



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: Spinach Whole Leaf +30MM IQF | Last Update: 31/01/2023 | Product Code: SPI009 |
|---|-----------------------------------|--------------------------------|

PACK SIZE 1 x 10kg;

ORIGIN: Spain

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 (minimum of +75°C for 30 seconds).

INGREDIENTS Spinach 100% Declare as: Spinach
(*Spinacia oleracea*)

PROCESSING Spinach leaves are delivered to the factory, cleaned, inspected, washed, cut (40x40mm), blanched, cooled and frozen (-18°C or below) and stored in bulk pallets at -18°C or below until required for re-packing.

PACKING During packing, the spinach is 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 to the UK at -18°C.

DEFECT TOLERANCES

| Per 500g | Maximum |
|-----------------------|----------------|
| Foreign Matter | Nil |
| EVM | 2 |
| Flower buds | 5 |
| Major Blemishes | 7 |
| Minor Blemishes | 15 |
| Yellow/Damaged Leaves | 10% w/w |
| Stalks >5CM | 15% w/w |
| Nitrates | <2000 ppm |

DEFINITIONS OF DEFECTS

Clumps

A clump is an agglomeration of leaves welded together that cannot be readily separated without causing damage to the leaves. Clumps shall weigh greater than 30g.

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Foreign Material

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

Extraneous Vegetable Matter (EVM)

This includes any harmless vegetable matter other than spinach leaves that is not derived from the spinach plant.

Yellow Leaves

These are spinach leaves that have a distinct yellow colouration.

Spinach Stalks

These are pieces of stalk completely devoid of leaf which is longer than 5cm

Flower buds

These are noticeable flower buds from the spinach plant measuring greater than 25mm.

ORGANOLEPSIS (Carried out on a thawed sample.)

COLOUR

Characteristic green almost completely uniform throughout the sample.

FLAVOUR

Characteristic spinach flavour. Shall be slightly sweet.

TEXTURE

Tender, firm but not hard, with no stringiness.



Average sample

| | | | | |
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MICROBIOLOGICAL

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

ANALYTICAL Peroxidase Negative.
Nitrates ≤ 2000 ppm

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 spinach typically contains: -

| Parameter | Value / 100g | Methodology |
|-------------------------|--------------|---|
| Energy - kcal | 21 | McCance & Widdowson 6 th Edition |
| Energy - kJ | 90 | McCance & Widdowson 6 th Edition |
| Moisture | 91.6g | McCance & Widdowson 6 th Edition |
| Carbohydrate | 0.5g | McCance & Widdowson 6 th Edition |
| - as sugars | 0.3g | McCance & Widdowson 6 th Edition |
| - as polyols | 0.0g | McCance & Widdowson 6 th Edition |
| - as starch | 0.2g | McCance & Widdowson 6 th Edition |
| Fat | 0.8g | McCance & Widdowson 6 th Edition |
| - as saturates | 0.1g | 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 | 3.1g | McCance & Widdowson 6 th Edition |
| Fibre | 2.1g | McCance & Widdowson 6 th Edition |
| Sodium | 16mg | McCance & Widdowson 6 th Edition |
| Vitamin A | 1101µg | McCance & Widdowson 6 th Edition |
| Vitamin B ₆ | 0.9mg | McCance & Widdowson 6 th Edition |
| Vitamin B ₁₂ | 0µg | McCance & Widdowson 6 th Edition |
| Vitamin C | 6mg | McCance & Widdowson 6 th Edition |
| Vitamin D | 0.0µg | McCance & Widdowson 6 th Edition |
| Vitamin E | 1.71mg | McCance & Widdowson 6 th Edition |
| Thiamin | 0.06mg | McCance & Widdowson 6 th Edition |
| Riboflavin | 0.05mg | McCance & Widdowson 6 th Edition |
| Niacin | 0.9mg | McCance & Widdowson 6 th Edition |
| Folic Acid | 52µg | McCance & Widdowson 6 th Edition |
| Biotin | 0.1µg | McCance & Widdowson 6 th Edition |
| Pantothenic Acid | 0.21mg | McCance & Widdowson 6 th Edition |
| Calcium | 150mg | McCance & Widdowson 6 th Edition |
| Phosphorus | 48mg | McCance & Widdowson 6 th Edition |
| Iron | 1.7mg | McCance & Widdowson 6 th Edition |
| Magnesium | 31mg | McCance & Widdowson 6 th Edition |
| Zinc | 0.6mg | McCance & Widdowson 6 th Edition |
| Iodine | 2µg | McCance & Widdowson 6 th Edition |
| Potassium | 340mg | McCance & Widdowson 6 th Edition |

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GMO DECLARATION

I confirm that this product is not genetically modified or produced from genetically modified organisms. No genetically modified organisms have been used as processing aids or additives. This product does not require specific GM labelling as per Regulation (EC) 1829/2003.

Name: Gianluca Oberto

Job Title: Technical Manager

Signature: 


Date: 31st January 2023

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 2023

COSHH Data

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

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

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

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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/Crustations/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/Celериac | 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 |
|------------------|-------------|----------------------------|-------------------------------|----------------------------------|---------------------------|
| | | | | | |
| | | | | | |

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 2023

Signed on behalf of the Customer:

Name:

Job Title:

Signature:

Date:

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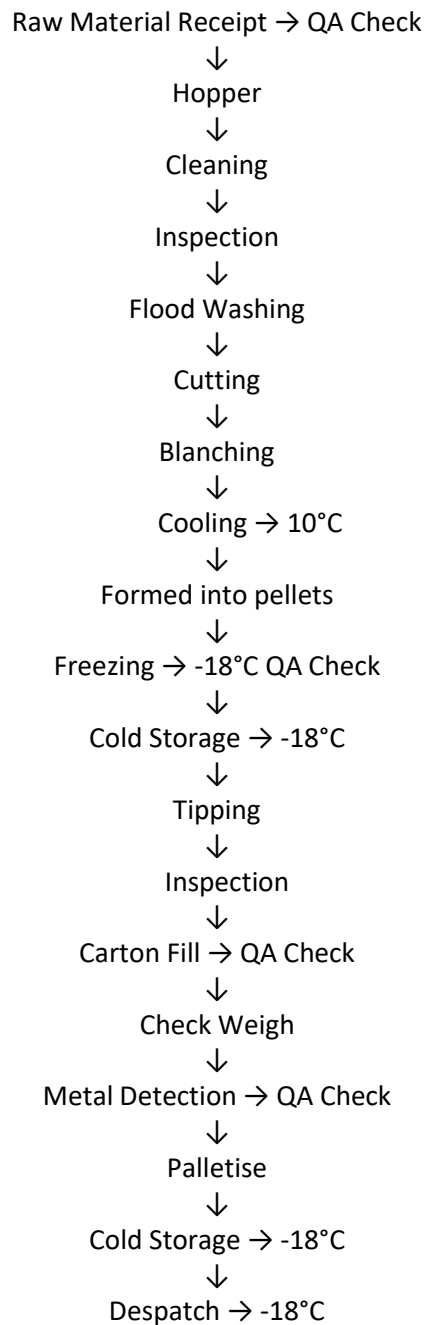
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PROCESS INFORMATION

PROCESS FLOW CHART*

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

LEAF SPINACH



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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 |
| 4 | 1 | 31/01/2023 | 3 Year update – general revision | F. Soares |
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