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Product Specification

15-25mm Button Brussels Sprouts

Date: 2nd December 2009

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PACK SIZE 1 x 10kg

ORIGIN: Belgium

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 Brussels Sprouts 100% Declare as: Brussels Sprouts
(*Brassica oleracea* var. *gemmifera*)

PROCESSING Sprouts are mechanically harvested and delivered to the factory. Each load is sampled and assessed for foreign material and physical defects. The load is then cleaned, blanched, frozen, size graded and filled into bulk palletainers. The frozen sprouts are sampled and assessed against specification. The palletainers are then labelled and transferred to the cold store, where they are stored at -23°C until required for packing.

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

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QUALITY CONTROL Checks are carried out on the following: -

Processing: -	Raw material Peroxidase Final Product 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: -

<u>Per 1000g</u>	<u>Tolerance</u>
Foreign Matter	Nil
E.V.M.	1
Loose Leaves	3
Major Blemish	2% w/w
Perforated Leaves	6% w/w
Brown Butts	10
Major Butts	5
Badly Formed	12
Internal Browning	1
Minor Blemish	10% w/w
Mechanically Damaged	12
Size >15<25mm	80% w/w minimum

DEFINITIONS OF DEFECTS**Foreign Material**

This includes any material not derived from the sprout plant or defined as EVM, such as insects, pieces of insects, wood, glass, stones, metal, sand, grit, plastic or any other material which will render the product unacceptable.

Extraneous Vegetable Matter (EVM)

This includes any vegetable material that is derived from the sprout plant or other harmless vegetable matter such as petiole stump attached to the sprout. It does not include loose leaves or leaf fragments which have become separated from the sprout.

Loose Leaves

These are leaves or fragments of leaves which have become detached from the sprout.

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Major Blemish

This includes sprouts that are blemished to the extent that the area affected is greater than 6mm in diameter, either as a single blemish or an aggregate of blemishes on the same sprout.

Perforated Leaves

These are sprouts with external leaves which have perforations caused by mechanical or insect means.

Brown Butts

Sprouts exhibiting significant brown discolouration on the cut surface of the butt.

Major Butts (see illustration)

These are sprouts with butts (or parts of butts) larger than 5mm measured from the base of the first leaf. This includes ragged heels. This includes butts cut at an angle of 45°.

Badly Formed (see illustration)

These are sprouts which are rosetted or composed of loose leaves (blown) or where the leaves fail to meet over the head of the sprout. This also includes loose base structure and secondary grown (budding).

Internal Browning

Sprouts with an internal brown area.

Minor Blemish

This includes sprouts that are blemished to the extent that the area affected is between 2mm and 6mm in diameter, either as a single blemish or an aggregate of blemishes on the same sprout. Blemishes less than 2mm in diameter shall be ignored.

Mechanically Damaged

This includes sprouts mechanically damaged to the extent that the sprout is partially severed to at least the centre of the sprout, or has a macerated or crushed appearance, or where more than a quarter of the sprout has been removed. This includes overtrimmed, spiky sprouts (see illustration), or yellow sprouts.

An overtrimmed sprout is one where too much base material has been cut away causing excessive loss of outer leaves.

A yellow sprout is one where more than 50% of the surface area is completely yellow in appearance.

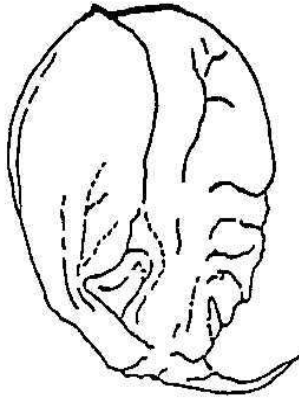
Size

These are sprouts greater than 25mm in any dimension, or less than 15mm in any dimension.

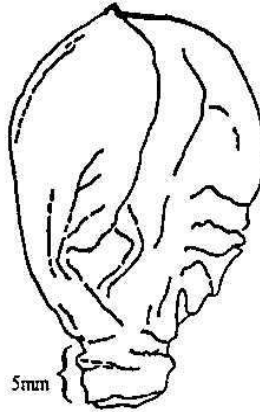
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ILLUSTRATIONS OF CERTAIN DEFECTS

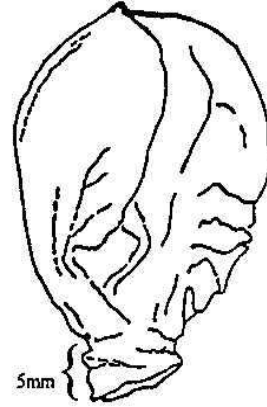
(h) Major Butts



Ragged Heel

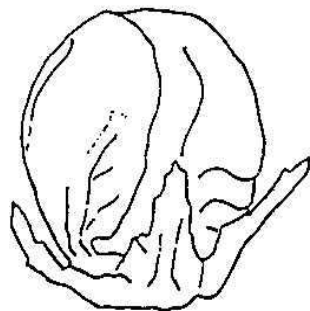


Major Butt

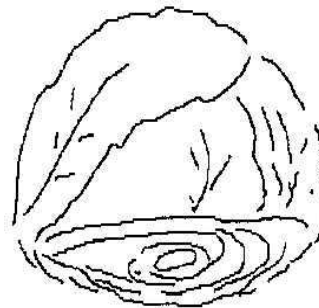


Major Butt (Angled Cut)

(i) Mechanically Damaged



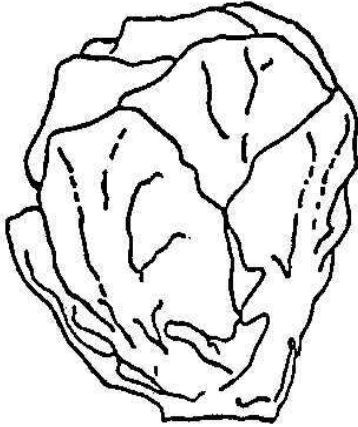
Spiky



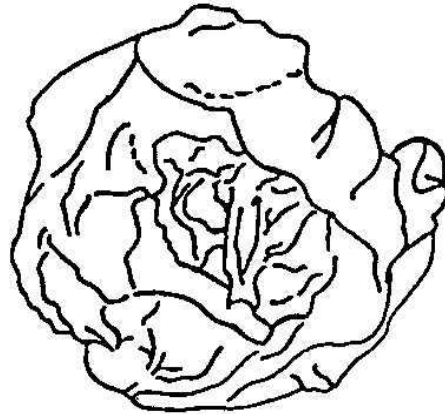
Overtrimmed

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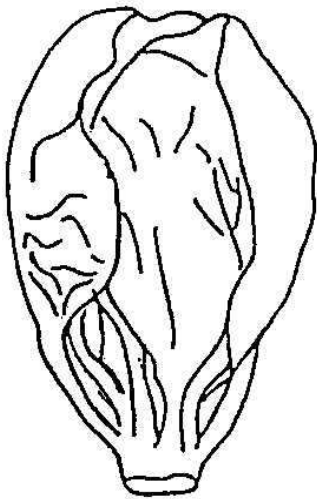
(i) Badly Formed



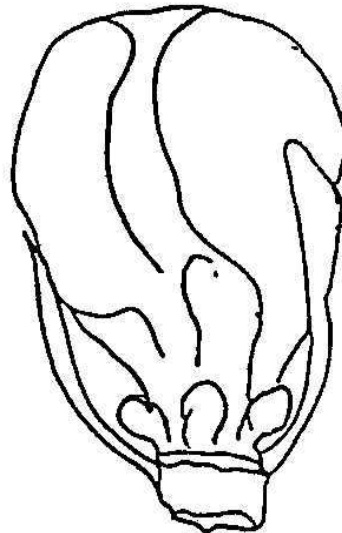
(i) Side View



(ii) Top View



(iii) Loose Base Structure



(iv) Secondary Growth (Budding)

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ORGANOLEPSIS**COLOUR**

Fairly bright pale green but may be slightly non-uniform.

FLAVOUR

Characteristic Brussels sprout flavour, with only slight bitterness.

TEXTURE

Tender and firm, with a yielding bite. Stalks may be slightly fibrous.



Average Sample

MICROBIOLOGICAL

Organism	Target	Maximum
T V C @ 30°C	5×10^4	1.5×10^5
Total Coliforms	1×10^3	1×10^3
E. coli	0/g	1×10^1
Yeasts & Moulds	1×10^3	3×10^3
Staph aureus	1×10^2	1×10^3
Salmonella	Absent in 25g	Absent in 25g
Listeria monocytogenes	Absent in 25g	1×10^2

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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 & non-ferrous and 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 May 2009 then BEST BEFORE END MAY 2011.

Production / TraceabilityCode Four figure International date code (Year number, Day number) plus factory identification code and shift code e.g. product packed 1 January 2009 = **9001**.

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 Brussels sprouts typically contains: -

Parameter	Value / 100g	Methodology
Energy - kcal	42	McCance & Widdowson 6 th Edition
Energy - kJ	177	McCance & Widdowson 6 th Edition
Moisture	84.3g	McCance & Widdowson 6 th Edition
Carbohydrate	4.1g	McCance & Widdowson 6 th Edition
- as sugars	3.1g	McCance & Widdowson 6 th Edition
- as polyols	0.0g	McCance & Widdowson 6 th Edition
- as starch	0.8g	McCance & Widdowson 6 th Edition
Fat	1.4g	McCance & Widdowson 6 th Edition
- as saturates	0.3g	McCance & Widdowson 6 th Edition
- as mono unsaturates	0.1g	McCance & Widdowson 6 th Edition
- as poly unsaturates	0.7g	McCance & Widdowson 6 th Edition
Protein	3.5g	McCance & Widdowson 6 th Edition
Fibre	4.1g	McCance & Widdowson 6 th Edition
Sodium	6mg	McCance & Widdowson 6 th Edition
Cholesterol	0.0g	McCance & Widdowson 6 th Edition
Vitamin A	36µg	McCance & Widdowson 6 th Edition
Vitamin B6	0.37mg	McCance & Widdowson 6 th Edition
Vitamin B12	0.0µg	McCance & Widdowson 6 th Edition
Vitamin C	115mg	McCance & Widdowson 6 th Edition
Vitamin D	0.0µg	McCance & Widdowson 6 th Edition
Vitamin E	1.0mg	McCance & Widdowson 6 th Edition
Thiamin	0.15mg	McCance & Widdowson 6 th Edition
Riboflavin	0.11mg	McCance & Widdowson 6 th Edition
Niacin	0.2mg	McCance & Widdowson 6 th Edition
Folic Acid	135µg	McCance & Widdowson 6 th Edition
Biotin	0.4µg	McCance & Widdowson 6 th Edition
Pantothenic Acid	1.0mg	McCance & Widdowson 6 th Edition
Calcium	26mg	McCance & Widdowson 6 th Edition
Phosphorus	77mg	McCance & Widdowson 6 th Edition
Iron	0.7mg	McCance & Widdowson 6 th Edition
Magnesium	8mg	McCance & Widdowson 6 th Edition
Zinc	0.5mg	McCance & Widdowson 6 th Edition
Iodine	1µg	McCance & Widdowson 6 th Edition
Potassium	450mg	McCance & Widdowson 6 th 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: 2nd December 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: 2nd December 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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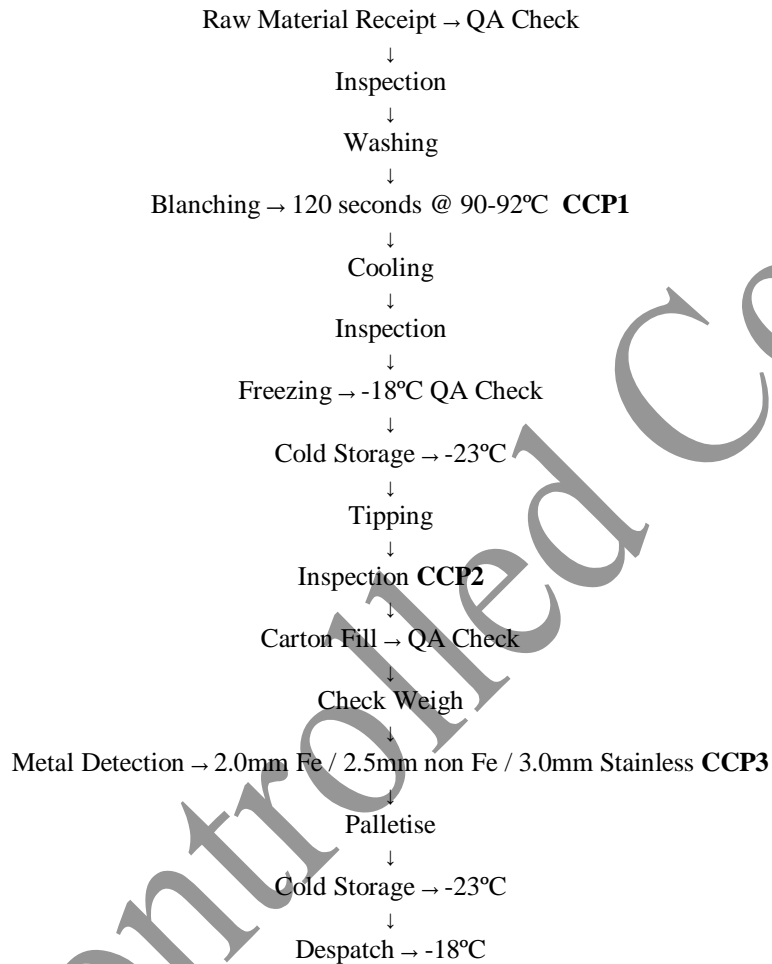
FOOD INTOLERANCE

Food Intolerance Data		
Does the material supplied contain any of the following? (NO) Absent, (YES) Present		
Allergen	NO / YES	Reason for presence if YES
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	
Organic?	Y / N	

FOOD ADDITIVES

E. Number	Name	In Which Ingredient	Function in Ingredient	Function in Final Product	% In Final Product
None					

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PROCESS INFORMATION**PROCESS FLOW CHART****BRUSSELS SPROUTS****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	Efficient freezing process. Half hourly checks.	QA checks of product temperature ex-freezer with calibrated thermometers
CCP3	Metal detector efficiency. Hourly checks.	Testing of detector using certified test pieces of 2.0mm Ferrous & non-Ferrous, 3.0mm 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: 2nd December 2009

Signed on behalf of the Customer:-

Name: Job Title:

Signature: Date:

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