

# Investigation of the composition and labelling of chicken breast fillets from the Netherlands imported into Ireland

## Summary

In May 2002 the Food Safety Authority of Ireland issued results of a survey which highlighted infringements of the labelling regulations and quality issues with chicken breast fillets imported into Ireland from the Netherlands. The main issues of concern were the unacceptable practice of addition of pig and beef protein to product, incorrect declaration of meat content and the failure to disclose meat content, added collagen and water. Product descriptions suggesting whole unadulterated chicken were misleading customers as to the content. In February 2003 the FSAI carried out sampling of frozen chicken breast fillets following continued concern in Ireland and the UK regarding these issues.

With the assistance of officers from the Department of Agriculture and Food, and Environmental Health Officers from the South Western Area Health Board and the Northern Area Health Board, premises known to import frozen poultry product from the Netherlands were visited and samples taken for analysis. Premises sampled were limited to those directly importing the products into the State.

Samples were checked for compliance against Article 2 of Directive 2000/13/EC relating to the labelling, presentation and advertising of foodstuffs specifically requires that:

1. The labelling methods used must not:

(a) *be such as could mislead the purchaser to a material degree, particularly;*

(i) *as to the **characteristics** of the foodstuffs and, in particular, as to **its nature, identity, properties, quantity, durability, origin or provenance, method of manufacture or production.***

The primary objective of the survey was to determine whether products described as chicken fillets were unadulterated fillets of meat. The secondary objective was, in those products found to contain other substances (including water), to determine the nature of the substance and the accuracy of the corresponding label declaration

Testing involved analysis for protein, fat, moisture, ash, hydroxyproline was at the Public Analyst Laboratory Cork. Sodium, meat content and added water was carried out at the Public Analyst Laboratory, Galway and at IdentiGen carried out DNA profiling.

The results showed an improvement on the previous samples. Porcine and bovine DNA was not detected indicating the absence of protein from these species in the chicken fillets. However, label problems remained. Of the eight samples analysed, 3 had between 7.2 and 10.8% less meat than declared on the label. All manufacturers

had changed their ingredient labels to include the presence of added hydrolysed protein, but, in three cases the description was not written in full which could lead to misinterpretation.

Three samples from one manufacturer carried misleading product name. According to the EU Regulation 317/93 poultrymeat is defined as “poultry meat suitable for human consumption, which has not undergone any treatment other than cold treatment”. The product name of these products did not indicate that they contained added water. However, water was declared on the ingredients label.

Two samples from one manufacturer carried reference to European legislation governing the marketing of poultrymeat suggesting that the products were compliant with this legislation. This is not true since the products in question are not poultrymeat as specified in the regulations quoted. These products are considered processed by the addition of water and other ingredients and are defined as meat preparations. This is a subtle but misleading practice that should be stopped.

While the samples analysed shows that the situation on the labelling and adding protein to these products has improved since the original survey of 2002, there remains a concern that practices are still not fully compliant with the labelling legislation and the naming of the products.

## ***Introduction***

### **Background**

Early in 2002 the Food Safety Authority of Ireland (FSAI) was notified of concerns about the quality and safety of chicken breast fillets imported into Ireland and supplied to the catering trade. The UK Food Standards Agency reported the results of an investigation carried out on similar products which highlighted quality and labelling issues with chicken breast portions principally supplied from the Netherlands but also involving one manufacture in Belgium and one manufacturer in UK. The UK FSA disclosed its findings publicly and contacted the national enforcement authorities in Holland and Belgium and the European Commission. Following this publication the FSAI initiated an investigation in Ireland targeted at the manufacturers named in the UK FSA report<sup>1</sup>. The results at that time showed that the concerns were justified with the discovery of significant levels of porcine and bovine DNA detected. A full report was published in May, 2002.

In February 2003, the FSAI carried out limited follow up sampling of imported products from specified premises. Similar follow up sampling was carried out in the UK in December 2002.

### **Products under investigation<sup>1</sup>**

Chicken breasts that have water and other ingredients added to them often originate in countries outside of the European Union. However this is not an exclusive source and some fillets appear to be produced in other Member States. The fillets tend to be

salted and frozen before import into the EU under a reduced trade tariff covering chicken for further processing. European manufacturers then defrost the fillets and tumble or inject them with water and other ingredients. Ingredients such as water binding additives, sugars, collagen and flavourings can all be added. The fillets are then re-frozen and packed into bulk boxes. They are then sold into wholesale catering suppliers at a lower price than normal unprocessed chicken breast fillets.

## Legislation

Internal trade in poultrymeat between Member States of the European Union is governed by Regulation (EEC) No. 2777/75 of the Council on the common organisation of the market in poultrymeat. The requirements of Article 2 (2) of this regulation are laid down in the harmonised marketing standards for poultrymeat; Council Regulation (EEC) No. 1906/90 as amended. This regulation is implemented by Commission Regulation (EEC) No. 1538/91 as amended. These regulations and their implementing regulations contain specific requirements for poultrymeat that cover legal names, quality grading, processing, labelling and specific controls on the addition of water to poultry meat not required to be declared.

Initially, poultry meat was defined in Council Regulation (EEC) No. 1906/90 as 'poultrymeat suitable for human consumption, which has not undergone any treatment other than cold treatment to ensure its preservation'. In this respect it applied to chicken breast fillets with added water and other ingredients. However, Council Regulation (EEC) No. 1906/90 was amended by Council Regulation (EEC) No. 317/93 that re-defined poultry meat as 'poultrymeat suitable for human consumption, which has not undergone any treatment other than cold treatment'. Hence, chicken breast fillets treated by the addition of water and other ingredients were no longer covered by the marketing standards provisions laid down in Council Regulation (EEC) No. 1906/90 and its implementing legislation.

However, pre-packaged chicken breast fillets with added water and other ingredients are still controlled by the general labelling rules. The general labelling rules are laid down in Council Directive 2000/13/EC on the labelling, presentation and advertising of foodstuffs. A recent amendment, Commission Directive 20001/101/EC, sets specific rules about the labelling of meat and comes into force from 1<sup>st</sup> January 2003. Council Directive 2000/13/EC has been enacted in Ireland by the European Communities (Labelling, Presentation and Advertising of Foodstuffs) Regulations, 2000 (S.I. 92 of 2000) and is the subject of an extensive guide entitled 'The Labelling of Food in Ireland 2002' available from the Food Safety Authority of Ireland or at [www.fsai.ie](http://www.fsai.ie). The overriding ethos of the general labelling directive is that the labelling, presentation or advertising of a foodstuff shall not mislead the consumer to a material degree.

The general labelling directive requires that pre-packed frozen chicken breast fillets are labelled in the following manner.

- Food marketed in Ireland must be labelled in English or English and Irish
- The label must contain the
  - a. Name under which the food is sold
  - b. List of ingredients

- i. These must be listed in descending order of weight at the mixing bowl stage. However, water must be listed by its weight in the final product and declared accordingly in the ingredients list (NB. Added water < 5% need not be declared)
- ii. Additives must be approved in the European union and must be labelled in the ingredients list as the category of additive followed by either its E-number or full name e.g. Stabiliser: E451 or Flavour enhancer: E640
- c. The quantity of certain characterising ingredients (in this case poultry meat)
- d. The net quantity
- e. The date of minimum durability
- f. Any special storage instruction or conditions of use
- g. The name of the business and address of the manufacturer or packager, or of a seller within the European Union
- h. Place of origin of the foodstuff if its absence might mislead the consumer to a material degree

For frozen chicken breast fillets sold into wholesalers or caterers and not directly to the ultimate consumer a derogation allows for some labelling information to be carried on the accompanying commercial documentation rather than the label. The information listed above which falls in this category includes provisions b, c, d, f and h. All other information listed above must appear on the pre-packaging label.

## **Methodology**

### **Sampling**

During February 2003, samples of frozen boxed chicken breast fillets originating from specific processors were taken from importers by EHO's from health boards Southern HB, South Western HB and the Department of Agriculture and Food. All samples were sent for analysis to the Western Region Public Analysts Laboratory in Galway. Each sample was tested for nitrogen, moisture, fat and ash. Sub-samples were sent to the Southern Region Public Analysts Laboratory for quantification of hydroxyproline content and to a commercial laboratory for DNA profiling. All analytical methods used were internationally recognised methods.

### **Meat Content Calculation**

The quantity of hydrolysed protein added to the chicken breast fillet sample was calculated from the hydroxyproline content of the sample. Hydroxyproline is a unique amino acid found in collagen which is a protein associated with skin, bones and other connective tissue. Skinless, boneless, lean chicken breast usually contains less than 0.08% hydroxyproline<sup>3</sup>. The apparent total meat content was therefore calculated as follows:

1.  $\% \text{ excess hydroxyproline} = \% \text{ hydroxyproline} - 0.10\%$   
(where  $\% \text{ Excess hydroxyproline} = \text{zero when } \% \text{ hydroxyproline} < 0.10\%$ )

2. %collagen nitrogen = % excess hydroxyproline content \* 1.28<sup>(ref 2)</sup>
3. % Apparent Total Meat Content = (((% total nitrogen – % collagen nitrogen)/NF)\*100) + %fat  
(Where *Nitrogen Factor* = 3.85<sup>(ref 3)</sup>)

### Added Water Calculation

The amount of water added to the chicken breast fillet sample was estimated by difference calculation as follows:

1. %carbohydrate = 100-(%protein + %fat + %ash + %moisture)  
(Where carbohydrate = zero if <1% by calculation)
2. % added water =100-(% apparent total meat content + %ash + %carbohydrate)

### DNA profiling

Intact chicken breast fillets were sub-sampled by removing a small portion of meat from the centre of each fillet. DNA was extracted and purified from chicken samples and subjected to polymerase chain reaction (PCR) analysis. PCR was carried out with chicken, bovine, porcine or ovine specific primer sequences using reaction conditions optimised for the specific primers used. To identify possible false negatives, primers specific to chicken were used on all samples to ensure the integrity of the extracted DNA. Positive controls using bovine, porcine or ovine template DNA were included in all PCR batches to ensure that PCR reaction conditions were favourable thus facilitating identification of any false negatives. As negative controls, reactions containing all the constituents except for template DNA were carried out to identify possible false positives that can arise due to contamination of reaction components, instruments or the laboratory environment. Multiple samples of the extracted DNA were subjected to PCR to ensure reproducible results, with a positive result being recorded only when the PCR product was consistently produced. Where necessary to clarify or verify results, DNA was extracted from multiple chicken samples.

### Results

8 samples of chicken breast fillets were submitted for analysis. From the health mark and processor descriptions it was determined that these samples originated from 5 processors/packers, all based in the Netherlands.

The full results of the analyses are shown in appendix 1

- No products had added protein of other animal species
- One product was of high quality breast meat without additives [Vleesch du Bola: NL5577EEG]
- Three products had higher than declared added water. Two samples taken from one premises **had meat contents 7.8% and 10.6% lower** than that declared.

Similar findings from the same premises in the last survey indicate little improvement. [T Lelie: NL 5721EEG]

- In three samples the description of the product did not indicate added water (which accounted for 20-30% of the product) [Kappers Foods: NL 5739]
- Ingredients labelling were misleading in three samples from one premises where the addition of hydrolysed protein was not properly declared [Kappers Foods: NL 5739]
- Salt levels were similar to the findings of the previous survey (1.37 – 1.88g/100g)

## ***Discussion***

The Food Safety Authority's investigation found that while there had been improvements on previous sample results, there were still instances when the labelling of processed pre-packaged chicken breast fillets was incomplete and inaccurate. For example, 13% of samples failed to disclose meat content as required by law and 38% of samples declared higher meat content than was actually present. This clearly indicates a failure in the control of processors who export these products.

Additionally, all manufacturers had changed their ingredients label to include the presence of hydrolysed protein. However, in three cases the description was not written in full which could lead to misinterpretation.

With regard to meat content declaration, the normal way of measuring meat content is to analyse the nitrogen content of the meat, the assumption being that the nitrogen is contributed by the meat protein. However, collagen also contributes nitrogen and unless the amount of collagen is taken into account in the meat content calculation it can lead to elevated meat content declaration.

The results of the investigation showed that consumers who purchase these chicken breast fillets in retail and catering outlets could be misled about the true composition of the product they are purchasing. The extent of this survey did not extend beyond import level. While most of such imported product will be sold to the catering trade these products could also be sold to consumers as raw chicken breast fillets either in a frozen or unfrozen state at retail level. Where, chicken breast fillets are sold loose over the counter to the consumer the seller need only declare the name 'chicken' on the label or on a sign nearby . Therefore unpackaged chicken breast fillets or chicken fillets wrapped in the presence of the purchaser that are sold directly to consumers at retail do not have to carry a label disclosing their composition. At catering level there is no legal requirement to label the ingredients in the poultry meat sold in a pre-prepared dish. It is therefore unlikely that a consumer would know that a chicken breast fillet could actually contain as little as 62% chicken meat as well as a range of additives when it looks perfectly normal to the eye.

## **References**

1. UK. Food Standards Agency (2001). Survey of Meat Content, Added Water and Hydrolysed Protein in Catering Chicken Breasts (Number 20/01). <http://www.foodstandards.gov.uk/science/surveillance/fsis-2001/20chick>
2. Lord, D.W. and Swan, K.J. (1984) Connective tissue in beef burgers. Journal of the Association of Public Analysts, 22 (4), 131-140
3. Report by the Analytical Methods Committee. Nitrogen factors for chicken meat (2000), The Analyst, 125, 1359-1366

## **Appendix 1: Detailed results 2003**

## **Appendix 2: Previous Survey Results 2002 (Summary)**



**Appendix 1: Detailed results 2003**

Producer	Brand	EC plant no	batch id	date of min durability	product name and description	labelled ingredients	% apparent meat content	% added water	Labelled meat content	hydroxyproline (%m/m)	Sodium (g/100g)	Salt % (2.54 * Sodium)	Bovine DNA?	Porcine DNA?	Low col (>5% col)
Kappers Foods St. Anthonis B.V. Postbus 86, 5430 AB Cuijk, Holland		NL5739EEG	batch code: 402204	Best before 11/2003	Single large chicken fillets without inners Intended use: to cook or roast HALAL Art Nr. 030110	Chicken (m.c. min 70%), water, salt, emulsifier (E451), lactose, acidifier (E640), hydro. Protein, anti oxidante (E332), dextrose, flav. enhancer (E621)	70.6	26.8	70% min	0.141	0.650	1.651	-	-	
Kappers Foods St. Anthonis B.V. Postbus 86, 5430 AB Cuijk, Holland		NL5739EEG	batch code: 382404	Best before 12/2003	Single large chicken fillets without inners Intended use: to cook or roast HALAL Art Nr. 030110	Chicken (m.c. min 70%), water, salt, emulsifier (E451), lactose, acidifier (E640), hydro. Protein, anti oxidante (E332), dextrose, flav. enhancer (E621)	62.6	34.7	70% min	0.060	0.630	1.600	-	-	
Kappers Foods St. Anthonis B.V. Postbus 86, 5430 AB Cuijk, Holland	De Kippenhof	NL5739EEG	batch code: 182404	Best before 12/2003	Single large chicken fillets without inners Intended use: to cook or roast HALAL Art Nr. 030930	Chicken (min mc. 65%), water, stabiliser (E450, E451), lactose, dried glucose syrup, salt, hydr. Protein, flavour enhancers (E640, E621), Dextrose	65.4	35.3	65% min	0.108	0.620	1.575	-	-	
Vrieskoop B.V. Aluminiumstraat 93, Zoetermeer/ Holland	Duke	NL5665EEG	prod date: 01/2003 batch code: ab4449945	use by 01-2004	Chicken breast fillets with added water Single 80% NR 129 HALAL SLAUGHTERED	Water; Salt; Hydrolysed protein; Carbohydrates; Stabiliser E451, E 339 Antioxidant E331; Flavour E621;	77.8	19.5	80%	0.156	0.710	1.803	-	-	
Vrieskoop B.V. Aluminiumstraat 93, Zoetermeer/ Holland	Duke	NL5665EEG	prod date: 10/2002 batch code: ab4053147	use by 10-2003	Chicken breast fillets with added water Single 80% NR 129 HALAL SLAUGHTERED	Water; Salt; Hydrolysed protein; Carbohydrates; Stabiliser E451, E 339 Antioxidant E331; Flavour E621	80.1	17.6	80%	0.140	0.540	1.372	-	-	
Pluimvee-uitsnijderij T. Lelie B.V. Holland DEN lip 126/ 1127 /pm DEN lip		NL5721EEG	prod date: 18/09/2002 batch code: A1812855	Best before 18/9/2003	Single chicken breast fillets with added water Min meat Content 70% EC Reg {1072/2000} 3,7	Chicken, water, salt, hydrolysed protein, carbohydrate, stabiliser (E450, E331), flavour enhancers (E640, E621)	62.2	35.4	70% min	0.303	0.700	1.778	-	-	

Final Report: Food Safety Authority of Ireland 02/11/2005

Pluimvee-uitsnijderij T. Lelie B.V. Holland DEN lip 126/ 1127 /pm DEN lip		NL5721EEG	prod date: 18/09/2002 batch code: A1812371	Best before 18/9/2003	Single chicken breast fillets with added water Min meat Content 75% EC Reg {1072/2000} 3,7	Chicken, water, salt, hydrolysed protein, carbohydrate, stabiliser (E450, E331), flavour enhancers (E640, E621)	64.4	33	75% min	0.303	0.740	1.880	-	-	
Vleesch du Bola Veldhoven b.v.		NL5577EEG	batch code: C1539/B 750	Use by July 2003	I.Q.F. frozen part-boned chicken breast Int. use: treatment		98.1	<5		0.060	0.040	0.102	-	-	

- = Negative, + = Positive

## **Summary of Results from Survey - May 2002**

30 samples of chicken breast fillets were submitted for analysis. From the health mark and processor descriptions it was determined that these samples originated from 8 processors/packers, all based in the Netherlands except one Dutch packer who as far as can be determined, is supplied with meat slaughtered and processed in Germany.

The full results of the analyses are shown in appendix 1 and examples of the DNA analysis are shown in appendix 2. The results in summary:

- 6 samples had no labelled meat content
- of the remaining 24 samples with a labelled meat content, 13 samples had meat contents that were lower than the labelled meat content by greater than 5% (5% = error of measurement)
- Measured meat contents ranged from 55% to 84%
- 8 samples contained excess hydroxyproline (>0.10%) indicative of added collagen
- only 3 samples labelled added water and the analytical results confirmed correct labelling
- Added water ranged from 14% to 43%
- of 10 samples tested for ovine DNA all were negative
- 13 samples did not contain bovine or porcine DNA.
- 17 samples were found to contain foreign DNA as follows
  - 7 samples showed positive for bovine DNA alone (3 of these had no added collagen but declared 'casein' in the ingredients list accounting for the bovine DNA signal)
  - 7 samples showed positive for porcine DNA alone
  - 3 samples were positive for bovine and porcine DNA
- all samples of whole chicken and chicken breast fillets originating in Ireland were negative for bovine and porcine DNA
- Many labelling infringements were identified including incorrect language, failure to label ingredients correctly, failure to label additives correctly and as mentioned previously, failure to give a quantitative ingredient declaration for the chicken meat content.

**Appendix 2: Previous Survey Results 2002**

Ref no	Producer	Brand	EC plant no	batch id	date of min durability	product name and description	labelled ingredients	% protein (Nx 6.25)	% fat (%m/m)	% moisture (m/m)	% ash (m/m)	hydroxyproline (%m/m)	Sodium (g/100g)	% apparent meat content	% added water	labelled meat content	labelled added water	Bovine DNA	Porcine DNA	Ovine DNA	Added Collagen (>0.10% hydroxyproline)
F10/170/02	Kappers Foods St. Anthonis B.V. Postbus 86, 5430 AB Cuijk, Holland	De Kippenhof	NL57 39EE G	prod date: 9/2001 batch code: 361802 art no 030930	Best before 9/2002	Chicken breast meat, Halal Slaughtered, A-grade, 10 kg net weight, Single large chicken fillets without inners. Intended use: further treatment. Keep deep frozen	Chicken (m.c. min 65%), water, stabiliser (E450, E451), lactose, dried glucose syrup, salt, flavour enhancers (E640, E621), Dextrose	15.02	0.84	80.67	2.94	<0.05	0.848	63.18	33.88	65% min		-	-	Not tested	-
F10/216/02	Kappers Foods St. Anthonis B.V. Postbus 86, 5430 AB Cuijk, Holland	De Kippenhof	NL57 39EE G	prod date: 9/2001 batch code: 361802 art no 030930	Best before 9/2002	Chicken breast meat, Halal Slaughtered, A-grade, 10 kg net weight, Single large chicken fillets without inners. Intended use: further treatment. Keep deep frozen	Chicken (m.c. min 65%), water, stabiliser (E450, E451), lactose, dried glucose syrup, salt, flavour enhancers (E640, E621), Dextrose	13.44	0.21	82.88	3.11	0.06	0.868	56.05	40.8	65% min		-	+	Not tested	-
F10/209/02	Kappers Foods St. Anthonis B.V. Postbus 86, 5430 AB Cuijk, Holland	De Kippenhof	NL57 39EE G	prod date: 9/2001 batch code: 561802 art no 030930	Best before 9/2002	Chicken breast meat, Halal Slaughtered, A-grade, 10 kg net weight, Single large chicken fillets without inners. Intended use: further treatment. Keep deep frozen	Chicken (m.c. min 65%), water, stabiliser (E450, E451), lactose, dried glucose syrup, salt, flavour enhancers (E640, E621), Dextrose	14.21	0.54	81.92	2.87	<0.05	0.822	59.5	37.63	65%		-	-	-	-
F10/217/02	Kappers Foods St. Anthonis B.V. Postbus 86, 5430 AB Cuijk, Holland	De Kippenhof	NL57 39EE G	prod date: 11/2001 batch code: 282202 art no 030930	Best before 11/2002	Chicken breast meat, Halal Slaughtered, A-grade, 10 kg net weight, Single large chicken fillets without inners. Intended use: further treatment. Keep deep frozen	Chicken (m.c. min 65%), water, stabiliser (E450, E451), lactose, dried glucose syrup, salt, flavour enhancers (E640, E621), Dextrose	15.65	0.67	80.63	2.52	0.06	0.72	65.61	31.87	65%		-	-	-	-

Final Report: Food Safety Authority of Ireland 02/11/2005

Ref no	Producer	Brand	EC plant no	batch id	date of min durability	product name and description	labelled ingredients	% protein (Nx 6.25)	% fat (%m/m)	% moisture (m/m)	% ash (m/m)	hydroxyproline (%m/m)	Sodium (g/100g)	% apparent meat content	% added water	labelled meat content	labelled added water	Bovine DNA	Porcine DNA	Ovine DNA	Added Collagen (>0.10% hydroxyproline)
F10/288/02	Kappers Foods St. Anthonis B.V. Postbus 86, 5430 AB Cuijk, Holland	De Kippenhof	NL57 39EE G	prod date: 11/2001 batch code: 582202 art no 030930	Best before 11/2002	Chicken breast meat, Halal Slaughtered, A-grade, 10 kg net weight, Single large chicken fillets without inners. Intended use: further treatment. Keep deep frozen	Chicken (m.c. min 65%), water, stabiliser (E450, E451), lactose, dried glucose syrup, salt, flavour enhancers (E640, E621), Dextrose	14.36	0.47	82.94	2.68	<0.05	0.868	60.21	37.11	65% (min A grade)		-	-	-	-
F10/91/02	Kappers Foods St. Anthonis B.V. Postbus 86, 5430 AB Cuijk, Holland	De Kippenhof	NL57 39EE G	prod date: 11/2001 batch code: 122202 art no 030930	Best before 11/2002	Chicken breast meat, Halal Slaughtered, A-grade, 10 kg net weight, Single large chicken fillets without inners. Intended use: further treatment. Keep deep frozen	Chicken (m.c. min 65%), water, stabiliser (E450, E451), lactose, dried glucose syrup, salt, flavour enhancers (E640, E621), Dextrose	14.23	0.59	81.67	2.71	<0.05	0.712	59.81	37.48	65% min		-	-	-	-
F10/168/02	Kappers Foods St. Anthonis B.V. Postbus 86, 5430 AB Cuijk, Holland	De Kippenhof	NL57 39EE G	prod date: 12/2001 batch code: 102402 art no 030930	best before 12/2002	Chicken breast meat, Halal Slaughtered, A-grade, 10 kg net weight, Single large chicken fillets without inners. Intended use: further treatment. Keep deep frozen	Chicken (m.c. min 65%), water, stabiliser (E450, E451), lactose, dried glucose syrup, salt, flavour enhancers (E640, E621), Dextrose	15.63	0.54	80.39	2.71	0.07	0.654	65.48	31.81	65%		-	+	-	-
F10/220/02	Kappers Foods St. Anthonis B.V. Postbus 86, 5430 AB Cuijk, Holland	De Kippenhof	NL57 39EE G	prod date: 05/2001 batch code: 561002 art no 031602	Best before 05/2002	Single chicken filets IQF without inners 140-170gr. Halal, 10 kg net weight. Intended use: further treatment. Keep deep frozen	Chicken (m.c. min. 80%) water, salt, emulsifier (E451), lactose, acidifier (E640), antioxidant (E332), dextrose, Flavour enhancer (E621)	16.49	0.88	80.72	2.39	0.16	0.588	66.8	30.9	80% min		+	-	Not tested	+
F10/222/02	Kappers Foods St. Anthonis B.V. Postbus	De Kippenhof	NL57 39EE G	prod date: 12/2001 batch	Best before 12/2002	Chicken breast meat. Halal slaughtered. Single large chicken fillets	Chicken (m.c. min. 80%), water, salt, emulsifier E451, lactose, acidifier	15.76	0.49	81.16	1.37	<0.05	0.528	65.94	32.69	80%		-	-	Not tested	-

Final Report: Food Safety Authority of Ireland 02/11/2005

Ref no	Producer	Brand	EC plant no	batch id	date of min durability	product name and description	labelled ingredients	% protein (Nx 6.25)	% fat (%m/m)	% moisture (m/m)	% ash (m/m)	hydroxyproline (%m/m)	Sodium (g/100g)	% apparent meat content	% added water	Labelled meat content	labelled added water	Bovine DNA	Porcine DNA	Ovine DNA	Added Collagen (>0.10% hydroxyproline)	
	86, 5430 AB Cuijk, Holland			code: 402402 art no 030114		without inners m.c. 80%. 10kg net. Intended use: further treatment. Keep deep frozen	E640, antioxidant E332, dextrose, flavour enhancer E621															
F10/171/02		Diamond	Holland 5216 EEG	09 UK 12001	Best before 1 Jan 2003	Premium quality chicken breast fillets, Halal slaughtered, Net weight 10kg Premium Class	Chicken meat, water, salt, glucose, flavour enhancers E640, E621, Antioxidant E330	17.88	0.92	79.13	2.25	0.05	0.515	75.21	22.54			-	+	-	-	
F10/225/02		Diamond	NL52 16EE G		BBD 1/01/2003	Tag No. A002328 Premium quality chicken breast fillets, halal slaughtered net weight 10kg, Premium class	Chicken meat, water, salt, glucose, flavour enhancers (E640, E621), antioxidant E330	16.57	0.49	80.13	2.35	0.05	0.563	69.32	28.33			-	+	Not tested	-	
F10/223/02		Diamond	NL52 16EE G		BBD 17/01/2003	Premium quality breast fillets. Halal slaughtered. Net wt 10kg	Chicken meat, water, salt, glucose, flavour enhancers (E640, E621), antioxidant (E330)	16.89	0.8	80.6	2.07	0.07	0.497	70.93	27			-	+	Not tested	-	
F10/211/02			NL52 16EE G	prod date 12-2001	best before 04-2003	Chicken fillet IFR single, Halal slaughtered, meat content 60%, Sorted 140g up. weight 10kg N	Chicken, added water, salt, glucose, flavour enhancers (E640, E621), antioxidant E330	13.15	0.76	83.83	1.95	<0.05	0.455	55.31	42.7	60%		-	+	Not tested	-	
F10/224/02			NL52 16EE G	prod date 28-12-2001	best before 04-2003	Chicken fillet IFR single, Halal slaughtered, meat content 80%, Sorted 140g up. weight 10kg N	Chicken, added water, salt, glucose, flavour enhancers (E640, E621), antioxidant E330	16.46	0.91	80.49	2.32	<0.05	0.578	69.22	28.46	80%		-	-	Not tested	-	
F10/166/02	Jozef Hassan B.V.Holland		NL52 16EE G	prod date 09-2001	best before 12-2002	Quality chicken fillets without inner fillets. Chicken fillet IFR single, meat content 70%, Sorted 140g up. weight 10kg N.	Chicken, added water, salt, glucose, flavour enhancers (E640, E621), Antioxidant	15.44	1.32	82.2	2.1	0.07	0.506	65.48	32.42	70%		-	-	Not tested	-	

Final Report: Food Safety Authority of Ireland 02/11/2005

Ref no	Producer	Brand	EC plant no	batch id	date of min durability	product name and description	labelled ingredients	% protein (Nx 6.25)	% fat (%m/m)	% moisture (m/m)	% ash (m/m)	hydroxyproline (%m/m)	Sodium (g/100g)	% apparent meat content	% added water	labelled meat content	labelled added water	Bovine DNA	Porcine DNA	Ovine DNA	Added Collagen (>0.10% hydroxyproline)
						slaughtered in accordance with Islamic rites	(E330)														
F10/212/02	packed by Superkip, Oss,Holland	Farmyard	NL55 82EE C	prod date: 02-11-2001 Art no.1475	use by 05/2003	Single Chicken Fillets. Frozen large single 180+ gr chicken breast fillets boneless and skinless with added water ex. Inner fillet. Halal. Net wt 10kg. Store at or below -18 C / keep frozen	Chicken (min 85%) water, salt, stabilisers (e450,e451), flavour enhancers (e640, e621), glucose syrup	18.49	1.13	78.31	2.39	0.05	0.529	78.01	19.6	85%		-	-	-	-
F10/215/02	packed by Superkip, Oss,Holland	Farmyard	NL55 82EE G	prod date: 20-07-2001 Art no.1475	use by 01/2003	Single Chicken Fillets. Frozen large single 180+ gr chicken breast fillets boneless and skinless with added water ex. Inner fillet. Halal. Net wt 10kg. Store at or below -18 C / keep frozen	Chicken (min 85%) water, sucrose, glucose syrup, flavour enhancers (E640, E621) antioxidant (E330)	17.12	0.67	80	2.39	<0.05	0.547	71.84	25.77	85%		-	-	-	-
F10/167/02	MR brand roodz	Slegtenhorst	NL59 76EE G	prod date: 11-2001 art no. 210	Exp. Date 11/2002	A quality chicken breast fillet. Halal slaughtered. Country of origin: Holland. Single chicken breast fillets, no Inners, tumbled, net weight 10kg, keep deep frozen at -18 C/intended use: further treatment, Halal Slaughtered, Meat Content ca. 80%, Added water ca20% MC calculated factor 3.7	Chicken water, Sugars, Salt, E316-E330, Aroma	18.69	0.85	79.09	2.03	0.06	0.497	78.51	19.46	80%	20%	-	+	-	-
F10/290/02	Pluimveeslachterij T.Storteboom B.V. 9864 PG Kornhorn.		D EV33 6 EWG D EV76		haltbar bis 23/08/2002	Poultry specialities. 3kg Hahnchenbrustfilet, unpaniert-lecht gewurzt mit 8% flussigwurzung-	Hahnchenbrustfilet, 8% flussigwurzung (trinkwasser, jodiertes speisesalz,	17.38	0.7	78.92	1.93	0.05	0.446	72.91	25.16			-	-	Not tested	-

Final Report: Food Safety Authority of Ireland 02/11/2005

Ref no	Producer	Brand	EC plant no	batch id	date of min durability	product name and description	labelled ingredients	% protein (Nx 6.25)	% fat (%m/m)	% moisture (m/m)	% ash (m/m)	hydroxyproline (%m/m)	Sodium (g/100g)	% apparent meat content	% added water	labelled meat content	labelled added water	Bovine DNA	Porcine DNA	Ovine DNA	Added Collagen (>0.10% hydroxyproline)
	Holland		1 EWG			tiefgefroren. Bei minus 18 C mindestens	gewürzmischung zuckerstoffe														
F10/169/02	Pluimveestachterij T.Storteboom B.V. 9864 PG Kornhorn. Holland		D EV336 EWG D EV761 EWG		haltbar bis 15 nov 2002	Poultry specialities. 3kg Hahnchenbrustfilet, unpaniert-lecht gewürzt mit 8% flüssigwurzungs-tiefgefroren. Bei minus 18 C mindestens	Hahnchenbrustfilet, 8% flüssigwurzung (trinkwasser, jodiertes speisesalz, gewürzmischung) zuckerstoffe	18.87	0.89	78.15	2.03	0.06	0.48	83.75	14.22			-	-	-	-
F10/221/02	Pluimveestachterij T.Storteboom B.V. 9864 PG Kornhorn. Holland		D EV336 EWG D EV761 EWG		haltbar bis 15 nov 2002	Poultry specialities. 3kg Hahnchenbrustfilet, unpaniert-lecht gewürzt mit 8% flüssigwurzungs-tiefgefroren. Bei minus 18 C mindestens	Hahnchenbrustfilet, 8% flüssigwurzung (trinkwasser, jodiertes speisesalz, gewürzmischung) zuckerstoffe	19.33	0.85	77.66	1.98	0.08	0.439	81.11	16.91			-	-	Not tested	-
F10/218/02	Produced for Lamex B.V., Dinxperio Holland	Sun Brand	NL50 01EE G	prod date: 13-12-2001. order no: 011213 B	best before 13/06/2003	Frozen large single chicken breast filets without inner fillets, boneless and skinless with no more than 30% added water. Net wt 10kg. Store below -18 C.	Chicken (70%), water, salt, casein, stabiliser E451 & E407, glucose syrup	16.22	0.56	81.07	1.94	0.08	0.532	68.09	29.97	70%	<30%	+	-	Not tested	-
F10/173/02	Produced for Lamex B.V., Dinxperio Holland	Blue Ribbon	NL50 01EE G	prod date: 12-11-2001. order no: 011112 G	best before 12/05/2003	Frozen large single chicken breast filets without inner fillets, boneless and skinless with no more than 20% added water. Net wt 10kg. Store below -18 C. Slaughtered in accordance with Islamic rites,	Chicken 80%, water, salt, casein, stabilizer E451 and E407, glucose syrup	17.76	0.91	78.9	2.03	0.08	0.434	74.68	23.29	80%	20%	+	-	Not tested	-
F10/213/02	Pluimveeuitsnijderij T. Lelie B.V. Holland		NL57 21EE G	prod date : 09-05-2001 Art no. T.L. 13	best before end 09-05-2002	Double chicken filets with added water. Slaughtered according to Islamic law. Min. meat content	Chicken, water, salt, carboyhydrates, Flavour enhancers (E640, E621)	16.59	1.6	79.33	2.07	0.3	0.666	63.1	34.8	70% min		+	+	Not tested	+



Final Report: Food Safety Authority of Ireland 02/11/2005

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						70%. EC regulation (1072/2000) 3, 7. 'A' grade															
F10/214/02	Pluimveeuitsnijderij T. Lelie B.V. Holland DEN lip 126/ 1127 /pm DEN lip	O1 B Excellent	NL57 21EE G	prod date : 11-12-2001 Arf no. 123485 6	best before end 11-12-2002	Single chicken breast fillets with added water. Intended use: Further treatment. Store at -18 C keep frozen. Min. meat content 70%. EC regulation (1072/2000) 3, 7.	Chicken, water, salt, carbohydrates, Flavour enhancers (E640, E621)	16.48	1.09	80.23	2.01	0.38	0.49	59.7	38.3	70%		+	+	Not tested	+
F10/219/02	Pluimveeuitsnijderij T. Lelie B.V. Holland DEN lip 126/ 1127 /pm DEN lip		NL57 21EE G	prod date : 14-12-2001	best before end 14-12-2002	Single chickenbreast fillets Intended use: Further treatment Min. Meat content 80%	Kipfilet, water, suikers, NaCl, E339	18.01	0.8	79.93	2.1	0.38	0.435	65.6	32.3	80% min		+	+	Not tested	+
F10/289/02	Vrieskoop B.V. Aluminium straat 93, Zoetermeer/ Holland	Theco	NL56 65EE G	prod date : 10-2001	Exp. date 10-2002	Single chickenbreast fillets min. 70% Halal slaughtered. nr. 294. Net wt 10kg	Chicken breast fillets min. 70%, water, carbohydrates (glucose syrup), salt, Antioxidant E331, stabiliser E450, flavour (chicken)	16.98	0.58	79.18	2.59	0.24	0.638	65.9	31.5	70% min		+	-	Not tested	+
F10/165/02	Vrieskoop B.V. Aluminium straat 93, Zoetermeer/ Holland		NL56 65EE G	prod date : 11-2001	Exp. date 11-2002	Single chickenbreast fillets min. 74% Halal slaughtered. nr. 132. Net wt 10kg	Chicken breast fillets min. 74%, water, salt, Antioxidant E331, carbohydrates (glucose syrup), stabiliser E450, flavour (chicken)	16.67	0.76	79.4	2.3	0.2	0.607	66.1	31.6	min. 74%		+	-	Not tested	+
F10/172/02	Vrieskoop B.V. Aluminium straat 93, Zoetermeer/ Holland	Duke	NL56 65EE G	prod date : 11-2001	Exp. date 11-2002	Single chickenbreast Filets, keep deep frozen, net wt 10kg, Halal slaughtered	Chicken Breast Filets min. 80%, Water, Carbohydrates (Glucose Syrup), Salt, antioxidant (E331), Stabiliser (E450), Flavour	19.61	1.15	77.22	2.19	0.16	0.474	80.1	17.7	80% min		+	-	Not tested	+

Final Report: Food Safety Authority of Ireland 02/11/2005

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							(Chicken)														
F10/210/02	Vrieskoop B.V. Aluminium straat 93, Zoetermeer/ Holland	Duke	NL56 65EE G	prod date : 10- 2001	Exp. date 10-2002	Single chickenbreast Filets, keep deep frozen, net wt 10kg, Halal slaughtered	Chicken Breast Filets min. 80%, Water, Carbohydrates (Glucose Syrup), Salt, antioxidant (E331), Stabiliser (E450), Flavour (Chicken)	18.9	0.41	77.87	2.58	0.16	0.62	76.2	21.2	80% min		+	-	Not tested	+

- = Negative, + = Positive