FDQ - Qualification Specification

FDQ number	Qualification title	EPA Plan number	EQF Level	Qualification number (QN)
261-303	Level 3 End-point Assessment for Food Technologist	ST0198/AP02	4	603/7299/0

Purpose overview

This End-point Assessment (EPA) qualification is designed for learners who have completed the on-programme training for the Food Technologist standard apprenticeship. Successful completion of this EPA confers the correct level of knowledge, skills and behaviours specified in the apprenticeship standard, and contributes towards the achievement of the Level 3 Food Technologist apprenticeship. FDQ provides an EPA statement of results but certification of the complete apprenticeship standard is provided by the Education and Skills Funding Agency (ESFA).

Regulation

The EPA qualification is externally quality assured by Ofqual.

Entry Requirements

Learners need to be 16 years old or over to take this qualification, employed or contracted in a workplace and enrolled on the Food Technologist standard apprenticeship.

Prior to taking this EPA qualification, entrants should meet the Level 3 Food Technologist gateway requirements as specified in the assessment plan:

- On and off the job training to develop knowledge, skills and behaviours as specified in the apprenticeship standard

- L3 Diploma in Food Technology*
- Level 2 Mathematics
- Level 2 English

*FDQ do not currently offer this qualification

Qualification Content

This qualification tests the mandatory knowledge, skills and behaviours set out in the Food Technologist standard including: knowledge of the food industry, health and safety and food safety; food technologist skills in food science to ensure the smooth transition of food and drink products from farm to fork driving the manufacturing process ensuring that technical and quality standards are achieved whilst maximising profitability to meet customer requirements.

Entrants will undergo three test components as detailed on the following pages, the results of which are aggregated to give a final apprenticeship grade of fail, pass, merit or distinction.

This qualification could lead to

This qualification will support progression to further learning in:

1. Subject areas including:

- Food science and technology
- Food safety and quality
- Food team leading/management
- Food retail management

2. Further qualifications including:

- Level 4 Management

Qualification support

The Level 3 Food Technologist standard and assessment plan has been developed by the Food Technologist Apprenticeship Employer Group and approved by the Institute for Apprenticeships and Technical Education (IFATE); Ofqual has confirmed it will carry out external quality assurance of the EPA. The FDQ EPA qualification is supported by the Food and Drink Training and Education Council and a range of employers and training providers.

Further information

Further information can be obtained from our website at: http://www.fdq.org.uk

Or by contacting FDQ:

Tel: 0113 859 1266

E-mail: fdq@fdq.org.uk

Methods of Assessment

The qualification includes 3 assessment components, each of which must achieve a pass in order to pass the EPA requirement of the Level 3 Food Technologist apprenticeship. Specifications for each of the assessment components are available on FDQ's secure system FDQAwards. Please contact FDQ's EPA team at epa@fdq.org.uk for more information.

Overall grading of the EPA qualification is fail, pass, merit or distinction.

Assessment Components and Time Allowed

Level 3 EPA for Food Technologist ST0198	Possible grades
Written Knowledge test	Fail/pass/merit/distinction
Workplace Project and Presentation	Fail/pass/merit/distinction
Professional Dialogue and Interview	Fail/pass/merit/distinction
Overall apprenticeship grading	Fail/pass/merit/distinction

Test structure		Time allowed
Written Knowledge test (WKT)	30 multiple choice questions 5 short answer questions	90 mins
Workplace Project and Presentation (WPP)	3,000 word project report and project presentation with Q&A session	11 week project with 45 – 60min presentation in week 12
Professional Dialogue & Interview (PDI)	Mandatory questioning of 6 questions	45-60 minutes

Qualification scope

The qualification will assess the following knowledge, skills and understanding:

		Assessment Method		
Standard Ref	Knowledge to be assessed	WKT	WPP	PDI
K1	Legislation and regulations in the food and drink industry, including understanding of: • Food Safety • Health and Safety • Hazard Analysis and Critical Control Points (HACCP)	•	•	
K2	Basic principles of environmental legislation	•		
K3	Basic principles of microbiology: common food pathogens and toxins, food hygiene	•		
K4	Basic principles of food chemistry: composition of food, food nutrition	•		
K5	How to carry out sensory analysis	•		
K6	Use and purposes of food industry standards (e.g. British Retail Consortium, Standard Operating Processes, Quality Management Systems and internal and external specifications)	•		
K7	Internal and external audit processes used in food businesses	•		
K8	How to collect, interpret and analyse data and complete documentation	•	•	
K9	Principles of raw materials: specifications, supply, storage, handling and quality assurance	•		
K10	The key principles of Continuous Improvement (CI) Management	•		
K11	Management systems used in food businesses: Good Manufacturing Processes	•		

	(GMP), Good Hygiene Practices (GHP), process flow and risk management			
K12	Understanding of the drivers of costs and quality	•		
K13	Methods of pest control and pest prevention	•		
K14	The functions and processes used in new and existing product development (NPD and EPD)	•		
K15	The food supply chain from end to end, and relationships within it	•		
K16	Understanding of a range of problem-solving techniques, to include root cause analysis and investigation methods	•	•	
K17	Appreciation of ethical issues in the food industry	•		
K18	Understanding of how to cost products	•		

Standard Ref		Assessment Method		
	Skills to be assessed	WKT	WPP	PDI
S1	Implement and maintain risk management systems (e.g. Hazard Analysis and Critical Control Points)		•	
S2	Review and maintain technical procedures for food businesses		•	
S3	Use a range of IT systems to analyse and interpret data to identify trends and drive Continuous Improvement (CI)		•	
S4	Provide and interpret management data and information (reports and presentations)		•	
S5	Carry out internal audits and participate in external audits			•
S6	Conduct sensory evaluation activities		•	
S7	Investigate and resolve problems, including customer complaints and quality issues			•
S8	Contribute to Continuous Improvement (CI)			•

S9	Develop and maintain effective relationships with customers, suppliers and colleagues		•	
S10	Act as a champion for the technical department within the wider business			•
S11	Carry out a product costing			•
S12	Support product trials			•
S13	Use problem solving techniques, to include root cause analysis and investigation methods		•	
S14	Influence and negotiate with colleagues		•	

		Assessment Method		
Standard Ref	Behaviours to be assessed	WKT	WPP	PDI
B1	Safe working: ensures safety of self and others, food safe, challenges safety issues		•	
B2	Ownership of work: accepts responsibility, is proactive, plans work		•	
B3	Pride in work: integrity, aims for excellence, time management		•	
B4	Self-development: proposes objectives to support the business, seeks learning, drives the development of self and others			•
B5	Integrity and respect: respect for colleagues, good communication at all levels, adapts style			•
B6	Working in a team: builds good relationships with others, works collaboratively, contributes ideas and challenges appropriately		•	
B7	Problem solving: works to identify and ensure root causes of problems are resolved, demonstrating a tenacious approach		•	

B8	Responsiveness to change: flexibility to changing working environment and demands			•
B9	Company/industry perspective: knowledge of company and food industry, acts as an ambassador			•
B10	Effective communication: in writing, visually and verbally		•	
B11	Innovation: Demonstrates curiosity to foster new ways of thinking and working		•	

Assessment Criteria

The three assessment components are assessed using the grading criteria on the following pages.

Points are allocated according to the allowances indicated, up to the maximum stipulated.

Assessment component	Assessment grading criteria		
WKT	Multiple choice questions: 1 point for each correct answer Short answer questions: up to 6 points for each correct answer **Total available points for WKT = 60 points (min 40 to pass, 50 - 54 for a merit, 55 or more for a distinction).**		
WPP	Pass (1 point)	Good (Merit) (2 points)	Outstanding (Distinction) (3 points)
1. Project plan and Approach	Project plan outlines realistic timescales and objectives and approach is clearly defined with consideration of resources and stakeholders	Project plan demonstrates approach and methodology has been well thought through carefully considered with realistic aims, objectives and timescales; demonstrates consideration of resources and risks	Project plan clearly defines approach and methodology, realistic and achievable aims objectives and timescales; and demonstrates careful consideration of all resources and possible stakeholders; full and accurate risk assessment is included.
2. Technical procedures	Implements and reviews procedures in line with organisational procedures	Implements procedures effectively, in a logical and planned sequence, seeking ways to improve performance	Demonstrates effective improvement on current performance, suggesting, implementing and validating improvements to standards or ways of working
3. Risk management procedures	Accurately assesses risks and plans action to manage risk	Conducts thorough risk assessment and implements effective controls	Demonstrates a systematic approach to carrying out risk assessment, implementing effective risk management

			controls and communicating the results.
4. Stakeholder liaison	Internal and external stakeholders identified and engaged	Demonstrated ability to communicate with internal and external stakeholders	Demonstrated ability to effectively influence all stakeholders, actively seek and listen to feedback
5. Data analysis	Structured data analysis using appropriate tools and techniques	Well–structured data analysis using appropriate statistical tools & techniques	Systematic data analysis using advanced statistical tools & techniques
6. Drawing conclusions & recommendations	Well–reasoned conclusions based on appropriate data analysis and basic recommendations made	Well–reasoned conclusions based on appropriate data analysis and logical recommendations for improvements made	Well–reasoned conclusions and sound logical recommendations for future implementation linked to tangible business benefits
7. Presentation	Presentation is well laid out, neat and organised with clearly articulated objectives	Style and language used within the presentation is appropriate to the audience; laid out in a logical sequence with a clear start, middle and end	Uses an appropriate variety of techniques and tools within the visuals and narrative to maximise the impact of key points within the presentation
8. Delivery of presentation	Clear, articulate and accurate presentation of technical project elements and personal viewpoints within timescales allowed	Delivers presentation confidently; deals well with technical questioning; demonstrates effective listening skills	Dynamic and engaging presentation; adapts style to fully capture the attention of the audience using an appropriate selection and variation of presentation skills
Fail	**Pass**	**Merit**	**Distinction**
Scored 7 or less	Scored between 8 and 12 points	Scored between 13 and 18 points	Scored between 19-24 points
PDI	**Pass** 1 Point	**Good (Merit)** 2 Points	**Outstanding (Distinction)** 3 Points
1. Self- development	Proposes objectives to	Takes ownership for learning and practising	Proactively develops new skills; challenges

	support the business, seeks learning, drives the development of self and others.	new skills/techniques/tools; constantly seeks to improve own understanding and learn from others; shares knowledge and experiences with others	and questions others to improve own understanding; encourages others to learn from experiences, supporting them when they make a mistake
2. Working in a team	Builds good relationships with others, works collaboratively, contributes ideas and challenges appropriately.	Builds excellent relationships with others, demonstrates knowledge and understanding of team goals.	Contributes and willing to lead team-based discussions or problem solving; puts team goals ahead of personal recognition.
3. Responsiveness to change	Demonstrates flexibility to changing working environment and demands.	Demonstrates flexibility to get involved in different tasks; consistently reacts positively to changes and finds ways to support implementation.	Looks to understand the reasons behind changes; constructively questions and challenges change; sets a positive example for others about change.
4. Company/industry perspective	Demonstrates knowledge of company and food industry, acts as an ambassador.	Identifies opportunities to improve own understanding of the company and wider food industry; sets an example to others.	Proactively seeks to improve own understanding of the company and wider food industry; actively seeks opportunities to promote the business.
Fail	Pass	Merit	Distinction
Scored 3 or less points	Scored between 4 and 6 points	Scored between 7 and 10 points	Scored between 11 -12 points

Specimen assessments

Example multiple-choice questions:

Question 1

Principles of environmental legislation is about the control of

a) waste, air, land and water quality
b) chemicals, air, water and land
c) land, soil, animals and rivers
d) agriculture, processing, transportation and waste disposal

Correct answer: a

Question 2

What food groups are most at risk from contamination from food pathogens?

a) High risk foods
b) Low risk foods
c) High moisture content foods
d) Low sugar foods

Correct answer: a

Question 3

What term is used to describe a sensory evaluation where testers are not influenced by the appearance of the food?

a) Non descriptive testing
b) Blind testing
c) Difference testing
d) Triangle testing

Correct answer: b

Question 4

Which example is a type of quality key performance indicator (KPI) in the food industry?

a) Throughput
b) Downtime to operating time ratio
c) Number of non-compliance events
d) Yield

Correct answer: c

Question 5

Which type of pest leaves these signs in a food production area. Black smears, smell, faeces, chewing and gnawing marks?

a) Stored product insects
b) Rodents
c) Birds
d) Flies and flying insects

Correct answer: b

Example short answer question:

1a. Name two activities that are effective in preventing cross contamination of allergens during storage (4mks)

1b. Provide two examples of ingredients classified as allergens (2 marks for each answer)

Example answer:

1a. Correctly segregated in an allergen only area. Coloured coding of containers and handling utensils, correct and clear labelling to identify allergens. Raw materials inspection upon receipt of goods at intake

1b. Celery, gluten, shellfish, eggs, fish, lupin flour, milk, molluscs, mustard, nuts, peanuts, sesame seeds, soybeans, Sulphur dioxide

Sample Project brief for Work Based Project:

Example Project Brief	
Project Title	Comparative analysis of a product for quality and safety attributes
Applicable role	Food Technologist
Project Scope	Select a product or recipe Identify what the product or recipe is being tested for (e.g. factors affecting enzyme activity in food; effect of food processing on nutritional content; effect of food preparation on organoleptic qualities) Test the product or recipe (e.g. using different batches) Carry out shelf life testing Interpret the results of laboratory analysis Provide customer insight Produce report
Output required	The project findings should be presented in a technical report of no more than 3000 words which describe how the project was planned, implemented, outcomes and results are discussed and conclusions drawn, which is presented to the independent assessor at the end of the assessment period.
Timing	The workplace project should be undertaken over a 12-week period where the report is handed in at week 11 and presented in week 12 of the end point assessment period.

Examples of PDI questions:

Standard reference	Sample sets of questions – IEs will ask all questions within each set.
B4	Self-development Main question: Give an example of how you have driven your own development and understanding of your role. Extension question: Have you supported others in learning new skills and understanding of the business? Give an example.
B6	Working in a team Main question: Give an example of how you have worked collaboratively in your role. Extension question: Describe the goals of your team. How have you contributed to their achievement?
B8	Responsiveness to change Main question: Do you prefer to avoid change in your role? Extension question: If you were told that a new piece of equipment was to be introduced and you had to test it, how would you react?
B9	Company/industry perspective Main question: Explain the objectives of your business and how it compares to its competitors. Extension question: Give some examples of how you have improved your knowledge of the business and the wider food industry.

Additional information and guidance

This specification should be read in conjunction with additional information relating to the EPA and the Food Technologist apprenticeship, which can be found in the following documents:

- Food Technologist End-point Assessment Plan ST0198/AP02, available from https://www.instituteforapprenticeships.org/media/1426/food-technologist-assessment-plan.pdf

- Food Technologist Apprenticeship Standard ST0198, available from https://www.instituteforapprenticeships.org/apprenticeship-standards/food-technologist-v1-0/

- Food Technologist Apprenticeship Standard – Employer and Training Provider Guide to End-point Assessment, available from epa@fdq.org.uk

FDQ has produced a number of guidance documents and specimen assessments to support apprentices, training providers and employers. Please contact epa@fdq.org.uk for further details.

Record of revisions to this document

Version	Description of change	Date
2.0	Clarification of gateway requirements – L3 diploma in Food Technology required and currently not provided by FDQ	16.02.2022