

T Level Technical Qualification in Science

Occupational specialism assessment (OSA)

Food Sciences

Assignment 1

Assignment brief

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Timings

You have 7 hours 30 minutes to complete the 4 tasks within this assignment. Your tutor will provide details of how this time will be split up, and over how many days or sessions.

- task 1 – 2 hours 10 minutes
- task 2 – 2 hours 55 minutes
- task 3 – 1 hour 15 minutes
- task 4 – 1 hour 10 minutes

SAMPLE

Scenario

A major food retailer is looking at a range of new or improved existing products to meet one of the following consumer trends:

- health
- environmental
- ethical
- economic
- cultural influence

Select **one** of the trends above and produce a detailed planning proposal for a new product development (NPD) or existing product development (EPD) based on the selected trend.

The product must include some ingredient preparation, for example, chopping or slicing, **and** processing, for example, blending or heat treatment, and **not** be just a combination of raw ingredients without any preparation or processing.

New or improved products can include:

- healthy snacks, for example, baked crisps, oat bars, fruit smoothies
- baked goods, for example, bread, cakes, biscuits, pies
- desserts and confectionery, for example, mousses, cheesecakes, crumbles, chocolate, nougat, marshmallows, macarons
- ready meals, for example, curry, shepherd's pie
- side dishes and accompaniments, for example, samosas, chutneys, sauerkraut, preserves
- non-alcoholic drinks, for example, kefir, cordials, ready to drink iced teas and coffees, milk-free shakes
- soups, sauces and stocks

Trends can include:

- health, for example, vegan, low fat, low sugar, allergen-free
- ethical produce, for example, animal welfare, palm oil substitutes
- environmentally sustainable ingredients
- economical, for example, local sources of ingredient supply
- cultural influence, for example, endorsed by celebrity chefs, social media trends

Performance outcomes

PO1: Perform appropriate activities to support the food supply chain complying with regulatory requirements

Task 1: develop a product brief

Develop a product brief that includes:

1.1(a): Rationale for your selection for the new or improved product including sources of information used to identify current trends, target market and marketing opportunities

1.1(b): Name, description and conditions of the new or improved product concept, including unique selling point, target weight/volume, packaging and storage details

(21 marks total)

1.2(a): How your ingredients and packaging requirements contribute to your selected consumer trend

1.2(b): A brief description of how the product is manufactured, from the intake of raw materials to the final packaged product. The overview should include the basic details of how the product will be made, and what the key process steps are, to include key food safety and quality controls

(12 marks total)

2 hours 10 minutes

Task 2: define the product brief objectives

Define the product brief objectives to include:

2.1: An estimation of the timings of each stage from product concept to product launch, explaining how the stages in the process affect the overall timeline

(6 marks)

2.2: A calculation of the cost of ingredients and packaging per consumer unit with reference to your proposed recipe. Outline other costs associated with the production of your product. You must state the source of your ingredients and packaging

(12 marks)

2.3: Calculate the mandatory nutritional data. List the ingredient data, including the source of the data

(7 marks)

2.4(a): An explanation of how the ingredients, processing and packaging selected contribute to the product's safety and shelf life

2.4(b): Explain how the relevant ingredients and processing steps contribute to the product's nutritional profile

(20 marks total)

2 hours 55 minutes

Task 3: food safety and quality management

3.1(a): Produce a flow diagram for your product as outlined in step 4 of the 12 steps of hazard analysis and critical control points (HACCP). This should:

- demonstrate a clear understanding of all steps of the process for subsequent risk assessment
- be presented in a suitable digital format of your choice
- be presented to industry standard

3.1(b): Create a monitoring procedure and associated record to demonstrate how a food safety hazard is under control within the chilled storage area

(21 marks total)
1 hour 15 minutes

Task 4: product specification and analysis

4.1: Create a product specification that clearly describes:

- food safety attributes and nutritional target values
- quality testing parameters that include sensory or organoleptic characteristics
- requirements for packaging, mandatory labelling, storage and transportation

(16 marks)
1 hour 10 minutes

In assignment 2, you will be required to carry out a taste panel to gather feedback on your product in relation to your quality testing parameters and target values. The taste panel will require evaluation of at least 3 sensory characteristics.

Document information

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Change History Record

Version	Description of change	Approval	Date of Issue
v1.0	Post approval, updated for publication.		January 2021
v1.1	NCFE rebrand.		September 2021
v1.2	OS review Feb 23		February 2023
v1.3	Sample added as a watermark	November 2023	21 November 2023