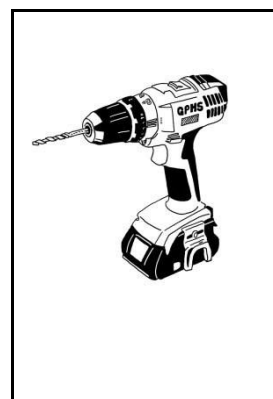


Case Study on Manufacturing Food



Subject:	Food Technology
Year:	12
Task:	2
Due Date:	Term 1, Week 9, 27/3/20
Mark:	/60
Weighting:	25%
Assessment Mode:	Practical and Assignment with electronic submission through Google Classroom

Outcomes

H1.1 explains manufacturing processes and technologies used in the production of food products

H4.2 applies principles of food preservation to extend the life of food and maintain safety.

Marking Criteria:

Students will be assessed on their ability to:

- Skills in experimenting with and preparing food by applying theoretical concepts.
- Skills in designing, implementing and evaluating solutions to food situation

Submission / Late Policy

Students are expected to submit their assessment tasks during the period the class meets on the due date. Students submitting assessment tasks at the staff room should only submit these tasks to their teacher or a nominated representative from the faculty. If the task is collected by anyone else the student MUST ask for a signed submission receipt.

Year 11-12 students will receive a zero for failing to submit their assessment task by the due date unless they have a doctor's certificate stating the nature of their absence. This is in line with NESAs ACE manual.

If you are absent on the due date you must submit the assessment task with a doctor's certificate on the first day that you return to school, whether you have the class or not. Failure to supply a doctor's certificate may result in a zero being awarded for the task

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HSC

Food Manufacture - Term One 2020

Assessment 2: Case Study on Manufacturing Food.

Prepare two reports (PART A and PART B) which answer the following questions: COMPUTER GENERATED and submitted through Google Classroom , plus PART C: Practical application.

PART A:

Cupcake/muffin Manufacturing in a domestic setting: At school (to be completed at home if absent on our practical day)

MARKS AWARDED

Find a cupcake recipe that suits your taste.

- a) **Identify** the raw material specifications for each ingredient. /4
- b) **Describe** the tests or assessments (sampling) you could apply to the ingredients to ensure compliance to the product specifications you have set. /4
- c) **Design** a flow process chart for your cupcake/muffin. Identify the critical control points. /3
- Make the cupcake according to the specifications you have set. Include a photograph of your batch in your report.**
- d) **Discuss**, were all the cupcakes/muffins uniform in size, appearance, weight and palatability? /3
- Account for any differences in characteristics.**
- e) Consider food additives which may be used if this product was manufactured at industry level. For each food additive discussed, **explain** its function. **List** the additive/s by its number and full name. /6
- f) **Describe** the principles of food preservation that were applied to the processing of your cupcake/muffins? /4

TOTAL: /24

PART B:

Food Preservation: Jam making: At school

MARKS AWARDED

- a) **Identify** the main causes of spoilage of the perishable ingredients before preservation. /4
- b) **Explain** TWO preservation principles involved when preserving this food. /6
- c) **Discuss** TWO preservation processes which may be used in commercial jam. /6
- d) **Describe** an experiment to determine the suitability of the packaging for this product. /4
- e) **Determine** the most suitable type of packaging for this product and state why. /3
- f) **Compare and contrast** your jam in comparison to other commercial jam products. /3
- What are the similarities and differences?

TOTAL: /26

PART C:

Jam manufacture: Practical application

MARKS AWARDED

Application of cake and jam making procedures and principles of food preservation
Demonstration of safe, hygienic work practices

TOTAL /10

PART A: /24

PART B: /26

PART C: /10

TOTAL: /60

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Marking Guideline PART A:

Cupcake manufacturing in a domestic setting

Question a: Identify the raw material specifications for each ingredient.	
Outstanding 4 marks	For every ingredient student has: <ul style="list-style-type: none"> • identified standards for physical characteristics (size,shape) • identified standards for sensory characteristics (colour,aroma) • identified standards for chemical characteristics (moisture content) Student has correctly identified in depth what each ingredient should look like and has also discussed checks for microbial growth in each section.
High 3 marks	For every ingredient student has: <ul style="list-style-type: none"> • identified standards for physical characteristics (size,shape) • identified standards for sensory characteristics (colour,aroma) • identified standards for chemical characteristics (moisture content) Student has identified what each ingredient should look like and has also discussed checks for microbial growth in each section.
Sound 2 marks	For every ingredient student has: <ul style="list-style-type: none"> • identified standards for physical characteristics (size,shape) • identified standards for sensory characteristics (colour,aroma) • identified standards for chemical characteristics (moisture content) Student has identified what each ingredient should look like.
Basic 1 marks	For some ingredients student has: <ul style="list-style-type: none"> • identified standards for two or more characteristics. Student has identified what each ingredient should look like.
Limited 0.5- 0 marks	Limited description of raw material specifications.
Question b: Describe the tests or assessments (sampling) you could apply to the ingredients to ensure compliance to the product specifications you have set.	
Outstanding 4 marks	Student has expertly described sampling methods for each ingredient which mirrors quality control procedures used in industry. Student has discussed physical, sensory and chemical or microbial tests in detail.
High 3 marks	Student has described sampling methods well for each ingredient which mirrors quality control procedures used in industry. Student has discussed physical, sensory and chemical or microbial tests.
Sound 2 marks	Student has described sampling methods for some ingredients which mirrors quality control procedures used in industry. Student has discussed two or more characteristic tests.
Basic 1 marks	Student has described sampling methods for some ingredients. Student has discussed at least two characteristic tests at a basic level.
Limited .5 mark	Limited description of tests and assessment samples.
Question c: Design a flow process chart for your cupcake. Identify the critical control points.	
Outstanding 4 marks	Student has expertly created a flow process chart for their cupcake, using correct symbols and has identified all critical control points that could result in a risk to health and safety or financial loss.
High 3 marks	Student has accurately created a flow process chart for their cupcake, using correct symbols and has identified all critical control points that could result in a risk to health and safety or financial loss.
Sound 2 marks	Student has created a flow process chart for their cupcake, using correct symbols and has identified some critical control points that could result in a risk to health.

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Basic 1 mark	Student has created a flow process chart for their cupcake, using some correct symbols and has identified 1 or more critical control points that could result in a risk.
Limited 0.5- 0 marks	Student has created a flow process chart for their cupcake, using some correct symbols.
Question d: Discuss, were all the cupcakes uniform in size, appearance, weight and palatability? Account for any differences in characteristics.	
Outstanding 3 marks	Student has evaluated their cupcakes and accounted for size differences, appearance, weight and palatability with correct reasoning and expert evaluation skills.
High 2 marks	Student has discussed size differences, appearance, weight and palatability with good reasoning.
Sound 1.5 marks	Student has discussed their cupcakes and accounted for two or more characteristics with some correct reasoning.
Basic 1 mark	Student has discussed their cupcakes and accounted for two or more characteristics with some incorrect reasoning.
Limited 0.5- 0 marks	Student has discussed their cupcakes with some incorrect reasoning.
Question e: Consider food additives which may be used if this product was manufactured at industry level. For each food additive discussed, explain its function. List the additive/s by its number and full name.	
Outstanding 6 marks	Student has noted many possible food additives. Student has expertly explained all mention food additives functions in food. Student has correctly listed additives by full names and numbers.
High 5-4 marks	Student has noted adequate possible food additives. Student has recognised and explained all mention food additives functions in food. Student has correctly listed additives by full names and numbers.
Sound 3 marks	Student has noted some possible food additives. Student has recognised some mentioned food additives functions in food. Student has listed additives by full names and numbers.
Basic 2-1 marks	Student has noted some possible food additives. Student has listed additives by full names and numbers.
Limited 0.5- 0 marks	Student has listed additives at a limited standard.
Question f: Describe the principles of food preservation that were applied to the processing of your cupcakes?	
Outstanding 4 marks	Student has expertly described the preservation principles which were applied to the manufacture of the cupcake. They have discussed numerous methods to ensure safety.
High 3 marks	Student has described the preservation principles which were applied to the manufacture of the cupcake well. They have discussed adequate methods to ensure safety.
Sound 2 marks	Student has described the preservation principles which were applied to the manufacture of the cupcake. They have discussed some methods to ensure safety.
Basic 1 mark	Student has described one or more preservation principles which were applied to the manufacture of the cupcake.
Limited 0.5-0 marks	Student has described one preservation principles incorrectly or at an inadequate level.

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Marking Guideline PART B: Food Preservation: Jam making

Question a: Identify the main causes of spoilage of the perishable ingredients before preservation.	
Outstanding 4 marks	Student has expertly identified the 5 main causes of spoilage of all perishable ingredients in jam.
High 3 marks	Student has adequately identified the 5 main causes of spoilage of all perishable ingredients in jam.
Sound 2 marks	Student has identified the 3-4 main causes of spoilage of some perishable ingredients in jam.
Basic 1 mark	Student has identified 1-2 main causes of spoilage of some perishable ingredients in jam.
Limited 0.5-0	Student has identified 1-0 main causes of spoilage of some perishable ingredients in jam or has incorrectly answered.
Question b: Explain TWO preservation principles involved when preserving this food.	
Outstanding 6 marks	Student has explained TWO preservation principles involved when preserving their jam. They have chosen preservation principles which are correct for this food and have discussed these in detail.
High 5 -4 marks	Student has explained TWO preservation principles involved when preserving their jam. They have chosen preservation principles which are correct for this food and have discussed these well.
Sound 3 marks	Student has explained TWO preservation principles involved when preserving their jam. They have chosen preservation principles which are correct for this food and have discussed these adequately.
Basic 2 mark	Student has explained ONE preservation principle involved when preserving their jam.
Limited 1-0 marks	Student has incorrectly explained ONE preservation principle involved when preserving their jam.
Question c: Discuss TWO preservation processes which may be used in commercial jam.	
Outstanding 6 marks	Discuss TWO preservation processes which may be used in commercial jam. Student has discussed TWO preservation processes involved when preserving commercial jam. They have chosen preservation processes which are correct for this food and have discussed these in detail.
High 5 -4 marks	Student has explained TWO preservation processes involved when preserving commercial jam. They have chosen preservation processes which are correct for this food and have discussed these well.
Sound 3 marks	Student has explained TWO preservation processes involved when preserving commercial jam. They have chosen preservation processes which are correct for this food and have discussed these adequately.
Basic 2 mark	Student has explained ONE preservation process involved when preserving commercial jam.
Limited 1-0 marks	Student has incorrectly explained ONE preservation process involved when preserving commercial jam.
Question d: Describe an experiment to determine the suitability of the packaging for this product.	
Outstanding 4 marks	Student has expertly described an experiment which would test the suitability of the package. They have discussed how the experiment would prove the package suitable or unsuitable. This experiment mirrors experiments appropriate for industry.

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High 3 marks	Student has described an experiment well, which would test the suitability of the package. They have discussed how the experiment would prove the package suitable or unsuitable.
Sound 2 marks	Student has described an experiment adequately, which would test the suitability of the package. They have discussed how the experiment would prove the package suitable or unsuitable.
Basic 1 mark	Student has described an experiment, which would test the suitability of the package at a basic level.
Limited 0.5- 0 marks	Student has incorrectly described an experiment.
Question e: Determine the most suitable type of packaging for this product and state why.	
Outstanding 3 marks	Student has correctly determined the most suitable type of packaging for the jam and stated why in detail.
High 2 marks	Student has correctly determined the most suitable type of packaging for the jam and stated why adequately.
Sound 1.5 marks	Student has correctly determined the most suitable type of packaging for the jam and stated why at a sound level.
Basic 1 mark	Student has determined a type of packaging for the jam and stated why inadequately.
Limited 0.5- 0 marks	Student has not determined a type of packaging for the jam.
Question f: Compare and contrast your jam in comparison to other commercial jam products. What are the similarities and differences?	
Outstanding 3 marks	Students have expertly compared their jam to commercial jam products acknowledging the similarities and differences. They have used clear examples to illustrate their point.
High 2 marks	Students have compared their jam to commercial jam products acknowledging the similarities and differences. They have used clear examples to illustrate their point.
Sound 1.5 marks	Students have compared their jam to commercial jam products acknowledging the similarities and differences.
Basic 1 mark	Students have compared their jam to commercial jam products acknowledging the similarities and differences inadequately.
Limited 0.5- 0 marks	Students have compared their jam to commercial jam products acknowledging some similarities and differences at a limited level.