



Ingredient Cards

For GCSE WJEC Food Preparation
and Nutrition: Herbs and Spices

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Teacher's Introduction

This resource is designed to help you teach and discover the fascinating world of food we eat every day. Ingredient Cards are written with in mind the students who have chosen the challenge of studying the new subject – WJEC (Wales) GCSE Food Preparation and Nutrition.

What it covers

This part of Ingredient Cards introduces carefully chosen food ingredients – some to represent British cuisine and some to introduce world foods. The resource comprises 22 Herbs and Spices sheets and seven Task sheets.

How to use this resource

This resource covers all aspects of the new WJEC (Wales) GCSE specification for Food Preparation and Nutrition and is designed to increase the knowledge, improve the skills, arouse the curiosity and the trigger creativity of those using it.

Each Ingredient Card is dedicated to one ingredient. You can print and laminate these so that they can be safely used in the kitchen, without the risk of staining or damaging them.

- **What is It?** Briefly describes what part of a plant a given herb or spice comes from, and provides some trivia to make it more interesting for the student.
- **Common Cuisines.** This part indicates where a given ingredient comes from and where it is usually used in the world.
- **Nutritional Information.** Contains data about macro- and micronutrients present in a given food ingredient, both in 100 g and in a portion or piece, to help evaluate the nutritional value of the dishes made using it. It is presented in the form of a table, containing information about macro- and micronutrients as required by the WJEC (Wales) GCSE specification. If there is a '-' it means that there is no data available about the given nutrient. If there is a '0' it means that the ingredient does not contain the given nutrient.

IMPORTANT: Please note that herbs and spices do not contain any cholesterol; therefore, it is not indicated separately on the Ingredient Cards.

Please bear in mind that nutritional data is estimated, and may differ depending on the variety, growth conditions, storage conditions and any processing applied to the food (e.g. freezing, pickling, drying, canning or juicing).

Please remember that herbs and spices shouldn't be treated as significant sources of macronutrients due to the small amount consumed as part of a balanced diet, but they are a good source of certain micronutrients, antioxidants and essential oils.

- **Health Benefits.** Indicates the health benefits of consuming the given food ingredient, with special attention to vitamins, minerals, unsaturated fats, protein, phytosterols, naturally occurring antioxidants and essential oils (where applicable).
- **Allergy and Health Risks.** Points out the main health hazards relating to the consumption of a given food ingredient, including the risk of an allergic reaction.
- **Alternatives.** Contains a list of other food products which can be used instead of the described ingredient in case of shortage, health conditions or other reasons why the original ingredient cannot be used.
- **Cooking Uses.** A catalogue of culinary uses of a given food ingredient. Indicates whether it can be eaten raw or cooked, and whether there are any special requirements for cooking or preparation (where applicable). It also lists the kinds of dish in which the ingredient can be used, in order to fully appreciate its features and value.
- **Storage.** Conditions in which to store given product in order to preserve its nutritional value, colour, texture and flavour.

The herbs and spices are combined into small groups, and each group is followed by a **Task sheet** focused on the given ingredients. The purpose of each Task sheet is to check students' knowledge and encourage them to research more information, as well as experiment with the ingredient and discover its potential in cooking. Each task has been assigned a reference number to help cover the whole spectrum of the WJEC (Wales) GCSE Food Preparation and Nutrition specification. Simply copy one Task sheet per student for them to work on either during the lesson or at home. There are also exemplary answers to help you assess your students' progress and determine more challenging exercises which require more effort.

The nutritional data is, in most cases, based on the United States Department of Agriculture database and McCance and Widdowson Composition of Foods database for Great Britain.

Where appropriate, other sources of information have been used, such as FODMAPer application issued by Monash University and label information for products most popular in Great Britain.

Specification Specific Information

The Ingredient Cards contain a wide range of information, including data about vitamins and minerals. Please note that the nutritional values supplied do not always reflect the requirements of the WJEC (Wales) GCSE specification for Food Preparation and Nutrition, as they provide additional data on vitamins E and K, as well as on sodium and phosphorus.

We believe that the additional information provided will broaden the students' knowledge and improve their understanding of how nutrients work together in the human body.

However, there is no need for students to focus on the vitamins or minerals not covered by the specification. The following table indicates which vitamins and minerals the WJEC (Wales) specification covers.

Minerals		
Calcium		✓
Iron		✓
Sodium		
Fluoride		✓
Iodine		✓
Phosphorus		
Potassium		✓
Magnesium		✓
Vitamins		
Fat soluble	Vitamin A	✓
	Vitamin D	✓
	Vitamin E	
	Vitamin K	
Water soluble	Vitamin B1 (Thiamine)	✓
	Vitamin B2 (Riboflavin)	✓
	Vitamin B3 (Niacin)	✓
	Vitamin B9 (Folic acid)	✓
	Vitamin B12 (Cobalamin)	✓
	Vitamin C (Ascorbic acid)	✓

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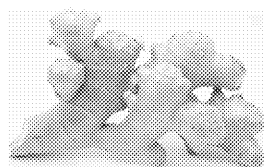
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* resulting from minor specification changes, suggestions from teachers and peer reviews, or occasional errors reported by customers

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1. GINGER



What is It?

Edible rhizome of a yellow-flowering plant growing naturally in the rainforests of South Asia. The young ginger roots are tender, but some fibres may develop over time, making it more difficult to peel. Ginger rhizomes usually have many small 'branches' growing from them, which might make it difficult to peel.

Common Uses:

Ginger is characteristic of Indian cuisine (ginger-garlic paste is used in many recipes), Chinese cuisine (used in sauces and stews, as well as in folk medicine) and Japanese cuisine (pickled ginger is often added to sushi). It was imported to Europe around the fourteenth century, and gained a well-earned appreciation.

Storage:

Fresh ginger can be stored in a cool place, wrapped in a paper towel and stored in a plastic bag.

Nutritional Information:

These values may vary. Information shown is for fresh ginger.

Nutritional value: typical value	Per 100 g	Per 1 tsp (2 g)
Energy	80 kcal	2 kcal
Macronutrients		
Fat	0.75 g	0.01 g
Saturated fats	0.203 g	0.004 g
Monounsaturated fats	0.154 g	0.003 g
Polyunsaturated fats	0.154 g	0.004 g
Carbohydrates	17.7 g	0.36 g
Starch (polysaccharides)	0.9 g	0.128 g
Sugars (monosaccharides and disaccharides)	1.7 g	0.03 g
Fibre	2.0 g	0 g
Protein	1.82 g	0.04 g
Micronutrients		
Vitamin A	0	0
Vitamin D	0	0
Vitamin E	0.26 mg	0.01 mg
Vitamin K	0.1 mcg	0
Vitamin B1 (Thiamine)	0.025 mg	0
Vitamin B2 (Riboflavin)	0.034 mg	0.001 mg
Vitamin B3 (Niacin)	0.750 mg	0.015 mg
Folate	11 mcg	0
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	5 mg	0.1 mg
Calcium	0 mg	0 mg
Iron	0.2 mg	0.01 mg
Sodium (Salt)	13 mg	0 mg
Fluoride	-	-
Iodine	0	0
Phosphorus	34 mg	1 mg
Potassium	415 mg	8 mg
Magnesium	43 mg	1 mg

g – grams, mg – milligrams, mcg – micrograms

Nutrition:

Health Benefits:

Despite the fact that it contains no vitamins or minerals, ginger provides many health benefits. It contains gingerols – essential oils responsible for its characteristic flavour. They stimulate production of saliva, making it easier to swallow – this is helpful for people with dry mouth from lack of saliva or a sore throat. It can also help to reduce nausea and prevent seasickness or morning sickness. It is also helpful in minimising cold and flu symptoms. It is a good source of potassium, which is an important electrolyte.

Allergy and Health Risks:

Ginger may be an irritant, especially for people with respiratory diseases, stomach ulcers or acid reflux. Powdered ginger may cause allergic reactions in some people.

Alterations:

To fresh ginger:

Myoga – aka Japanese ginger – is a variety of ginger that is edible.

Galangal (finger root) – species of ginger.

To dried ginger:

Ground ginger, ground cinnamon.

Cooking Uses:

- **Chop or grate** to add to curries, soups, stews, etc.
- **Grate fresh** ginger to use in curries, soups, stews, etc.
- **Dehydrate** to make a powder for use in soups, stews, curries and soups.
- **Pickle** to use with sushi, etc.
- **Grate** to add to desserts, crumble, etc.

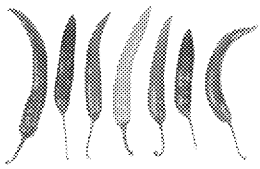
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2. CHILLI

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What is It?

Type of pepper with a high amount of capsaicin – a substance that makes it really hot and spicy. Capsaicin is also the main component of cayenne. The hotness of pepper is measured in SHU (Scoville heat units) on the Scoville scale. Cayenne pepper is a widely used variety.

Common Cuisines:

Chilli peppers were brought to Europe by Christopher Columbus, and were further spread to Asia by Portuguese traders. Chilli peppers are the main ingredient of Mexican chilli – thick, spicy stew – and Mole poblano sauce. Sambal is a chilli paste popular in Indonesia.

Nutritional Information:

These values may vary. Information shown is for red chilli pepper (average).

Nutritional value: typical value	Per 100 g	Per 1 pepper (45 g)
Energy	40 kcal	18 kcal
Macronutrients		
Fat	0.44 g	0.2 g
Saturated fats	0.042 g	0.019 g
Monounsaturated fats	0.024 g	0.011 g
Polyunsaturated fats	0.239 g	0.108 g
Carbohydrates	8.81 g	3.96 g
Starch (polysaccharides)	-	-
Sugars (fructose and disaccharides)	5.3 g	2.38 g
Fibre	1.5 g	0.7 g
Protein	1.87 g	0.84 g
Micronutrients		
Vitamin A	48 mcg	2 mcg
Vitamin D	0	0
Vitamin E	0.69 mg	0.31 mg
Vitamin K	14 mcg	6.3 mcg
Vitamin B1 (Thiamine)	0.072 mg	0.032 mg
Vitamin B2 (Riboflavin)	0.086 mg	0.039 mg
Vitamin B3 (Niacin)	1.244 mg	0.56 mg
Folate	23 mcg	10 mcg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	143.7 mg	64.7 mg
Calcium	14 mg	6.3 mg
Iron	1.02 mg	0.46 mg
Sodium (Salt)	5 mg	2.3 mg
Fluoride	-	-
Iodine	0	0
Phosphorus	43 mg	19 mg
Potassium	322 mg	145 mg
Magnesium	23 mg	10 mg

g – grams, **mg** – milligrams, **mcg** – micrograms

Nutritional

Health Benefits:

Chilli peppers are rich in vitamins and antioxidants, which may provide some relief from pain, as well as alleviate inflammation. Capsaicin is used in treating diabetic neuropathy, and helps to mitigate the effects of high blood sugar.

Allergy and Health Risks:

High amounts of chilli may irritate the taste buds on the tongue, so may cause a rash or side effects. It is also dangerous to mucous membranes, such as the stomach, so avoid hot spices in gastrostomach ulcers or irritable bowel syndrome.

Alterations:

For milder hotness, use green pepper, garlic powder or black pepper.
For milder flavour and colour, use coriander seeds, turmeric seeds, coriander seeds, turmeric.

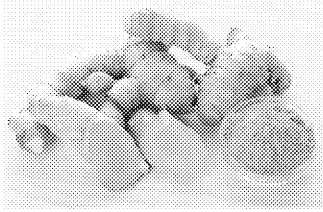
Cooking Uses:

- Always remember to read the label.
- **Chop** to add to sauces, marinades, scrambled eggs, stir-fries – even to bread.
- **Blend** into sambal paste and marinades.
- **Infuse** in an oil to use in cooking.
- **Stuff** with cream cheese.

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3. TURMERIC



What is It?

Intensely yellow powder made from ginger-like roots from South Asia. Also known as Indian saffron, it is a key herb in Ayurvedic and folk medicine. Turmeric is the main compound in saffron. Fresh turmeric root stains hands and clothing. The absorption of turmeric in the body if eaten together with black pepper (a natural aromatic compound in it).

Common Culinary Uses:

In India and Southeast Asia, turmeric is used in both savoury and sweet dishes, as both a spice and a colouring agent. It was introduced to Europe in the thirteenth century. It is also popular in Lebanese cuisine, where it is used to prepare cakes called *stouf*.

Nutritional Information:

These values may vary. Information is shown for turmeric powder.

Nutritional value: typical value	Per 100 g	Per 1 tsp (3 g)
Energy	312 kcal	9 kcal
Macronutrients		
Fat	3.25 g	0.1 g
Saturated fats	1.838 g	0.055 g
Monounsaturated fats	0.0449 g	0.013 g
Polyunsaturated fats	0.756 g	0.023 g
Carbohydrates	67.14 g	2.01 g
Starch (polysaccharides)	-	-
Sugars (monosaccharides and disaccharides)	0.1 g	0.1 g
Fibre	22.7 g	0.7 g
Protein	9.7 g	0.3 g
Micronutrients		
Vitamin A	0	0
Vitamin D	0	0
Vitamin E	4.43 mg	0.13 mg
Vitamin K	13.4 mcg	0.4 mcg
Vitamin B1 (Thiamine)	0.058g	0.002 mg
Vitamin B2 (Riboflavin)	0.150 mg	0.004 mg
Vitamin B3 (Niacin)	1.35 mg	0.041 mg
Folate	20 mcg	1 mcg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	0.7 mg	0
Calcium	168 mg	5 mg
Iron	55 mg	1.65 mg
Sodium (Salt)	2 mg	1 mg
Fluoride	-	-
Iodine	-	-
Phosphorus	299 mg	9 mg
Potassium	2,080 mg	62 mg
Magnesium	208 mg	6 mg

g – grams, **mg** – milligrams, **mcg** – micrograms

Nutritional Benefits:

Health Benefits:

The main pigment of turmeric is curcumin, a powerful antioxidant. Turmeric is used as a natural pain relieving agent in arthritis and is also effective in treating depression. It is also a source of potassium, which helps in lowering blood pressure.

Allergy and Health Risks:

Turmeric may cause an allergic reaction if applied to the skin. Excessive consumption may cause nausea, diarrhoea, hypotension (low blood pressure) and increased mortality in pregnant women and during lactation.

Alterations:

For colour, try using saffron threads instead of turmeric powder.
For colour and flavour, replace turmeric with saffron powder.

Cooking Uses:

- Add 1 ground turmeric to curries, soups and stews.
- Add ground turmeric as a natural colouring agent to roasted vegetables.
- Add to marinades for meats and fish.
- Use ground turmeric in baked goods, e.g. cakes, breads, pastries, desserts, e.g. sponge, biscuits, cookies, cakes, creams, yogurts.
- Use grated fresh turmeric in curries, soups, and yellow curry.

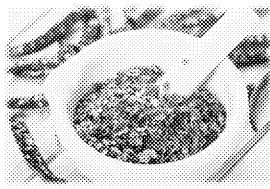
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4. PAPRIKA

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What is It?

Bright red powder made from dried sweet peppers or hot peppers. It is usually quite mild in flavour, but there are many varieties of pepper that make it spicier.

Common Cuisines:

Although peppers are native to Mexico, paprika became very popular in Hungary. The powder is used to prepare many Hungarian national dishes such as *paprika gulyás* and *korozott*.

Store in a cool, dry place.

Nutritional Information:

These values may vary.

Nutritional value: typical value	Per 100 g	Per 1 tsp (2.3 g)
Energy	282 kcal	6 kcal
Macronutrients		
Fat	12.89 g	0.3 g
Saturated fats	2.14 g	0.049 g
Monounsaturated fats	1.695 g	0.039 g
Polyunsaturated fats	7.766 g	0.179 g
Carbohydrates	53.99 g	1.24 g
Starch (polysaccharides)	-	-
Sugars (mono- and disaccharides)	10.34 g	0.24 g
Fibre	2.9 g	0.8 g
Protein	14.14 g	0.33 g
Micronutrients		
Vitamin A	2,463 mcg	57 mcg
Vitamin D	0	0
Vitamin E	29.1 mg	0.67 mg
Vitamin K	80.3 mcg	1.8 mcg
Vitamin B1 (Thiamine)	0.33 mg	0.008 mg
Vitamin B2 (Riboflavin)	1.23 mg	0.028 mg
Vitamin B3 (Niacin)	10.06 mg	0.231 mg
Folate	49 mcg	1 mcg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	0.9 mg	0
Calcium	229 mg	5 mg
Iron	21.14 mg	0.49 mg
Sodium (Salt)	68 mg	1.6 mg
Fluoride	-	-
Iodine	-	-
Phosphorus	314 mg	7 mg
Potassium	2,280 mg	52 mg
Magnesium	178 mg	4 mg

g – grams, mg – milligrams, mcg – micrograms

Nutritional

Health Benefits:

Paprika is very rich in vitamin A, beta-carotene, and zeaxanthin, all of which support eye health. It also provides vitamin C, an antioxidant, and Niacin, necessary for energy production. Paprika is also very rich in vitamin K, which helps prevent bleeding, and phytonutrients that help lower cholesterol levels in the blood. High amounts of paprika can help lower blood pressure, and may help with heart disease. Since it's quite low in calories, it's a great addition to your diet. Benefits (such as lowering blood pressure) without the side effects!

Allergy and Health Risks:

Make sure you choose a milder variety if you have ulcers or bowel diseases, as capsaicin can worsen the symptoms.

Alterations:

To make food more spicy and hot: Add a pinch of cayenne pepper.
For a milder taste, use ancho powder.
For a similar taste in some recipes, use ground red pepper powder.

Cooking Uses:

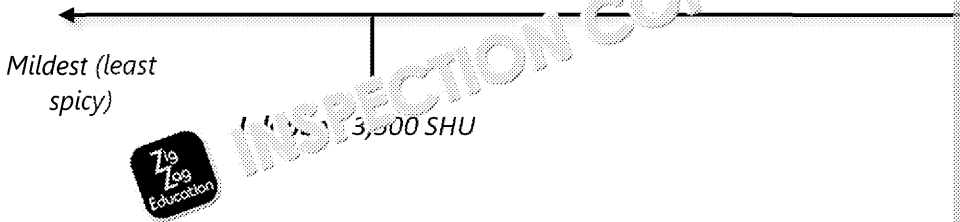
- Add ground paprika to soups, stews, and casseroles.
- Sprinkle on top of dishes like omelettes and pasta.
- Add ground paprika to marinades, especially for meats (e.g. omelettes) and pasta.
- Stir into marinades, especially for meats.
- Add powder to minced meat, sausages, or sausages.
- Use as a colouring agent in soups, stews, and casseroles.
- Sprinkle on top of roasted vegetables.
- Mix with cottage cheese to make a dip.
- Add as a colourant and flavouring to other dips.

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GINGER, CHILLI, TURMERIC AND PAPRIKA

1. Research and list various kinds of pepper on the diagram below, order to the hottest. One has been done for you. [Area 1, Area 6]



2. List five recipes which use fresh ginger. [Area 6]

- 1.
- 2.
- 3.
- 4.
- 5.

3. Prepare your own curry powder.

- i) Research the ingredients (both what to use and how much)
- ii) Draw an image of the equipment you will use, and label it.
- iii) Assess what would be the health outcomes of using such a spice.
- iv) Compare your own curry powder to one available on the market. Are they similar? [Area 6]

i) Ingredients needed:

Ingredient	How much?

ii)

iii) Health outcomes of this spice include (remember health outcomes)

-
-
-

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iv) Comparison with curry powder on the market:

My curry powder	Curry powder Brand: _____

4. Although chilli is most popular in Mexican cuisine, it is also used in other cuisines in which the use of chilli is popular. [Area 5]

1.
2.

Extension [Area 5]

Research the conditions required for growing ginger, list the countries in which it is grown and assess whether or not ginger could be cultivated in the United Kingdom. Present your research in the form of a leaflet or a poster.

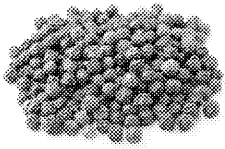
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5. BLACK PEPPER

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What is It?

Seeds of *Piper nigrum*, a tropical climber with pea-sized berries. It contains essential oils and alkaloids, responsible for its specific taste and aroma. There are three different kinds of pepper: namely, green, pink and white.

Common Cuisines:

The spice of India, but is now known and used worldwide. It was so valuable it was used as a currency to trade between countries. Now it is used mainly for culinary purposes, although it can have medicinal uses.

Nutritional Information:

These values may vary.

Nutritional value: typical value	Per 100 g	Per 1 tsp (2.5 g)
Energy	251 kcal	6 kcal
Macronutrients		
Fat	3.26 g	0.07 g
Saturated fats	1.392 g	0.032 g
Monounsaturated fats	0.739 g	0.017 g
Polyunsaturated fats	0.998 g	0.023 g
Carbohydrates	63.95 g	1.47 g
Starch (polysaccharides)	-	-
Sugars (mono- and disaccharides)	0.04 g	0.01 g
Fibre	25.3 g	0.6 g
Protein	10.39 g	0.24 g
Micronutrients		
Vitamin A	27 mcg	1 mcg
Vitamin D	0	0
Vitamin E	1.04 mg	0.02 mg
Vitamin K	163.7 mcg	3.8 mcg
Vitamin B1 (Thiamine)	0.108 mg	0.002 mg
Vitamin B2 (Riboflavin)	0.180 mg	0.004 mg
Vitamin B3 (Niacin)	1.143 mg	0.026 mg
Folate	17 mcg	0 mcg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	0	0
Calcium	443 mg	11.1 mg
Iron	5.1 mg	0.127 mg
Sodium (Salt)	0 mg	0 mg
Fluoride	34.2 mcg	0.855 mcg
Iodine	-	-
Phosphorus	158 mg	3.95 mg
Potassium	1,329 mg	33.225 mg
Magnesium	171 mg	4.275 mg

g – grams, mg – milligrams, mcg – micrograms

Nutritional

Health Benefits:

Black peppercorn is rich in potassium and fluoride. It contains many antioxidants (2 mg in each teaspoon!), which aid the functioning of the cardiovascular system. Piperine – an alkaloid which gives black pepper its taste – studies show that piperine increases the effectiveness of curcumin – this means that black pepper is more effective than separately. Piperine also helps to relax muscles and lowers blood pressure. Peppercorn oil may be used, e.g. on painful joints and muscles.

Allergy and Health Risks:

Black pepper oil can irritate the skin when applied directly to the skin. It may also affect the performance of some medications, increasing the risk of side effects.

Alter

For the spicy, hot sensation: Use horseradish, mustard or chili. **For the flavour:** replace with herbs like marjoram, coriander, caraway.

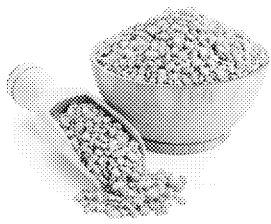
Cooking Uses:

- Use whole, crushed or ground in soups, sauces, stews, salads, etc.
- Crush or grind to use in breads, pastas, etc.
- Add whole peppercorns to soups, stews, etc.
- Freshly ground pepper is the best and is a kind of universal seasoning.
- Grind or crush to add to...

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6. FENUGREEK



What is It?

Small, round yellow seeds, usually used whole. Also, be used in cooking.

Common Cuisines:

Fenugreek is popular in Indian, Jewish and Arabic cuisines. In Egypt, fenugreek is used to make pita bread. Jews mix fenugreek with lemon juice and other ingredients to obtain traditional dip called *hilbeh*, eaten during Rosh Hashanah.

Nutritional Information:

These values may vary.

Nutritional value: typical value	Per 100 g seeds	Per 1 tsp (4 g)
Energy	323 kcal	12 kcal
Macronutrients		
Fat	6.41 g	0.24 g
Saturated fats	1.46 g	0.054 g
Monounsaturated fats	-	-
Polyunsaturated fats	-	-
Carbohydrates	58.35 g	2.16 g
Starch (polysaccharides)	-	-
Sugars (mono- and disaccharides)	-	-
Fibre	24.6 g	0.9 g
Protein	23 g	0.85 g
Micronutrients		
Vitamin A	3 mcg	0 mcg
Vitamin D	0	0
Vitamin E	-	-
Vitamin K	-	-
Vitamin B1 (Thiamine)	0.322 mg	0.012 mg
Vitamin B2 (Riboflavin)	0.366 mg	0.014 mg
Vitamin B3 (Niacin)	1.64 mg	0.061 mg
Folate	57 mcg	2 mcg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	3 mg	0.1 mg
Calcium	176 mg	7 mg
Iron	33.53 mg	1.34 mg
Sodium (Salt)	2 mg	0.08 mg
Fluoride	-	-
Iodine	0	0
Phosphorus	296 mg	11 mg
Potassium	770 mg	28 mg
Magnesium	191 mg	7 mg

g – grams, **mg** – milligrams, **mcg** – micrograms

Nutritional

Health Benefits:

Fenugreek is rich in calcium and provides proper growth and development. It is also rich in selenium – an important micro-nutrient with anticarcinogenic properties. A teaspoon provides 5 mg of phytosterols, which help prevent cardiovascular diseases. Fenugreek is also a source of strong antioxidants – which may help prevent ageing, constipation, prevent obesity and diabetes, lower blood sugar and support insulin production.

Allergy and Health Risks:

Eating large amounts of fenugreek may cause a rash, to smell sweet, a bit like maple syrup. It may also cause contractions in pregnant women. Allergies to fenugreek are not common, but symptoms include rash, breathlessness or fainting. Fenugreek may also lower blood sugar levels to dangerous levels.

Alter

For similar shape, size and color, use fennel seeds.
For smell and sweetness, try nutmeg.
For aroma, replace with fennel seeds.
 Instead of fresh fenugreek leaves, use dried fenugreek leaves.
For color, use cumin, coriander.

Cooking Uses:

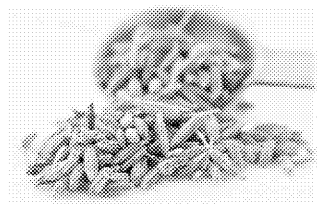
- **Chop leaves** and add to soups, stews, curries.
- **Add whole or ground seeds** to rice dishes, bread, scones.
- **Grind seeds and mix with oil** to form a paste which can be used in other baked goods instead of butter.
- **Use ground or whole seeds** in curries.
- **Grind seeds and leaves** to make a paste.

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7. CUMIN



What is It?

Seeds similar in shape to caraway, but with a different flavour. It is commonly used in the kitchen. This oriental spice comes from the same plant as the caraway. It is used as a culinary, cosmetic and medicinal plant.

Common Cuisines:

Although the seeds come from the Mediterranean region, it is most commonly used in South Asian cuisine. It is also used in Spanish and Mexican cuisines, although not as often. It is especially popular in Brazil, Morocco and India.

Storage

Store in a dark place. It is better to grind the seeds when needed.

Nutritional Information:

These values may vary.

Nutritional value: typical value	Per 100 g	Per 1 tsp (2 g)
Energy	375 kcal	8 kcal
Macronutrients		
Fat	22.27 g	0.47 g
Saturated fats	1.535 g	0.032 g
Monounsaturated fats	14.04 g	0.3 g
Polyunsaturated fats	3.3 g	0.07 g
Carbohydrates	44.24 g	0.93 g
Starch (polysaccharides)	-	-
Sugars (mono- and disaccharides)	0.05 g	0.05 g
Fibre	10.5 g	0.2 g
Protein	17.81 g	0.37 g
Micronutrients		
Vitamin A	64 mcg	1 mcg
Vitamin D	0	0
Vitamin E	3.33 mg	0.07 mg
Vitamin K	5.4 mcg	0.1 mcg
Vitamin B1 (Thiamine)	0.628 mg	0.013 mg
Vitamin B2 (Riboflavin)	0.327 mg	0.007 mg
Vitamin B3 (Niacin)	4.58 mg	0.096 mg
Folate	10 mcg	0
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	7.7 mg	0.2 mg
Calcium	931 mg	20 mg
Iron	66 mg	1.4 mg
Sodium (Salt)	1.1 mg	4 mg
Fluoride	-	-
Iodine	0	0
Phosphorus	500 mg	10 mg
Potassium	1,788 mg	38 mg
Magnesium	366 mg	8 mg

g – grams, mg – milligrams, mcg – micrograms

Nutrition

Health Benefits:

Cumin provides a lot of potassium, which is important for maintaining healthy blood pressure. It also contains zeaxanthin and lutein, which are antioxidants. Cumin also contains phytochemicals, which help to reduce the risk of cardiovascular disease by lowering cholesterol levels. Cumin increases diuresis and helps to reduce blood pressure, which improves digestion. Cumin is rich in calcium, necessary for bone health.

Allergy and Health Risks:

May cause heartburn, wind and bloating. Cumin may lower blood sugar levels so may be dangerous for people with diabetes. Cumin may interact with some medications, so patients undergoing surgery should avoid it. Cumin may cause allergic reactions and more serious symptoms.

Alter

For similar flavour, try the seeds of *Cuminum cyminum* (black cumin).

For similar look and texture, try caraway seeds.

For similar aroma and spice, try coriander or chilli powder.

Cooking Uses:

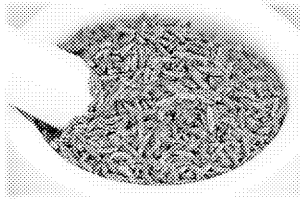
- Stir into curries, goulashes and soups.
- Mix into, or sprinkle over, bread and enchiladas.
- Infuse in marinades, especially for meats.
- Infuse to improve the flavour of soups and stews.
- Improve the flavour of fondue.
- Simmer or steam in soups.

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8. CARAWAY



What is It?

Also known as meridian fennel, caraway fruits (do not look like seeds) are light brown with an anise-like aroma. Unlike cumin, they do not resemble cumin, their appearance, features and culinary uses are different.

Common Cuisines:

Caraway is especially common in Eastern European cuisine, where it is used in many cabbage-based dishes, such as sauerkraut stew and soup, and in bread. Caraway is also commonly added to harissa, a popular hot paste used in Arabic cuisine.

Nutritional Information:

These values may vary.

Nutritional value: typical value	Per 100 g	Per 1 tsp (2 g)
Energy	333 kcal	7 kcal
Macronutrients		
Fat	14.59 g	0.31 g
Saturated fats	0.62 g	0.013 g
Monounsaturated fats	7.125 g	0.15 g
Polyunsaturated fats	3.272 g	0.069 g
Carbohydrates	49.9 g	1.05 g
Starch (polysaccharides)	-	-
Sugars (mono- and disaccharides)	0.64 g	0.013 g
Fibre	0.8 g	0.016 g
Protein	19.77 g	0.42 g
Micronutrients		
Vitamin A	18 mcg	0
Vitamin D	0	0
Vitamin E	2.5 mg	0.05 mg
Vitamin K	0	0
Vitamin B1 (Thiamine)	0.383 mg	0.008 mg
Vitamin B2 (Riboflavin)	0.38 mg	0.008 mg
Vitamin B3 (Niacin)	3.606 mg	0.076 mg
Folate	10 mcg	0
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	21 mg	0.4 mg
Calcium	689 mg	14 mg
Iron	16.23 mg	0.34 mg
Sodium (Salt)	17 mg	0
Fluoride	-	-
Iodine	0	0
Phosphorus	48 mg	12 mg
Potassium	1,351 mg	28 mg
Magnesium	258 mg	5 mg

g – grams, mg – milligrams, mcg – micrograms

Nutrition

Health Benefits:

Caraway is rich in potassium, which helps to regulate blood pressure. They ensure proper circulation and help to prevent cardiovascular diseases. Caraway is also used mainly for its ability to prevent indigestion and to prevent constipation.

Allergies and Health Risks:

Caraway is a member of the Umbelliferae family. It is a common allergen. Caraway is also used to treat indigestion and belching. High doses of caraway can be harmful to the liver and kidneys. It is also considered to be harmful for pregnant women. Caraway is supported by medical studies.

Alter

For similar look and texture: Use cumin. For similar aroma, use cumin.

For similar flavour: try anise and cardamom.

Cooking Uses:

- Stir into fat-rich dishes like goose, duck, pork and chicken.
- Mix into high-fibre dishes like cabbage, such as bean and sauerkraut soup and cabbage.
- Infuse in marinades for meat.
- Add to dough or spritz into muffins.
- Slightly roast and sprinkle into potato salad, carrot salad.
- Mix into cheese fondue.

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BLACK PEPPER, FENUGREEK, CUMIN AND CARAWAY

1. Black pepper is made by cooking and drying the unripe drupes of the kinds of pepper made? [Area 5]

White pepper:

.....

Green pepper:

.....

Red pepper:

.....

Pink pepper:

.....

2. Roasted fenugreek can be used as a substitute for coffee.

i) Can you think of any other plants which can be used instead?

.....

ii) Explain why people might prefer to use coffee substitutes. How do you think they differ, for example, in terms of flavour, colour and nutritional value? [Area 1, Area 2]

.....

.....

.....

3. Cumin is the second most popular spice in the world. What spice is the most popular?

.....

4. List three herbs or spices which improve digestion and prevent bloating.

1.

2.

3.

Extension [Area 6]

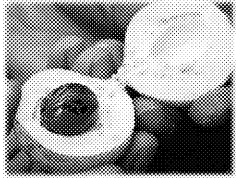
Place some cumin and caraway seeds in two bowls. Compare their appearance and flavour (remember to rinse out your mouth after each spice). Then describe the two spices.

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9. NUTMEG



What is It?

This spice is derived from the same tree as mace – indeed, the mace is the inner covering of the tree, while nutmeg is made from the seed. It can be used either as a whole seed, which is hard and has to be grated, or as a light brown aromatic powder. Nutmeg fruit can also be used.

Common Cuisines:

In Indonesian cuisine, nutmeg is used both in savoury and sweet dishes. Nutmeg can also be added to spice mixes such as curry powder. Nutmeg is also quite popular in European cuisine, where it may be added to dishes such as cream of leek soup and apple tart.

Nutritional Information:

These values may vary.

Nutritional value: typical value	Per 100 g powder	Per 1 tsp (2.5 g)
Energy	525 kcal	12 kcal
Macronutrients		
Fat	36.31 g	0.8 g
Saturated fats	25.94 g	0.571 g
Monounsaturated fats	3.22 g	0.071 g
Polyunsaturated fats	0.35 g	0.008 g
Carbohydrates	49.29 g	1.08 g
Starch (polysaccharides)	-	-
Sugars (mono- and disaccharides)	0.07 g	0.07 g
Fibre	20.8 g	0.5 g
Protein	5.84 g	0.13 g
Micronutrients		
Vitamin A	5 mcg	0
Vitamin D	0	0
Vitamin E	0	0
Vitamin K	0	0
Vitamin B1 (Thiamine)	0.346 mg	0.008 mg
Vitamin B2 (Riboflavin)	0.057 mg	0.001 mg
Vitamin B3 (Niacin)	1.299 mg	0.029 mg
Folate	76 mcg	2 mcg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	3 mg	0.1 mg
Calcium	184 mg	4.6 mg
Iron	3.04 mg	0.076 mg
Sodium (Salt)	1 mg	0 mg
Fluoride	-	-
Iodine	0	0
Phosphorus	213 mg	5.3 mg
Potassium	350 mg	8.7 mg
Magnesium	183 mg	4.6 mg

g – grams, **mg** – milligrams, **mcg** – micrograms

Nutritional

Health Benefits:

Although nutmeg has very few nutrients, it is rich in essential oils, responsible for its characteristic aroma. It can be used as a mild sedative. Along with other essential oils, those present in nutmeg are anti-inflammatory – for that reason, nutmeg can combat bad breath. The oils also have a beneficial effect on the brain, increasing its activity.

Allergy and Health Risks:

Large doses of nutmeg may be harmful, although not enough data is available to recommend to avoid nutmeg. It may also interact with some medications, either increasing or decreasing their effectiveness.

Alter

For similar aroma, try garam masala. If you're allergic to nutmeg because of its essential oils, you may also be allergic to ground cloves.

Cooking Uses:

- **Stir** into soups (e.g. especially lentil soups), sauces, stews and curries. Fry in a little oil when making a curry.
- **Infuse** to make marinades.
- **Mix into, or sprinkle on** puddings, and in beverages like cider.
- **Add** to mashed potato, Bolognese sauce, and tortellini.
- **Improve the flavour** of meat dishes.
- **Add to dough/batter** for bread, muffins, banana bread and scones.
- **Spice up** meaty dishes such as stews.

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10. CLOVES



What is It?

Aromatic flower buds originating in Indonesia, resemble nails. Cloves contain an essential oil (called eugenol) which is a painkiller and an antibiotic. Cloves are used in dentistry in order to alleviate pain and kill bacteria.

Common Cuisines:

Although cloves are rarely used in Indian cuisine (e.g. in garam masala spice powders), they are now used worldwide, e.g. in the making of gingerbreads, hot chocolate or sauces (such as Worcester sauce). Cloves are popularly used in both savoury and sweet dishes, including meat marinades, apple sauce and mulled wine.

Nutritional Information:

These values may vary. Data shown is for ground cloves.

Nutritional value: typical value	Per 100 g	Per 1 tsp (2 g)
Energy	274 kcal	6 kcal
Macronutrients		
Fat	13 g	0.27 g
Saturated fats	3.952 g	0.083 g
Monounsaturated fats	1.393 g	0.029 g
Polyunsaturated fats	3.606 g	0.076 g
Carbohydrates	65.5 g	1.31 g
Starch (polysaccharides)	0 g	0 g
Sugars (monosaccharides and disaccharides)	0.4 g	0.05 g
Fibre	34 g	0.7 g
Protein	5.97 g	0.13 g
Micronutrients		
Vitamin A	8 mcg	0
Vitamin D	0	0
Vitamin E	8.82 mg	0.19 mg
Vitamin K	141.8 mcg	3 mcg
Vitamin B1 (Thiamine)	0.158 mg	0.003 mg
Vitamin B2 (Riboflavin)	0.22 mg	0.005 mg
Vitamin B3 (Niacin)	1.56 mg	0.033 mg
Folate	25 mcg	1 mcg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	0.2 mg	0
Calcium	632 mg	12.6 mg
Iron	11.8 mg	0.23 mg
Sodium (Salt)	0 mg	0 mg
Fluoride	0 mg	0 mg
Iodine	0	0
Phosphorus	104 mg	2 mg
Potassium	1,020 mg	21 mg
Magnesium	259 mg	5 mg

g – grams, mg – milligrams, mcg – micrograms

Storage:

Whole cloves are best stored in a sealed glass jar. Ground cloves are quite perishable and should be used when necessary.

Nutrition Facts

Health Benefits:

A teaspoonful of ground cloves can stimulate healthy bowel movements, improve blood clotting. It also provides antioxidants needed for maintaining heart health. Cloves are also good for the nervous system and can help with various ailments. Cloves contain phytochemicals that can help lower LDL cholesterol levels and prevent cardiovascular disease.

Allergy and Health Risks:

Cloves can lower blood sugar levels. Cloves should be used in moderation. Eugenol in cloves – eugenol – may cause allergic reactions if consumed in excess, and may interact with certain medications.

Alterations:

For similar aroma and warmth, use cinnamon or nutmeg.

Cooking Uses:

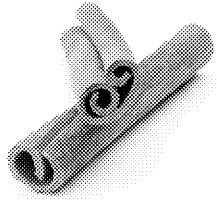
- **Whole or ground** to use in stews, soups, and curries.
- **Grind or crush** to use as a rub for red meat.
- **Infuse whole or ground** in apples, plums, pears or pumpkin, e.g. in pies, crumbles.
- **Grind** to add to chai (spiced tea).
- **Infuse whole cloves** when making gingerbread, as well as buns and cookies.
- **Whole cloves** stuck into a pomander – mainly to give an interesting ornament.

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11. CINNAMON



What is It?

Brown coloured bark of several tree species, usually in the shape of sticks. Cinnamon is used in both savoury and sweet dishes.

Common Cuisines:

In Mexico, cinnamon is commonly used in chocolate production, while in the Middle East it is usually used in savoury dishes – usually stews made from lamb or chicken. Today, cinnamon is used commonly worldwide, for culinary, cosmetic and medicinal purposes.

Nutritional Information:

These values may vary.

Nutritional value: typical value	Per 100 g	Per 1 tsp (2.5 g)
Energy	247 kcal	6 kcal
Macronutrients		
Fat	1.24 g	0.03 g
Saturated fats	0.345 g	0.009 g
Monounsaturated fats	0.246 g	0.006 g
Polyunsaturated fats	0.068 g	0.002 g
Carbohydrates	80.59 g	2.10 g
Starch (polysaccharides)	-	-
Sugars (mono- and disaccharides)	2.06 g	0.06 g
Fibre	53.1 g	1.4 g
Protein	4 g	0.1 g
Micronutrients		
Vitamin A	15 mcg	0
Vitamin D	0	0
Vitamin E	2.32 mg	0.06 mg
Vitamin K	31.2 mcg	0.8 mcg
Vitamin B1 (Thiamine)	0.022 mg	0.001 mg
Vitamin B2 (Riboflavin)	0.041 mg	0.001 mg
Vitamin B3 (Niacin)	1.33 mg	0.03 mg
Folate	6 mcg	0
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	3.8 mg	0.1 mg
Calcium	1,002 mg	25 mg
Iron	8.25 mg	0.22 mg
Sodium (Salt)	1 mg	0
Fluoride	-	-
Iodine	0	0
Phosphorus	64 mg	2 mg
Potassium	431 mg	11 mg
Magnesium	60 mg	2 mg

g – grams, **mg** – milligrams, **mcg** – micrograms

Nutrition

Health Benefits:

Cinnamon contains a lot of polyphenols (including proanthocyanidins (a teaspoon of cinnamon has 100mg of them!)), effective in the prevention of cardiovascular diseases. It also provides calcium (important for bone and muscle performance) and potassium (important for blood pressure). It also provides almost 5% of the daily requirement of cinnamaldehyde in cinnamon, which is beneficial for cardiovascular diseases.

Allergy and Health Risks:

A high amount of cinnamaldehyde can be especially dangerous in people with asthma. Inhaling cinnamon powder can cause irritation. Cinnamon may also cause allergic reactions in some people, with symptoms such as burning and itching.

Alter

For similar texture, colour and flavour, use
nutmeg or allspice

Cooking Uses:

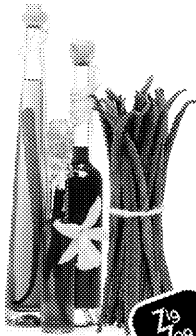
- **Grind or grate** to use in breads, cakes, cookies, pastries, etc.
- **Grind or grate** to use with meat, poultry, fish, etc. (e.g. boule and tagine)
- **Add ground, or infuse** whole cinnamon sticks in soups, sauces and stews
- **Infuse whole** when cooking custards, anglaise and custard
- **Infuse whole, or grind** to use in fruit salads or poaching fruit
- **Grind** to add to crumble, coffee (e.g. latte)
- **Grind** to use as dusting on cakes and pastries
- **Whole** cinnamon sticks are used in stews and decorations

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12. VANILLA EXTRACT AND



What is It?

Fruits of the vanilla orchid flowers, which are dark brown and contain multiple tiny seeds inside. The seeds are used to produce vanilla, an aromatic, dark brown liquid used in many recipes. Today they are harvested manually – the pod is picked from one flower to another. This production is costly and time-consuming. This makes vanilla the second most expensive spice in the world – saffron being the most expensive.

Common Cuisines:

Although vanilla originated in South America, it is now used worldwide in the manufacture of countless sweets and desserts, chocolates, sauces and beverages. It is also commonly used in the cosmetic industry.

Nutritional Information:

These values may vary.

Nutritional value: typical value	Per 1 tsp vanilla extract (4 g)	Per 1 vanilla pod
Energy	12 kcal	10 kcal
Macronutrients		
Fat	0	0.3 g
Saturated fats	-	-
Monounsaturated fats	-	-
Polyunsaturated fats	-	-
Carbohydrates	0.33 g	1.7 g
Starch (polysaccharides)	-	-
Sugars (monosaccharides and disaccharides)	0.53 g	0.24 g
Fibre	0	1.32 g
Protein	0	0.14 g
Micronutrients		
Vitamin A	0	-
Vitamin D	0	-
Vitamin E	0	-
Vitamin K	0	-
Vitamin B1 (Thiamine)	0	-
Vitamin B2 (Riboflavin)	0.04 mg	-
Vitamin B3 (Niacin)	0.018 mg	-
Folic Acid	0	-
Vitamin B12	0	-
Vitamin C (Ascorbic acid)	0	-
Calcium	0	-
Iron	0.01 mg	-
Sodium (Salt)	0	0.7 mg
Fluoride	-	-
Iodine	-	-
Phosphorus	0	-
Potassium	6 mg	-
Magnesium	1 mg	-
Alcohol	1.4 g	-

g – grams, **mg** – milligrams, **mcg** – micrograms

Store in a cool, dry place.

Nutrition

Health Benefits:

Vanilla contains some antioxidants that may reduce inflammation. Although it is often used as a mild tranquiliser in aromatherapy, not its health benefits (the compound in vanilla) also has a mild pain-relieving effect.

Allergy and Health Risks:

Vanilla extract contains a small amount of alcohol. It should be avoided in dishes for little children if the alcohol is not cooked, as the alcohol can be harmful.

Alter

To substitute for colour:

Use natural colouring syrups, almond extract, rum or vanilla extract.

To substitute the aroma:

Use natural aromatised sugar available in the market.

Cooking Uses:

- **Whole pod** is used in coffee and in mulled wine. It is also used to aromatise sugar for use in confectionery.
- **Seeds** are used in beverages, sauces (such as crème brûlée) and biscuits (such as gingerbread).
- **Vanilla extract** is also used in creams, ice creams and other desserts, such as custards.

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NUTMEG, CLOVES, CINNAMON AND VANILLA

- Although nutmeg is very popular around the world, different countries have different names for it. Research other names for nutmeg, which you can find in oriental shops or when travelling abroad. List at least five by labelling the map below (one has been done for you).



- Prepare your own five-spice powder.
 - List the ingredients you used.
 - Draw and label the kitchen equipment necessary to prepare the five-spice powder.
 - Compare your spice with one (or two) which is available on the market and describe the differences.



Ingredients		
What I need?	How much?	

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iii) Comparison

	My five-spice powder	
Main ingredient		
 Other ingredients		
Colour		
Aroma		
Texture		
Taste		
 Other features		

3. Briefly describe the process of vanilla production. How does vanilla grow in its natural environment? [Area 5]

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4. Research where cinnamon is grown, and then shade the producer countries.



Extension [Area 6, skill 20]

Prepare a cream soup using one large potato, one leek, one carrot and obtain a smooth texture and then pour into three separate bowls. Now a taste panel to find out which of the ingredients complements the dish best.



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13. THYME



What is It?

Thyme is an evergreen herb with tiny, needle-like leaves. Both fresh and dried thyme can be used in cooking. Thyme is rich in essential oils and is a folk medicine ingredient.

Common Cuisines:

In the Southern United States, thyme forms part of *bouquet garni* – a bundle of aromatic herbs used in sauces, soups and other infusions. Thyme is also a part of *herbes de Provence* – a herbal mix especially popular in Mediterranean cuisine. In Italy, thyme is usually added to tomato sauce.

Storage:

Fresh thyme can be stored in the refrigerator for up to 2 weeks. Dried thyme contains essential oils and should be stored in a cool, dark place.

Nutritional Information:

These values may vary. Data is shown for fresh thyme leaves.

Nutritional value: typical value	Per 100 g	Per 1 tsp (0.8 g)
Energy	101 kcal	1 kcal
Macronutrients		
Fat	1.68 g	0.01 g
Saturated fats	0.467 g	0.004 g
Monounsaturated fats	0.081 g	0.001 g
Polyunsaturated fats	0.532 g	0.004 g
Carbohydrates	24.45 g	0.2 g
Starch (polysaccharides)	-	-
Sugars (mono- and disaccharides)	0.006 g	0.006 g
Fibre	14 g	0.1 g
Protein	5.56 g	0.04 g
Micronutrients		
Vitamin A	238 mcg	2 mcg
Vitamin D	0	0
Vitamin E	-	-
Vitamin K	-	-
Vitamin B1 (Thiamine)	0.048 mg	0
Vitamin B2 (Riboflavin)	0.471 mg	0.004 mg
Vitamin B3 (Niacin)	1.824 mg	0.015 mg
Folate	45 mcg	0
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	160 mg	1.3 mg
Calcium	405 mg	3.2 mg
Iron	17 mg	0.14 mg
Sodium (Salt)	0	0
Fluoride	-	-
Iodine	-	-
Phosphorus	106 mg	1 mg
Potassium	609 mg	5 mg
Magnesium	160 mg	1 mg

g – grams, **mg** – milligrams, **mcg** – micrograms

Nutritional Benefits:

Health Benefits:

Fresh thyme is rich in beta-carotene, which is important for eyesight and healthy skin. Thyme is also rich in antioxidants, which are especially important for the central nervous system, which helps with concentration. Thyme is also a natural antiseptic and can provide relief from ailments caused by colds and flu. Thyme is therefore, it is used with fish, mutton or pork.

Allergy and Health Risks:

Thyme may cause allergic reactions in people who are allergic to celery or grass. Drinking thyme tea may decrease levels of cholesterol and slow down metabolism.

Alterations:

For similar aroma, try basil or oregano.
For similar texture and appearance, try rosemary.

Cooking Uses:

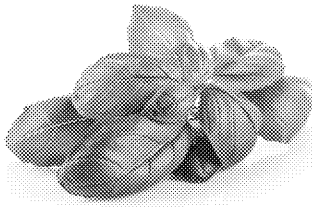
- Use leaves and whole herb in soups, e.g. for pork or mutton.
- Sprinkle leaves on top of vegetables (e.g. aubergine), soups and stews.
- Infuse rice dishes, rice, bread and fibre-rich dishes such as stews (e.g. ratatouille).
- Add to dough for bread and pastries.
- Infuse to make aromatic oils.
- Stir into sauces, e.g. tomato sauce.

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14. BASIL



What is It?

Leafy herb with a prominent, aniseed-like smell. Usually bright green, but there are some varieties with purple leaves. It has a different aroma, and it is worth trying each of the plants on a list, quite easy to grow.

Common Cuisines:

Although basil is most characteristic of Italian cuisine, it is also popular in both East Asian cuisines such as Thai, Indonesian, Vietnamese and Malaysian.

Storage:

Wrap in a sheet in the fridge. Leave them with a thin layer of oil before freezing.

Nutritional Information:

These values may vary.

Nutritional value: typical value	Per 100 g fresh	Per 100 g dried	Per 1 tsp dried (0.7 g)
Energy	23 kcal	233 kcal	2 kcal
Macronutrients			
Fat	0.64 g	4.07 g	0.03 g
Saturated fats	0.041 g	2.157 g	0.015 g
Monounsaturated fats	0.088 g	1.238 g	0.009 g
Polyunsaturated fats	0.389 g	0.498 g	0.003 g
Carbohydrates	2.65 g	47.75 g	0.23 g
Starch (polysaccharides)	-	-	-
Sugars (monosaccharides and disaccharides)	-	1.71 g	0.01 g
Fibre	1.6 g	37.7 g	0.3 g
Protein	3.15 g	22.98 g	0.16 g
Micronutrients			
Vitamin A	264 mcg	37 mcg	0
Vitamin D	0	0	0
Vitamin E	0.8 mcg	10.7 mg	0.07 mg
Vitamin K	414.8 mcg	1714.5 mcg	12 mcg
Vitamin B1 (Thiamine)	0.034 mg	0.08 mg	0.001 mg
Vitamin B2 (Riboflavin)	0.076 mg	1.2 mg	0.008 mg
Vitamin B3 (Niacin)	0.902 mg	4.9 mg	0.034 mg
Folate	68 mcg	310 mcg	2 mcg
Vitamin B12	0	0	0
Vitamin C (Ascorbic acid)	18 mg	0.8 mg	0.006 mg
Calcium	177 mg	2240 mg	16 mg
Iron	2.2 mg	89.8 mg	0.63 mg
Sodium (Salt)	4 mg	76 mg	1 mg
Fluoride	-	-	-
Iodine	0	0	0
Phosphorus	56 mg	274 mg	2 mg
Potassium	295 mg	2630 mg	18 mg
Magnesium	64 mg	711 mg	5 mg

g – grams, mg – milligrams, mcg – micrograms

Nutrition

Health Benefits:

For thousands of years, basil has been used as a food and a medicine. That is because it contains many micronutrients, such as vitamins A, C, E, K, potassium and manganese. These are chemicals which can reduce blood pressure, improve blood circulation, and therefore help to prevent disease. Its essential oils can help to soothe stomach ulcers and relieve indigestion. It is also an excellent source of potassium, which is often used in low-sodium diets.

Allergy and Health Risks:

Lowering blood sugar levels is a benefit for people treated with insulin, but it can also cause bleeding and bruising in people taking blood-thinning drugs. As with many other herbs, basil is only dangerous if basil is eaten in large quantities.

Alternatives:

For similar aroma, use fresh dill.
For colour and texture, try fresh parsley.

Cooking Uses:

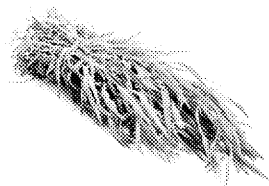
- Use fresh basil as a garnish for rice or pasta dishes.
- Blend fresh basil into pesto.
- Use fresh or dried basil in soups.
- Dried basil is used in bread, scones and dumplings and sprigs.
- Chopped fresh basil is used in salads and sorbets (e.g. lemon sorbet).
- Infuse fresh or dried basil into oil.

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15. TARRAGON (ESTRAGON)



What is It?

Also known as estragon, tarragon is a green leafy herb from Mediterranean countries. What is interesting about tarragon stems can be cooked as a substitute for asparagus. Children cause numbness of the tongue.

Common Cuisine:

Tarragon is popular in French cuisine, especially in chicken, fish and egg-based dishes. It is also an ingredient of the famous Béarnaise sauce.

Nutritional Information:

These values may vary.

Nutritional value: typical value	Per 100 g dried	Per 1 tsp (0.5 g)
Energy	295 kcal	2 kcal
Macronutrients		
Fat	7.24 g	0.04 g
Saturated fats	1.881 g	0.011 g
Monounsaturated fats	0.474 g	0.003 g
Polyunsaturated fats	3.698 g	0.022 g
Carbohydrates	50.22 g	0.30 g
Starch (polysaccharides)	-	-
Sugars (mono- and disaccharides)	-	-
Fibre	7.4 g	0
Protein	22.77 g	0.14 g
Micronutrients		
Vitamin A	210 mcg	1 mcg
Vitamin D	0	0
Vitamin E	-	-
Vitamin K	-	-
Vitamin B1 (Thiamine)	0.251 mg	0.002 mg
Vitamin B2 (Riboflavin)	1.339 mg	0.008 mg
Vitamin B3 (Niacin)	8.950 mg	0.054 mg
Folate	274 mcg	2 mcg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	50 mg	0.3 mg
Calcium	1139 mg	7 mcg
Iron	32.3 mg	0.19 mg
Sodium (Salt)	2 mg	0
Fluoride	-	-
Iodine	0	0
Phosphorus	313 mg	2 mg
Potassium	3,020 mg	18 mg
Magnesium	347 mg	2 mg

g – grams, **mg** – milligrams, **mcg** – micrograms

Nutritional

Health Benefits:

For a herb, tarragon is exceptionally high in vitamin B2, niacin and calcium. It also contains phytosterols – chemicals which inhibit cholesterol adhesion in the blood vessels, thus preventing heart diseases. Essential oils in tarragon can improve digestion and prevent gas. The essential oil – eugenol – is naturally found in clove. Clove (the chemical) in tarragon lowers blood pressure. An infusion can be drunk before bedtime. The high level of potassium in tarragon can lower blood pressure, and make it a good wine, for the so-called *French wine*.

Allergy and Health Risks:

The essential oils in tarragon can cause allergic reactions.

Alter

To substitute for fresh tarragon: basil, or fennel or anise seeds.

To substitute for dried tarragon: thyme, oregano, basil or dill.

To substitute the flavour,

Common Uses:

- **Whole or chopped fresh tarragon** in salads or as a garnish.
- **Use fresh or dried tarragon** in fish.
- **Mix** into bread dough.
- **Infuse** to make aromatic oils for dressings and sauces.
- **Infuse** to make a sauce.
- **Mix** with butter to make a spread for beans and carrots.

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16. ROSEMARY



What is It?

Evergreen plant with needle-like leaves with a pine-like scent and white underneath. Rosemary attracts bees and, for this reason, is an important herb for planting in orchards and gardens.

Common Cuisines:

As rosemary comes from the Mediterranean region, it is especially popular in cuisines such as Italy or Greece. It is often paired with garlic, thyme, wine and olive oil. It often forms part of *bouquet garni* – a herbal mix added to soups and stews.

Nutritional Information:

These values may vary.

Nutritional value: typical value	Per 100 g dried	Per 1 tsp (1.2 g)
Energy	331 kcal	4 kcal
Macronutrients		
Fat	15.22 g	0.18 g
Saturated fats	7.371 g	0.088 g
Monounsaturated fats	3.014 g	0.036 g
Polyunsaturated fats	2.339 g	0.028 g
Carbohydrates	64.06 g	0.77 g
Starch (polysaccharides)	-	-
Sugars (mono- and disaccharides)	-	-
Fibre	42.6 g	0.5 g
Protein	4.88 g	0.06 g
Micronutrients		
Vitamin A	156 mcg	2 mcg
Vitamin D	0	0
Vitamin E	-	-
Vitamin K	-	-
Vitamin B1 (Thiamine)	0.514 mg	0.006 mg
Vitamin B2 (Riboflavin)	0.428 mg	0.005 mg
Vitamin B3 (Niacin)	1 mg	0.012 mg
Folate	307 mcg	4 mcg
Vitamin B12	-	-
Vitamin C (Ascorbic acid)	61.2 mg	0.7 mg
Calcium	1280 mg	15.4 mg
Iron	29.25 mg	0.35 mg
Sodium (Salt)	2 mg	1 mg
Fluoride	-	-
Iodine	-	-
Phosphorus	70 mg	1 mg
Potassium	955 mg	11 mg
Magnesium	220 mg	3 mg

g – grams, **mg** – milligrams, **mcg** – micrograms

Nutritional

Health Benefits:

Rosemary is a rich source of iron. It contains 15 mg of this mineral! It is also a good source of manganese, which helps to prevent anaemia. Manganese is necessary for controlling and regulating nutrient levels in the body. Rosemary is an important antioxidant and helps in the prevention of developing many diseases. It can help to lower LDL cholesterol levels and prevent cardiovascular disease. It also helps to prevent bloating and heartburn in the liver.

Allergy and Health Risks:

Ingesting large amounts of volatile oils can cause respiratory and pulmonary problems (fluid in the lungs). Rosemary should be avoided by pregnant women due to its effects from hypertension, bowel or kidney problems. It can also interfere with blood thinning medications.

Alter

To provide similar texture as fresh rosemary, use tarragon or summer savory.
To replace dried rosemary, use 1/2 tsp fresh.

Cooking Uses:

- **Wash and dry** the leaves before use.
- **Marinate or sprinkle** on meats, poultry, pork and game dishes.
- **Mix into** mushrooms, tomatoes, potatoes or egg dishes.
- **Improve the flavour** by adding to soups, stews or bay leaf.
- **Stir** into soups, especially tomato soup.
- **Add** to sauces and dressings.
- **Use both sprigs and flowers** in salads.
- **Aromatise** meat by adding to marinades or charcoal when grilling.

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THYME, BASIL, TARRAGON AND ROSEMARY

1. Thyme, basil and tarragon are used to prepare *herbes de Provence* mix (often used in France). List the other herbs used to prepare *herbes de Provence*.

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2. Calculate the nutritional value of a pinch of basil leaves weighing approximately 1g.

Nutritional value: typical value	Per pinch (1g)
Energy	
Fat	
Saturated fats	
Monounsaturated fats	
Polyunsaturated fats	
Carbohydrates	
Sugars (mono- and disaccharides)	
Fibre	
Protein	
Vitamin A	
Vitamin E	
Vitamin K	
Vitamin B1 (Thiamine)	
Vitamin B2 (Riboflavin)	
Vitamin B3 (Niacin)	
Folate	
Vitamin C (Ascorbic acid)	
Calcium	
Iron	
Sodium (Salt)	
Phosphorus	
Potassium	
Magnesium	

3. Tarragon contains an essential oil called eugenol. What other foods contain eugenol? What is the function/impact on health? [Area 1, Area 2]

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4. When is it better to use fresh herbs, and when is it better to use dried cooking, at the end, or only as a garnish on a plate? Justify your choice.

Fresh herbs should be used

This is because

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Dried herbs should be used

This is because

.....



Extension [Area 6, skill 2, skill 6–8, skill 20]

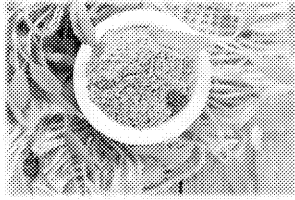
Prepare your own green pesto. List the main ingredients, equipment and up a taste panel to compare your pesto with a commercially available product.

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17. SAGE



What is It?

Sage is one of the most common herbs used in the UK although it originated in the Mediterranean. It has a greyish leaves. Both fresh leaves and powder can be used.

Common Cuisines:

Sage is one of the essential herbs in Great Britain, where it is used to prepare traditional Christmas turkey stuffing, sage Derby cheese and Lincolnshire sausages. In Italy, sage is an essential ingredient in traditional saltimbocca.

Storage

Fresh leaves
(change every 2 weeks)
ground sage
cool place

Nutritional Information:

These values may vary. Data shown is for ground sage.

Nutritional value: typical value	Per 100 g powder	Per 1 tsp powder (0.7 g)
Energy	315 kcal	2 kcal
Macronutrients		
Fat	12.75 g	0.09 g
Saturated fats	7.03 g	0.05 g
Monounsaturated fats	1.87 g	0.013 g
Polyunsaturated fats	1.76 g	0.01 g
Carbohydrates	60.73 g	0.43 g
Starch (polysaccharides)	-	-
Sugars (mono- and disaccharides)	1.14 g	0.01 g
Fibre	40.3 g	0.3 g
Protein	10.63 g	0.07 g
Micronutrients		
Vitamin A	295 mcg	2 mcg
Vitamin D	0	0
Vitamin E	7.48 mg	0.05 mg
Vitamin K	1714 mcg	12 mcg
Vitamin B1 (Thiamine)	0.754 mg	0.005 mg
Vitamin B2 (Riboflavin)	0.336 mg	0.002 mg
Vitamin B3 (Niacin)	5.72 mg	0.04 mg
Folic Acid	274 mcg	2 mcg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	32.4 mg	0.2 mg
Calcium	1652 mg	12 mg
Iron	28.12 mg	0.20 mg
Sodium (Salt)	11.4 mg	0 mg
Fluoride	-	-
Iodine	0	0
Phosphorus	91 mg	1 mg
Potassium	1,070 mg	7 mg
Magnesium	428 mg	3 mg

g – grams, **mg** – milligrams, **mcg** – micrograms

Nutrition

Health Benefits:

Sage is rich in calcium, vitamin K and antioxidants. It is mostly used in food to improve digestion, improve appetite, and prevent infections. Sage is used in the treatment of various ailments. A sage leaf infusion can also be used to relieve symptoms of colds, flu and allergies. Sage also contains phytosterols which can help lower LDL cholesterol.

Allergy and Health Risks:

Excessive consumption of sage can be harmful, especially in lactating women, so it's best to avoid it while breastfeeding. The leaves also contain a psychoactive agent, which can be harmful in excess. Sage may inhibit the absorption of iron, so avoid it when treating anaemia.

Alter

For similar aroma and health benefits: savory, marjoram or rosemary

Cooking Uses:

- 🍷 **Marinate and sprinkle** on duck, goose or pork, and use in stuffing
- 🍷 **Mix** into chicken and turkey sausages
- 🍷 **Sprinkle** on top of creamed potatoes
- 🍷 **Add** to bread dough, and to pea and lentil dishes
- 🍷 **Add** to potato purée, and to vegetable soups
- 🍷 **Infuse** stews (such as beef and lamb) and vegetable pâtés, and

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18. MINT

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What is It?

Dark green leaves with a minty aroma. There are many kinds of mint, including peppermint and spearmint. The aroma of mint is very refreshing.

Common Cuisines:

Mint is a common ingredient found all around the world, but its uses differ. In Morocco, mint leaves are used to prepare a hot beverage on hot days. In England, mint is commonly served with lamb. In the USA, mint is used to produce candies. In Eastern Europe, mint liquor is a popular remedy.

Nutritional Information:

These values may vary.

Nutritional value: typical value	Per 100 g dried leaves	Per 100 g fresh leaves
Energy	279 kcal	70 kcal
Macronutrients		
Fat	4.6 g	0.94 g
Saturated fats	-	0.246 g
Monounsaturated fats	-	0.033 g
Polyunsaturated fats	-	0.508 g
Carbohydrates	34.6 g	14.89 g
Starch (polysaccharides)	0	-
Sugars (mono- and disaccharides)	-	-
Fibre	0	8 g
Protein	24.8 g	3.8 g
Micronutrients		
Vitamin A	0	212 mcg
Vitamin D	0	0
Vitamin E	0	5 mg
Vitamin K	0	0
Vitamin B1 (Thiamine)	0	0.08 mg
Vitamin B2 (Riboflavin)	0	0.266 mg
Vitamin B3 (Niacin)	0	1.706 mg
Folic Acid	0	114 mg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	0	31 mg
Calcium	1,370 mg	13 mg
Iron	2.3 mg	5.08 mg
Sodium (Salt)	3 mg	31 mg
Fluoride	-	-
Iodine	-	-
Phosphorus	490 mg	75 mg
Potassium	1,924 mg	569 mg
Magnesium	602 mg	80 mg
g – grams, mg – milligrams, mcg – micrograms		

Nutritional

Health Benefits:

Although mint is quite rich in calcium, vitamin A and phytosterols, it is also low in calories, which provide many health benefits (it can help to relieve stomach pains, nausea and indigestion). It relaxes the muscles of the gastrointestinal system. It increases the rate of normal bowel movement. The most active compound in mint is menthol, which helps to relieve the symptoms of flu, colds and allergies. It is also the aromatherapy of headaches and migraines. It is an important antioxidant necessary for the prevention of inflammation and cancer. Since it is low in sodium, it can be used in low-sodium diets.

Allergy and Health Risks:

Excessive consumption of mint can cause drowsiness, deep sleep, as well as redness and irritation. However, both fresh and dried – aren't considered allergenic.

Alter

For similar texture, colour and appearance:
For aroma, replace with basil, oregano, dill, fennel, etc.

Cooking Uses:

- **Add fresh, whole or chopped** to salads, soups, teas on hot, sunny days.
- **Chop or blend** to use in smoothies, dips, dressings and other desserts, such as sorbets.
- **Chop or blend** to make pesto (chicken, pork) and as part of marinades.
- **Chop finely** to use with ground meat, fish, poultry, watermelon, pineapple or in smoothies.
- **Use fresh or dried** in salads, soups, dips, dressings, made with beans and peas.
- **Use fresh whole leaves** to garnish dishes.

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SAGE AND MINT - TASK SHEET

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1. Sage is one of the essential herbs in British cuisine. What are the other

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2. Mint sauce is traditionally served with roast lamb and mushy peas. What
[Area 6]

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3. Some foods, such as mint, were introduced to Britain by the Romans. Draw
five other plants which were brought to Great Britain by the Romans.

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4. Choose three of your favourite restaurants and study their menus. List
herbs, such as mint and sage. You can choose the restaurants in your local
online

Restaurant	Dishes containing mint



Extension [Area 5]

Draw a diagram to show the production process of sage Derby cheese. What herb could be replaced with another herb?

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19. SAFFRON



What is It?

Saffron is the most expensive spice in the world (1 kg costs around £6, which is equivalent to £6,000 per kg) and is made from the dried stigmas of the saffron crocus. It is a natural colouring agent in food. Only a tiny pinch of saffron is needed to give a yellow to orange shade.

Common Cuisines:

Saffron is very popular in North African, Asian and European cuisines. In Morocco, saffron is used in tajines, such as *kefta* tajine (meatballs in tomato sauce). In Iran, it is the indispensable ingredient of a national dish called *chelow kabab*. In France, it is used in a fish soup called *bouillabaisse*.

Nutritional Information:

These values may vary.

Nutritional value: typical value	Per 100 g	Per 1 tsp (0.7 g)
Energy	310 kcal	2 kcal
Macronutrients		
Fat	5.85 g	0.04 g
Saturated fats	1.586 g	0.011 g
Monounsaturated fats	0.429 g	0.003 g
Polyunsaturated fats	2.067 g	0.014 g
Carbohydrates	65.37 g	0.46 g
Starch (polysaccharides)	-	-
Sugars (mono- and disaccharides)	-	-
Fibre	3.9 g	0
Protein	11.43 g	0.08 g
Micronutrients		
Vitamin A	27 mcg	0
Vitamin D	0	0
Vitamin E	-	-
Vitamin K	-	-
Vitamin B1 (Thiamine)	0.115 mg	0.001 mg
Vitamin B2 (Riboflavin)	0.267 mg	0.002 mg
Vitamin B3 (Niacin)	1.46 mg	0.01 mg
Folate	93 mcg	1 mcg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	80.8 mg	0.6 mg
Calcium	111 mg	1 mg
Iron	11.10 mg	0.08 mg
Sodium (Salt)	1 mg	1 mg
Fluoride	-	-
Iodine	-	-
Phosphorus	252 mg	2 mg
Potassium	1,724 mg	12 mg
Magnesium	264 mg	2 mg

g – grams, mg – milligrams, mcg – micrograms

Nutritional

Health Benefits:

Saffron is quite rich in potassium, being necessary for the proper functioning of the circulatory system and fertility. It is rich in antioxidants, effective against diabetes and cardiovascular diseases. Crocin – a pigment in saffron – is a powerful antioxidant and protects the heart. Saffron, a good source of potassium, can be beneficial for people with hypertension.

Allergy and Health Risks:

Excessive use of saffron (over 15g) can cause headaches, drowsiness, loss of appetite. Large doses of saffron may also be toxic to the liver. 20 g may be lethal – although it is an expensive poison!

Alter

For colour, replace with saffron threads.
For colour and flavour, try saffron powder.
To obtain the sweetness of saffron, use saffron honey.

Cooking Uses:

- **Add** to colour beverages such as coffee and tea.
- **Infuse** to make soups and stews.
- **Mix** in to colour rice dishes, risotto, and with couscous and tabbouleh.
- **Add** to colour bread, scones and cakes.
- **Add** to dough to make pasta.
- **Mix** into desserts such as milkshakes and yogurts.

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SAFFRON – TASK SHEET

1. Saffron is used to make saffron buns. Which part of Great Britain do saffron buns come from? What other buns or pastries elsewhere are similar treats made, and what are the differences between them?

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2. 'Why is saffron so expensive?' Research and discuss the production process of saffron. How is it used in food? What other uses does it have?

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Extension [Area 4: The science of food, Unit 6: Preparation and cooking techniques]

Saffron is used to obtain a golden colour in foods. Research ingredients that can be used to obtain different colours in food products. What foods could you use these ingredients in? How could you use them easily?

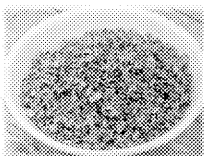


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20. MARJORAM



What is It?

Herb similar in appearance and flavour to oregano, originally from Turkey. Its leaves are cut and dried to obtain the herb used in cooking.

Common Cuisines:

Since marjoram aids digestion, it is often used with 'heavy', hard-to-digest dishes based on beans, lentils, other legumes, as well as with fatty meats such as goose, duck and bacon. Marjoram is also an ingredient of *herbes de Provence*, a herbal mixture characteristic of the South of France.

Stir

Stir

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Nutritional Information:

These values may vary. Data shown is for dried marjoram leaves.

Nutritional value: typical value	Per 100 g	Per 1 tsp (0.6 g)
Energy	271 kcal	2 kcal
Macronutrients		
Fat	7.04 g	0.04 g
Saturated fats	0.529 g	0.003 g
Monounsaturated fats	0.94 g	0.006 g
Polyunsaturated fats	4.405 g	0.025 g
Carbohydrates	60.56 g	0.36 g
Starch (polysaccharides)	-	-
Sugars (mono- and disaccharides)	4.09 g	0.02 g
Fibre	3.3 g	0.2 g
Protein	12.66 g	0.08 g
Micronutrients		
Vitamin A	403 mcg	2 mcg
Vitamin D	0	0
Vitamin E	1.63 mg	0.01 mg
Vitamin K	621.7 mcg	3.7 mcg
Vitamin B1 (Thiamine)	0.289 mg	0.002 mg
Vitamin B2 (Riboflavin)	0.316 mg	0.002 mg
Vitamin B3 (Niacin)	4.120 mg	0.025 mg
Folate	274 mcg	2 mcg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	51.4 mg	0.3 mg
Calcium	1990 mg	12 mg
Iron	82.71 mg	0.50 mg
Sodium (Salt)	77 mg	0.46 mg
Fluoride	-	-
Iodine	0	0
Phosphorus	306 mg	2 mg
Potassium	1,522 mg	9 mg
Magnesium	346 mg	2 mg

g – grams, mg – milligrams, mcg – micrograms

Nutritional

Health Benefits:

Marjoram is a source of vitamins and supports blood clotting. Lutein, which supports proper vision, and marjoram prevent the accumulation of cholesterol in the arteries, lowering the risk of heart attack. It contains some antioxidants that improve regeneration of the skin (fighting inflammation). It enhances the immune system and, therefore, aids in fighting off infections.

Allergy and Health Risks:

There are no known side effects.

Alter

For similar texture and flavour:
For the aroma, try using the leaves.

Cooking Uses:

- **Add into, or sprinkle** into soups, casseroles, and stews containing beans, dried lentils, and other legumes (e.g. soups, casseroles, stews).
- **Add** into fat-rich dishes such as goose, duck, pork, and bacon.
- **Infuse** to make marinades for meats.
- **Sprinkle** on top of roasted meats.
- **Infuse** to make aromatic dressings.
- **Infuse** to aromatise oil. In a small box, add garlic, marjoram, and olive oil.
- **Add** into stuffing, e.g. for poultry.
- **Mix into, and sprinkle** into scones, muffins.

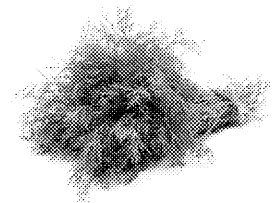
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21. DILL

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What is It?

Bright green, soft, needle-shaped leaves on long, hollow stems. The leaves, the flowers and seeds are also used in cooking. As a member to the celery family, dill may be considered an important herb.

Common Cuisines:

Dill is a popular herb in Eastern Europe, Russia and Scandinavia, where it is used to flavour many cuisines, from fish to pickles, to soups.

Nutritional Information:

These values may vary.

Nutritional value: typical value	Per 100 g fresh	Per pinch (five sprigs, 1 g)
Energy	43 kcal	0
Macronutrients		
Fat	1.12 g	0.1 g
Saturated fats	0.06 g	0.001 g
Monounsaturated fats	0.802 g	0.008 g
Polyunsaturated fats	0.095 g	0.001 g
Carbohydrates	7.02 g	0.07 g
Starch (polysaccharides)	-	-
Sugars (mono- and disaccharides)	-	-
Fibre	2.1 g	0
Protein	3.46 g	0.03 g
Micronutrients		
Vitamin A	386 mcg	4 mcg
Vitamin D	0	0
Vitamin E	-	-
Vitamin K	-	-
Vitamin B1 (Thiamine)	0.058 mg	0.001 mg
Vitamin B2 (Riboflavin)	0.296 mg	0.003 mg
Vitamin B3 (Niacin)	1.57 mg	0.016 mg
Folate	150 mcg	2 mcg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	85 mg	0.8 mg
Calcium	208 mg	2 mg
Iron	6.59 mg	0.07 mg
Sodium (Salt)	2 mg	1 mg
Fluoride	-	-
Iodine	0	0
Phosphorus	66 mg	1 mg
Potassium	738 mg	7 mg
Magnesium	55 mg	1 mg

g – grams, **mg** – milligrams, **mcg** – micrograms

Nutritional

Health Benefits:

Although dill doesn't provide many micronutrients, it is rich in antioxidants like beta-carotene and quercetin. They act as antioxidants, protecting the body from oxidative stress and slowing down ageing. It aids digestion (relieves indigestion, dyspepsia (heartburn), low stomach acid), lowers blood pressure and helps to promote heart health (especially effective).

Allergy and Health Risks:

Dill is closely related to celery. People with a celery allergy should avoid dill.

Alter

For similar texture, replace with parsley.
For the colour, use parsley.
For the aroma, try using fresh dill.

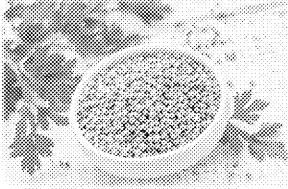
Cooking Uses:

- Use whole fresh sprigs in salads, soups, starters, dips and dressings.
- Chop fresh or use dried dill in soups, dips and dressings.
- Use dried leaves and seeds in breads and seafood.
- Chop finely fresh leaves for omelette, sandwiches, pickles.
- Add fresh or dried leaves to gherkins.
- Chop fresh or use dried dill in sauce, creamed horseradish. It goes nicely with fish, seafood.
- Sprinkle fresh on top of cucumbers and potatoes.
- Add chopped fresh or dried dill to soft white cheese, yogurt, cream and butter.

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22. CORIANDER



What is It?

Also known as cilantro, coriander is a lemony herb. Its leaves and seeds are commonly used in cooking.

Common Cuisines:

Coriander is used in many cuisines and Thai dishes. Chopped leaves are often used as a garnish, e.g. in Indian dal.

Nutritional Information:

These values may vary.

Nutritional value: typical value	Per 100 g fresh leaves	Per 100 g seeds
Energy	23 kcal	298 kcal
Macronutrients		
Fat	0.52 g	17.77 g
Saturated fats	0.014 g	0.99 g
Monounsaturated fats	0.275 g	13.58 g
Polyunsaturated fats	0.04 g	1.75 g
Carbohydrates	3.67 g	54.99 g
Starch (polysaccharides)	-	-
Sugars (mono- and disaccharides)	0.87 g	-
Fibre	-	41.9 g
Protein	2.13 g	12.37 g
Micronutrients		
Vitamin A	337 mcg	0
Vitamin D	0	0
Vitamin E	2.5 mg	0
Vitamin K	310 mcg	0
Vitamin B1 (Thiamine)	0.067 mg	0.239 mg
Vitamin B2 (Riboflavin)	0.162 mg	0.290 mg
Vitamin B3 (Niacin)	1.114 mg	2.130 mg
Folate	62 mcg	0
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	27 mg	21 mg
Calcium	67 mg	700 mg
Iron	1.77 mg	1.2 mg
Sodium (Salt)	4 mg	35 mg
Fluoride	0	0
Iodine	0	0
Phosphorus	48 mg	409 mg
Potassium	521 mg	1,267 mg
Magnesium	26 mg	330 mg

g – grams, mg – milligrams, mcg – micrograms

Storage:

Seeds should be stored in a jar (e.g. a jar) in a cool, dry place. In the fridge, wrap them in a paper towel to prevent them from drying out.

Nutritional

Health Benefits:

Coriander seeds are rich in antioxidants, helping to lower LDL levels in the blood. They also contain B vitamins and monounsaturated fats. Coriander is also rich in calcium, necessary for bone health, and iron, important in red blood cells. Coriander seeds are very rich in fibre, which aids in bowel movements and for overall health.

Coriander leaves are a source of vitamin C, which improves blood clotting and releases energy from food. They also contain polyphenols – antioxidants that help prevent cardiovascular diseases.

Allergy and Health Risks:

Both the seeds and leaves of coriander are rich in sodium, which may increase blood pressure. Since coriander is related to other plants, it can cause allergic reactions.

Alter

For the colour and texture
For the lemony aroma, use fresh leaves.
Replace seeds with cumin or fennel seeds.

Cooking Uses:

- **Seeds** are used in hearty soups (e.g. pea soup) and meats (e.g. lamb).
- **Whole and ground seeds** are used in curries, chutneys and pickles, added to bread and biscuits.
- **Fresh leaves** can be used as a garnish in soups and fish dishes – mainly in Indian and Thai cuisines.

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MARJORAM, DILL AND CORIANDER - 1

1. List five recipes for traditional British dishes which use marjoram. [Area 5]

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2. What herbs would you use in the following dishes? Justify your choice

a) Split pea soup

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b) Roasted bacon

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c) Salmon sashimi

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d) Lamb shank hotpot

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e) Mashed potatoes

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f) Chicken curry

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Extension



Prepare a simple tasting panel for fresh coriander and parsley. Assess the leaves, their taste and their aroma. Can they be used in the same dishes?

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ANSWERS

Ginger, chilli, turmeric and paprika

- Students research the use of the Scoville scale for measuring the hotness of food. Students list at least five varieties of chilli pepper, ordering them from the least to the most hot.
 - paprika 100 SHU
 - poblano 1,000 SHU
 - Jalapeno 3,500 SHU
 - pepperoncino 10,000 SHU
 - cayenne pepper 25,000 SHU
 - pirinca 50,000 SHU
 - habanero chilli 100,000 SHU
- Students list at least five recipes in which fresh ginger is used, e.g. stir-fry, curries, ginger, honey syrup with ginger slices.
Cakes, cookies and puddings **do not count** as they usually call for dried ginger.
- Students list at least five ingredients of curry powder, such as: turmeric, black pepper, cinnamon, cloves, nutmeg, cardamom and caraway, and indicate the most important ingredient, 2 tsp, other ingredients in smaller amounts, e.g. 1 tsp.
Note: Recipes will vary depending on source students use.
 - Students indicate what equipment they are going to use (e.g. pestle and mortar).
 - Students indicate at least three potential health outcomes of eating such a spice (boosting metabolism, lowering blood sugar levels, lowering the risk of heart disease, antibiotic effect, prevention of cancer, allergy symptoms, nausea, diarrhoea).
 - Students demonstrate their knowledge about the spice for evaluation and use, e.g. describe differences between the two main types of curry powder.
- Chilli peppers are also used in many cuisines, including Filipino, Japanese, Bhutanese, Indian, Thai, Vietnamese, Greek, cumin and caraway.

Black pepper, fenugreek, cumin and caraway

- White pepper is made from dried seeds of the pepper fruits (the fruit flesh is removed).
 - Green pepper is made from unripe drupes, which were treated with sulphur dioxide.
 - Red pepper is made from ripe drupes preserved in brine and vinegar.
 - Pink pepper is actually a member of a different plant family and **does not** contain capsaicin.
- Tea is a common substitute, as it contains caffeine and provides similar flavour.
 - Hot maca powder can provide similar flavour, especially if made with black maca.
 - Roasted grains, such as barley and rye, chicory and sugar beet, are often used as substitutes.
 - Another substitute can be made from roasted rice and peas.
 - For example: fenugreek may be seen as better than coffee as it is caffeine-free and safe for children or it could be drunk before going to bed as it will not affect sleep. However, caffeine makes it worse than coffee, as the fenugreek-based beverage would be more bitter than coffee does.
- Black pepper
- Any three from the following:
 - Peppermint
 - Green cardamom
 - Cardamom
 - Fennel
 - Dandelion
 - Camomile
 - Basil
 - Or any other examples

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Nutmeg, cloves, cinnamon and vanilla

1. Other names for nutmeg are: bazbaz (Persian), bisbasa (Arabic), gauzbua (Punjabi), jatikoshā (Sanskrit), jatipatra (Sanskrit), jatipatri (Sanskrit), jatiphalam (Sanskrit), javitri (Gujarati/Urdu/Marathi), muscade (French), *Myristica* (Latin), *Myristicae aril* (Latin), *Myristica fragrans* (Latin), *Myristica officinalis* (Latin), noix muscade (French), nuez moscada (Spanish), nux moschata (English). Accept any other suitable examples.

Note that Latin names will more often be seen on the labels of cosmetic products while modern languages will be more often used on the labels of food products from a particular country/region.

2.
 - i) Students list the ingredients of a five-spice powder from: cinnamon, cloves, black pepper, white peppercorns, or any other (may vary depending on the recipe) such as turmeric, cardamom, liquorice or galangal).
 - ii) Students correctly identify pieces of equipment necessary for preparing a mortar and pestle, mortar, kitchen scales, food processor or blender.
 - iii) Students set up a simple tasting panel and conduct a test for their own product.
3. Vanilla is mostly produced in Madagascar, which is a large island to the east of Africa.
 - Tropical forests are cut to plant manioc. Manioc has stiff, tall stems. Vanilla is trained to climb something to cling onto when growing. Manioc stems are used for this purpose.
 - Vanilla is left to grow until tall enough, then vanilla is planted and the shoots can be trained to climb.
 - Vanilla flowers are pollinated by hand, which means that hundreds of people are needed to pollinate the plants can produce fruits.
 - After harvesting, the fruits are dried for at least three months.
 - Deforestation leads to the extinction of some animal and plant species, and the loss of an ecosystem. Fewer trees means that there is less oxygen produced, and more carbon dioxide in the atmosphere, which impacts on the climate and contributes to global warming.
 - As vanilla is produced in only a few places in the world, its transportation has a large carbon footprint.
 - Also, the price of vanilla is quite low, which means that farmers and workers are often paid very little for their work.
4.
 - Ceylon cinnamon is mostly grown in Sri Lanka, the Seychelles and Madagascar.
 - Cassia cinnamon is grown in Indonesia and China.
 - Some cinnamon is grown in Vietnam and India.
 - Students should correctly locate these countries on the map.

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Thyme, basil, tarragon and rosemary

- Other herbs include:
Rosemary, sage, mint, summer savory, marjoram and, occasionally, lavender (tarragon and, therefore, should not be allowed.)
- Calculated using USDA database:

Nutritional value: typical value	Per pinch 2.5 g
Energy	1 kcal
Fat	0.02 g
Saturated fat	0.001 g
Monounsaturated fats	0.002 g
Polyunsaturated fats	0.01 g
Carbohydrates	0.07 g
Sugars (mono- and disaccharides)	0.01 g
Fibre	0
Protein	0.08 g
Vitamin A	7 mcg
Vitamin E	0.02 mg
Vitamin K	10.4 mcg
Vitamin B1 (Thiamine)	0.001 mg
Vitamin B2 (Riboflavin)	0.002 mg
Vitamin B3 (Niacin)	0.023 mg
Folate	2 mcg
Vitamin C (Ascorbic acid)	0.01 mg
Calcium	4 mg
Iron	0.08 mg
Sodium (Salt)	0
Phosphorus	1 mg
Potassium	7 mg
Magnesium	2 mg

- Eugenol is mostly found in cloves, but also in cinnamon, nutmeg, basil and thyme.
 - It is an antiseptic (antibacterial) and an anaesthetic (painkiller), popularly used in perfumes.
 - Excessive use of eugenol is toxic (may cause damage to the liver) and can be carcinogenic.
- Fresh herbs should be added at the end of cooking or as a garnish on a plate, to preserve their natural freshness and texture.
 - Dried herbs should be used at the beginning of cooking so that they have time to release their aroma and infuse the dish.

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Sage and mint

1. Other essential herbs are parsley, rosemary and thyme.
 2. Fresh chopped mint leaves, vinegar, sugar; modern variations include lime juice.
 3. Any five from:
Rosemary, thyme, bay leaf, basil, garlic, onion, shallots, leek, cabbage, peas, etc.
brought to Great Britain by the Romans.
 4. Any three restaurants, at least one chosen from each menu which uses mint sauce, lamb shoulder with mint sauce, 100g fillette with locally grown herbs, cod fish and mixed salad dressed with a English herb oil.
- Note: students' answers will vary depending on the restaurant and dishes chosen.



Saffron

1.
 - Saffron buns are made in Cornwall, with the use of red currants, cinnamon and raisins.
 - Similar treats are made in Sweden (*lussebulle*) and Norway (*lussekatt*), although they use other spices and use raisins instead of currants.
2.
 - Saffron is made from the stigmas of the saffron crocus flower.
 - Each crocus flower has only three of them.
 - So you need about 80,000 crocuses to harvest one kilogram of stigmas.
 - And saffron is made by hand – that adds manual labour costs.
 - So the price rockets!

Marjoram, dill and coriander

1. Students list five traditional recipes which use marjoram. For example:
 - potted game
 - chicken liver pâté
 - tomato sauce
 - trout with dill
 - Or other suitable examples
2. Students indicate and correctly justify at least one herb for each dish:
 - a) Marjoram, mint, sage, thyme – to aid digestion and prevent bloating, improve gastric juices, improve the flavour
 - b) Marjoram, tarragon, mint, sage, thyme – to aid digestion and prevent wind, improve gastric juices, improve the taste and aroma
 - c) Dill, coriander – to add texture, flavour and colour
 - d) Thyme, marjoram, mint, sage – to aid digestion and prevent bloating, to improve gastric juices, improve the flavour
 - e) Dill – to improve flavour and colour
 - f) Coriander for flavour, saffron for colour



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