



**LOVELY
VEGETABLES**

PRODUCT DEVELOPMENT

The *Lovely Vegetables* product range was developed to provide a selection of tasty meals for consumers who wish to lower their meat consumption and/or increase their vegetable intake. The range also appeals to vegetarians, however they are not solely marketed at this group. Many of the core components of the products are suitable for vegetarians; however some meals do include cheeses which use animal rennet, such as parmesan, or fish sauce. The range is available in single portion main meals and snackpots. *Lovely Vegetables* is about making the most of seasonal and interesting vegetables that may not be found in other prepared meals.

Packaging development

Lovely Vegetables products have been designed to be cooked in a microwave oven for convenient, tasty meals. The type of packaging has been used before, but not to such an extent. It consists of a clear plastic bowl, with the sauce at the bottom which is covered by a plastic trivet (a plastic tray on small legs with holes for steam to move through).

Making the most of SEASONAL VEGETABLES

Lovely Vegetables is all about making the most of delicious vegetables, helping consumers to increase their intake and meet the recommended 5-a-day.

Production process

All products are sold as “ready to re-heat”, therefore require further heat processing before consumption, such as microwaving. As the products contain fresh ingredients they have the shelf life of a normal fresh chilled product (approximately 7 days from production) and are kept chilled during their manufacture and before consumption.

The products are manufactured under temperature controlled conditions. Chilled storage and manufacturing areas operate between 2-10°C. Finished product despatch areas are maintained at a temperature of <8°C.

Many of the products are based on seasonal produce so raw ingredients are sourced from the UK; however other additional ingredients may be transported from other countries.

The types of produce used include:

- A mix of fresh ingredients that have been processed, e.g. sliced carrot;
- Frozen ingredients that have been blanched or washed before use, e.g. peas;
- Carbohydrate, such as noodles/rice, that have been through a cook process and coated or tossed in a marinade or dressing;
- Dry ingredients, e.g. seeds;
- Ingredients that have been washed but cannot be cooked so have to be prepared in specified areas of a factory to limit growth of pathogenic micro-organisms (such as listeria), e.g. spinach or sliced raw peppers;
- Dressings and sauces, in individual sachets or loose in the product.

These ingredients may be present in various combinations in the finished product; this is determined by the product specification.

Assembly is carried out according to individual product specifications which detail how a product must be assembled step-by-step.

On the trivet other components of the meal are placed (such as the salads, vegetables and noodles).

During cooking the sauce heats up which effectively steams the ingredients which lay above on the trivet. Steaming helps to maintain more of their colour, flavour, texture and nutrients.

After microwaving the trivet is removed, by lifting the tab attached to it, and the other ingredients fall into the sauce. The product is gently mixed and then it is ready to serve. In many products there is an additional sachet of dressing which is removed before heating and this can be drizzled over the dish as a finishing touch.

“ Most *Lovely Vegetables* products have a shelf life of 7 days from production ”

Test production runs

During production a number of processes take place to ensure that the product meets the specified standard and is fit for consumption. These include:

- **Metal detection** – to ensure metal detection systems are operating efficiently, tests are carried out at the start, during and at the end of each production run using test pieces of ferrous, non-ferrous and stainless steel.
- **Check weighing** – every pack is checked to ensure it has been packaged to the correct weight.
- **Finished product microbiological testing** – completed every day of production, randomly selected products are sent for pathogen testing at

the end of their shelf life to ensure that there are not high levels of harmful bacteria or spoilage organisms present.

Lifecycle of products

The finished product is packaged at the factory and is stamped with a shelf life date-mark appropriate to the ingredients it contains and the processes it has been through. Most Lovely Vegetable products have a relatively short shelf life as they contain many fresh ingredients, typically a life of around 7 days from production. The finished product is then packed onto a temperature controlled transport vehicle and taken to depots to be sorted and distributed amongst stores across the UK.



Example of product range

- Beetroot multigrain risotto with goats cheese
- Butternut squash & Moroccan spiced sauce
- Cumin roasted carrots
- Falafel and chickpeas
- Mexican chili bean
- Pea and broad bean risotto
- Portobello & chestnut mushroom pappardelle
- Red pepper, artichoke & feta bucatini
- Roast honey-glazed parsnips & red chard
- Roasted butternut squash & chargrilled holloumi
- Spicy paneer curry
- Spicy red lentil patties
- Feta snackpot with Bulghur Wheat
- Laksa Noodle Snackpot
- Feta and Falafel snackpot

Large pot packaging

Easy to follow instructions are provided on how to use this novel food packaging; this includes cooking time, removal of the trivet and serving suggestions.

The packaging label displays its name, country of origin, ingredients list, product description, nutritional data and guideline daily amounts, a 5-a-day logo, cooking instructions, date mark and allergen information.



Clear plastic bowl



Trivet



Lid



Product label



Assembled packaging



Final product



PACKAGING NOT SUITABLE FOR A CONVENTIONAL OVEN.

MICROWAVE - FOR BEST RESULTS
Microwave ovens vary. The following is a guide only. Remove sleeve. Pierce film. Cook on high (100%).

PAN FRY
Heat 2 teaspoons of oil in a stir fry pan. Add all ingredients, except for sauce. Add 2 tablespoons of water to the pan. Pan fry for 2 minutes stirring frequently. Add sauce and cook for a further 1 minute. Stir and serve.

Cat D 750w **Cat E 850w**

3 mins **2½ mins**

After cooking allow product to stand for 1 minute. Remove film, locate tab on edge of black insert and remove insert by sliding vegetables into bowl. Stir gently and serve. Check that product is hot before serving.

Medium

3 mins

Do not reheat.

INGREDIENTS
Cooked Bucatini Pasta (35%) · Spicy Tomato Sauce (31%) · Chargilled Artichokes (9%) · Seared Red Peppers (6%) · Seared Yellow Peppers (6%) · Feta Cheese · Black Olives (1%) · Spinach · Pumpkin Seeds · Sunflower Seeds · Chives · Rapeseed Oil · Paprika Flakes · Basil · Parsley.

Cooked Bucatini Pasta contains Durum Wheat Semolina · Water.

Spicy Tomato Sauce contains Tomato Passata · Tomatoes · Cherry Tomatoes · Tomato Purée · Red Peppers · Rapeseed Oil · Water · Sundried Tomato Paste (Sundried Tomatoes · Tomato Purée · Sunflower Oil · Sugar · Salt · Dried Oregano · Dried Basil · Dried Garlic) · Onions · Garlic Purée · Brown Sugar · Cornflour · Salt · Kashmiri Chilli Powder · Cracked Black Pepper.

Chargilled Artichokes contain Artichoke Hearts · Water · Salt · Acidity Regulator: Citric Acid.

Black Olives contain Black Olives · Water · Salt · Acidity Regulator: Citric Acid · Lactic Acid.

ALLERGY INFORMATION
CONTAINS Goat's Milk, Ewe's Milk, Wheat, Gluten.

NO ARTIFICIAL COLOURS, ARTIFICIAL FLAVOURINGS, OR PRESERVATIVES

Bucatini pasta with spicy tomato sauce, artichokes, seared peppers, feta cheese, black olives and spinach

NUTRITION	GDA			
	per 100g	per pack	adult	per pack
Energy kJ	445	1690		
Energy kcal	105	400	2000	20%
Protein	4.6g	17.5g	45g	39%
Carbohydrate	13.4g	50.9g	230g	22%
of which sugars	2.6g	9.9g	90g	11%
Fat	3.8g	14.4g	70g	21%
of which saturates	1.4g	5.3g	20g	27%
Fibre	2.2g	8.4g	24g	35%
Sodium	0.24g	0.91g	2.4g	38%
Equivalent as salt	0.60g	2.28g	6g	38%

GDA = Guideline daily amount

STORAGE
Keep refrigerated. Not suitable for freezing. For Display Until (DU) and Use By (UB), see front of pack.

Made in the UK.
© Marks and Spencer plc
PO Box 3139
Chesham CH99 9QS
marksandspencer.com
FSC paper cert no. SA-COC-001658

380g e

SOURCES DISPOSAL
SLEEVE SLEEVE POT TRIVET FILM
FSC paper plastics plastics plastics
MIXED SOURCES WHOLLY RECYCLED CHECK LOCAL CHECK LOCAL NOT CURRENTLY RECYCLED

0784 344 S

Taste panel procedure

Every batch of each product is assessed against agreed finished product taste panel criteria.

Samples are taken from each production run. Where appropriate, any products that require reheating before eating are cooked according to the cooking instructions on pack. All cooked items must have the reheat temperature checked and recorded on the taste panel score collation record. Reheat temperatures must achieve 75°C or above.

Anyone may attend the taste panel, but each panellist must have undergone sensory training and be trained against the site taste panel procedure. A minimum of one member of the technical department must be among the panellists to ensure any queries can be dealt with.

Products are arranged in blocks of six, placing the products with the milder flavours at the start of each block of six and the products with the stronger flavours at the end. For example, grilled peppers or cheese and tomato frittatas are placed at the start of each block, and olives or arrabbiata at the end of each block of six. This ensures that strong flavours do not influence the panellists testing other products.

Each panellist will benchmark (test) six products. However, it may be necessary to benchmark up to eight. All panellists must complete a sensory grading sheet.

Panellists locate the six products required to benchmark. They then test each product in numerical order as it appears on the sensory grading sheet. They check each characteristic of each product against the relevant taste panel criteria, recording each result on the sheet. Panellists must use the palate cleanser between each product, so that flavours do not influence one another.

Panellists must ensure that each product characteristic is thoroughly checked. For example, when testing lasagne they must split the layers of pasta to check the spread of the sauce and its quality; for mini frittatas they must turn them upside down in the pack to ensure they are thoroughly cooked and are easily removed.

All tests should be conducted quietly and discussions must not take place until all products have been benchmarked.

If the product differs to the taste panel criteria in any way this is recorded on the sensory grading sheet (stating as much detail as possible) and the technical representative present is informed to enable further investigation.

© Marks and Spencer plc 2011

