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**Product Specification**

**Sweetcorn Kernels Grade A**

Date: 16<sup>th</sup> January 2009

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**PACK SIZE** 1 x 10kg

**ORIGIN:** Hungary / France

**GENERAL** The product shall be prepared from fresh sound raw material that is free from all toxic residues and taints. The final product shall comply with all current U.K. and E.C. Food Legislation.

**INGREDIENTS** Sweetcorn Kernels 100% Declare as: Sweetcorn  
 (*Zea mays*)

**PROCESSING** Sweetcorn cobs are delivered fresh to the factory and each load is sampled and assessed for grade, foreign material and physical defects. The cobs are then de-husked, inspected, and washed before the kernels are cut from the cob. The kernels are then cleaned, blanched, cooled, inspected, frozen and filled into cartons. Each pallet of frozen sweetcorn is sampled and assessed against specification. The pallets are then labelled and transferred to the cold store at -23°C until required for packing.

**PACKING** During packing the sweetcorn is inspected before weighing and filling into blue poly lined cartons. The cartons are Best Before and Production date coded, check weighed, metal detected, palletised and stretch-wrapped before being returned to store at -23°C to await despatch to the UK, cold store at -23°C, until despatched at -18°C.

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**QUALITY CONTROL** Checks are carried out on the following: -

- Processing: -      Raw material  
                           Final Product  
                           Peroxidase  
                           Temperature
- Packing: -         Metal detection  
                           Check weighing  
                           Final product physical defect levels  
                           Organolepsis  
                           Case quantity  
                           Case sealing  
                           Case coding and print quality

**DEFECT TOLERANCES** Product shall be checked at least hourly against the following tolerances for defects: -

**Per 1000g**

Clumps	2% w/w
Foreign Matter	Nil
E.V.M.	Nil

**Per 200g**

Major Blemish	Nil
Minor Blemish	3
Black Eyes	6
Pale Silks	2
Pulled Kernels (with attached stem)	4
Damaged Kernels	3% w/w
Miscut	5% w/w

**DEFINITIONS OF DEFECTS**

**Clumps**

A clump is defined as five or more kernels welded together which cannot be readily separated without causing damage to the kernels.

**Foreign Material**

This includes any material not derived from the sweetcorn plant, or defined as FEVM or EVM, Examples of foreign matter include insects, pieces of insect, wood, glass, stones, metal, snails, slugs etc. unacceptable.

**EVM**

This includes any vegetable matter other than sweetcorn kernels which is derived from the sweet corn plant, such as husk or leaf larger in area than 6mm diameter, dark silks longer than 12mm, pieces of unattached cob greater than an equivalent circle of 3mm in diameter.

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**Major Blemish**

Discoloured or blemished areas, other than black eyes, equal to or greater than an equivalent circle of 3mm in diameter, either as a single blemish or as an aggregate of blemishes.

**Minor Blemish**

Discoloured or blemished areas, other than black eyes, less than an equivalent circle of 3mm in diameter.

**Black Eyes**

Sweetcorn kernels which exhibit a complete or partial **dark** ring on the cut surface of the kernel.

**Pale Silks**

Pale silks longer than 12mm.

**Pulled Kernels (with attached stem)**

Corn kernels which have not been cut, but have been pulled from the cob, and retain some stem tissue.

**Damaged Kernels**

Kernels which are crushed and/or have loose skins.

**Miscut**

Kernels which are cut either very high up the kernel or low down the kernel. This includes pulled kernels **without** attached stem.

**ORGANOLEPSIS** (Carried out on a cooked sample.)**COLOUR**

Uniform, bright, characteristic pale yellow, yellow or golden yellow.

**FLAVOUR**

Full, natural and characteristic sweet flavour.

**TEXTURE**

Kernel contents are opaque and viscous, they tend to “pop” or “squirt” when chewed, and have reasonably tender skins (pericarps) which can be chewed easily.



Average sample

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**MICROBIOLOGICAL**

Organism	Target	Maximum
T V C @ 30°C	1 x 10 <sup>5</sup>	5 x 10 <sup>5</sup>
Total Coliforms	1 x 10 <sup>2</sup>	1 x 10 <sup>3</sup>
E. coli	Nil	1 x 10 <sup>1</sup>
Staph aureus	1 x 10 <sup>2</sup>	2 x 10 <sup>2</sup>
Salmonella	Absent in 25g	Absent in 25g
Listeria monocytogenes	Absent in 25g	1 x 10 <sup>2</sup>

**ANALYTICAL**

Product shall be blanched to give a trace positive peroxidase reaction (guaiacol test) between 60 and 90 seconds.

**WEIGHT CONTROL**

The product shall be packed to minimum weight.

**METAL DETECTION**

All cartons shall be passed through a metal detector. The system shall be tested at least hourly using 3.5mm ferrous and 3.5mm non-ferrous & 4.5mm stainless steel test pieces.

**CODING**

Best Before End shall be twenty four months following the month of packing e.g. if packed in 1<sup>st</sup> May 2009 then BEST BEFORE END MAY 2011 or BEST BEFORE 01/05/2011.

Production / Traceability Code Four figure International date code (Year number, Day number) plus factory identification code and shift code e.g. product packed 1 May 2009 = **9001** or **01/05/2009**.

**CARTON LINERS**

Dark blue food grade polythene liner of a **minimum** thickness of 45µm.

**CARTONS**

Corrugated fibreboard of glued construction, no metal staples to be used. Shall be sealed using dark blue adhesive tape.

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**NUTRITIONAL INFORMATION**

This data conforms to the requirements of EC Council Directive 90/496/EEC

100g of uncooked sweetcorn typically contains: -

Parameter	Value / 100g	Methodology
Energy - kcal	92	McCance & Widdowson 5 <sup>th</sup> Edition
Energy - kJ	390	McCance & Widdowson 5 <sup>th</sup> Edition
Moisture	76.0g	McCance & Widdowson 5 <sup>th</sup> Edition
Carbohydrate	15.6g	McCance & Widdowson 5 <sup>th</sup> Edition
- as sugars	1.9g	McCance & Widdowson 5 <sup>th</sup> Edition
- as polyols	0.0g	McCance & Widdowson 5 <sup>th</sup> Edition
- as starch	13.3g	McCance & Widdowson 5 <sup>th</sup> Edition
Fat	1.8g	McCance & Widdowson 5 <sup>th</sup> Edition
- as saturates	0.4g	McCance & Widdowson 5 <sup>th</sup> Edition
- as mono unsaturates	0.2g	McCance & Widdowson 5 <sup>th</sup> Edition
- as poly unsaturates	0.9g	McCance & Widdowson 5 <sup>th</sup> Edition
Protein	3.4g	McCance & Widdowson 5 <sup>th</sup> Edition
Fibre	1.5g	McCance & Widdowson 5 <sup>th</sup> Edition
Sodium	1mg	McCance & Widdowson 5 <sup>th</sup> Edition
Vitamin A	16µg	McCance & Widdowson 5 <sup>th</sup> Edition
Vitamin B <sub>6</sub>	0.15mg	McCance & Widdowson 5 <sup>th</sup> Edition
Vitamin B <sub>12</sub>	0µg	McCance & Widdowson 5 <sup>th</sup> Edition
Vitamin C	8mg	McCance & Widdowson 5 <sup>th</sup> Edition
Vitamin D	0µg	McCance & Widdowson 5 <sup>th</sup> Edition
Vitamin E	0.69mg	McCance & Widdowson 5 <sup>th</sup> Edition
Thiamin	0.16mg	McCance & Widdowson 5 <sup>th</sup> Edition
Riboflavin	0.05mg	McCance & Widdowson 5 <sup>th</sup> Edition
Niacin	1.9mg	McCance & Widdowson 5 <sup>th</sup> Edition
Folic Acid	41µg	McCance & Widdowson 5 <sup>th</sup> Edition
Biotin	0µg	McCance & Widdowson 5 <sup>th</sup> Edition
Pantothenic Acid	0.73mg	McCance & Widdowson 5 <sup>th</sup> Edition
Calcium	3mg	McCance & Widdowson 5 <sup>th</sup> Edition
Phosphorus	91mg	McCance & Widdowson 5 <sup>th</sup> Edition
Iron	0.7mg	McCance & Widdowson 5 <sup>th</sup> Edition
Magnesium	37mg	McCance & Widdowson 5 <sup>th</sup> Edition
Zinc	0.4mg	McCance & Widdowson 5 <sup>th</sup> Edition
Iodine	0µg	McCance & Widdowson 5 <sup>th</sup> Edition
Potassium	260mg	McCance & Widdowson 5 <sup>th</sup> Edition

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**GMO DECLARATION**

Does the product, or any of its ingredients contain any genetically modified material (whether viable or not)? YES / NO

Is the product or any of its ingredients not substantially equivalent as a consequence of the use of genetic modification? YES / NO

Is the product or any of its ingredients produced from, but not containing any genetically modified material? YES / NO

Have genetically modified organisms been used as processing aids or additives used in connection with the production of the food or any of its ingredients? YES / NO

Have genetically modified organisms been used to produce processing aids or additives but where such genetically modified organisms are not present in the processing aid as used in connection with the production of the food or any of its ingredients? YES / NO

Name: Alan Gosling Job Title: Technical Consultant

Signature:  Date: 16<sup>th</sup> January 2009

**IRRADIATION POLICY**

I confirm that the product supplied by Foodnet Limited under this specification has not undergone any irradiation treatment or process. I further confirm that no ingredient or processing aid used in conjunction with this product has undergone irradiation treatment.

Name: Alan Gosling Job Title: Technical Consultant

Signature:  Date: 16<sup>th</sup> January 2009

Where any answer is YES, see details below.

Product or Material	Details of Genetic Modification

I confirm I have made any necessary enquiries and obtained relevant written assurances from suppliers to verify the accuracy of the details provided above. I confirm the above data supplied is correct and can be used without reservation to advise customers.

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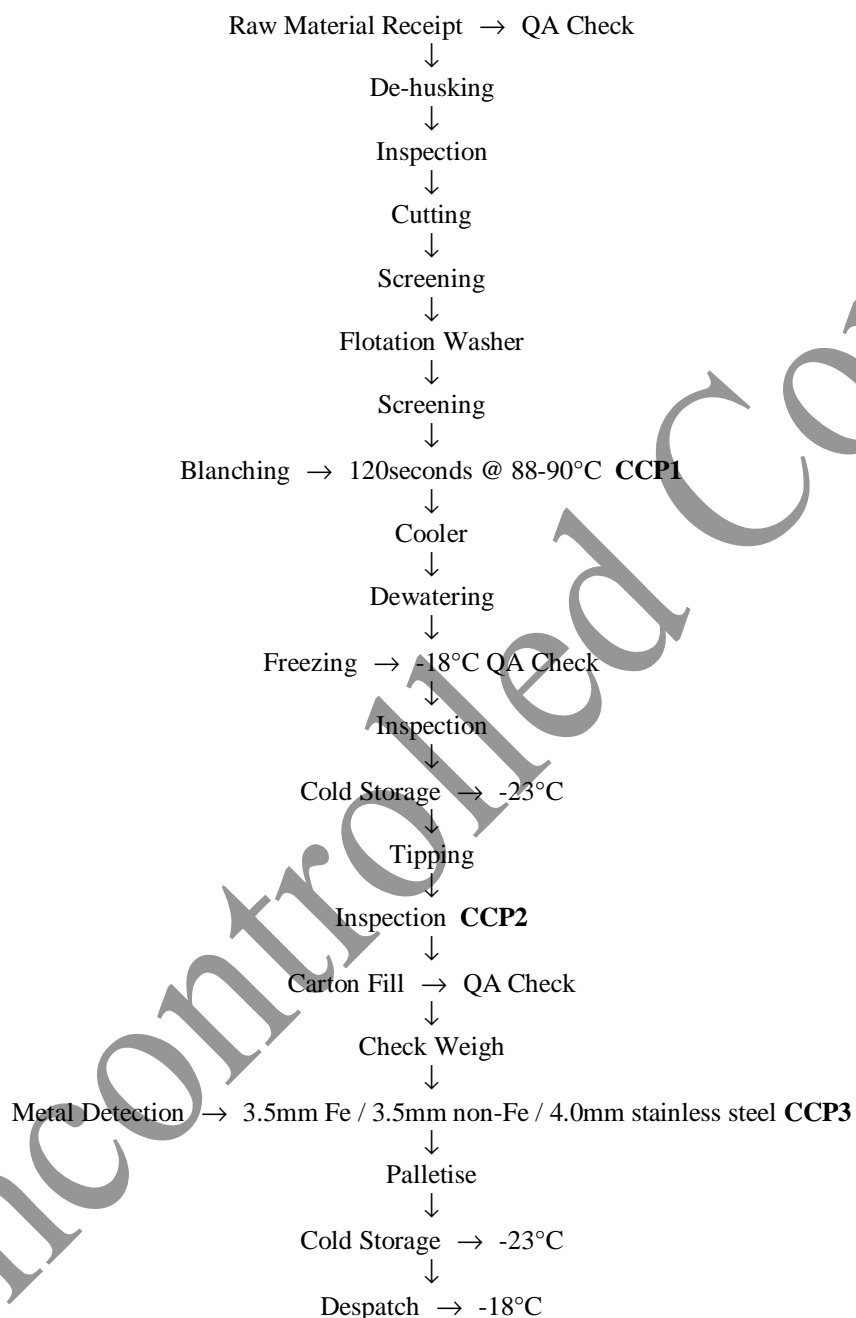
**FOOD INTOLERANCE**

<b>Food Intolerance Data</b>		
Does the material supplied contain any of the following? (NO) Absent, (YES) Present		
<b>Allergen</b>	<b>NO / YES</b>	<b>Reason for presence if YES</b>
Milk & Milk Derivatives	NO	
Egg & Egg Derivatives	NO	
Animal Products (*)	NO	
Fish/Shellfish/Crustaceans/Molluscs	NO	
Cereals (**)	NO	
Gluten	NO	
Yeast/Yeast Extract	NO	
Soya/Soya Derivatives	NO	
Fruit & Fruit Derivatives	NO	
Beef & Beef Products	NO	
Pork & Pork Products	NO	
Lamb & Lamb Products	NO	
Poultry & Poultry Products	NO	
Legumes	NO	
Peanuts	NO	
Sulphite >10ppm	NO	
MSG	NO	
BHA / BHT	NO	
Benzoates	NO	
Glutamates	NO	
Azo & Coal Tar Dyes	NO	
Added Colour	NO	
Added Flavour	NO	
Preservatives	NO	
Antioxidants	NO	
Added Salt	NO	
Nuts/Nut Oils	NO	
Caffeine	NO	
Sesame Products	NO	
Garlic	NO	
Poppy Seeds	NO	
Mustard	NO	
Celery/Celariac	NO	
Lupins	NO	
*Including any product derived from slaughtered animals, e.g. gelatine, rennet		
**Including wheat, corn, barley, rye, oats, etc.		
Is the material suitable for:		
Vegetarians?	Y / N	
Vegans?	Y / N	
Kosher?	Y / N	
Halal?	Y / N (Not certified)	
Organic?	Y / N	

**FOOD ADDITIVES**

<b>E. Number</b>	<b>Name</b>	<b>In Which Ingredient</b>	<b>Function in Ingredient</b>	<b>Function in Final Product</b>	<b>% In Final Product</b>
None					

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**PROCESS INFORMATION****PROCESS FLOW CHART****SWEETCORN KERNEL****CRITICAL CONTROL POINTS:**

to include time / temperature / frequency / target and sensitivity of all process steps.

CCP Number	Process Step	Controls in place
CCP1	Effective blanching to minimise microbiological loading. Half hourly checks.	Continuous chart recoding of temperature and guaiacol test for adequate blanching.
CCP2	Inspection of the product. Continuous control	To remove foreign material via manual inspection
CCP3	Metal detector efficiency. Hourly checks.	Testing of detector using certified test pieces of 3.5mm Ferrous and non-Ferrous, 4.0mm stainless steel.

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## **COSHH Data For Frozen Vegetables**

Treat as you would any frozen material i.e. if engaged in prolonged handling of the vegetables wear gloves.

Care should be used when lifting full cases of frozen vegetables.

There are no other perceived COSHH implications regarding the use of frozen vegetables.

**THE CONTENTS OF THIS SPECIFICATION ARE CONFIDENTIAL TO FOODNET LTD AND THE CUSTOMER, AND MAY NOT BE DISCLOSED TO ANY OTHER PARTY.**

Signed on behalf of Foodnet Ltd:-

Name: Alan Gosling Job Title: Technical Consultant

Signature:  Date: 16<sup>th</sup> January 2009

Signed on behalf of the Customer:-

Name: Job Title:

Signature: Date:

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