



Head Office: The Old Grammar School, 3-7 Market Square, Amersham, Bucks. HP7 0DF
Tel: (44) 1494 434600 Email: foodnettechnical@foodnet.ltd.uk

Technical Specification		
Product: Broccoli Floret 15-30mm	Last Update: 31/01/2020	Product Code: BRO002

PACK SIZE 1 x 10kg;

ORIGIN: Spain / China / Poland / Turkey

GENERAL The product shall be prepared from fresh sound raw material that is free from all toxic residues and taints and shall comply with all current UK/EU Food Legislation. The product is intended to be used as ingredient that is further processed and heat-treated before final consumption.

INGREDIENTS Broccoli 100% Declare as: Broccoli
(*Brassica oleracea* var. *italica*)

PROCESSING Broccoli is harvested, delivered to the factory to be floretted. 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 broccoli is sampled and assessed against specification. The palletainers are then labelled and transferred to the cold store, where they are stored at -18°C until required for packing.

PACKING During packing, the broccoli florets are 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 – 18°C to await despatch.

QUALITY CONTROL Checks are carried out on the following: -

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

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DEFECT TOLERANCES

DEFECT TOLERANCES

<u>Per 1000g</u>	MAXIMUM
Clump	5%w/w
Foreign Matter	Nil
Foreign EVM	Nil
Attached Leaves	10
Stalk Part	10
Long stalk (>25mm)	30
Head diameter-over/undersize	20% w/w
Dust	8%w/w
Overmature	12
Minor Blemish/Colour defect 2-6mm	10
Major Blemish/Colour defect >6mm	6

DEFINITIONS OF DEFECTS

Clumps

These are where three or more pieces of broccoli are frozen together which cannot be readily separated without causing damage to the product.

Foreign Material

This includes any material not derived from the broccoli 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.

Attached Leaves on Florets

This includes any florets which have attached leaves which are greater than 25mm in length.

Fragments and Dust

These are small pieces of broccoli less than 10mm in any dimension.

Stalk

These are units which are completely devoid of the broccoli beads and branching of the individual florets.

Long Stalk

This is where the stalk (measured from the last branching of the floret) is greater than 25mm in length.

Overmature

This includes any floret which has one or more buds showing yellow petals. This shall not be confused with paler under parts (lacking chlorophyll), which are characteristic of cut heads.

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Colour Defects

This includes florets which have a distinct area of brown or purple to the floret surface which is greater than 20mm in diameter.

Major Colour/Blemish

This includes broccoli that is blemished or has a distinct area of brown or purple 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 piece.

Minor Colour/Blemish

This includes broccoli that is blemished to or has a distinct area of brown or purple 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 piece. Blemishes less than 2mm in diameter shall be ignored.

Out of Size

This is where the diameter of any floret head exceeds 30mm when measured across the widest part of the smallest diameter, or where the floret head is less than 15mm when measured across the longest dimension.

The below minimum numbers of samples should be inspected and average result to be out-of-spec.

Quantity Delivered (Kg)	Minimum samples to be taken (1Kg of product per each item)		
	10Kg Boxes	20Kg Bags	25Kg Bags
<1000	4	2	2
<2000	8	5	4
<5000	10	7	5
<10000	15	10	8
≤27000	20	15	12

ORGANOLEPSIS (Carried out on a thawed sample.)

COLOUR

Fairly bright green but may be slightly non-uniform.

FLAVOUR

Characteristic broccoli flavour, with only slight bitterness.

TEXTURE

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



Average sample

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MICROBIOLOGICAL

Organism	Target	Maximum
<i>TVC @ 30°C</i>	5×10^4	1×10^6
<i>Total Coliforms</i>	1×10^3	3×10^3
<i>E. coli</i>	1×10^1	1×10^2
<i>Listeria mono</i>	Absent in 25g	1×10^2
<i>Salmonella</i>	Absent in 25g	Absent in 25g

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 every 2 hours using ferrous, non-ferrous and stainless-steel test pieces.

BEST BEFORE DATE The product shall be twenty-four months following the month of packing. Minimum BB date on delivery: 6 months.

TRACEABILITY INFO Production date or Lot number printed on the label as well as customer order number and/or delivery date.

STORAGE CONDITIONS Keep frozen at - 18°C at all times.

CARTON LINERS Blue food grade polythene liner of a minimum thickness of 30µm.

CARTONS Corrugated fibreboard of glued construction, no metal staples to be used. Shall be sealed using 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 broccoli typically contains: -

Parameter	Value / 100g	Methodology
Energy - kcal	33	McCance & Widdowson 6 th Edition
Energy - kJ	138	McCance & Widdowson 6 th Edition
Moisture	88.2g	McCance & Widdowson 6 th Edition
Carbohydrate	1.8g	McCance & Widdowson 6 th Edition
- as sugars	1.5g	McCance & Widdowson 6 th Edition
- as polyols	0.0g	McCance & Widdowson 6 th Edition
- as starch	0.1g	McCance & Widdowson 6 th Edition
Fat	0.9g	McCance & Widdowson 6 th Edition
- as saturates	0.2g	McCance & Widdowson 6 th Edition
- as mono unsaturates	0.1g	McCance & Widdowson 6 th Edition
- as poly unsaturates	0.5g	McCance & Widdowson 6 th Edition
Protein	4.4g	McCance & Widdowson 6 th Edition
Fibre	2.6g	McCance & Widdowson 6 th Edition
Sodium	8mg	McCance & Widdowson 6 th Edition
Vitamin A	96µg	McCance & Widdowson 6 th Edition
Vitamin B ₆	0.14mg	McCance & Widdowson 6 th Edition
Vitamin B ₁₂	0µg	McCance & Widdowson 6 th Edition
Vitamin C	87mg	McCance & Widdowson 6 th Edition
Vitamin D	0µg	McCance & Widdowson 6 th Edition
Vitamin E	1.3mg	McCance & Widdowson 6 th Edition
Thiamin	0.10mg	McCance & Widdowson 6 th Edition
Riboflavin	0.06mg	McCance & Widdowson 6 th Edition
Niacin	0.9mg	McCance & Widdowson 6 th Edition
Folic Acid	90µg	McCance & Widdowson 6 th Edition
Biotin	0µg	McCance & Widdowson 6 th Edition
Pantothenic Acid	0mg	McCance & Widdowson 6 th Edition
Calcium	56mg	McCance & Widdowson 6 th Edition
Phosphorus	87mg	McCance & Widdowson 6 th Edition
Iron	1.7mg	McCance & Widdowson 6 th Edition
Magnesium	22mg	McCance & Widdowson 6 th Edition
Zinc	0.6mg	McCance & Widdowson 6 th Edition
Iodine	2µg	McCance & Widdowson 6 th Edition
Potassium	370mg	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: Gianluca Oberto

Job Title: Technical Manager

Signature: 

Date: 31st January 2020

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: Gianluca Oberto

Job Title: Technical Manager

Signature: 

Date: 31st January 2020

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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/Celery	NO				
Lupins	NO				
*Including any product derived from slaughtered animals, e.g. gelatine, rennet					
**Including wheat, corn, barley, rye, oats, etc.					
<u>Please be aware the manufacturing sites we supply this item from may handle allergens in production. Procedures are in place to prevent cross-contamination.</u>					
Is this product Suitable for:					
Vegans	Yes (Not certified)	Vegetarians	Yes	Organic	No
Halal	Yes (Not certified)	Kosher	Yes (Not certified)		

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FOOD ADDITIVES

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

COSHH Data

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 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: Gianluca Oberto

Job Title: Technical Manager

Signature: 

Date: 31st January 2020

Signed on behalf of the Customer:

Name:

Job Title:

Signature:

Date:

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PROCESS INFORMATION

PROCESS FLOW CHART*

*Note: this is a generic flow chart which does not refer to any specific production site.

BROCCOLI CRUMB

Raw Material Receipt → QA Check



Inspection



Washing



Floretting



Washing



Blanching



Cooling



Inspection



Dewater



Freezing → -18°C QA Check



Bar Grading



Weighing



Carton Fill → QA Check



Check Weigh



Metal Detection → QA Check



Palletise



Cold Storage → -18°C



Despatch → -18°C

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Issues & Amendments

Issue N°	Amend. N°	Date	Amendments	Compiled by
1	1	01/02/2016	New entry	G. Oberto
2	1	01/05/2017	Defect tolerances – minimum ref samples; Reviewed BB and Traceability info. Added Storage Conditions. Reviewed Food Intolerance table, Flow Chart and Amendment table.	G. Oberto
3	1	31/01/2020	3 Year update – general revision	G. Oberto

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