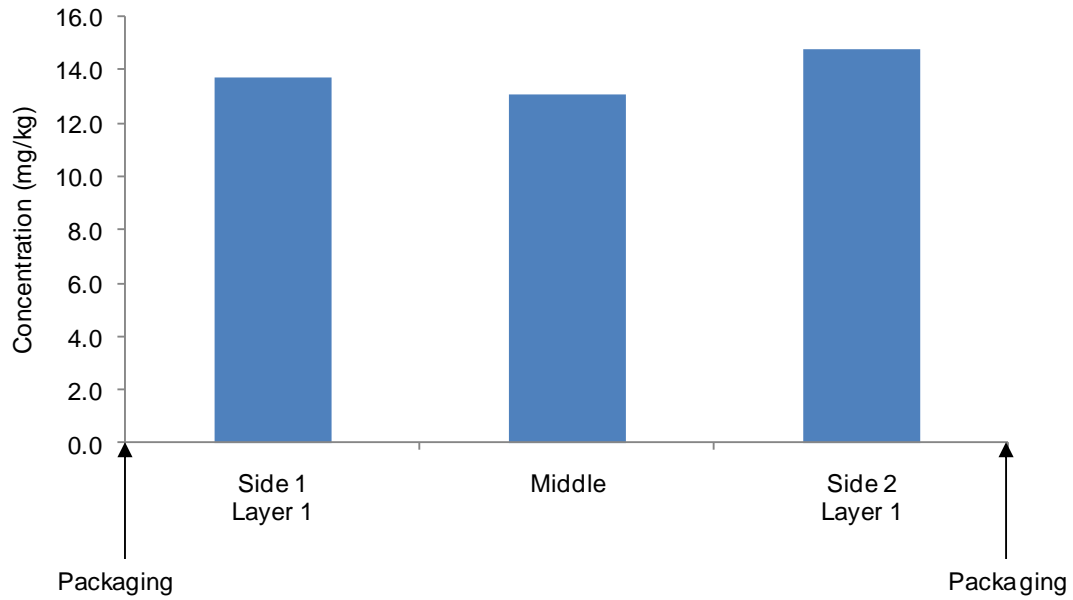


Figure 4. Aluminium concentration profile for sample ALU\_026 – Chocolate Brownie

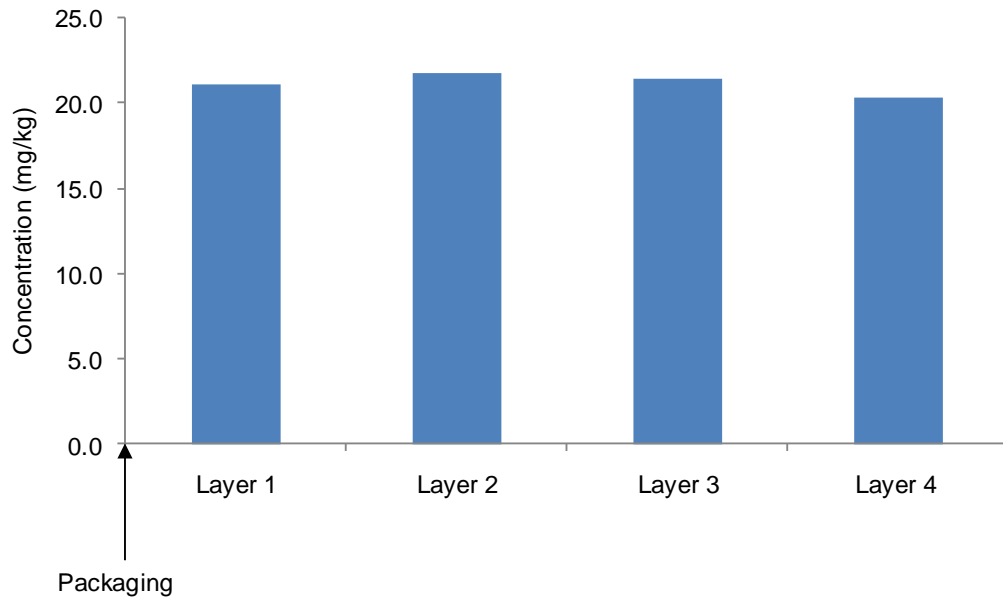


Figure 5. Aluminium concentration profile for sample ALU\_031 - Tomato Puree

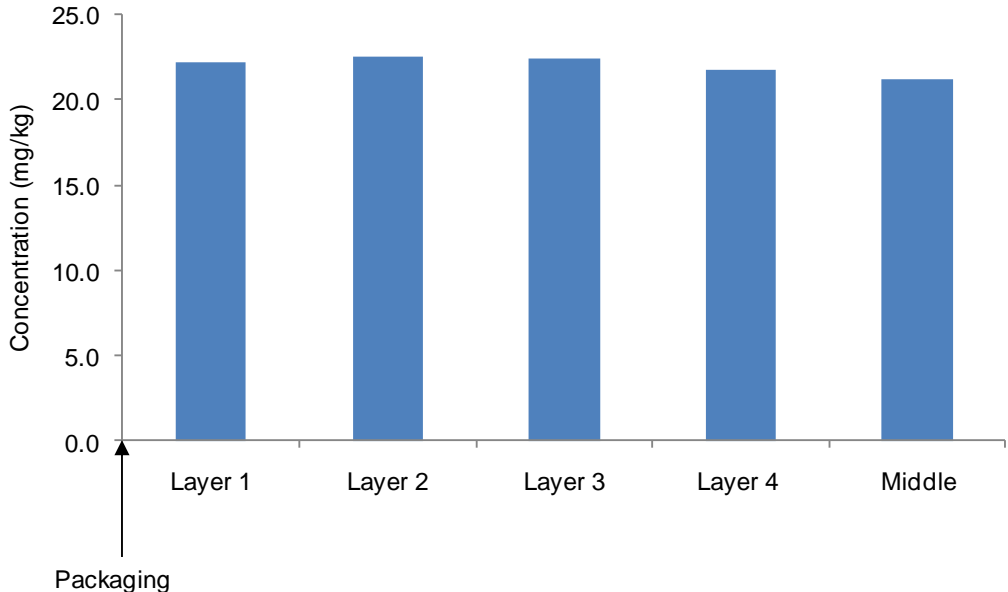


Figure 6. Aluminium concentration profile for sample ALU\_055 - Chocolate Mousse

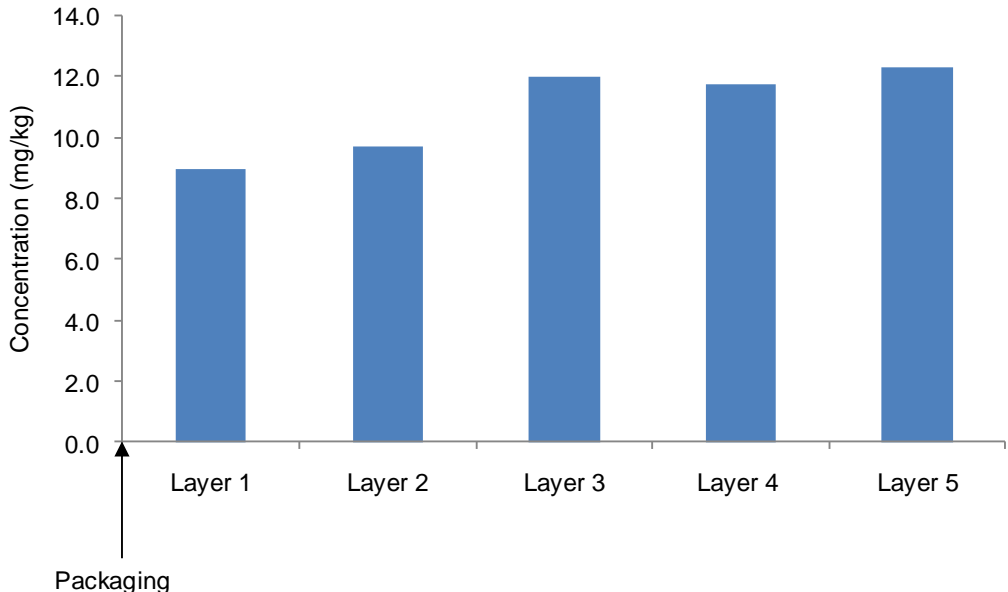


Figure 7. Aluminium concentration profile for sample ALU\_057 - Chicken Tikka Pie

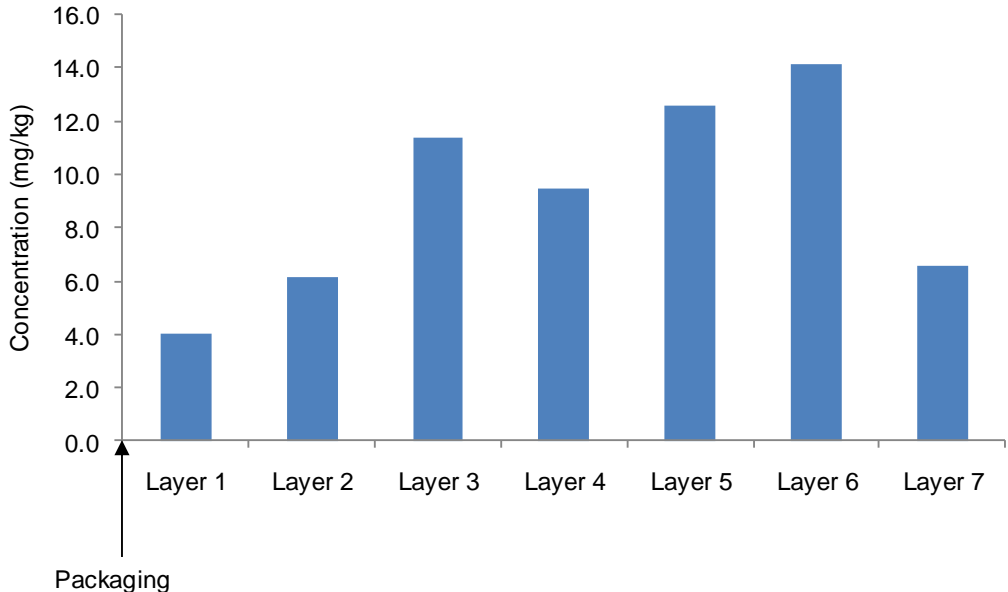


Figure 8. Aluminium concentration profile for sample ALU\_107 - Steamed Chocolate Puddings

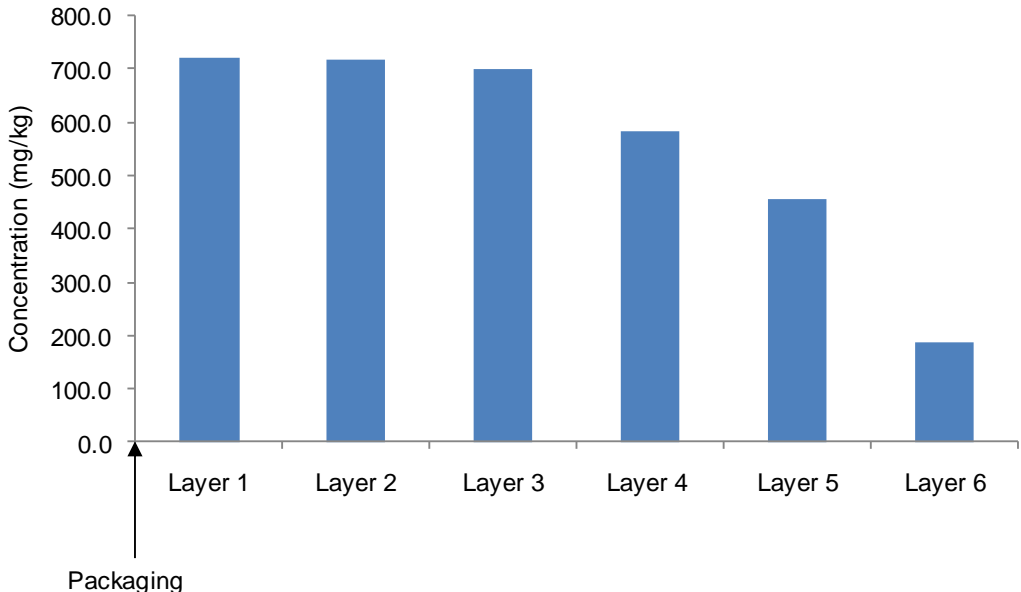


Figure 9. Aluminium concentration profile for sample ALU\_120 - Garlic Puree

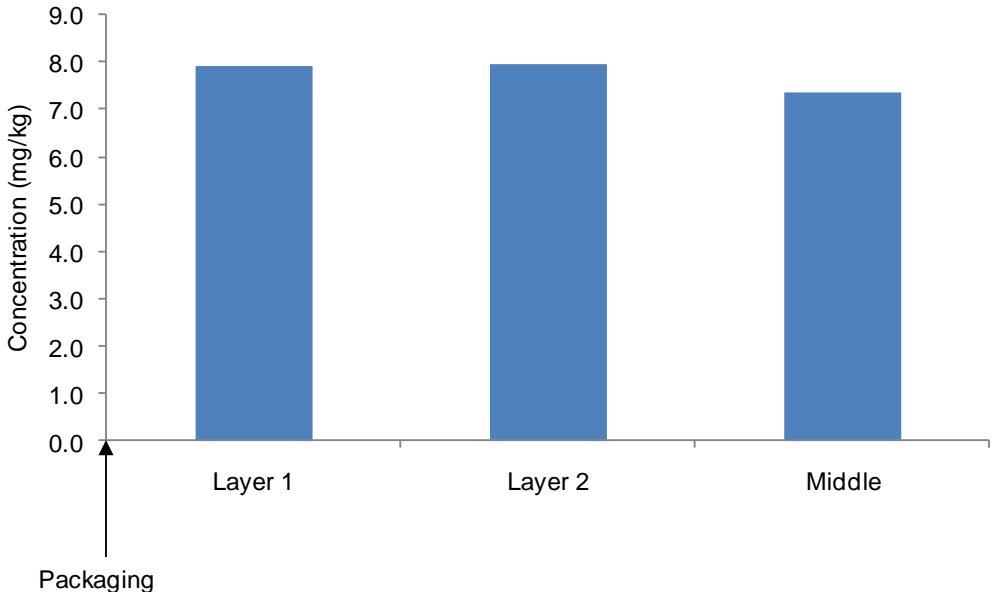
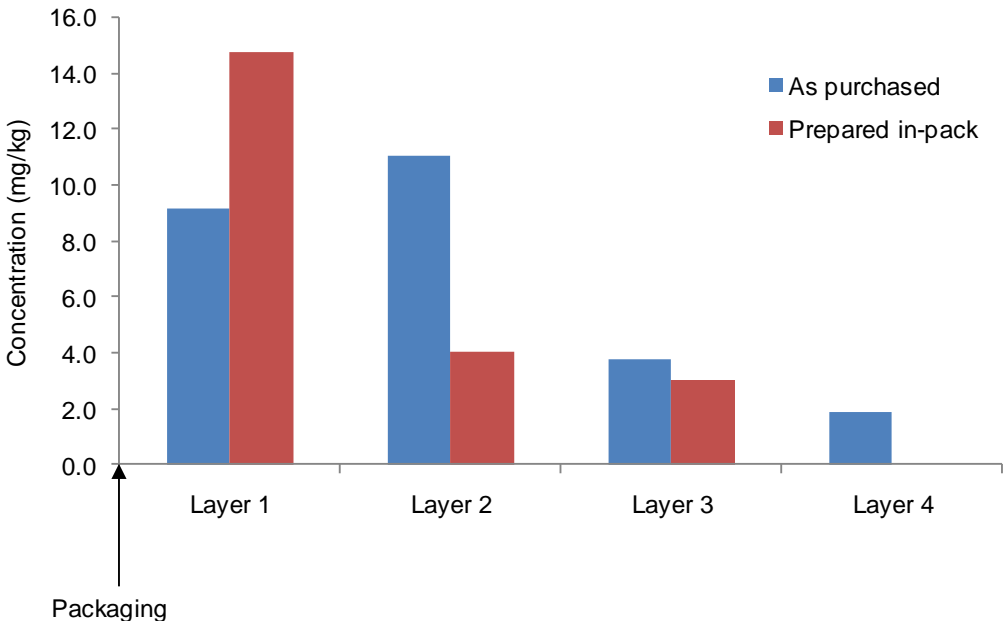


Figure 10. Aluminium concentration profile for sample ALU\_125 - Chicken Fillets with Sun-Dried Tomato & Mozzarella



NOTE: No fourth layer for the prepared in-pack samples

Figure 11. Aluminium concentration profile for sample ALU\_131 - Kaszanka wiejska Black Pudding

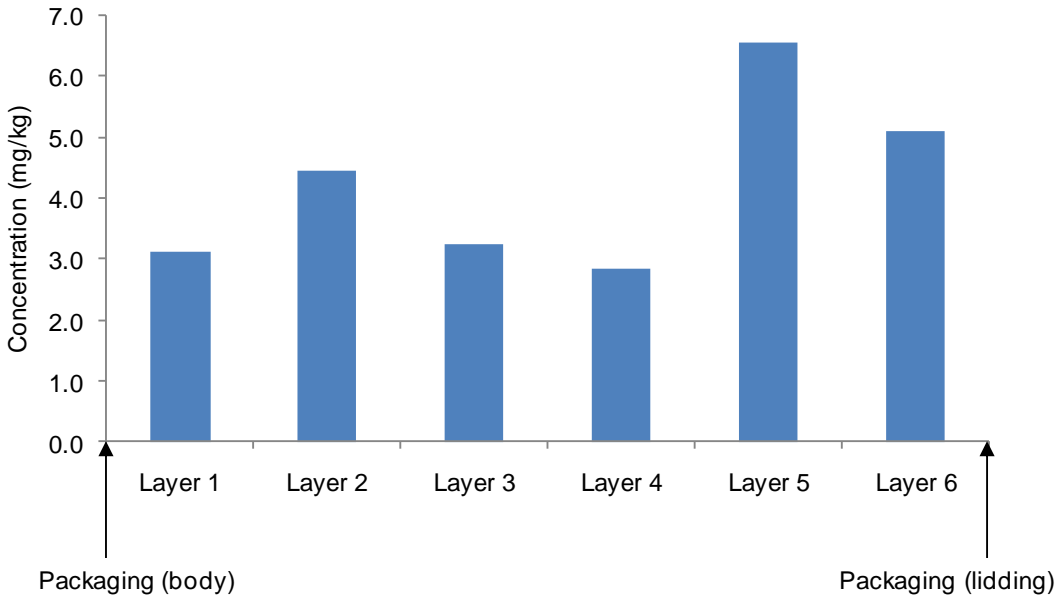


Figure 12. Aluminium concentration profile for sample ALU\_132 - Double Concentrate Tomato Paste

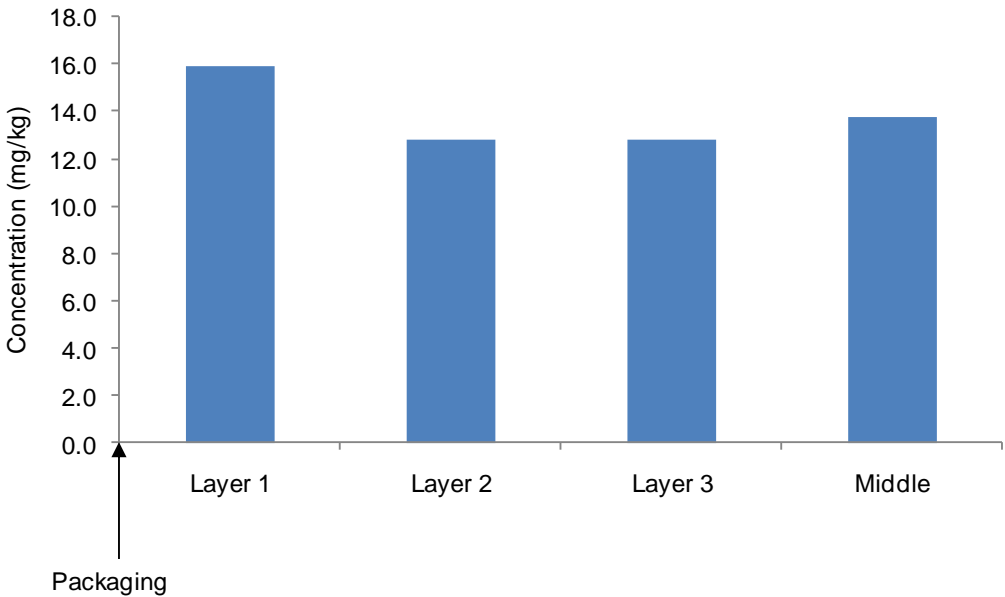


Figure 13. Aluminium concentration profile for sample ALU\_137 - Chocolate Hazelnut Crunch Protein Bar

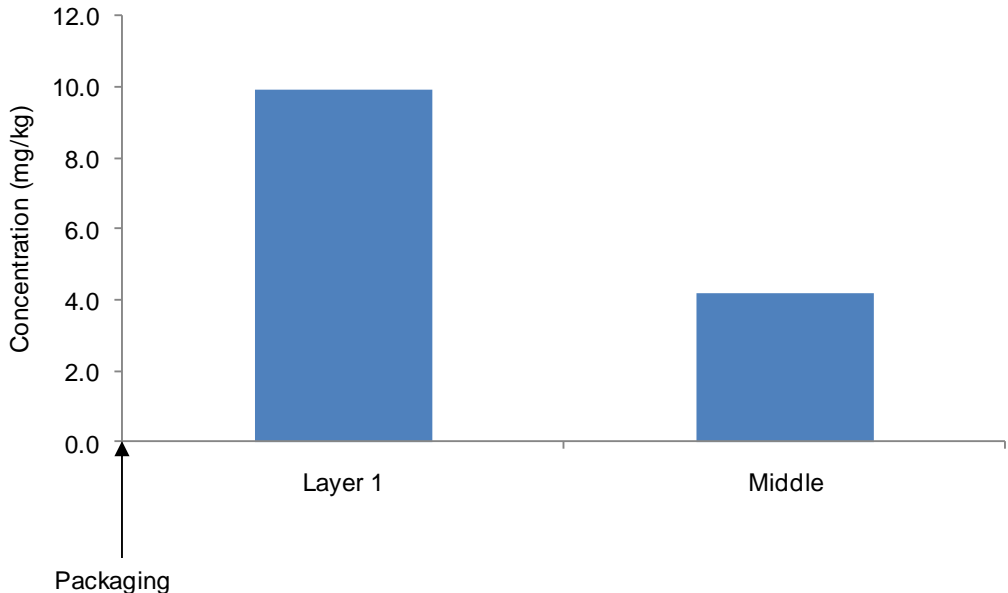


Figure 14. Aluminium concentration profile for sample ALU\_144 - Double Concentrate Tomato Puree

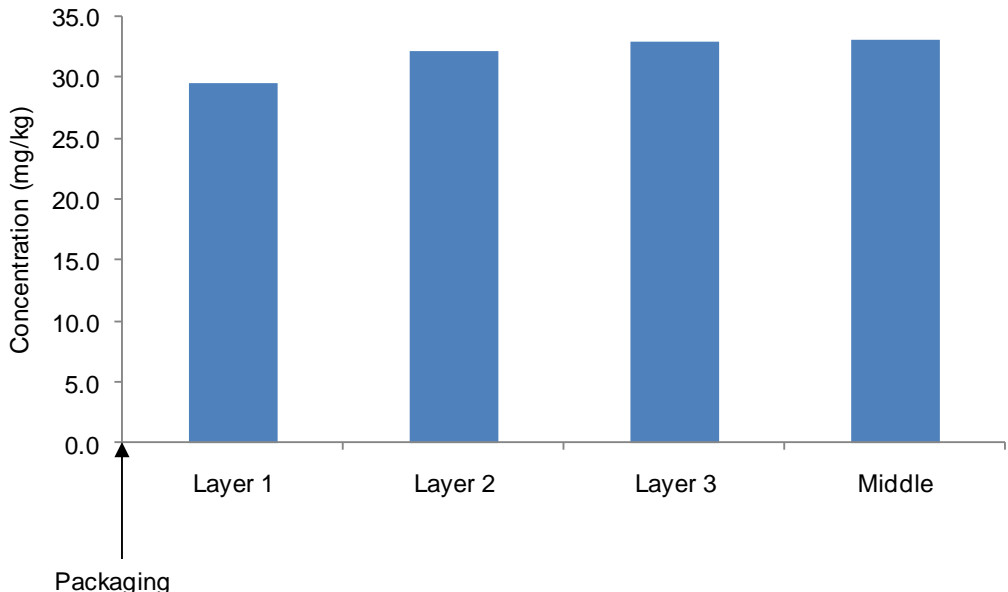


Figure 15. Aluminium concentration profile for sample ALU\_170 - Double Concentrated Tomato Puree

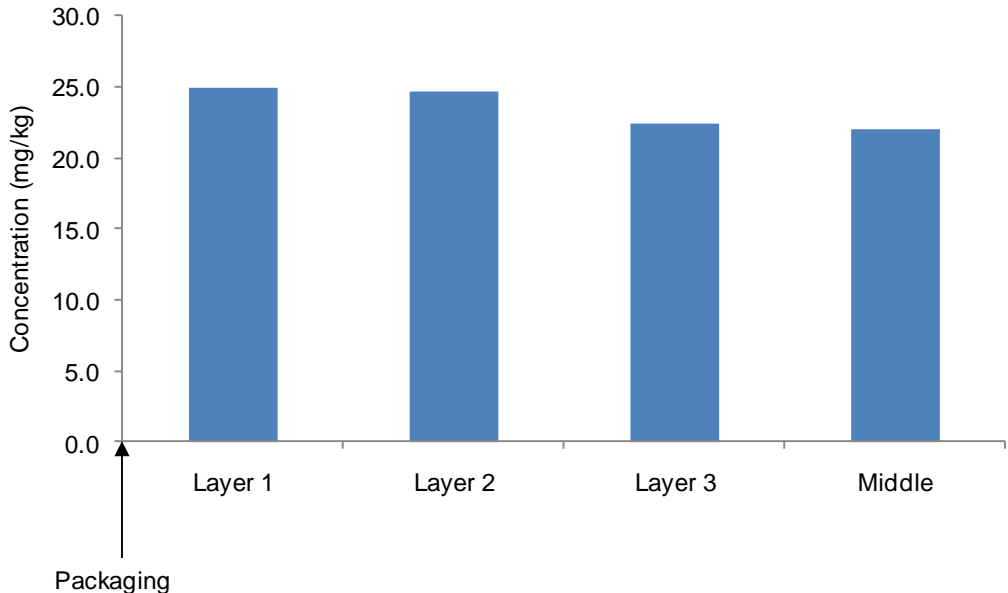


Figure 16. Aluminium concentration profile for sample ALU\_174 - Rocky Road

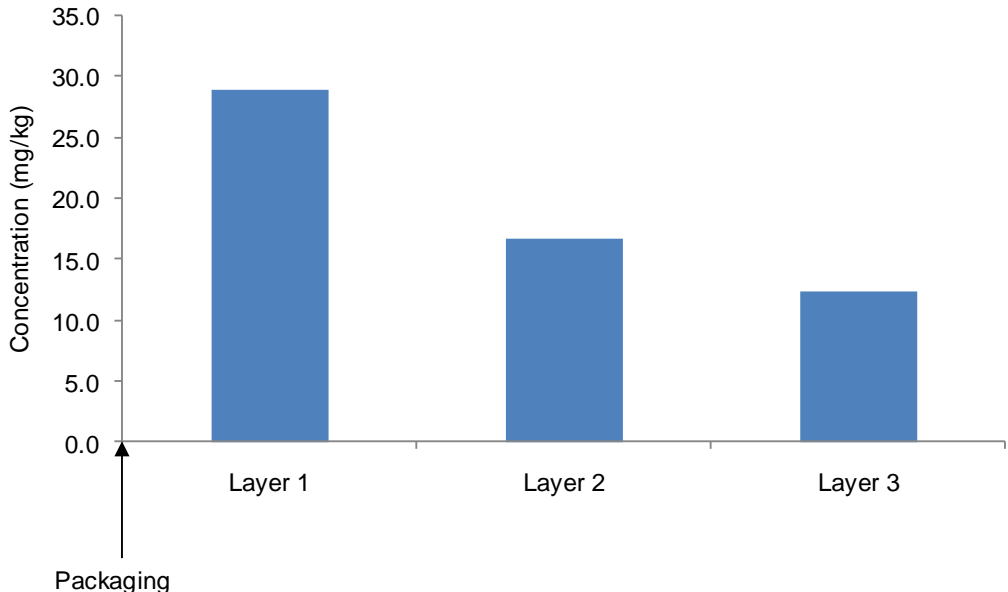




Figure 17. Aluminium concentration profile for sample ALU\_180 - Original Beef Stock Cube

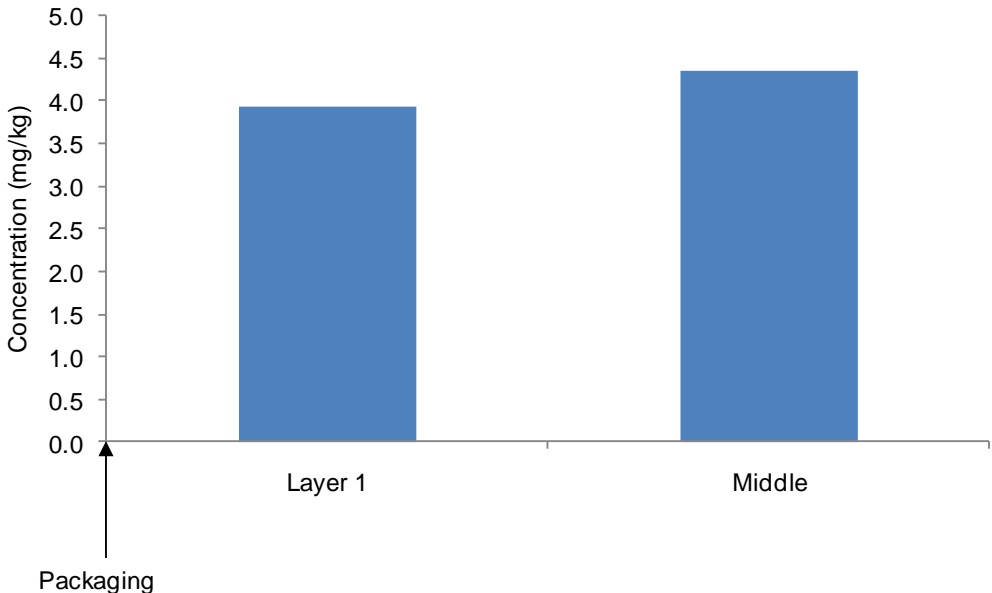


Figure 18. Aluminium concentration profile for sample ALU\_187 - Sardines in Tomato Sauce

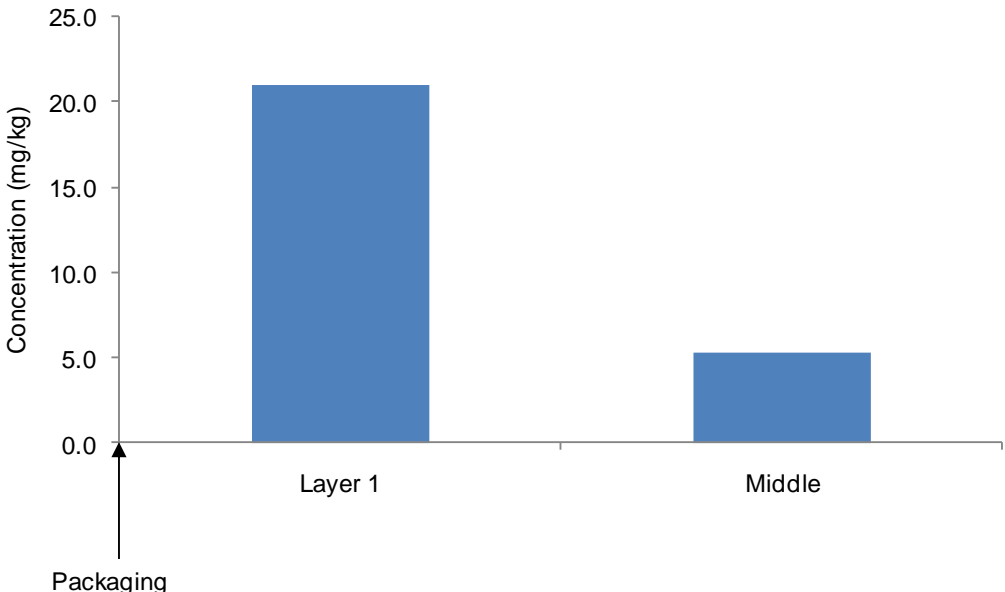


Figure 19. Aluminium concentration profile for sample ALU\_191 - Le Phare Du Cap Bon Chilli Paste

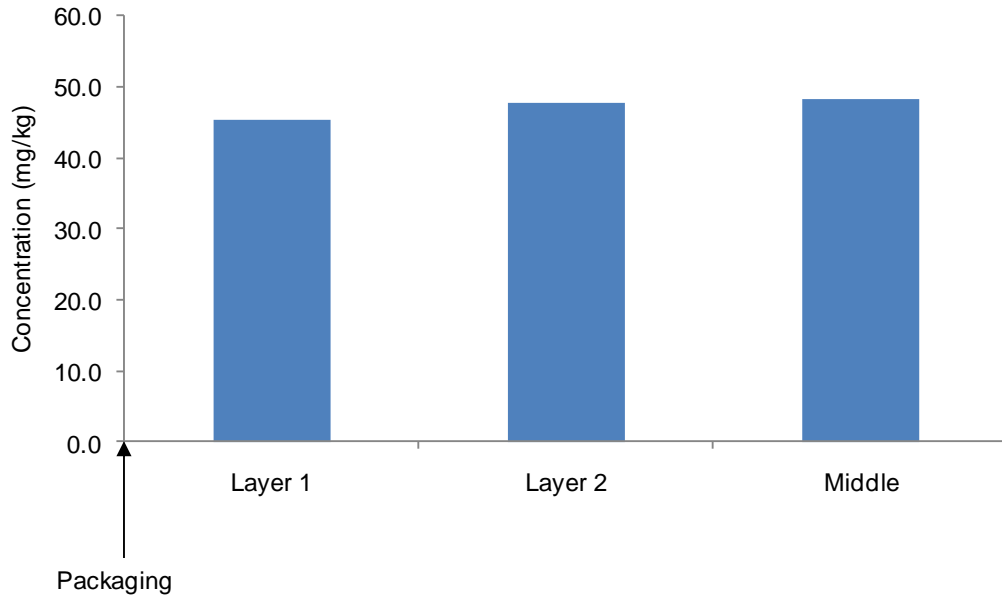


Figure 20. Aluminium concentration profile for sample ALU\_195 - Thomas & Friends Milk Chocolate Lollipop

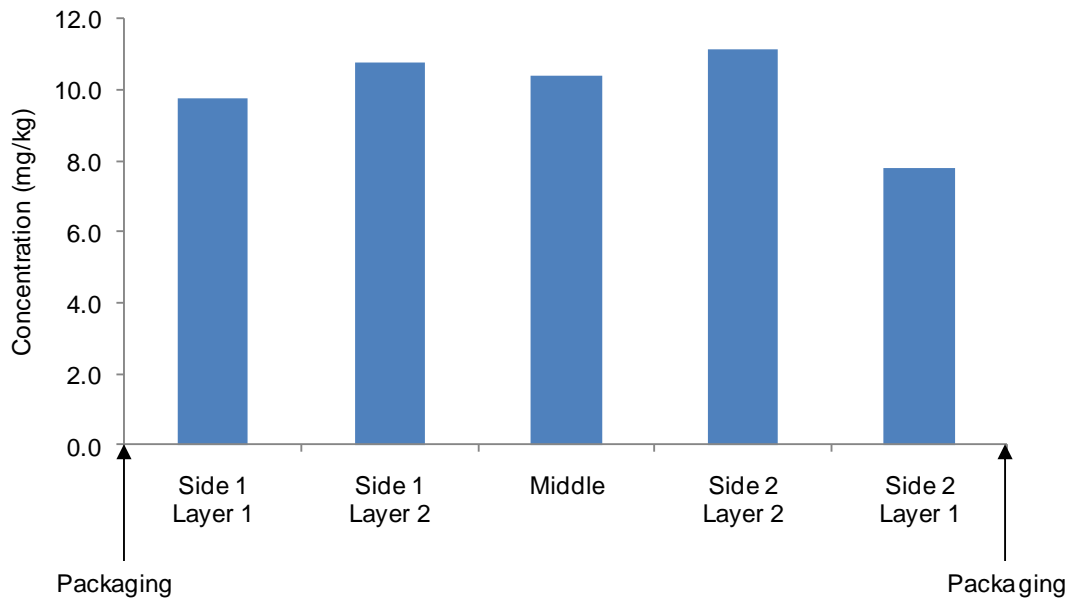


Figure 21. Aluminium concentration profile for sample ALU\_199 - Sardines in Sunflower oil

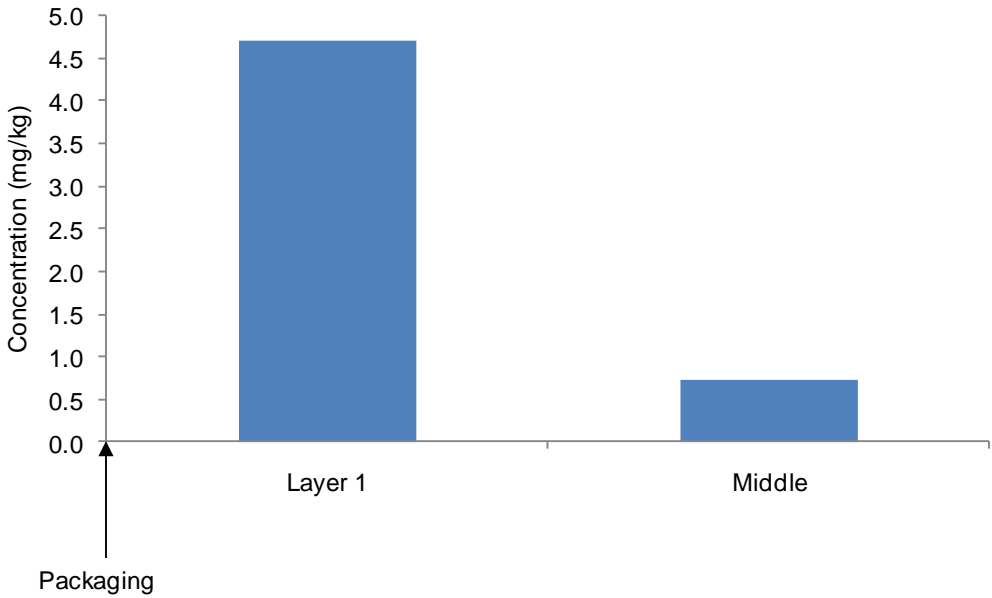


Figure 22. Aluminium concentration profile for sample ALU\_216 - Euro Medallion Milk Chocolate

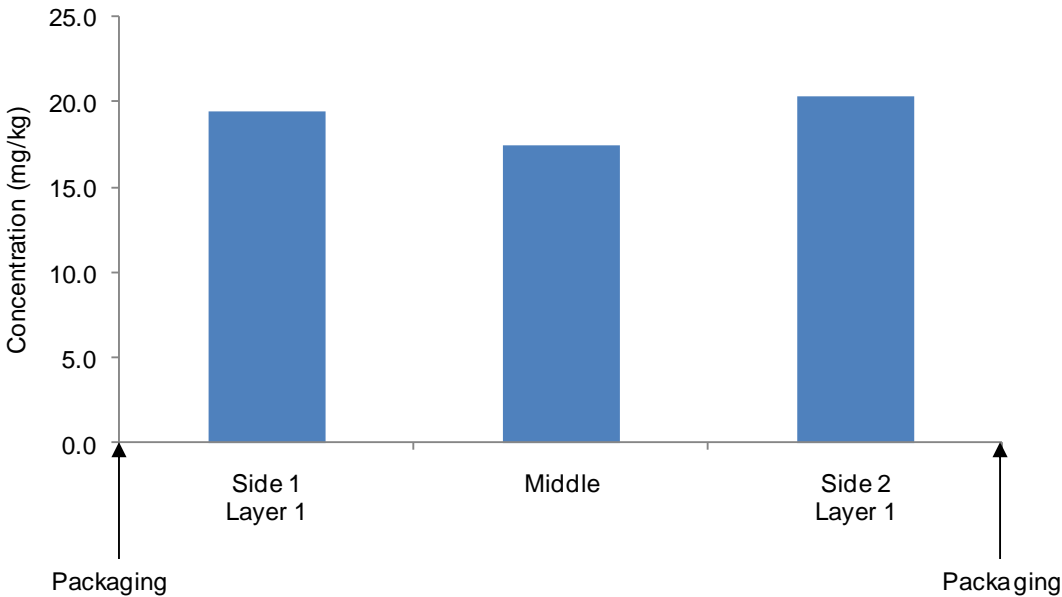


Figure 23. Aluminium concentration profile for sample ALU\_226 - Milk Chocolate Lollipop with Popping Candy Pieces

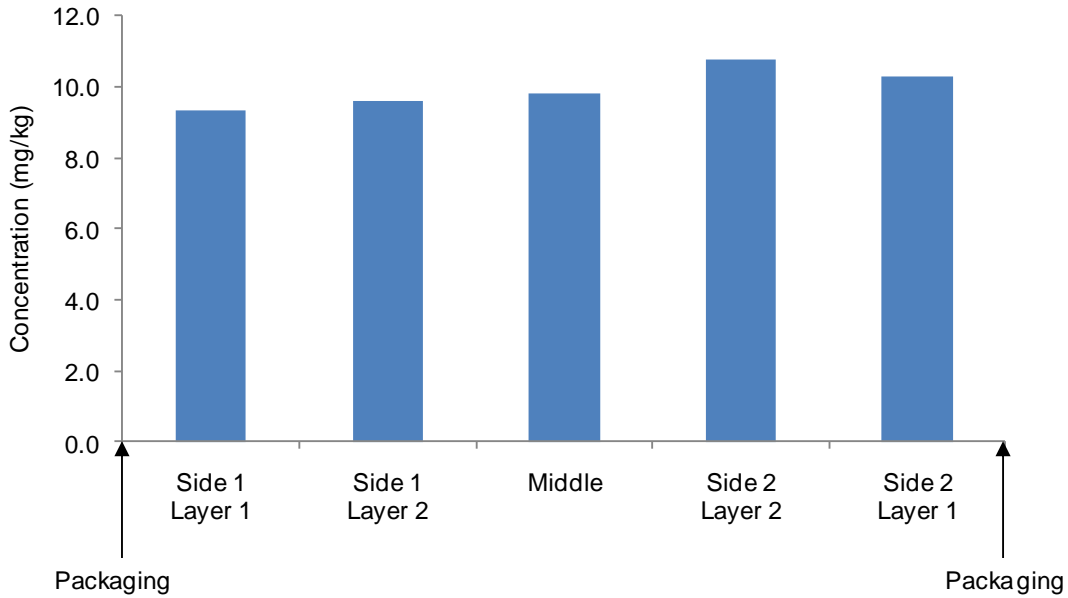


Figure 24. Aluminium concentration profile for sample ALU\_237 - Apple & Blackcurrant Pies

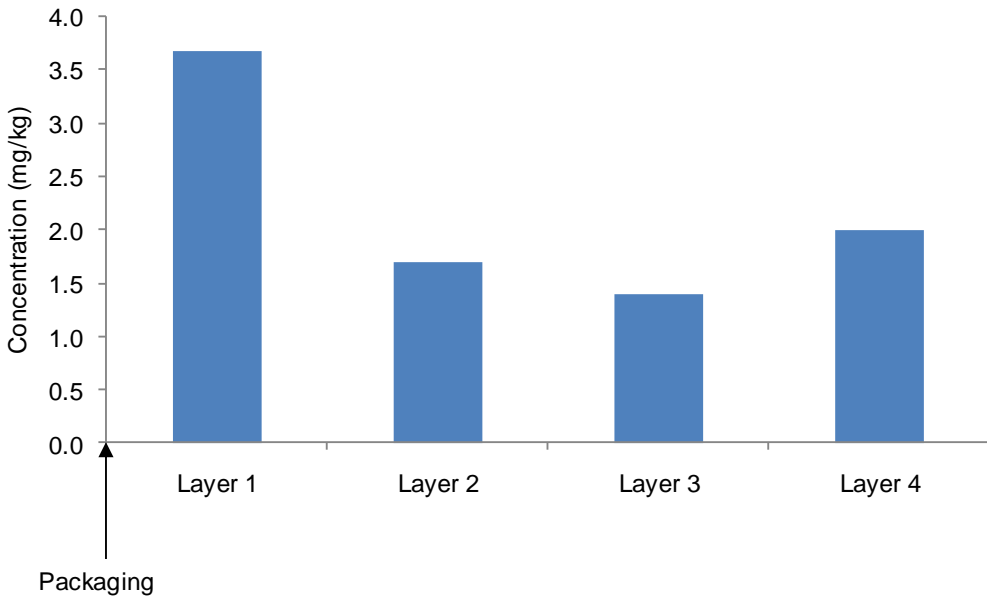


Figure 25. Aluminium concentration profile for sample ALU\_240 - "Tear & Share" Continental Patisserie with Chocolate Chips

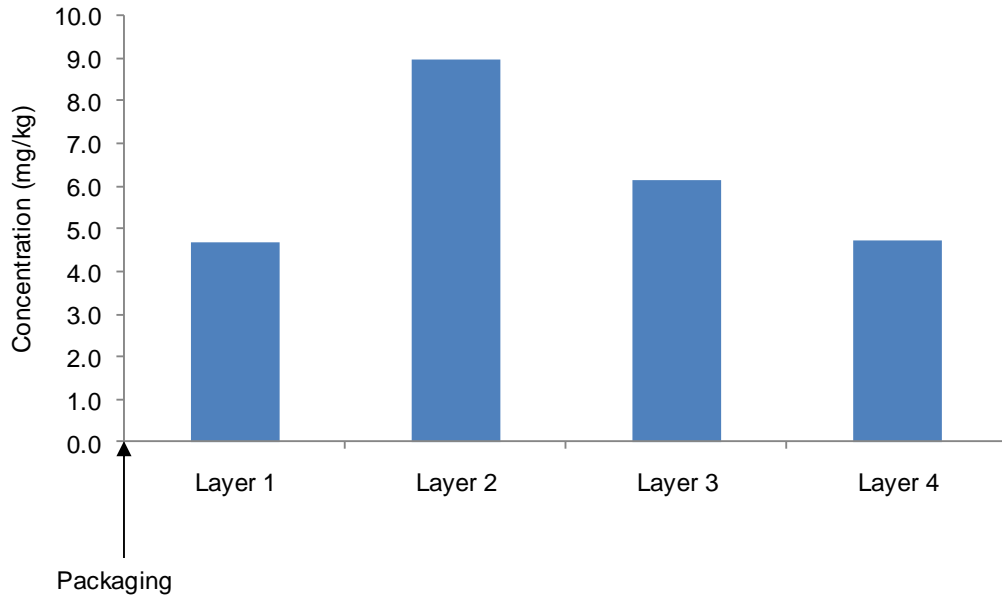


Figure 26. Aluminium concentration profile for sample ALU\_174 - Rocky Road (duplicate data)

