

## **Website Exemplar**

### **GCE D&T Food Technology**

#### **Unit: 6FT01**

**Topic:** Budget Meal for a  
Restaurant.

# Food Technology Coursework



**Photographic evidence for the Product Manufacture section**

(A maximum of three photographs must be submitted)



Please refer to the instructions on page 2.

# Product Investigation





# A. Performance Analysis

## Ginster's Chicken and Bacon pasty

### Introduction

I have chosen to analyse this Ginster's Chicken and Bacon Pasty as I think it would be interesting to look at the different components within it, and then compare my findings to another similar product. This product appears to be a very popular item to be bought, and pasties are sold in many supermarkets, and also in motorway stations and other food outlets. I would like to analyse it, and discover what makes it such a popular snack.



### Technical specification

**Cost:** £1.59

**Portion size:** 180g, contains 1 serving

**Special claims:** "Real honest food", "Great taste of Cornwall"

**User requirements:** People on the go that don't have time to stop for lunch, and need to eat on the move. They could also be eaten at home as a quick and convenient meal, as they can be heated in the oven or a microwave, or eaten cold. They are specifically

designed for busy people who like to have good, wholesome food, but don't have a large amount of time to spend with preparation.

**Form:** 22cm x 12cm x 3 cm plastic pouch, sealed at both ends to retain freshness and hygiene, with a cardboard base to keep the pasty in place.

**Function:** Ready made convenience snack, which is suitable to be eaten either hot or cold depending on preference. It can be frozen easily, and doesn't take long to cook, which is ideal for people who are on a tight schedule. It is handheld, and can be eaten straight out of the packaging if desired. It can be served as a snack, or as a part of a main meal. It contains high energy values which makes it ideal as a very filling, satisfying food product. It presents a traditional food image; "good honest food". No cooking skills are required, and also very limited amounts of washing up are needed, adding to the convenience of this food.

**Materials/components:** Potato, wheat flour, vegetable oil, British roast chicken (12%), semi skimmed milk, spring onion (3%), onion, sweet cure smoked flavour bacon (2.5), corn flour, egg, salt, butter, chicken bouillon, white pepper.

**Roast chicken contains:** chicken, corn flour, salt, water

**Bacon contains:** Pork belly, invert sugar syrup, salt, smoke flavouring, preservative: sodium nitrate

**Chicken bouillon contains:** Natural flavourings, salt, chicken powder, chicken fat.



This is a picture of the pasty before it was cooked. As you can see it has a golden brown colour, and does not alter in form at all once it has been cooked.

This photograph shows the filling of the pasty. It appears to be packed full of ingredients, though it doesn't look particularly appetising.





## Ingredient uses

**Potato;** This is used as a bulk ingredient, to add carbohydrate and to fill the pastry

**Wheat flour;** This is used as the main ingredient in the pastry, and it adds the texture and the bulk

**Vegetable oil;** This will have been used to fry the onions in, in order to soften them, and make them ready to be eaten

**British roast chicken;** This is a main ingredient, which adds flavour, texture and high biological value protein to the food product

**Semi skimmed milk;** This may have been used to create a kind of sauce consistency within the pastry, and to also add some protein and calcium, which is important for strong bones and teeth

**Spring onion;** These would have been added to introduce some colour and flavour to the filling of the pastry, and also some vitamin C.

**Onion;** This would have been added for flavour, and also to improve the texture of the pastry filling, along with introducing some colour

**Sweet cure smoked flavour bacon;** The bacon has been added as a main ingredient, to provide some flavour, along with a different texture for the filling, and a splash of colour to the otherwise rather bland looking filling

**Corn flour;** This will have been introduced in order to thicken the filling, which is important to prevent it from falling out of the pastry case when being eaten, and prevents the pastry from becoming soggy.

**Egg;** Used to bind the ingredients together, to form a thick pastry filling, it's also high in a number of different vitamins required by the body

**Salt;** This will be to add some flavour to the food, and to season the meat and the vegetables

**Butter;** This could have been used in the pastry in order to trap air between the layers, and also within the filling to provide a rich, creamy flavour to the sauce.

**Chicken bouillon;** This will have been used to make the stock for the sauce and to add some flavour to the filling, and to disguise the lack of actual meat

**White pepper;** This will have been used as a seasoning for the pastry filling, and to add extra flavour to the food.

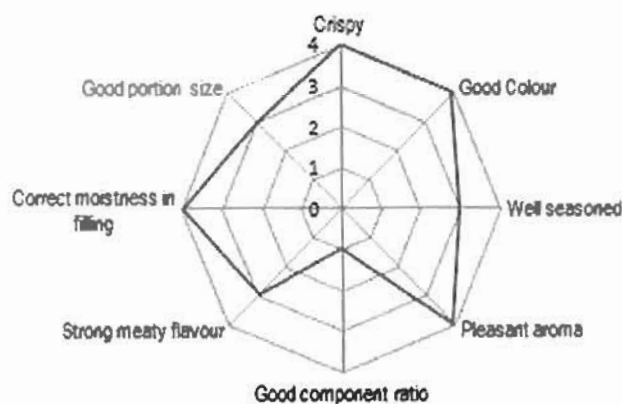
## Costing

This Ginster's pastry has a fairly high cost of £1.59 for one serving, and this particular company is well known for their sandwiches and other snack items, and has a good reputation. It is clear by the price of this pastry that it is not aimed at someone who is on a budget. However I do not feel that the quality of the product justified the price paid. There was a very poor balance of ingredients, with vast quantities of pastry and potato, but very small amounts of chicken and bacon, which gave a rather dry, stodgy texture in the mouth. It appeared that the potato was used to bulk out the product; something which would have been expected from a much cheaper brand product. Although the

product provided a very high carbohydrate content, there was very little high biological value protein, which should have been obtained from the chicken, which was disappointingly sparse.

### Scale of production

This pastry would have more that likely to have been made using batch production, as it would be possible for the fillings to be changed to make a variety of different pasties. This would mean that the manufacturer could buy the ingredients in bulk, which would cut down on the cost of the pasties. Also this would mean that several different pastry fillings could be manufactured in the same factory, which will cut down on further, unnecessary costs. By using a vast amount of machinery, the labour costs will have been kept to a minimum. Overall by using batch it helps to keep the costs of the product to an absolute minimum. There would have been several components which would have been readily prepared, such as the sliced potatoes, and the pastry may well have also been prepared earlier, depending on the machinery which is available within the Ginster's factories. The chicken would have been prepared on site, as this is a high risk product, and so special care must have been taken whilst handling it. The chicken bullion may well have been either pre bought, or created from the cooking of the chicken, and this must have been stored at fridge temperatures of between 0 and 5degrees. Hygiene would have been an important issue in creating the pastry, as the staff would need to make sure that they were wearing hair nets, and overalls, along with no rings, to make sure that the food didn't become contaminated by foreign bodies. It would also be a possibility to change some of the ingredients to make the product seem more appealing to a consumer, to make it cheaper, or even alter some of the ingredients to make it healthier.



### Food analysis

The pastry has a nice, crisp pastry which leads to a good mouth feel, though the crimped edges are slightly on the stodgy side. Once cooked, it was a very rich, golden brown colour, which made it look very appetising, and gave an almost homemade feel to the product. It also gave off a very pleasant aroma

whilst being cooked, which made me want to taste it. There was a very peppery aftertaste once eating the pasty, which leads me to think it's slightly over seasoned – possibly used to disguise the lack of meat in the filling. There was a great deal of potato



in the filling; especially seen as this wasn't even mentioned as a main ingredient on the front of the packaging. There were also vast amounts of pastry, and a disappointing lack of chicken and bacon. Despite the lack of actual meat, the pastry had a strong, meaty flavour which had probably been achieved by the additional chicken bouillon, rather than by the actual meat. The filling wasn't particularly moist, and could have probably done with slightly more gravy, though it wasn't unpleasantly dry. The portion size was very generous, if not slightly too large, which leads me to think it's probably more suited to men, than it is for women.

### Performance comparison- Morrison's Chicken and Bacon pastry

I have chosen to do my comparison disassembly on a home brand chicken and bacon pastry, to compare to a Ginster's pastry with the same fillings. I have chosen to do this to see the differences between a cheaper product, and a more expensive one, so that I could compare the quality with the price.



Length: 21cm  
Height: 4.5cm

**Special claims:** No artificial colours or flavours. Made with British meat

**Cost:** 65p each

**Portion size:** Contains 2 portions, 330g (165g each)

**User requirements:** Like the Ginster's pastry, this home brand chicken and bacon pastry would also be aimed at a similar market of people, who would want a tasty, convenient product which could be eaten on the go by a busy person, or hot as part of a main meal at home. This pastry is a lot cheaper than the Ginster's one at less than half the price,

which means that it is ideal for people who want a filling, convenient snack, but have a budget to stick to.

**Form:** 21cm X 15cm X 4.5cm (contains two). They are contained within a plastic packaging, which displays all the relevant information about the contents. This packaging prevents the food from being tampered with, and also keeps them fresh. The pasty's are also laid on a plastic tray, which keeps them in place and prevents them from being damaged. This tray also makes it easier for the pasty's to be stacked whilst within the shop.

**Function:** This product can be heated in the oven either from frozen, or out of the fridge. It can also be eaten cold if desired. To cook from frozen, the pasties need to be heated in the oven for 25-30 minutes, and from the fridge it needs 18-20 minutes to cook.

**Performance:** This product can be chilled, and it must be eaten within 6 days of purchase, though it can also be frozen, and can be stored for up to a month.

**Materials/components:** Wheat flour, chicken (21%), water, vegetable oil, single cream (7.1%), smoked bacon (5.9%) (pork, water, salt, dextrose, preservative (sodium nitrate)), onion, corn flour, chicken stock (chicken stock, chicken extract, yeast extract, salt), salt, yeast extract, sugar, milk protein, garlic puree, white pepper, natural flavouring, glucose syrup, paprika, black pepper.

## Ingredient uses

**Wheat flour;** This provides the bulk of the pastry, and gives the crisp, crumbly texture that you would expect from pastry.

**Chicken;** This is used as a main ingredient for the food, it adds some texture to the filling, and also provides a high biological value protein which is good for growth and repair in the body.

**Water;** This will have been added to make the filling more moist

**Vegetable oil;** The chicken and the bacon would have been fried in this in order to cook them

**Single cream;** This provides a creamy texture for the filling, and also contains protein which is good for growth and repair, and also contains calcium which is needed for healthy bones.

**Smoked bacon;** The bacon would be used as a main ingredient; it also gives the filling some colour, and improves the texture. Bacon contains high biological value protein.

**Onion;** Onion would have been used to enhance the flavour, and to add a different texture to the filling of the pasty.

**Corn flour;** This would have been used to thicken the filling, so that it wasn't too runny, as this would mean it would leak out once the pastry was cut open.

**Chicken stock;** This will have been used to give the whole of the filling a rich, meaty flavour, and could have allowed slightly less meat to be used, as the flavour could be gained from this.

**Salt;** This would have been used to season the filling, and it would also be used in the pastry to add some flavour.



**Yeast extract;** This may have been used to enhance either the flavour or the texture of the food product

**Sugar;** Could have been used to add some flavouring to the source, or in the pastry to add some flavour

**Milk protein;** This is a good source of protein, which is needed by the body; it also would have been used to give the filling the creamy flavour

**Garlic puree;** This would have been used to add flavour, and to enhance the aroma when the pasty is cooked, garlic also contains a large amount of vitamin C, which is vital for the body.

**White pepper;** This will have been used to season the filling of the pasty and to give it an extra flavour

**Natural flavouring;** This will have been used to enhance the original flavours of the product, though it is natural which means that no artificial components are in the food product

**Glucose syrup;** This will have been used to give a slightly sweet flavour to the pasty filling

**Paprika;** This could have been used to enhance the flavour, and to give a more appetising colour to the chicken filling

**Black pepper;** This would have been used to add some colour, and also to season the filling to the pasty.



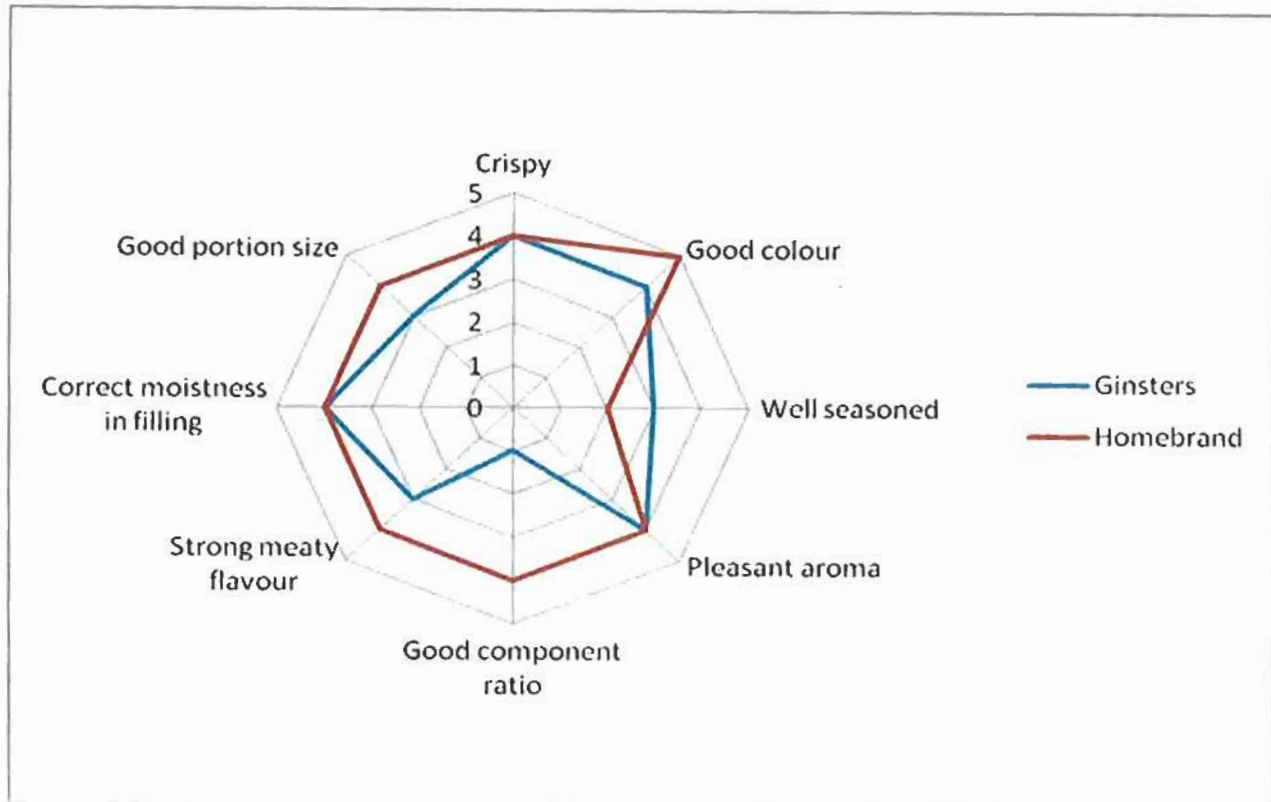
This is the pasty when it was cooked; as you can see, it has a nice golden brown colour.

This is what the product looked like before it was cooked, as you can



see it was quite a nice, golden colour even before cooking, which makes it appetising for people who choose to eat the product cold.

## Summary



Overall, I have come to the conclusion that the Morrison's home brand pasty was much better than the Ginster's equivalent, as it's generally better rated as you can see from my star profile I have awarded each of them a 4/5 for the crispiness of the pastry, however I feel that the home brand had the slight edge, as the Ginster's was slightly overly greasy, and the Morrison's one provided a good mouth feel, and a crisp, crumbly texture, which was very appetising. The Morrison's pasty had a richer, darker colour when it's been cooked which makes it look more aesthetically pleasing, when compared the Ginster's pasty which didn't go the same golden brown colour, and looked slightly less appetising. Neither was very well seasoned, with the Ginster's pasty having an overpowering peppery flavour, which I feel may have been used to disguise the fact that there was very little amounts of meat, however this was slightly better than in the Morrison's equivalent, which doesn't appear to have any seasoning, even though the ingredient list suggests otherwise. I have given both of the pasties 4/5 for the aroma, as they both smelt really appetising whilst cooking, I think that this is an important factor, as a consumer is more likely to enjoy the product if it smells good. The Ginster's pasty provided a very poor component ratio, as there were huge amounts of both pastry and potato, and very little amounts of meat, which was very disappointing, especially



considering the price of the pasty, I would have expected to find much more than there actually was, however the cheaper pasty, in which you would expect to find smaller amounts of meat, actually contained quite substantial amounts of both chicken and bacon. It appears that both provided a very strong meaty flavour, though the home brand's was slightly more appealing, which is possibly due to the flavour being from actual chicken and bacon chunks, rather than the chicken bullion used with Ginster's. Both had a good moistness with the filling; with it not being too runny, or too dry, though if anything the Ginster's could have possibly benefitted with slightly more moisture, though both were given 4/5. The Ginster's provided an huge portion size; which while good for a big appetite, may well be too large for a average person, whereas the home brand pasty was slightly smaller, and in a more manageable size, making it appeal to a larger audience of people. Though both pasties were quite delectable, I was disappointed with the Ginster's pasty, as I was expecting it to be of a much better standard, due to the company claiming to use completely natural ingredients, and as they are generally well known for their pasties. I was also pleasantly surprised at the high standard of the home brand pasty, as it was much better than I expected, due to it being quite a basic product which was of a very low price.

# B. Materials and components

Potato 66g

Pastry 88g



Chicken 22g

Bacon 4g

In the Ginster's chicken and bacon pastry contained a huge quantity of pastry which was 54% of the product, with the proportion of chicken being extremely low at just 12% and only 2% bacon. This is not really an acceptable ratio of ingredients, especially considering the cost of it. The 66g of potato would have been used to bulk up the product so that less meat would be required, again this isn't very good for a product of this standard, which should contain far more meat to create a better balanced product.

In my opinion I feel that the portion size of this product was relatively good and would be a substantial snack, or could be used as main meal. However, some consumers may be put off from buying this product due to the vast amounts of potato and pastry, and very little meat.

| Ingredient            | Standard component? | Performance   | Alternative ingredient which could be used                                |
|-----------------------|---------------------|---|---|
| Potato                | No                  | The potato provides the pastry with carbohydrates. Potato is a very cheap product, which provides bulk to the filling, and means that less meat is required to fill the pastry.                 | The large amounts of potato could be replaced with more chicken and bacon |
| Wheat flour           | No                  | It provides the bulk and the texture of the pastry. Without this, it would be impossible to make the pastry, and so is a very important ingredient, and also provides carbohydrate to the food. | The wheat flour could possibly be replaced with wholemeal flour           |
| Vegetable oil         | No                  | It would have been used to fry the chicken, bacon and onions that are in the filling of the pastry. It provides   |   |
| British roast chicken | No                  | The chicken provides high biological value to the filling of the pastry. It provides texture and flavour too  |   |
| Semi skimmed milk     | No                  | This would have been used to create a creamy texture in the sauce, for the filling of this pastry. It contains high biological value  | This could possibly be replaced with single cream                         |

|                                 |  |  |   |
|---------------------------------|--|--|---|
| Spring onion                    | No   | proteins.<br>This provides a good source of both vitamins B, C and K. It would have also been used to provide colour and flavour to the pasty filling.                             |   |
| Onion                           | No   | Onion is very high in vitamin C, and would provide texture and flavour to the filling.   | This could have been replaced with sweet corn |
| Sweet cure smoked flavour bacon | Yes- The bacon would have been sweet cured beforehand as the facilities would not be available within the Ginster's factory. | Bacon provides high biological value protein, and it also provides flavour and colour to the filling.  |   |
| Corn flour                      | No   | The corn flour would have been used to thicken the sauce in the filling. When heat was added to the sauce, the corn flour would gelatinise and this would cause the thickening.    | This could be replaced with a modified starch |
| Egg                             | No   | This provides high biological value proteins, along with vitamins A, D, E and K. The egg could have been used to thicken the sauce, or used to ensure that the mixture emulsifies. |   |
| Salt                            | No   | The salt would have been used  |   |



|                        |           |  |  |                                       |
|------------------------|-----------|--|--|---------------------------------------|
|                        |           |  | to season the filling and may have also been added to the pastry for flavour.  |                                       |
| <b>Butter</b>          | <b>No</b> |  | Butter provides vitamin B and also high biological value protein. It would have been used to provide a rich flavour to the pastry, and would have also given it a nice colour. | This could be replaced with margarine |
| <b>Chicken bullion</b> | <b>No</b> |  | This could have been used to enhance the meaty flavour of the filling, and would allow the amount of actual meat used to be reduced, as the flavour would still be there.      |                                       |
| <b>White pepper</b>    | <b>No</b> |  | This would have been used to season the filling of the pastry  |                                       |

## **Advantages and Disadvantages of possible alternative ingredients**

### **Flaky pastry;**

This could be replaced with short crust pastry as this would be a healthier pastry to use, as flaky pastry is incredibly high in fat. However, this would not be particularly necessary in a product such as this is not really aimed at health conscious people anyway, and I feel many people prefer the texture and the taste of the flaky pastry and so a change wouldn't really benefit the product.

### **Potato;**

This could be replaced with more chicken and bacon as this would give a meatier flavour and a better texture for the filling of the pastry. Also it would provide the food product with a high biological value protein which would improve the nutritional values of the food. I don't think that there are any disadvantages to adding more meat to the filling.

### **Wheat flour;**

This could be replaced with wholemeal flour to introduce more fibre to the food product, though this might alter the texture of the pastry which may not be a good idea, and so I think that it would be better to keep the flour as it is.

### **Semi-skimmed milk;**

This could be replaced with single cream, as this would give a richer, more luxurious taste to the product, and would give a very good mouth feel, something which would be expected of a high priced product. However, it may make the filling too thick, and not moist enough for the filling and it would also increase the calorie content to an unacceptable level.

### **Onion;**

This could be replaced with sweet corn which would compliment the flavour of the chicken well. It would also introduce a bit of extra colour to the pastry filling, and also would give a nice, crunchy texture. However, some people may not like the crunchy texture as they would prefer a soft filling.

### **Corn flour;**

This could be replaced with a modified starch (phosphate cross bonded) because this would mean the sauce would gelatinize easier and it would retrograde slower than cornflour, which would reduce the chances of the pastry filling being subjected to

syneresis. However, some people may object to using such ingredients, as they are not perceived as natural because of the word modified.

### Butter;

This could be replaced with polyunsaturated margarine which would make the product slightly healthier, reduce the saturated fat levels in the pasty, it's also much cheaper to produce. However, margarine doesn't have the same rich taste of butter, and may make the product feel less luxurious.

### Nutritional Profile

| Nutritional information   |               |                            | Guideline daily amount |          |
|---------------------------|---------------|----------------------------|------------------------|----------|
| Typical values            | 100g Provides | Each pasty (180g) provides | Women                  | Men      |
| <b>Energy</b>             | 1061KJ        | 1910KJ                     |                        |          |
|                           | 254Kcal       | 458Kcal                    | 2500Kcal               | 2000Kcal |
| <b>Protein</b>            | 8.0g          | 14.5g                      | 45g                    | 55g      |
| <b>Carbohydrate</b>       | 19.3g         | 34.7g                      | 230g                   | 300g     |
| <b>Of which sugars</b>    | 1.4g          | 2.5g                       | 90g                    | 120g     |
| <b>Fat</b>                | 16.1g         | 29.0g                      | 70g                    | 95g      |
| <b>Of which saturates</b> | 7.2g          | 13.0g                      | 20g                    | 30g      |
| <b>Fibre</b>              | 2.8g          | 5.1g                       | 24g                    | 24g      |
| <b>Sodium</b>             | 0.4g          | 0.72g                      | 2.4g                   | 2.4g     |
| <b>Salt equivalent</b>    | 1.02g         | 1.84g                      | 6g                     | 6g       |

The nutritional profile on the packaging of the Ginster's Chicken and Bacon looked like the above. It provides all the information which would be required so that the consumer would know exactly what nutrition is in the food product. It shows what's in 100g portion of this product, along with how much is in a 180g serving, so the consumer knows what they are eating. It is clear that this product contains a large proportion of a daily intake of saturated fat for both men and women, and therefore it would be unwise to eat these products too often.

### Environmental Issues

The majority of the ingredients which are involved in the pasty could be sourced within the UK for most of the year, which will help to reduce the number of food miles within this product, which then goes to reduce the carbon emissions from transporting ingredients. However there may be certain parts of the year when certain ingredients such as spring

onions will not be able to grow within this country and therefore may need to be imported from foreign countries which will obviously increase the food miles drastically.

I don't think that there is excessive packaging with this product, as it tends to be fairly minimal in just a plastic cover with a cardboard sleeve as this is required to protect the food product from damage and contamination. It doesn't say anywhere on the packaging whether or not the packaging can be recycled or not, which is definitely a negative side, because consumers may not know whether it's possible to recycle and therefore many people may just dispose of this packet in a normal bin and this would end up in a landfill, which isn't very good for the environment. Also due to this product being a convenience food people may eat it on the go, and it's possible that people may drop the packaging onto the ground which will contribute to the litter problem, which may then damage the environment, and can lead to an increase in rats and other vermin.

There are different ways which the product could be cooked; either in the microwave or in the oven. Using the microwave to heat the product would use a large amount of energy to power, though it would only be a short period of time, and therefore this would impact on the environment, but not too drastically. Cooking in the oven uses a smaller amount of energy but it takes a much longer amount of time to cook and therefore the energy usage is probably very similar to microwave cooking. Before use, this pastry can either be stored in a fridge or a freezer, both of which require power to run, and therefore contribute to carbon emissions, however nowadays many of these appliances are fairly eco friendly, and so don't cause too much damage. It doesn't say anywhere on the packaging about any of the ingredients being fair trade, and this probably is due to the fact that all of the ingredients are locally sourced and there would be no need for them to buy their ingredients from abroad. The ingredients are also not organic, this is probably because as the ingredients are bought in such volumes it would be much more expensive to buy.



# C. Manufacture

## Production method

I think that the Ginster's chicken and bacon pasty would be most likely to be produced using batch production. My reasons for thinking this, is that there are many other possible flavour fillings for pasties which could be created with the same machinery, and therefore the machinery could be cleaned down after producing this particular pasty flavour in order to make a different one. This is the main advantage of batch production as it would cut down on the costs of Ginster's and therefore should be reflected in the price of the food product, it would also keep the costs down due to the fact that the ingredients could be bought in bulk therefore keeping the ingredient cost down. This form of production would mean that the workers would become very skilled in their job and therefore the quality of the product should, in theory be consistently high. However the workers may have a low job satisfaction and there may be low levels of motivation due to carrying out the same job repeatedly. A disadvantage of using batch production would be that if there was an increase in demand for this product then it may not be possible to increase the level of production. However, batch production provides some flexibility in the fact that if there is more demand for one certain food product then it would be possible to swap between the different products.

## Production process

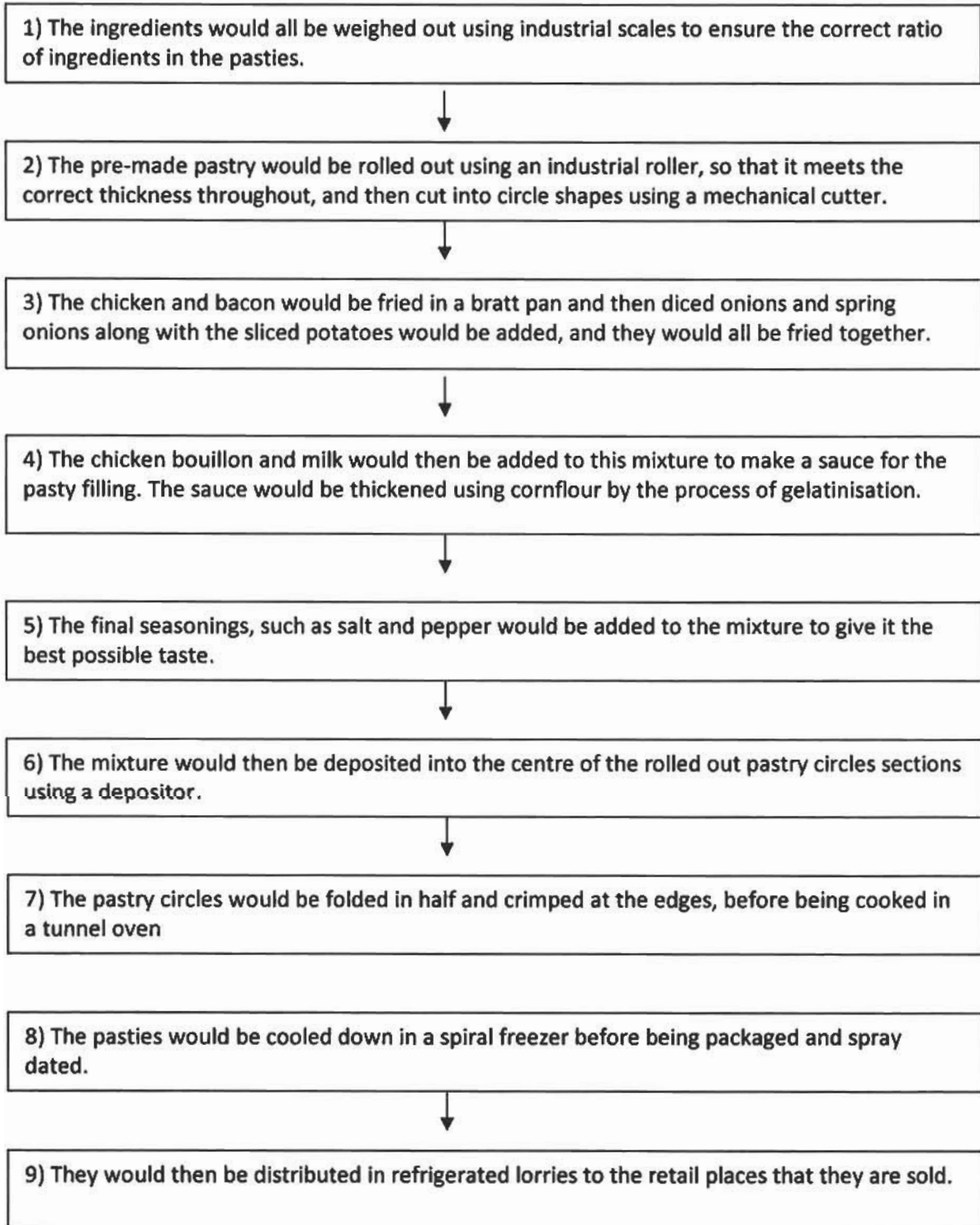
### **Raw Materials**

| <b>Ingredient</b> | <b>Storage</b>  | <b>Preparation</b>  |
|-------------------|---|---|
| Potato            | These would have been stored in ambient conditions in the dark as this prevents them from going green, which makes them poisonous to eat. Also this would prevent them from sprouting and allows them to be kept for a longer period of time. | The potatoes would be cleaned without water using sieves and screens to remove any contamination from the potatoes, such as twigs and stones. They would also be cleaned by rotating brushes which would remove dried on dirt. The potatoes would have been spray washed as the high pressure of the water would remove the dirt. The potatoes would have then been steam peeled as the skins would be loosened, and then removed with rotating brushes. The potatoes would be reduced in size by |

|                      |  |  |
|----------------------|--|--|
|                      |  | slicing them into very thin pieces, which means that they wouldn't take long to cook, and wouldn't overpower the texture of the pastry.  |
| Roast chicken breast | This would be stored in chilled conditions of around 3C away from all other products to prevent bacterial contamination.                   | The chicken would be boned and skinned before being chopped into small pieces.   |
| Semi skimmed milk    | This would be stored in chilled conditions between 0-5C to prevent it from going sour.   |  |
| Spring onion         | They would be stored in chilled conditions at around 8C, and may be stored in a controlled atmosphere as this would slow down respiration. | The spring onion would be spray washed to remove any dirt. They would then be shredded into small pieces ready to go into the pastry filling.  |
| Onion                | They would be stored in a cool, dry and well ventilated area   | The onion would be steam peeled and then the peel would be either rubbed off by rotating brushes, or it could then be sprayed with cold water to remove the skin, and then downsized using mechanical cutters. |
| Corn flour           | This would be stored in a large storage bin with a lid to prevent any contamination from insects ect.                                      |  |
| Egg                  | These would be stored in chilled conditions of around 0-5C away from anything which has a strong odour.                                    |  |
| Salt                 | This would be stored in a storage bin with a lid to prevent contamination, in dry conditions to prevent 'clumping'                         |  |
| Butter               | The butter would be kept in chilled storage at a temperature of around 5C.   |  |
| White pepper         | The white pepper would be stored in a storage bin to prevent contamination.  |  |

The only standard components which I have identified to be in this Ginster's Chicken and Bacon pasty is the sweet cure smoked flavour bacon which would be stored in a refrigerator at around 5C until required. The pre made pastry would be stored in ambient conditions away from anything with a strong aroma until it was needed.

### Production processes for making the product





### **Alternative production method**

An alternative way that Ginster's could produce their pasty would be using continuous flow production. However I don't think that this would be as appropriate because this would cause too many of this product to be produced, causing waste. However, this type of production would cut down the costs of production due to it being on such a large scale, which would reduce the price of the pasties in the shop. This would mean that different factories would be needed for all of the different types of pasty which would be extremely expensive for the manufacturers and therefore would not be a suitable option for them.

### **Environmental issues in Manufacture**

There would be very little environmental damage in collecting the ingredients for the pasties, as it states on the packaging for the product that all ingredients have been locally sourced. This means that the amount of food miles will be considerably lower than if they had chosen to source their ingredients elsewhere. There would be an effect on the environment due to the amount of electricity which would be required for the production though, as all the machinery which they rely on will be ran by electricity; this requires the use of fossil fuels, which inevitably leads to an increase in carbon emissions and the usage of non- renewable energy resources. When the machinery was cleaned down between different batches of pasties; chemicals may be used to remove any trace of the last made product, it's possible that the chemicals which were used for this purpose, when disposed of could cause a negative effect on the environment. The production of the packaging would also increase the amount of carbon emissions due to the electricity which is required to power the machinery. Also it isn't included anywhere on the packaging whether or not it's suitable for recycling, which means that many people who consume the pasty would dispose of the packaging in a bin which would then fill up the landfill sites. This waste would then emit methane which contributes to global warming.

Refer to Fair trade, organic, farm assured, animal welfare

# D. Quality

## **Raw materials quality**

The raw ingredients of this pasty would have been bought from reputable suppliers; the bacon and the chicken will have been bought from local farms, which consider animal welfare laws. The pasty claims to be the produce of Cornwall, and therefore the ingredients would have been bought close to the factory. They would probably use the same suppliers at all times to ensure that the same high quality would always be achieved. As the raw ingredients are brought into the factory a number of checks such as on appearance and the smell would be carried out to make sure that the ingredients are all fresh and of a high enough quality to be used within the pasty. When the chicken arrives at the factory it would be temperature checked with a food probe to ensure that it has been stored at the correct temperature as otherwise it may have started to go off beforehand. Potatoes and other vegetables would be visually checked for freshness, ensuring that they were firm with no signs of wrinkling or sprouting.

## **Ongoing quality checks**

When the potatoes and the onions were downsized by slicing and dicing, the individual pieces would be scanned using machinery to remove any pieces which contained blemishes or black parts. This would ensure that the product filling would be of the highest flavour and quality. During the downsizing process the pieces of onion would all be diced into the same size as would the pieces of potato as this would mean they took the same amount of cooking time to ensure a consistent texture in the filling. The weight of the product would be monitored at several intervals in the food production to ensure that all of the pasties would end up being the same size and weight. The ingredients would all be weighed before being used too, as this would ensure that there would be an equal ratio of ingredients, the weighing machines would be computer controlled. Once cooked the appearance of the products would be checked to ensure that they were all of the same colour as to remain consistent. The timings and the temperature of the cooking equipment would be constantly monitored as this means the finished products would all be identical after cooking. Random sensory analysis would be carried out, where food professionals would check certain pasties to see if the taste, smell and the appearance are consistent. Also once the final products had been created, bacteria level checks would be carried out randomly on some pasties to make sure that they are safe to eat. Then each pasty would be metal detected which would remove any pasties which were physically contaminated as this would otherwise cause harm to the consumer or could cause complaints.

## **Quality assurance**

GMP requires that there is an in-depth specification which highlights every aspect of the manufacture of the pasties, and that all of the sources and facilities which are specified are provided, in the correct quantities and in the right intervals and are used as intended, so that all of the products end up identical.

The other major component in good manufacturing practice is effective food control, this is achieved in many ways; by having well qualified and experienced staff to draw up the specifications; adequate staff to do inspections to ensure that everything is at the correct standard; and rapid feedback of information which allows quick changes to be made when a problem arises. These factors would definitely be required within the Ginster's manufacture to ensure that the production is efficient and of the right standard throughout.

Quality assurance is the system which is used by food manufacturers to describe and guarantee that the products they produce will be of the highest standard. Quality control checks are measures which are carried out to ensure quality assurance. The other things which are covered by quality assurance are:

- The way that the product is packaged
- How the product is distributed and sold
- The ingredients which are being used
- What the food product is like
- How the food has been made
- The quality of the workforce, and how they have been trained
- How well the hygiene procedures are being followed during the production.

Quality assurance is an integral part of GMP.

## **Colour checks**

In the Ginster's pasties that I have analysed, an important quality check that they would require would be a colour check, to ensure that all of the products left the factory looking identical. This would almost always be achieved due to computer checked cooking temperatures and times; so that all the products were cooked to the same end standard. However, I think that they would still use colour checks; where they would possibly have a colour card with the ideal colour of the pastry present, from this, the randomly chosen pasties could be compared to make sure that they are identical to this. If there was, for some reason a fluctuation in colour, then the manufacturers would need to assess the cooking time and temperature to ensure that all following pasties are the same colour.



# Product Design





## Design Brief

Design and develop a medium budget meal which could be served at a family restaurant. It should be well presented with a good balance of ingredients.

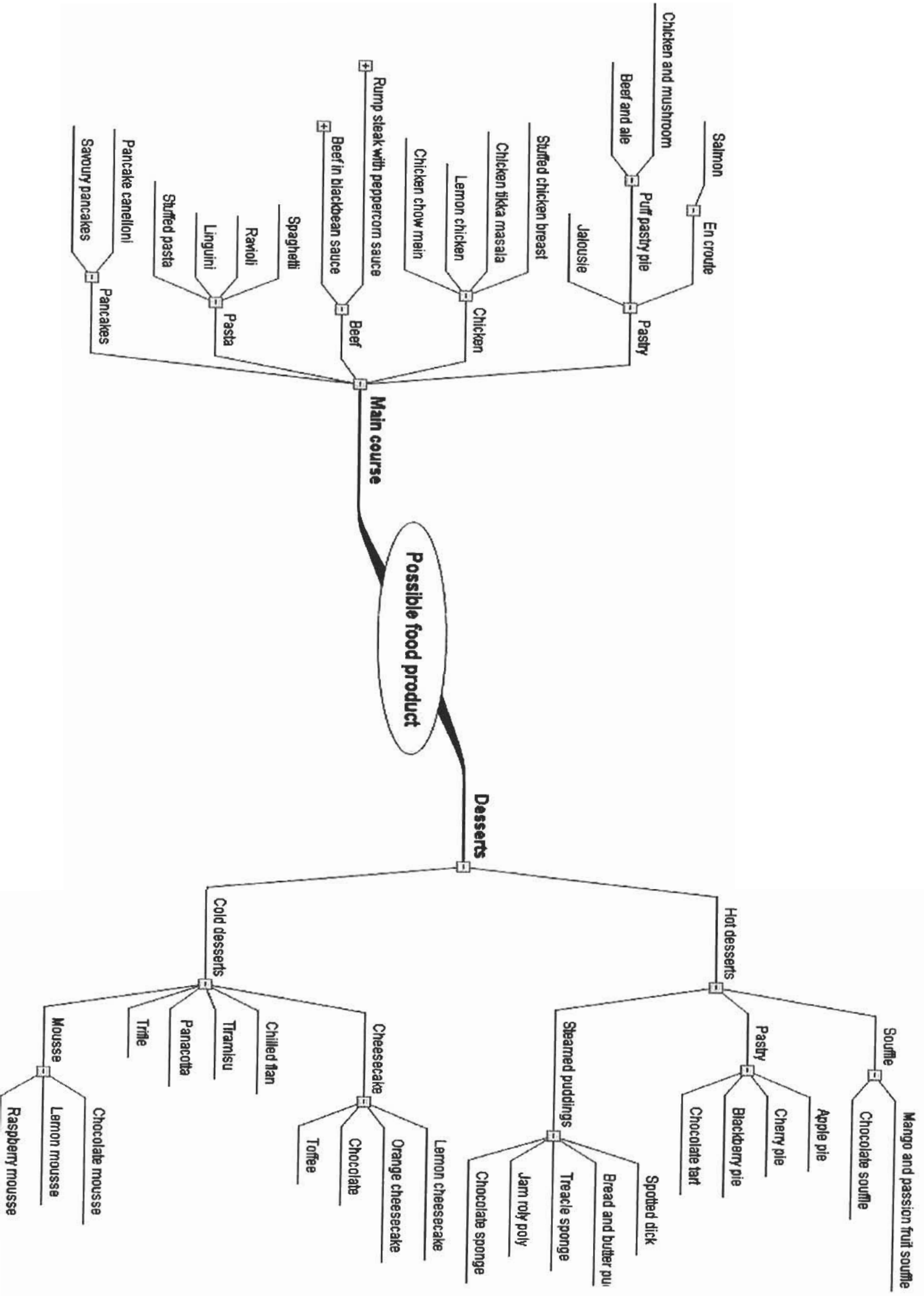
## Specification Points

### Main course

- 1) **The meal should cost between £8 - £12** A family on a medium budget would not be willing to pay anymore than this for their meal; especially if they have children present as this would further increase the cost for them. Therefore the ingredients that are included in this meal should be of a high quality, but not too expensive as this would increase the price drastically.
- 2) **The food should be well presented-** A paying family expects their food to look appetising when it's brought to them, and the presentation of the meal is a very important aspect in this.
- 3) **There should be a good balance of ingredients-** The meal should contain at least one portion of vegetables, and should include a source of HBV protein so that the meal is nutritionally balanced, which is an important factor for most families.
- 4) **The food should have a good aroma-** It's important for the food to have a good aroma when it's served to the consumer as if it smells appetising, then the consumer will be more likely to enjoy the meal.
- 5) **There should be a good range of flavours-** For the price of the meal, a family expect to have a substantial sized meal so that nobody leaves feeling hungry.

### Desserts

- 1) **The dessert should cost between £3-£5** Anything more than this price would be too expensive to expect a family restaurant to charge. And therefore the customers would be reluctant to pay this.
- 2) **The dessert should have a range of colours** This will make the dessert look more appetising to the customer and would therefore ,make them more likely to want to eat it.
- 3) **The dessert should be served with an accompaniment** As this will give the dessert more flavours, and will complement the main dessert. Without an accompaniment the dessert may also be too dry.
- 4) **The dessert should have a good aroma** As this will make the dessert more appealing to the customer and they will be more likely to enjoy it.
- 5) **The dessert should include a range of different textures** As this would provide colour and also fruit has a strong flavour.



## Lemon Meringue pie

Small, individual sized servings are ideal to serve at a restaurant for one person.



Very attractive looking, which would be appetising to customers.

This dessert would be relatively cheap to create, which would mean it could be priced within the budget range.

Several different components which shows a variety of different skills.

## Mango and passion fruit soufflé

The soufflés would love very attractive, and appetising for the customers.



Making a soufflé shows a large number of skills, but they would need to be given to the customer very quickly before they sink

These soufflés can be served with an accompaniment such as a sauce or ice cream.

They would come at the top end of the restaurant budget, but wouldn't cost too much to be acceptable at a family restaurant.



## Chicken Tikka Masala

This meal would show a good range of skills in both cooking the curry, and it would be possible to make naan bread to show even more skills.



To create this meal would be relatively inexpensive to make, and therefore could be priced within the range for a family restaurant.

This would be a substantial sized meal which would be very filling for the customers.

With all of the spices which are within the curry sauce this would give off a good aroma.

This meal could be well presented, with the curry and rice being served in separate bowls, with the naan served at the edge of the plate. This would look very appetising when brought out to the customers.

## Raspberry Mousse

The bright colours of the fruit make it look appetising for the customers.



This could be served with an accompaniment to give a different flavour and texture.

The mousse could be served with biscuits to show more skills and make the dessert more filling.

This mousse wouldn't be too expensive to make, and therefore could be sold at a reasonable price.

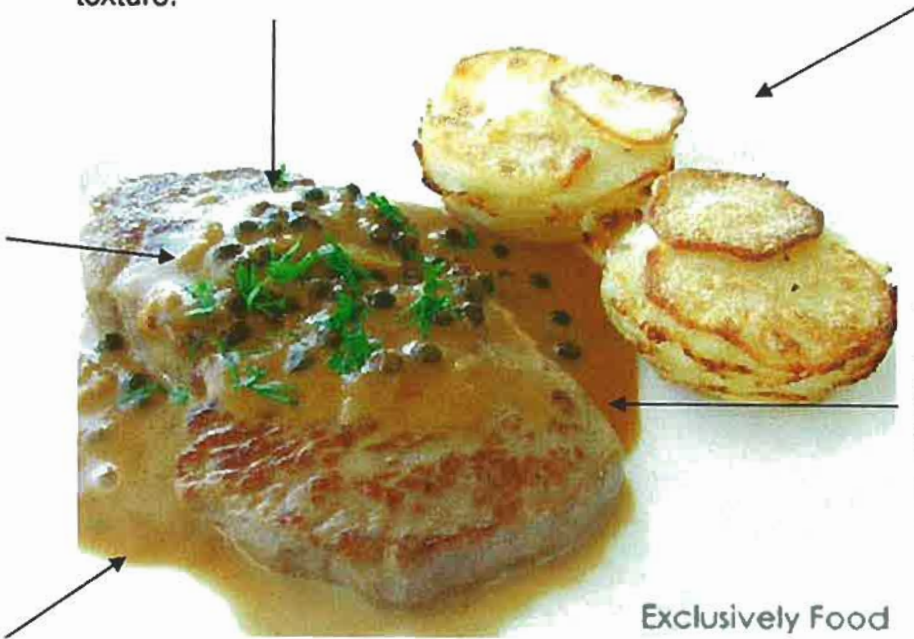


### Steak with peppercorn sauce

The peppercorns in the sauce would give extra texture.

If served with vegetables at the side, then there would be a good balance of ingredients, ideal for a family restaurant.

This would look attractive to the customer, as there are several different parts to the meal.



This meal would probably come at the top end of the budget, but wouldn't be too expensive for a family meal.

Exclusively Food

The sauce in this meal would give a good aroma which would make it appetising for the consumer.

### Pancake cannelloni with chicken and bacon

This meal would have several different colours, which would make it look appetising with a range of ingredients.

This meal would have a good aroma and therefore make the customers want to eat it.



The chunky pieces of chicken and bacon would provide a good texture, along with the smooth texture of the pancakes.

This dish wouldn't be too expensive to make, and therefore could be priced within the range suitable for a family restaurant.

## Marble chocolate torte

This would give off a rich, chocolaty aroma which would be appetising.

This wouldn't be too expensive to make, as the ingredients are relatively cheap to buy.



This could be served with a chocolate sauce for extra indulgence.

This looks quite attractive which would be pleasing to the customers.

This could be served in a substantial sized portion which wouldn't be disappointing for the customers, and they wouldn't leave hungry.



## The selected design ideas



Exclusively Food

This meal meets my specification points really well, as it wouldn't be too expensive to produce, and would therefore go within the price range which is specified. I feel that the food is fairly well presented, with a range of different ingredients which make it look very attractive. The sauce in this meal, along with the strong aroma from the meat would make the meal smell appealing to customers, and would make them more likely to enjoy the food.

I have chosen to make these lemon meringue pies because they meet my specification points very well. They are not too expensive to create and therefore could be sold to customers at a price between £3 and £5. The lemon filling along with the colour of the pastry and the meringue provide a range of different colours which make the dessert look more appealing to customers. The meringue could be served with a raspberry coulis as an accompaniment as this would provide another dimension of flavours to the dessert, and would also provide more colour. The sweet lemon flavour would provide a good aroma and would make the dessert appetising to customers.





I have chosen to make chicken and bacon cannelloni because I think that it would sell well, as chicken and bacon are quite popular flavours which go well together. The ingredients are not too expensive to buy and therefore the finished product could be sold to the customer between the specified amounts. I could serve this meal with a green salad which would provide some extra colours and make the meal look more attractive. The cheese sauce gives off a strong, creamy aroma which will be more appetising to the customers.

I think that marble chocolate torte would be a good choice of desserts to make. It would be possible to make for under the specified amount which means that it wouldn't be too expensive for customers in a family restaurant to buy. It has several different colours due to the marbling, which makes it look attractive.





## Design Idea 1

**Rump steak served with Dijon mustard infused mash and steamed baby vegetables.**



### Ingredients:

#### **For the sauce:**

1 tsp Dijon mustard  
200ml double cream  
1 tsp black peppercorns  
1 oxo cube

#### **For the mash:**

100g potatoes  
1 tsp Dijon mustard  
2 tbsp double cream

6oz steak  
50g Sugar snap peas  
50g Baby sweet corn

### Function of ingredients:

**Dijon mustard-** This provides flavour to the sauce and the mash

**Double cream-** This gives a rich taste to the sauce, and provides the bulk of the liquid making a sauce. In the mash it gives a creamy texture to the potatoes.

**Black peppercorns-** These provide flavour, colour and give texture to the sauce.

**Oxo cube-** This provides a meaty flavour to the sauce, and also gives it a rich, dark colour.

**Potatoes-** These give the main bulk to the mash, and provide a source of carbohydrate.

**Steak-** This provides the main part of the meal, and contains a good source of HBV protein. It also provides flavour, colour and texture to the meal.

**Sugar snap peas and baby sweet corn-** These provide colour to the meal, and they also have a sweet flavour and crunchy texture.

### Comments of the client group:

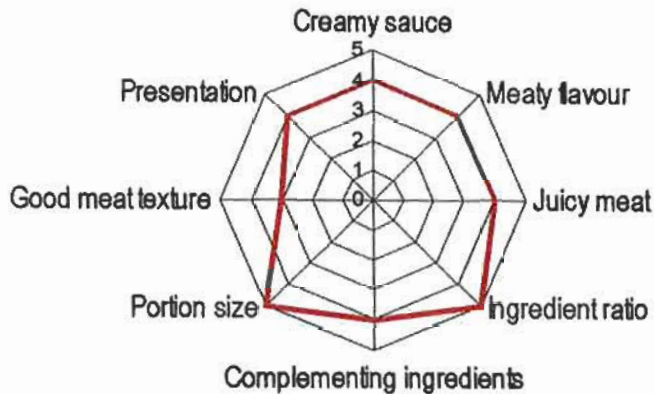
**Person 1:** 'The meat was very tender, and the sauce complements the meat really well'

**Person 2:** 'The sauce is delicious'

**Person 3:** 'The ingredients in the meal all work really well together'

**Person 4:** 'There are a good range of flavours in the meal'

### Steak with creamy peppercorn sauce



### Summary of star profile

I think that the sauce which was served with the steak was very creamy and therefore complemented the juiciness of the meat really well, as it provided a contrast in textures and also in flavours. The meal

was fairly well presented with the sauce served with a small serving of sauce at the side. I think that the presentation of a meal is really important as this is the first experience that the customer gets with their meal, and therefore it's necessary for their enjoyment. There was an overall very meaty flavour to this plate of food, with the meat juices from the steak being put into the peppercorn sauce worked well to combine the two flavours together. There was a very good ratio of ingredients; which is important in the taste of the product, as it wouldn't be desirable to have one particular part of the meal overpowering the rest. The portion size would be perfect if served in a restaurant, with not too much food on the plate, but wouldn't leave the customer feeling disappointed.

### Opportunities for development

There isn't very many ways in which this product could be developed without ruining the way that the ingredients complement each other. However I could adapt the sauce, by possibly doing steak Diane, or even making a rue sauce. There are also different ways in which I could serve the potatoes to add a different texture to the meal, for example I could serve sautéed potatoes, or make a col cannon .



## Design Idea 2

### Individual sized lemon meringue pie served with sweet raspberry coulis



### Ingredients

#### **Pastry:**

8oz plain flour  
Pinch of salt  
2 ½ oz Lard  
2 ½ oz Butter  
2 Tbsp cold water

#### **Lemon filling:**

Juice of 5 lemons  
4 tbsp corn flour  
270ml Water  
3 Egg yolks  
175ml Caster sugar

25g Butter

#### **Meringue:**

3 Egg whites  
150g Golden caster sugar

#### **Raspberry coulis:**

100g Raspberries  
1 tbsp Icing sugar

### Function of ingredients

**Plain flour-** This provides the main bulk of the pastry, and gives the dry, crumbly texture of this part of the pie.

**Lard & Butter-** This provides the fat which is needed to shorten the pastry together; it lines the flour and gives it a clumpy texture.

**Water-** This is used to bring the ingredients in the pastry together and makes it possible to roll it out.

**Lemon juice-** This provides the main ingredient of the lemon curd and gives it a bitter, fruity flavour

**Corn flour-** This is used as an agent to cause the filling to gelatinize, and therefore become much thicker.

**g yolks-** These are a good source of protein, and they also cause the filling to coagulate, and therefore form a thick, set filling for the dessert.

**Caster sugar-** This makes the filling much sweeter, and combats the bitterness of the lemons, to prevent the filling from being too sour.

**Butter-** This gives the lemon curd the creamy, rich yellow colour, and also makes the filling taste much richer, it's also a good source of fat.

**Egg whites-** These provide the main ingredient to the meringue, and trap air when whisked to create a foamy texture, used to top the pies.

**Sugar-** This gives the meringue its golden brown colour when cooked, and also gives the meringue a more solid structure, to prevent it from collapsing; it also sweetens the egg whites, which would otherwise be unpleasant to eat.

**Raspberries-** These provide the colour, and also give a fruity taste to the sauce.

**Icing sugar-** This counteracts the bitterness of the fruit, and also thickens the sauce slightly.

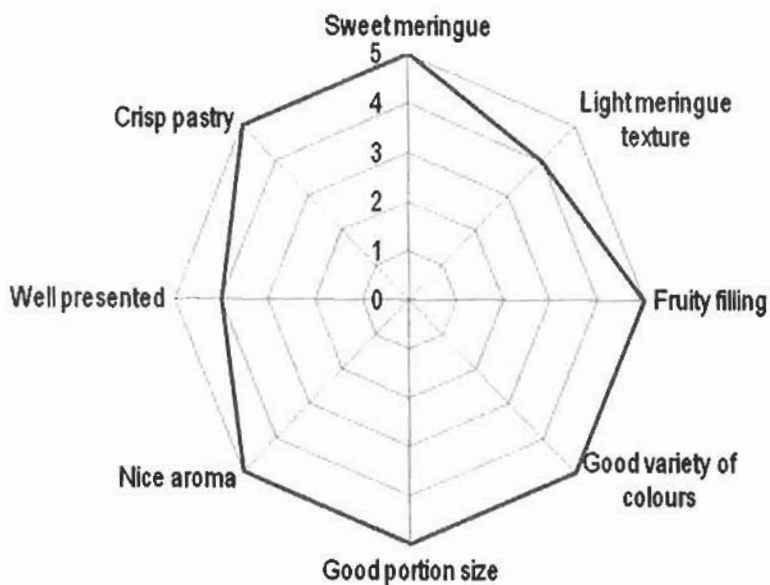
### Comments from client group:

**Person 1:** 'The sweetness of the meringue greatly complements the tart flavour of the lemon filling.'

**Person 2:** 'I really like the lemony flavour of the filling, though the meringue is slightly too sweet.'

**Person 3:** 'They come in ideal sizes to serve in a restaurant. The additional flavour of the raspberry coulis really compliments the citrus flavours.'

**Person 4:** 'I'd be happy to pay to eat this in a restaurant!'



### **Product summary**

The filling of the meringue pie was incredibly fruity, but wasn't overpowering, which is important. The dish provided a good variety of colours, including the golden brown of the meringue, the yellow of the lemon curd, and the deep pink of the raspberry coulis.

The variety of colours meant that the dessert looked very appetising. This was also aided by the presentation, which I think was simple but effective, served with a swirl of raspberry coulis and a wedge of lemon. The strong, fruity flavours of the lemon curd gave off a very nice aroma, which would be appetising for a customer, and also the sweet smell of the coulis complemented this very well, I feel. The portion size was very substantial, and definitely wouldn't leave any customers feeling that they hadn't received value for money, and it's definitely big enough to share, if the customers chose to do so. The meringue had a light, very sweet flavour which went really well with the tart flavour of the filling. I think that possibly the meringue could have been improved with slightly less sugar being used, as this made it slightly more crunchy than ideal. The pastry had a very nice texture, and provided a nice crunch giving consumers a good mouth-feel, and also it complements the different textures which are available in this particular dish.

### **Opportunities for development**

I think that I may be restricted in the amount of ways that I could develop this dessert, as it would be difficult to alter the meringue part of the dessert, without ruining the light, airy texture of it. However it would be possible to replace the lemon filling with another fruity filling, such as lime, orange or even raspberry. I could also experiment with different types of pastry for the base of the pie to see which complements the dessert best, I could try flaky, choux, plain short crust, or possibly even chocolate pastry. Or I could replace the pastry filling with a biscuit base to provide a different dimension of flavour and texture to the dish.



### Design Idea 3

#### **Chicken and bacon pancake cannelloni.**



#### Ingredients:

##### **Pancakes:**

100g Plain flour  
2 Eggs  
250ml Milk  
75ml Cold Water

##### **Filling:**

200g Chicken breast  
150g Bacon

##### **Cheese sauce:**

1 pint Milk  
40g Plain Flour  
40g Butter  
50g Grated cheddar  
50g Mozzarella

#### Function of ingredients

**Plain flour-** This provides the bulk to the pancakes and gives them their texture. In the cheese sauce, the flour acts as a thickener as it causes the starch to gelatinize.

**Eggs-** These provide high biological value protein to the meal, and also cause the mixture to bind together.

**Milk-** This provides high biological value protein, and it gives the pancakes the smooth texture. It also provides the bulk to the cheese sauce.

**Water-** This causes the pancake mixture to thin out, and allows the mixture to cover the pan adequately in order to create a thin pancake.

**Chicken-** This provides high biological value protein and also provides flavour and texture to the meal. It makes the meal more substantial and filling.

**Bacon-** This gives some colour and flavour to the filling of the product and also provides high biological value proteins.

**Butter-** This would give a creamy texture to the sauce, and also provides a rich taste and gives the sauce some colour.

**Cheddar-** This gives flavour to the sauce, and also provides high biological value protein. It will provide taste to the sauce too.

**Mozzarella-** This gives a stringy texture to the topping of the cannelloni.

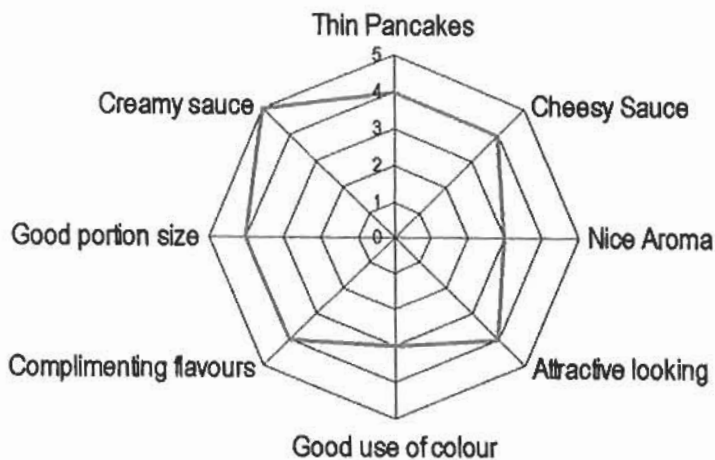
#### Comments of the client group:

**Person 1-** 'The sauce is really tasty!'

**Person 2-** 'This is delicious, I'd definitely eat it again.'

**Person 3-** 'The pancakes were really thin, which made the meal really light.'

**Person 4-** 'The chicken and bacon filling was really complemented by the cheese sauce.'



### Summary of star profile

The pancakes in the cannelloni are very thin which makes the filling very light. This is important as the portion size is rather large and customers may not be able to manage the whole meal. The sauce was quite cheesy and

this went well with the flavours of the chicken and bacon. The aroma from the product wasn't particularly strong which means that it wouldn't appeal to the customers in this way, however it was a fairly attractive looking meal which means that it's likely the customer would be pleased with their meal. The product could have done with slightly more colour- this could have been achieved by using spinach in the filling, or a different coloured cheese for the topping. The flavours in the product complemented each other really well, with the strong flavour of the cheese and the rich meaty flavours of the bacon.

### Ideas for development

There are many possible ways in which I could develop this particular product as there are several different components which could be altered to make it meet my specification points better. I could put different ingredients into the pancakes such as spinach, cheese or sundried tomatoes, by doing this I could introduced more colour into the meal which would in turn make it appear more attractive to the customers. I could also experiment with different fillings for my pancakes, such as bolognaise sauce, or even a vegetarian filling to cater for more customers. There are many different things which I could serve the pancakes with such as a green salad, potato wedges or some other sort of accompaniment. I could also experiment with the different cheeses that were served on the top of the pancakes, and within the sauce. This would provide a different flavour and texture combination to the meal, which may be more appealing to customers.



## Design Idea 4

### Chocolate marble torte served with chocolate sauce



### Ingredients:

#### **Pastry:**

225g Plain flour  
½ Teaspoon salt  
130g Butter  
2 Tbsp water

#### **Chocolate filling:**

125g Dark chocolate  
125g White chocolate  
568g Double cream  
4 Tsp Coffee

### Function of ingredients:

**Plain flour-** This provides the bulk to the pastry and gives a crumbly, crisp texture.

**Butter-** This provides the rich taste to the pastry, it also provides colour to the pastry. It also helps to bind the flour to produce a crumb consistency.

**Water-** This also is used to combine the ingredients and together, and allows it to be rolled out into a thin sheet.

**Dark & White chocolate-** This provides colour to the dessert, and gives it the marbled affect. It also provides the main flavour of the dessert, and also allows the torte to set completely.

**Double cream-** This provides the main bulk of the dessert, it provides a creamy texture to the dessert, and also gives a good mouth feel. It is also a good source of protein.

**Coffee-** This provides a rich flavour to the dessert, and gives an underlying flavour to the chocolate filling.

### Comments of the client group:

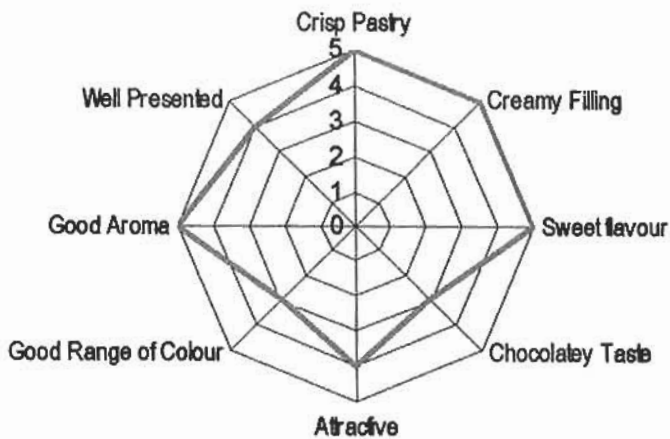
**Person 1:** 'The filling of the pastry is really delicious and creamy.'

**Person 2:** 'The dessert could probably do with a fruity sauce as a refreshing touch to the dish.'

**Person 3:** 'The rich coffee taste is a really nice touch.'

**Person 4:** 'This dessert looked really attractive, and tasted great. The pastry was lovely and crisp.'





### **Summary of star profile:**

The pastry was very crisp which was nice because it gave an alternative texture to the creamy filling, and gave a good mouth feel. The dessert as a whole was very sweet, which is important

however it actually lacked slightly in chocolaty flavour, I think that this was due to the amount of coffee which was used, and this overpowered the less strong flavours of the chocolate. In future if I was to make this dessert again I would cut back on the amount of coffee which I used in the cream. The desserts were fairly attractive looking, and would be appealing to all chocolate lovers, especially with the marble effect to add to the presentation. I think that serving a chocolate sauce added to the decoration however I feel that it maybe wasn't necessary for the taste, as it was slightly too rich when combined with the already rich filling of the torte. I could replace the chocolate sauce with a fruit sauce to improve the range of colours and also to provide a different flavour to the dessert. The aroma of the coffee and chocolate provided an overall very nice aroma, this would appeal greatly to the customers and they would be more likely enjoy the dessert.

### **Ideas for development**

There are many ways in which I could develop this product, I could experiment with the types of base used for this dessert, trying pastries such as chocolate, or cinnamon, or I could try a variety of biscuit bases such as ginger or hobnob biscuits. I could also experiment with a number of different flavours for the filling of the torte, such as raspberry, lime, lemon or a variety of other flavours could be used. As well as this I could alter the sauce in which the dessert is served with to give the dessert the best flavour possible. I could try a raspberry coulis, lemon sauce, or many other fruity flavours to complement the flavours in the torte.

## Matching the design ideas to specification

### **Steak in peppercorn sauce**

### **Chicken and bacon pancake cannelloni**

#### **The meal should cost between £8 - £12**

- ✓ The overall price of the ingredients is around £5 per meal, and therefore it would be possible to serve this meal in a restaurant at between the specified prices.
- ✓ The cost of the ingredients in this particular meal are not that expensive to buy and therefore it would be possible to price this at between the specified amounts.

#### **The food should be well presented**

- ✓ This meal looked really nicely presented and therefore would be appealing to any customer who had ordered this food.
- ✓ This particular food product was fairly difficult to present nicely, however it did look appetising. If I was serving this in a restaurant then I would probably serve it in an individual ovenware container.

#### **There should be a good balance of ingredients**

- ✓ There was a large range of ingredients in this particular meal, with the steak being served with a creamy sauce, along with the creamy mashed potato and some freshly steamed vegetables
- ✓ There were a good balance of ingredients with the pancakes, the chicken and bacon filling, and the cheese sauce. This worked well to give a balance of different flavours to the dish.

#### **The food should have a good aroma**

- ✓ The aroma of the meat and also from the peppercorn sauce was really nice and would therefore be appetising for the customer.
- ✓ The flavour of the cheese sauce was really strong and therefore gave a good aroma.

#### **There should be a good portion of food**

- ✓ The size of the meal was the perfect size for a restaurant meal and would not leave a customer feeling disappointed.
- ✓ The amount of food which was served on the plate would be more than enough for a single serving.

## Lemon meringue pie

### Chocolate torte

#### The dessert should cost between £3-£5

- ✓ The ingredients which were used in creating this dessert were relatively inexpensive and therefore it wouldn't be considered to be overpriced if sold in a restaurant
- ✓ The ingredients in this dessert were also not too expensive and therefore could easily be priced within the specified amounts.

#### The dessert should have a range of colours

- ✓ This dessert did have a good range of colours from the light brown of the meringue and the pastry, to the deep yellow of the lemon filling. The inclusion of a rich pink raspberry coulis really worked well in providing extra colour.
- ✓ The marbled effect of the torte provided several different shades of brown. However I could possibly include a fruit sauce rather than the chocolate one originally served with this dessert to add another colour.
- ✓

#### The dessert should be served with an accompaniment

- ✓ This was served with a raspberry coulis as an accompaniment
- ✓ The chocolate torte was served with an accompaniment of chocolate sauce
- ✓

#### The dessert should have a good aroma

- ✓ The powerful, sweet aroma of the dessert was mouth watering
- ✓ The sweet aroma of melted chocolate along with the deep rich aroma of the coffee was really delicious.

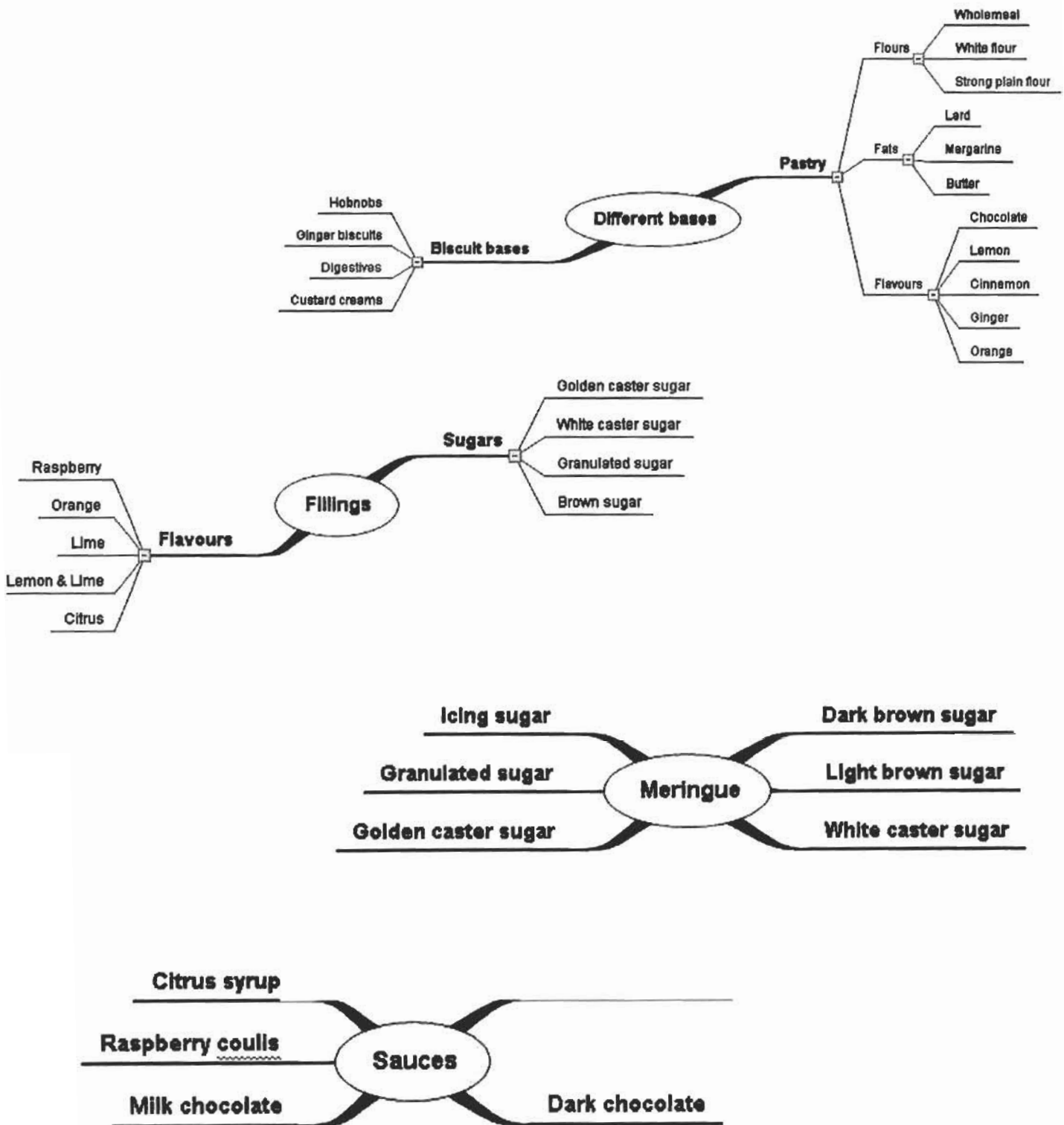
#### The dessert should include a range of different textures

- ✓ There was the creaminess of the lemon filling, which went really well with the crumbly, crisp texture of the pastry, and the light fluffy texture of the meringue.
- ✓ The creaminess of the chocolaty filling really complemented the crispness of the pastry and the sticky, gooey chocolate sauce.



The item that I am going to be developing is the Lemon meringue Pie as I feel that there are many different ways in which it can be altered to improve both the taste and the appearance of it. Also this particular dish met my specification really well and therefore would definitely be a suitable dessert to meet my design brief.

**Different ideas for development:**



## Development 1- Different bases

A= Chocolate  
pastry

B= Lemon pastry



C= Hobnob  
biscuits

D= Ginger  
biscuits

### Ingredients:

#### **Chocolate pastry**

25g Softened butter  
1 Tbsp Icing sugar  
1/3 Egg yolk  
70g Plain flour  
1 Tsp Cocoa

#### **Lemon pastry**

70g Softened butter  
75g Plain flour  
Pinch Lime rind  
2 Tbsp Chilled water

#### **Hobnob base**

50g Hobnob biscuits  
1 Tsp Cocoa powder  
25g Butter

#### **Ginger biscuit base**

50g Ginger biscuits  
25g Butter

### Ratings given by the client group:

#### **Chocolate pastry**

Person 1- 4/5

Person 2- 4/5

Person 3- 5/5

Person 4- 5/5

Total- 18/20

'I really liked the flavours of the chocolate pastry, and it was the perfect texture.'

#### **Lemon Pastry**

Person 1- 3/5

Person 2- 4/5

Person 3- 3/5

Person 4- 3/5

Total- 13/20

'I couldn't really taste the citrus in this pastry, it could do with more rind for a better flavour.'

#### **Hobnob base**

Person 1- 4/5

Person 2- 4/5

Person 3- 4/5

Person 4- 5/5

Total- 17/20

'This base was really crunchy, but lacked some flavour.'

#### **Ginger biscuit base**

Person 1- 5/5

Person 2- 3/5

Person 3- 3/5

Person 4- 4/5

Total- 15/20

'I really liked this base, but it was quite crumbly and didn't hold its structure very well.'

## Summary of developments

### **Chocolate pastry**

This was the most popular pastry of all the developments with a rating of 18/20, it had a really nice texture and was crumbly and gave a very nice mouth feel. When eating the pastry you could really taste the chocolate which would be a nice addition to the meringue.

### **Lemon pastry**

It was really difficult to taste the lemon in the pastry and I think that because of this you wouldn't be able to taste the subtle flavour in the complete pie. The pastry had a very nice texture though but with the lowest rating out of all, I will definitely not be using this as my final product.

### **Hobnob biscuit base**

This base didn't show many skills in creating and this is therefore a negative point about this, it also lacked in some flavour too, which was rather disappointing, I think that it would have probably been better if I'd included some chocolate chips in the base to add some flavour and another dimension to the texture.

### **Ginger biscuit base**

This base was slightly too hard, and therefore it was very difficult to crush the biscuits into crumbs that were of the right size to line the dish. Because of this, the base fell apart slightly when cut, which is a definite problem. I will not be developing this base because of the above factor, and also because it shows very few skills in creating.

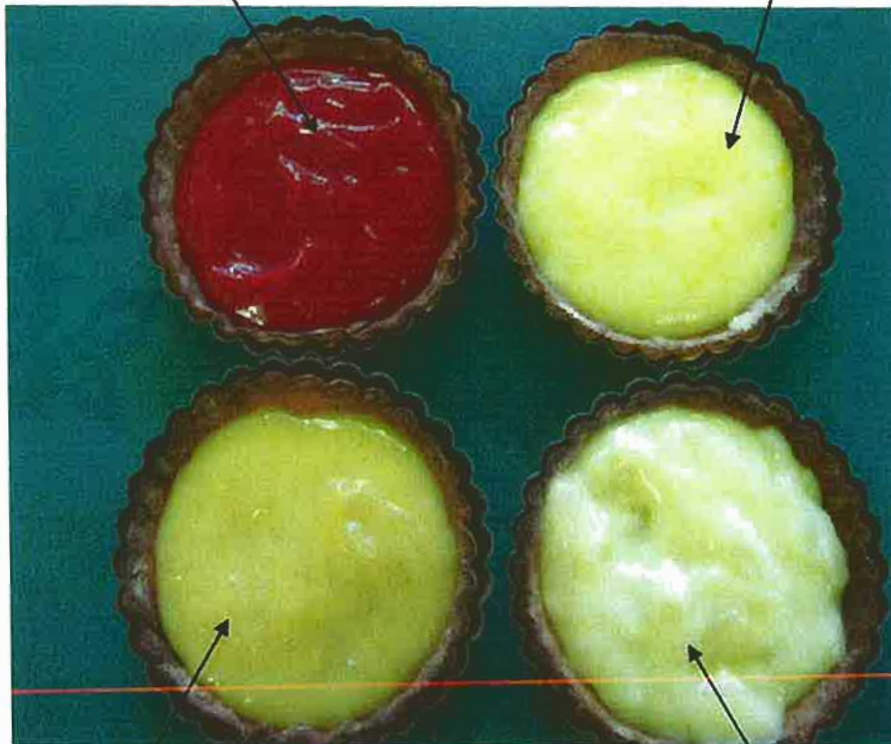
**The pastry which I have chosen to develop is the chocolate pastry, because I think that this was the pastry which had the best flavour. It also had the highest rating out of all the different types, and I feel that it would add a different dimension of flavour to the dessert.**



## Development 2- Different flavoured fillings

A= Raspberry

B= Orange



C= Lime

D= Pineapple

### Ratings given by the client group:

#### **Raspberry filling**

Person 1- 3/5

Person 2- 5/5

Person 3- 5/5

Person 4- 4/5

Total- 17/20

'This filling was delicious, and had a really sweet flavour.'

#### **Orange filling**

Person 1- 1/5

Person 2- 1/5

Person 3- 2/5

Person 4- 2/5

Total- 4/20

'This filling had a really rubber texture and not a very nice flavour either.'

#### **Lime filling**

Person 1- 5/5

Person 2- 4/5

Person 3- 3/5

Person 4- 3/5

Total- 15/20

'I really liked this but the colour wasn't very nice.'

#### **Pineapple filling**

Person 1- 2/5

Person 2- 4/5

Person 3- 3/5

Person 4- 2/5

Total- 11/20

'The chunks of pineapple were a good addition, but the flavour wasn't very strong.'

### Ingredients:

#### **Raspberry filling**

200g Raspberries  
1-2 tbsp Corn flour  
100g Caster sugar  
½ tbsp Lemon juice  
10g Butter  
1 ½ Egg yolks

#### **Orange filling**

1 Large Orange  
1 tbsp Corn flour  
200ml Water  
45g Caster sugar  
1 Egg yolk

#### **Lime filling**

1 Lime  
1 tbsp Corn flour  
75ml Water  
50g Caster sugar  
2/3 Egg yolk  
1 Egg

#### **Pineapple filling**

125g Crushed pineapple  
1 tbsp Cornflour  
10g Caster sugar  
30ml Water  
½ Egg yolk  
15g Butter

## Summary of developments

### **Raspberry filling**

This filling was delicious, with a rich raspberry flavour which wasn't too sweet; it also had a really deep colour which looked really attractive, and would make customers want to eat if it was served within a restaurant. With the highest rating out of all the fillings, which was 17/20 I will be using this filling in my final product.

### **Lime filling**

I was quite surprised about the flavour of this filling; I didn't expect the lime to be as strong, which provided a nice surprise. However, the colour of the filling wasn't particularly attractive; this is a problem because the appearance may actually prevent some people from eating the dessert if they bought it in a restaurant.

### **Orange filling**

This filling had a really rubbery texture which gave a really poor mouth-feel and therefore I would not want to use this filling in my final product. Also I found that the orange flavour didn't have enough depth which meant that the overall taste of the filling was quite unpleasant.

### **Pineapple filling**

The pineapple chunks in this filling were a nice addition but there wasn't enough overall flavour from the juice in the filling, which meant that it wasn't a particularly nice flavour. I think that possibly if I'd have included more sugar in the filling then it may have had a better flavour.

**The filling which I have chosen to use in my final product was the raspberry flavour, because this had the best consistency and also the flavour would go really well with the chocolate pastry from the other development.**

### Development 3- Different sugars in meringues

A= Soft dark brown sugar

B= Soft light brown sugar



C= White caster sugar

D= Golden caster sugar

#### Ingredients:

50g Soft dark brown sugar  
1 Egg

50g Soft light brown sugar  
1 Egg

50g White caster sugar  
1 Egg

50G Golden caster sugar  
1 Egg

#### Ratings given by the client group:

##### **Soft dark brown sugar**

Person 1- 3/5

Person 2- 5/5

Person 3- 3/5

Person 4- 3/5

Total- 17/20

'This topping had a really nice texture.'

##### **Soft light brown sugar**

Person 1- 1/5

Person 2- 3/5

Person 3- 1/5

Person 4- 2/5

Total- 7/20

'This one was really sickly.'

##### **White caster sugar**

Person 1- 5/5

Person 2- 5/5

Person 3- 4/5

Person 4- 4/5

Total- 18/20

'This was my favourite. Really nice flavour.'

##### **Golden caster sugar**

Person 1- 3/5

Person 2- 4/5

Person 3- 5/5

Person 4- 4/5

Total- 16/20

'This topping had a really nice flavour, but was slightly too soggy.'



### **Soft dark brown sugar meringue**

This topping had a really nice, crisp texture on the outside, with a soft, light interior. However the sugar flavour was slightly too overpowering which means that it might be too much with the sweetness of the raspberry filling.

### **Soft light brown sugar meringue**

The meringue which used this particular sugar had an incredibly strong, quite unpleasant taste. Also it was quite stodgy and not like the light meringue which was expected. With the lowest rating out of all the meringues, I shall not be using this in my final product.

### **White caster sugar meringue**

This meringue topping was the overall favourite, with a sweet, flavour which wasn't overpowering when consumed with the whole dessert. It also had a really nice, light texture; exactly what you expect from a meringue. With the highest overall score of all the meringue toppings, I shall be using this within my final product.

### **Golden caster sugar meringue**

This meringue had a slightly gritty taste to it, which although it wasn't unpleasant, it wasn't ideal either, although it was really light and crisp on the outside. It had a really nice, sweet but not overpowering flavour, but it was let down by it's texture.

**I have chosen to use the white caster sugar in the meringue because this gave the lightest texture, and I feel that it would work really well with the final product. The sugar which was used means that the exterior of the meringue was really crisp which gave a nice mouth feel.**

## Development 4- Different sauces

A= Raspberry and white chocolate sauce

B= White chocolate sauce



C= Milk chocolate sauce

D= Butterscotch sauce

### Ingredients:

#### **Raspberry and white chocolate sauce**

100g Raspberries  
50g White chocolate  
100ml Double cream

#### **White chocolate sauce**

50g White chocolate  
50ml Double cream

#### **Milk chocolate sauce**

50g Milk chocolate  
50ml Double cream  
1 tsp Golden syrup

#### **Butterscotch sauce**

50g Butter  
50g Soft brown sugar  
Vanilla pod  
75ml Double cream

### Ratings given by my client group:

#### **Raspberry and white chocolate sauce**

Person 1- 2/5

Person 2- 2/5

Person 3- 3/5

Person 4- 3/5

Total- 10/20

'This sauce was far too sweet.'

#### **White chocolate sauce**

Person 1- 3/5

Person 2- 4/5

Person 3- 5/5

Person 4- 3/5

Total- 15/20

'This sauce was quite nice, but slightly too sickly.'

#### **Milk chocolate sauce**

Person 1- 3/5

Person 2- 3/5

Person 3- 4/5

Person 4- 4/5

Total- 14/20

'This sauce was slightly too sweet, and could have done with a slightly higher cocoa content.'

#### **Butterscotch sauce**

Person 1- 5/5

Person 2- 5/5

Person 3- 5/5

Person 4 5/5

Total- 19/20

'This sauce is delicious!'

## Summary of developments

### **Raspberry and white chocolate sauce**

This sauce was too sweet and I think that if I served this with the raspberry filling then it would be slightly too much. I therefore don't think that this would be a suitable accompaniment to the meringue pie.

### **White chocolate sauce**

This sauce was also too sweet, and wouldn't work very well with the meringue, as it doesn't have enough depth of flavour, I therefore will not be using this in my final product.

### **Milk chocolate sauce**

This sauce didn't have enough depth of flavour either and I think that this sauce would be so much better if I swapped the milk chocolate for plain chocolate. This would provide some bitterness to the dessert, and provide another dimension of flavour.

### **Butterscotch sauce**

Although this sauce was really nice, I don't think it would be suitable to be served with the meringue pies as it is a clashing flavour. Therefore, although it received a very high score, if served with the raspberry meringues it wouldn't go very well, and so I shall not be using it in my final product.

**Overall I have decided that instead of using any of the flavours that I have tested in this development, I am going to use a dark chocolate sauce, as out of the above sauces I think that the milk chocolate sauce would work the best with it, but it could do with a higher cocoa content to give a different dimension of flavour.**



## Final product- Raspberry meringue pie served with dark chocolate sauce



I have chosen this particular product for my final piece because it incorporates all of the most liked flavours throughout my developments. The chocolate pastry was chosen for its crispness, and the sweet aftertaste of chocolate, the raspberry filling was chosen for the fruitiness and the light flavour. I have chosen to use the meringue topping made from white caster sugar because this

provided the best texture, and also wasn't too overpowering as this would make the dessert too sweet. I decided that I would serve the meringue with a dark chocolate sauce to complement the flavours of the chocolate, and by using a sauce with high cocoa content means that the slight bitterness works well, rather than using a really sweet chocolate, which would overpower the dessert.

### Ingredients

#### **Chocolate pastry**

75g Softened butter  
3 tbsp Icing sugar  
1 Large egg yolk  
100g Plain flour  
1 tbsp Cocoa powder

#### **Raspberry filling**

800g Fresh raspberries  
5 tbsp Corn flour  
100g Golden caster sugar  
2 tsp Lemon juice  
5 Large egg yolks  
60g Butter

#### **Meringue topping**

4 Egg whites  
200g White caster sugar

#### **Dark chocolate sauce**

50g Dark chocolate  
50ml Double cream  
1 tsp Golden syrup  
1 tbsp Icing sugar

## **Method**



### **For the pastry:**

Cream butter and icing sugar together, then add egg yolks, whisk and gradually add flour and cocoa until just combined.



Bring together in hands, then roll out on a well floured surface



Place pastry into the moulds, then trim the excess pastry from around the edges to make the pastry look neater.



This is what my chocolate pastry cases looked like after I'd trimmed off the excess. Line with greaseproof paper and add baking beans. Bake blind at 180C for 10 minutes, then remove beans and cook for a further 5 minutes.



**For the filling:**

Whisk raspberries over a low heat to release the juice



Sieve out the seeds and add to a clean pan. Mix cornflour, sugar, water and lemon juice in a small bowl and add to raspberry juice. Stir over a low heat until thickened. Leave to cool for 5 minutes and then stir in egg yolks and butter until melted.



Spoon into the pastry cases until almost full and leave to cool.



**For the meringue**

Whisk the egg whites until they form soft peaks. Gradually add the white caster sugar until fully combined. Then pipe onto the raspberry filling. Place them in the oven at 200C for 10 minutes.



### **For the chocolate sauce**

Place cream, chocolate and syrup in a bowl over a pan of just simmering water. Leave until melted and then add icing sugar to taste.

### **Storage**

This product could be stored in a refrigerator for around 2 days, at a temperature between 0C and 5C. It would not be suitable for this to be frozen because when defrosted it would probably ruin the consistency and may break up which would reduce the quality.

### **Specification**

#### **1) The dessert should cost between £3-£5**

- ✓ The total cost to produce this dessert would be around £2 for an individual portion, and therefore it could be sold within the specified prices.

#### **2) The dessert should have a range of colours**

- ✓ The colours of the raspberry filling along with the crisp whiteness of the meringue compliments the dark browns of the chocolate pastry and the dark chocolate sauce.

#### **3) The dessert should be served with an accompaniment**

- ✓ It's served with a small pot of dark chocolate sauce, and some raspberries

#### **4) The dessert should have a good aroma**

- ✓ The smell of the chocolate and the sweet smell of raspberries would be really appetising for the customers.

#### **5) The dessert should include a range of different textures**

- ✓ There are a range of different textures, with the crispness of the pastry, the soft smooth consistency of the filling, the light airy texture of the meringue and the viscous chocolate sauce. This would provide a range of different feelings in the mouth.

### **Testers opinions**

**Person 1-** 5/5 'This was delicious, I really loved the raspberry filling!'

**Person 2-** 4/5 'I really enjoyed this dessert, I would definitely order this in a restaurant'

**Person 3-** 5/5 'The chocolate sauce works really well to tie all the flavours together'

**Person 4-** 5/5 'The texture of the meringue was beautiful, and went really well with the smoothness of the raspberry filling.'

# Product Manufacture





## Design Brief

**Design a trio of desserts which complement each other well and could be served in a high quality restaurant.**

## Specification

**1) They should have good Organoleptic qualities**

As this would be served in an upper class restaurant it's important to ensure that the customer is pleased with their food. The products must look good and have an excellent flavour.

**2) The desserts must complement each other well**

It's important that the desserts all go well together because otherwise the flavours may clash and therefore wouldn't provide a nice taste for the customer.

**3) All the desserts should include one or more types of fruit**

I think that desserts which include fruit would be more popular and therefore it would be a good idea for me to do this.

**4) The trio should cost between £5-£8**

This would be a suitable price to expect to pay for a dessert within a high quality restaurant.

**5) The desserts should be created with high quality ingredients**

This will mean that the end products will be of the very best standard, that people would expect when purchasing from a good quality restaurant.

**6) The size should be scaled down so as to not over face customers**

As I am doing a trio of desserts it's important to only have small servings of each dessert, otherwise there would be too much food for one customer.

**Trio of desserts (Fruit flan with patisserie cream) (Blueberry and lemon cheesecake) (Lemon mousse).**





## Ingredients

### **Lemon mousse:**

284ml Double cream- *This provides the bulk to the dessert, and also provides a soft, creamy texture and taste.*

1 Lemon, juiced and zested- *This gives the main flavour to the dessert and also helps to combine the ingredients.*

60g Caster sugar- *This makes the dessert sweet and goes well with the lemon to prevent the dessert from being too bitter.*

2 Egg whites- *These, when whisked provide the light, airy texture to the mousse.*

### **Lemon and blueberry cheesecake:**

#### Biscuit base:

75g Butter- *This is used to help the biscuits to combine, and prevent the base from being too crumbly.*

150g Digestive biscuits- *The biscuits provide the bulk of the base, and also gives a good texture and taste.*

#### Filling:

180ml Double cream- *This gives a creamy texture and taste to the dessert*

300g Cream cheese- *The cheese provides the bulk of the dessert and gives a creamy texture*

80g Sugar- *This gives a sweet taste to the filling*

1 Lemon- *This is used to give the main taste to the cheesecake, and provides a tart flavour*

#### For the topping:

½ Punnet of blueberries- *These add colour and taste to the cheesecake, and work well to decorate the dessert.*

### **Fruit flan with patisserie cream:**

#### Pastry:

2 Egg yolks- *These provide a rich colour to the pastry, and they also bind the ingredients together.*

2 tbsp Water- *This binds the dry ingredients together, and allows the mixture to roll out.*

1 tbsp Icing sugar- *This gives a subtle sweet flavour to the pastry.*

200g Plain flour- *This provides the main bulk of the pastry and also provides the crumbly texture.*

100g Butter- *This shortens the texture of the pastry, and also binds the ingredients together.*

Pinch of salt- *This will give flavour to the product.*

#### Patisserie cream:

150ml Double cream- *This provides the main bulk of the filling; it also provides a thick creamy texture and taste.*

150ml Milk- *This thins out the filling, and prevents it from becoming too thick.*

15g Plain flour- *The flour is used to thicken the filling*

1 tsp Vanilla essence- *This provides flavour and also colour to the filling*

3 Egg yolks- *The egg yolks will thicken the filling and allow it to set, as the eggs coagulate when heated*

150g Caster sugar- *This will sweeten the filling, and make it suitable for a sweet dish.*

#### Topping:



½ Punnet of Blueberries- *These provide colour and flavour to the product*





½ Punnet of Raspberries- *The raspberries give colour and texture to the dessert dish.*

1 tsp Apricot jam- *This provides a glaze to the fruit, give it a professional finish*


1 tsp Water- *This is used to thin out the apricot jam, which then provides the glaze.*

### Fruit flan with patisserie cream (focus product)

| Times         | Quality control   | Process   | HACCP  |
|---------------|---|---|--|
| 1 Minute      | Visual checks, and ensure the use of reliable suppliers.  | Purchase of ingredients   | Check all of the ingredients to ensure that they are fresh, and also make sure that the packaging has not been damaged. Check all sell by dates are current. |
|               | Ensure that the ingredients are stored at the correct temperatures; 0-5C for perishable ingredients, and frozen goods stored at below -18C                                    | Appropriate storage of ingredients until required   | Ensure the ingredients are stored correctly to ensure that the conditions that they are kept in are not optimum for bacterial growth.                        |
| 10-15 Minutes | Weigh out all the ingredients using the same weighing scales, which will preferably be computerised to ensure the final products will have a consistent ratio of ingredients. | Weighing out the ingredients  | Make sure that the scales are washed down before use to prevent contamination with whatever was being weighed beforehand.                                    |
| 1 Minute      |   | Ingredients moved to the area where they will be used   | Make sure that the area which is going to be used, has been cleaned.   |
| 2 Minutes     | Ensure that all the cubes of butter are of the same size, so that they rub in at the same rate.   | Sieve the flour and salt into a bowl. Rub in the butter until a breadcrumb consistency is achieved. This could be done using a food processor in the restaurant to save time.<br> | Ensure that hands have been washed before handling the ingredients, as otherwise bacteria will enter the product.  |
| 2 Minutes     | Ensure that the eggs have no cracks before breaking them. Also ensure that no shell enters the egg mixture.   | Separate the eggs and discard the egg whites. Add correct amount of water to the egg yolks and beat together.<br>   | Ensure that no egg shell enters the egg yolk, as this could increase the levels of bacteria. Also you should wash your hands to prevent contamination.       |

|            |   |  |  |
|------------|---|--|--|
| 1 Minute   | Ensure that this is done for the same amount of time each time. This will make the mixture have the same consistency, keeping a consistent quality.                       | Stir gradually into flour mix, until ingredients are just combined, bring together in hands.   | Once again check that your hands, and the utensils being used have been thoroughly cleaned prior to use.                       |
| 2 Minutes  | Ensure that the pastry is the same thickness throughout.  | Roll out the pastry thinly onto a floured surface.<br>   | Ensure that the surface has been cleaned to prevent physical contamination.  |
| 5 Minutes  | Make sure that all excess pastry has been removed evenly, to maintain a consistent appearance of the product.   | Cut the pastry into rounds, place in moulds and trim the excess off.<br>  | Ensure that you wash your hands before this particular stage, to prevent any physical contamination.                           |
| 10 Minutes | Ensure that the freezer is at the correct temperature, and that the pastry is in for the same length of time to ensure the quality of pastry is consistent.               | Place in the freezer for 10 minutes  | Make sure that pastry is stored above any meat to prevent there from being any contamination.                                  |
| 15 Minutes | Make sure that the oven is at the correct temperature before use. Also ensure that a timer is set, so that the pastry bakes for the same length of time on each occasion. | Remove from the freezer and bake blind in the oven for 10 minutes at 180C. Then remove greaseproof paper and bake for a further 5 minutes.<br> |  |
| 4 Minutes  | Check the measurements of the liquids to ensure that there is the precise amount to prevent any differences in the consistency.   | Add milk and cream to a saucepan, and heat gently until the mixture thickens.<br>  | Make sure that the milk and cream have been stored at the correct temperature prior to use, to prevent the growth of bacteria. |



|           |   |   |  |
|-----------|---|---|--|
| 5 Minutes | Time this stage to be sure that the consistency is correct  | Add the flour, vanilla essence and egg yolks, and whisk or stir over a low heat until the mixture thickens further.                                 | Ensure that none of the egg shell is in the yolk, as this would increase the risk of salmonella. |
| 1 Minute  | Measure out the amount of filling that goes into each case, so that they are consistent.                        | Pour into the pastry cases, and chill until the filling sets.<br> |  |
| 5 Minutes | Make sure that the same amount of fruit is placed on each tart, and in the same pattern to achieve consistency. | Lay on fresh fruit, in a pattern to decorate the tarts.   | Wash both your hands and the fruit before use to prevent any physical contamination.             |
| 2 Minutes | Ensure that the same amount of glaze is put onto each of the tarts, to keep them consistent.                    | Put apricot jam and water in a small bowl and mix to a paste. Brush this over the fresh fruit to provide a glaze to complete the flans.             |  |

## Testing my products

### Match to specification

- ✓ **The desserts should all complement each other**

I feel that the tarts looked very appetising, and the way that they were presented made them even more attractive. There were many different textures available in these desserts; with the creaminess of the cheesecake and the mousse, to the crisp pastry and the crumbliness of the biscuit base. The fruit on the top of the desserts also added another dimension to the textures, and also there were a range of different flavours available, with the slightly tart taste of the fruit, which went well with the arrangement of sweet fillings including the cheesecake and the patisserie cream.
- ✓ **All the desserts should include one or more types of fruit**

All of the different desserts which were made contained at least one type of fruit; with the lemon and blueberry of the cheesecake, the sweet lemon flavour of the fruit, and the lightly glazed topping of the fruit flan. I think that having fruit in my desserts was important as it provided colour to the dish, and also worked well to prevent the desserts from becoming too sweet. I feel that I could have included more of a range of fruits in the desserts, to add even more colour to the dish, however I think that the fruit that I did use worked really well together with complementing colours and flavours.
- ✓ **The trio should cost between £5-£8**

In the lemon cheesecake, the ingredients which were used are relatively inexpensive; with the double cream, cheese, lemon and blueberries. The most expensive part of this particular dish was the blueberries, but the small number that were used wouldn't greatly increase the cost of the dessert. I feel that the total cost of making one cheesecake would be around 60p. Similarly, the ingredients that were used in the lemon mousse are double cream, egg whites, lemon and sugar; this therefore means that it would be very inexpensive to create this particular dessert; and the cost would be around 40p per portion. The most expensive dessert on the plate was the fruit flan, however even in this dessert, the only expensive ingredients were the vanilla pod and the fruit. The small amount of each which would be required means that the dessert would still be relatively inexpensive to produce, at around 80p per dessert. Overall, it would cost less than £2 for all of the ingredients required in this dish, and therefore it would be possible to charge within the specified amount for the dessert, whilst still making a profit.
- ✓ **The desserts should be created with high quality ingredients**

The ingredients which I used for these desserts were of a relatively high quality, which I feel was suitable for this dish, as if the ingredients were of a higher quality then the end cost of the desserts would increase; which may seem unreasonable to customers.
- ✓ **The size should be scaled down so as to not over face customers**

Due to the fact that I am serving three portions of dessert together, I feel that it was important to ensure that the desserts were all of a similar size, so that they looked in proportion on the plate. Also I ensured that the size of the individual desserts were much smaller than would be used if served separately, as otherwise the customers would be overwhelmed by the sheer amount on their plate. Also this would have meant that the overall cost of the dessert would be much more, and there would be an increase in the amount of waste.

### Sensory analysis

I think that using a sensory analysis is very important as if the product wasn't very highly rated by a select number of people, then it's very likely that the dessert wouldn't be very popular in a restaurant.

**Person 1:** 'The pastry was delicious and light, with a crisp texture that gave a really nice mouth feel. The cream was slightly too thick for my liking though, and had a very sweet aftertaste. However, the tarts looked very attractive.' **8/10**

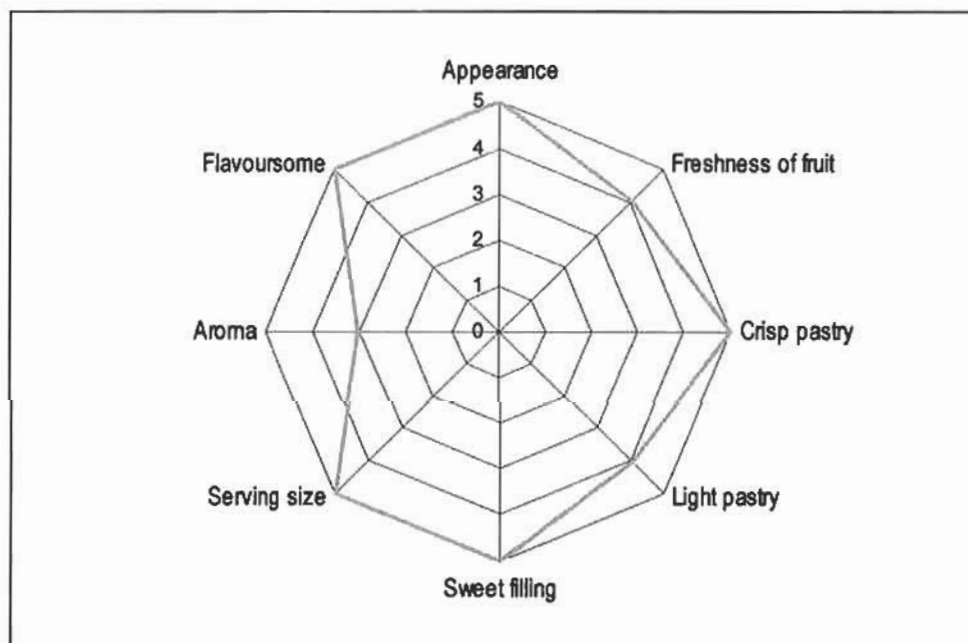
**Person 2:** 'The slight bitterness of the fruit worked really well with the sweet cream, and I really liked the crispness of the pastry.' **8/10**

**Person 3:** 'Wow. These look really attractive! I feel that all the ingredients worked really well together, as there are a combination of different textures and flavours.' **9/10**

**Person 4:** 'The fresh fruit looks really nice, and it provides a delicious flavour to the dessert.' **8/10**

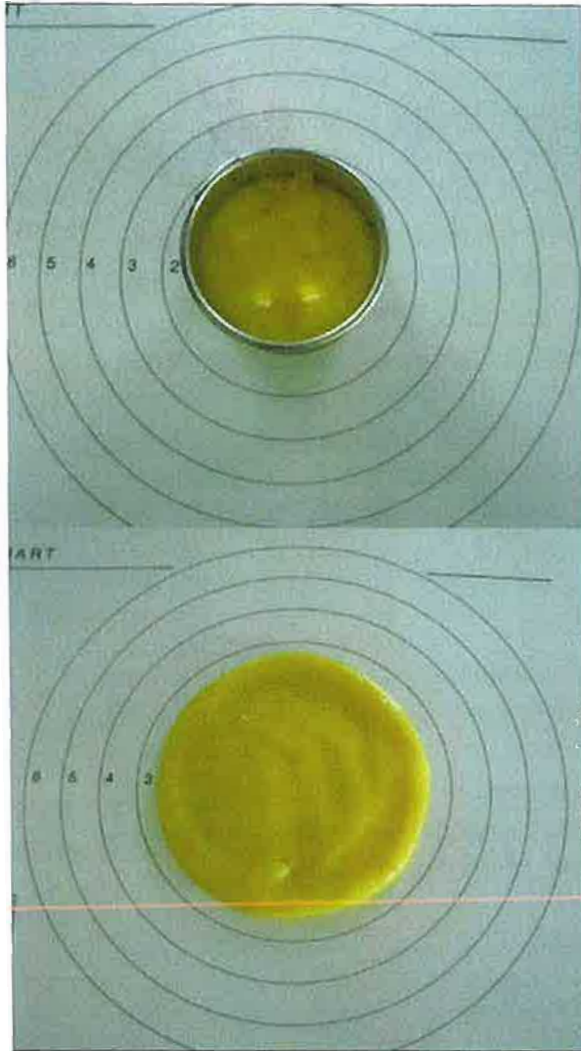
### Star profile

A star profile is a test where a variety of different characteristics are tested by a number of people, each point is then rated out of 5, the average of these results would be taken for each characteristic and then plotted within a chart. In an industry this would be carried out with a minimum of 6 testers to allow a range of opinions. By doing this it's easy to see which areas need to be improved upon, and where the product isn't quite up to standard. I am going to use a star profile as one of my sensory testing methods.



The dessert had a very good appearance, as the arrangement of glazed fruit on the top made them very attractive. The pastry was light and crisp which went really well with the sweet, creamy filling. I feel that they were the perfect size for a dessert, and if sold in a restaurant would be really nice served with either cream or a dollop of ice cream. The dessert was flavoursome and all the ingredients worked really well together.





### Viscosity test:

A viscosity test is used in the food industry to test that a consistent thickness is achieved when making sauces, fillings etc. I decided that it would be a good idea to conduct such a test on my patisserie cream so that I can ensure that the filling of the tarts are consistently of the same thickness.

Once I had made the patisserie cream, I placed 2 tablespoons of this into a metal cutter at the centre of the viscosity chart. I then removed the cutter and allowed the cream to spread. By doing this I know exactly the results I would expect if this test was carried out again, and therefore this makes it possible to ensure that the thickness is consistent.

### Shelf life/ quality:

I have carried out this particular test so that I know how long my tarts can be kept in the fridge before they begin to deteriorate in quality. To do this I left one tart in my fridge, at a temperature of 3C, and each day I did a sensory evaluation of it to see how it altered from how it was at the beginning.

**Day 2:** The flan was still of the same quality as when it was first made, however some of the raspberry juice had begun to seep into the patisserie cream. The taste had not deteriorated however, and would still be acceptable to serve in a restaurant.

**Day 3:** The raspberry juice had leaked even further into the patisserie cream, and the pastry has now started become softer in the centre with a slightly soggy texture.

**Day 4:** The fruit has begun to deteriorate in quality, and the pastry has also continued to become soggy.

**Day 5:** There is some evidence of syneresis on the top of the patisserie cream which shows that there is some degree of retrogradation from the gelatinisation which took place.

**Day 6:** There is even more syneresis here now, and the fruit has begun to show signs of mould. The pastry is now very stale at the edges, and shows signs of softening in the centre.