

FDQ - Qualification Purpose and Structure Specification

FDQ number	Qualification title	EPA Plan number	EQF Level	Qualification number (QN)
311-280	FDQ Level 3 End-Point Assessment for Food and Drink Advanced Process Operator	ST0196/AP05	4	610/0414/5

Purpose overview

This End-point Assessment (EPA) qualification is designed for learners who have completed the on-programme training for the Food and Drink Advanced Process Operator 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 and Drink Advanced Process Operator 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 and Drink Advanced Process Operator standard apprenticeship.

Prior to taking this EPA qualification, entrants should meet the Level 3 Food and Drink Advanced Process Operator 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
- Level 3 Diploma in Food and Drink Operations
- Level 2 Mathematics
- Level 2 English

Qualification Content

This qualification tests the mandatory knowledge, skills and behaviours set out in the Food and Drink Advanced Process Operator standard including:

The broad purpose of the occupation is to support the manufacture of quality food and drink products. They conduct start-up, close-down, changeover, and handovers in the manufacturing process, often using highly automated equipment and technology, across a wide range of food products.

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:

- Production management
- Food science and technology
- Food safety and quality
- Food team leading/management
- Food product development

2. Further qualifications including:

FDQ Level 4 Award in HACCP Management for Food Manufacturing

FDQ Level 4 Award In Food Safety Management for the Food Industry

Qualification support

The Level 3 Food and Drink Advanced Process Operator standard and assessment plan has been developed by the Food and Drink Advanced Process Operator Apprenticeship Employer Group and approved by the Institute for Apprenticeships and Technical Education (IFATE); Ofqual 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 and Drink Advanced Process Operator 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 FDAO ST0196/AP05	Possible grades
Knowledge Test (KT)	Fail/pass/merit/distinction
Observation (O)	Fail/pass/merit/distinction
Presentation and Interview (PI)	Fail/pass/merit/distinction
Overall apprenticeship grading	Fail/pass/merit/distinction Minimum pass in each component

Assessment		Time
Knowledge test (KT)	Core MCQ format of 30 multiple choice questions, 1 mark per question 5 extended answer questions x 6 marks per question	90 min
Observation	6 activities, practical assessment plus questioning reflecting apprentices normal working conditions	2-4 hours
Presentation and Interview	Apprentice presents a Continuous Improvement project to the Independent Examiner	30-45 min for presentation 45-60 min for interview

Qualification scope

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

EPA Assessment Method	Key
Knowledge Test – multiple choice	KT
Practical Observation	PO
Presentation & Interview	PI

Standard Ref	Knowledge to be assessed	Assessment Method		
		KT	PO	PI
K1	Principles of plant maintenance of equipment and processes	•		
K2	How to identify and resolve technical problems (including products, equipment and safety) in line with organisational processes	•		•
K3	The process of introducing new processes, products and machinery	•		
K4	The wider business environment: internal and external customers, profitability and commercial awareness	•		
KS	Principles of monitoring and assessing risks, including Hazard Analysis and Critical Control Points (HACCP)	•	•	
K6	Principles of team leading, training, mentoring and buddying	•		
K7	Principles of asset care	•		

K8	Principles of data analysis and food operations	•	•	•
K9	Principles of continuous improvement	•		•
K10	Principles of incident management	•		
K11	Principles of multistage operations, including start-up, shutdown and changeovers, in line with Standard Operating Procedures (SOPs)	•		
K12	Principles of internal and external audits	•		
K13	Principles of high-quality systems	•	•	
K14	Principles of environmental management systems	•		
K15	Principles of health and safety systems	•	•	
K16	Principles of food science and technology	•		
K17	Principles of planning and stock control	•		
Standard		Assessment Method		
Ref	Skills to be assessed	KT	PO	PI
S1	Ensure compliance with Health and Safety regulations, e.g. Isolation and Lock-off, guarding, PPE, Manual Handling		•	
S2	Contribute to risk assessment		•	
S3	Analyse and report data		•	•
S4	Anticipate potential problems or delays and plan accordingly			•
S5	Use problem solving techniques to eliminate root cause of problems			•

S6	Evaluate and improve production in line with Continuous Improvement (CI) techniques and take responsibility for CI activity			•
S7	Take action to minimise waste		•	
S8	Carry out routine and specialist maintenance of equipment, in line with organisational guidelines		•	
S9	Execute incident management protocols			•
S10	Support a variety of internal audits			•
S11	Participate in external audits, in line with organisational procedures			•
S12	Contribute to the development and improvement of quality controls			•
S13	Carry out testing for quality control		•	
S14	Take part in mentoring, buddying and on- the-job training			•
S15	Interpret and implement Standard Operating Procedures and Technical Compliance procedures to ensure working towards best practices		•	
		Assessment Method		
Standard Ref	Behaviours to be assessed	KT	PO	PI
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: 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, adapts style where appropriate		•	
B6	Working in a team: builds good relationships with others, works collaboratively, contributes ideas and challenges appropriately, leads by example			•
B7	Problem solving: works to identify and ensure root causes are resolved, demonstrating a tenacious approach			•
B8	Responsiveness to change: flexibility to changing working environment and demands			•
B9	Company/industry perspective: desire to learn about the company and food industry, acts as an ambassador			•
B10	Effective communicator at all levels		•	
B11	Demonstrates and encourages curiosity to foster new ways of thinking and working			•
B12	Acts in alignment with the business vision and values			•

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 & KSBs	Assessment criteria
Knowledge Test (KT)	<p>Multiple choice questions (MCQ): 40 questions, 1 point for each correct answer.</p> <p>Extended answer questions (EAQ): 5 questions, 6 points for each correct answer</p> <p>Total available points for MCQ = 30</p> <p>Total available points for EAQ = 30</p> <p>Total available points for KT = 60</p>

Fail	Pass	Merit	Distinction
Apprentice scores 0-39 marks	Apprentice scores 40-50 marks	Apprentice scores 51-55 marks	Apprentice scores 56-60 marks

Practical Observation (PO)			
Knowledge, Skills and Behaviours Statement			
Principles of monitoring and assessing risks, including Hazard Analysis and Critical Control Points (HACCP)			
K5			
Assessment Criteria			
Fail Criteria: 0 points	Pass Criteria: 1 point	Pass with Merit Criteria: 2 points	Pass with Distinction Criteria: 3 points
Does not demonstrate an understanding of the principles of monitoring and assessing risks including HACCP	Demonstrates an understanding of the principles of monitoring and assessing risks including HACCP	Demonstrates an understanding of CCPs in their own area of the business and how compliance contributes to food safety of their product	Demonstrates an understanding of CCPs which are not required for their own business and how compliance contributes to food safety for a range of products

Knowledge, Skills and Behaviours Statement			
Principles of data analysis and food operations			
K8			
Assessment Criteria			
Fail Criteria: 0 points	Pass Criteria: 1 point	Pass with Merit Criteria: 2 points	Pass with Distinction Criteria: 3 points
Does not demonstrate an understanding of the principles of data analysis and food operations	Demonstrates an understanding of the principles of data analysis and food operations	Demonstrates an understanding of key performance indicators in their own area of the business and how these KPIs impact on business profitability	Demonstrates an understanding of a range of KPIs throughout their own business and how these actions can directly affect the profitability of the whole business
Knowledge, Skills and Behaviours Statement			
Principles of high-quality systems			
K13			
Assessment Criteria			
Fail Criteria: 0 points	Pass Criteria: 1 point	Pass with Merit Criteria: 2 points	Pass with Distinction Criteria: 3 points
Fails to demonstrate an understanding of high-quality systems	Demonstrates an understanding of the principles of high-quality systems	Can identify quality systems currently in place in their own area of business and how they contribute to ensuring quality of product	Can identify a range of quality systems and how they can be implemented to improve quality in an environment with which the apprentice is unfamiliar
Knowledge, Skills and Behaviours Statement			
Principles of health and safety systems			
K15			
Assessment Criteria			
Fail Criteria: 0 points	Pass Criteria: 1 point	Pass with Merit Criteria: 2 points	Pass with Distinction Criteria: 3 points
Fails to demonstrate an understanding of health and safety systems	Demonstrates an understanding of health and safety systems	Can identify health and safety systems currently in place in their own area of the business and how they contribute to the health and	Can identify a range of health and safety systems and how they can be implemented to improve the health and safety of the

		safety of the workforce	workforce in an environment with which the apprentice is unfamiliar
Knowledge, Skills and Behaviours Statement			
Ensure compliance with Health and Safety regulations, e.g. Isolation and Lock-off, guarding, PPE, Manual Handling			
S1			
Assessment Criteria			
Fail Criteria: 0 points	Pass Criteria: 1 point	Pass with Merit Criteria: 2 points	Pass with Distinction Criteria: 3 points
Fails to comply with Health and Safety regulations as appropriate to the activity being observed	Ensures compliance with Health and Safety regulations as appropriate to the activity being observed	Consistently complies with Health and Safety regulations appropriate to task and challenges others who do not	Consistently complies with Health and Safety regulations appropriate to tasks, challenges others who do not and suggests areas for improvement
Knowledge, Skills and Behaviours Statement			
Contribute to risk assessment			
S2			
Assessment Criteria			
Fail Criteria: 0 points	Pass Criteria: 1 point	Pass with Merit Criteria: 2 points	Pass with Distinction Criteria: 3 points
Fails to contribute to risk assessment	Contributes to risk assessment	Challenges existing ways of working and suggests improvements to existing risk assessments	Contributes to risk assessments for new equipment and processes and suggests improvements to existing processes
Knowledge, Skills and Behaviours Statement			
Analyse and report data			
S3			
Assessment Criteria			
Fail Criteria: 0 points	Pass Criteria: 1 point	Pass with Merit Criteria: 2 points	Pass with Distinction Criteria: 3 points
Fails to analyse or report data in their area of work	Analyses and reports data appropriate to activities being	Actively monitors current KPIs for area of responsibilities	Identifies root cause of non-compliance with KPIs and puts

	observed	and identifies areas of non- compliance	forward suggestions to improve current business performance
Knowledge, Skills and Behaviours Statement			
Carry out routine and specialist maintenance of equipment, in line with organisational guidelines			
S7 & S8			
Assessment Criteria			
Fail Criteria: 0 points	Pass Criteria: 1 point	Pass with Merit Criteria: 2 points	Pass with Distinction Criteria: 3 points
Fails to carry out routine and specialist maintenance of equipment, in line with organisational guidelines	Carries out routine and specialist maintenance of equipment, in line with organisational procedures, taking action to minimise waste	Identifies basic faults and causes with equipment they use on a regular basis	Challenges current routine maintenance schedule and puts forward suggestion to improve overall equipment efficiency
Knowledge, Skills and Behaviours Statement			
Carry out testing for quality control			
S13			
Assessment Criteria			
Fail Criteria: 0 points	Pass Criteria: 1 point	Pass with Merit Criteria: 2 points	Pass with Distinction Criteria: 3 points
Fail to carry out testing for quality control as appropriate to the activity being observed	Carries out testing for quality control as appropriate to the activity being observed	Challenges existing process when stated quality standard not being met and takes appropriate action to remedy	Suggests process improvement to maintain or improve product quality
Knowledge, Skills and Behaviours Statement			
Interpret and implement Standard Operating Procedures and Technical compliance procedures to ensure working towards best practices			
S15			
Assessment Criteria			
Fail Criteria: 0 points	Pass Criteria: 1 point	Pass with Merit Criteria: 2 points	Pass with Distinction Criteria: 3 points
Fails to interpret and implement Standard Operating	Interprets and implements Standard Operating	Updates existing Standard Operating Procedures for	Writes and implements Standard Operating

Procedures and Technical compliance procedures	Procedures and Technical compliance procedures to ensure working towards best practices as appropriate to activities being observed	current area of expertise	Procedure for new equipment or process or area with which the apprentice is unfamiliar
Knowledge, Skills and Behaviours Statement			
Safe working: ensures safety of self and others, food safe, challenges safety issues			
B1			
Assessment Criteria			
Fail Criteria: 0 points	Pass Criteria: 1 point	Pass with Merit Criteria: 2 points	Pass with Distinction Criteria: 3 points
Fails to ensure safety of self or others, fails to ensure food safety	Ensures safety of self and others, food safe, challenges safety issues	Consistently ensures safety of self and others; spots and challenges unsafe behaviour	Identifies and communicates potential safety, health or other risks across team and departments; takes appropriate action when others are not behaving safely

Knowledge, Skills and Behaviours Statement			
Ownership of work; accepts responsibility, is proactive, plans work			
B2			
Assessment Criteria			
Fail Criteria: 0 points	Pass Criteria: 1 point	Pass with Merit Criteria: 2 points	Pass with Distinction Criteria: 3 points
Fails to accept responsibility; does not plan work	Accepts responsibility; is proactive; plans work	Takes ownership of own work; takes a structured approach to planning and prioritising work and reviews progress against plans	Proactively plans to maximise performance; effectively prioritises and re-prioritises work to meet objectives
Knowledge, Skills and Behaviours Statement			
Pride in work:			

B3			
Assessment Criteria			
Fail Criteria: 0 points	Pass Criteria: 1 point	Pass with Merit Criteria: 2 points	Pass with Distinction Criteria: 3 points
Fails to aim for excellence; demonstrates poor time management	Aims for excellence, demonstrates good time management	Consistently uses time proactively and anticipates problems which may cause delays to work plans or compromise to quality	Actively reviews performance with a critical eye and looks for ways to improve performance on site
Knowledge, Skills and Behaviours Statement			
Integrity and respect:			
B4			
Assessment Criteria			
Fail Criteria: 0 points	Pass Criteria: 1 point	Pass with Merit Criteria: 2 points	Pass with Distinction Criteria: 3 points
Does not show respect for others, does not adapt style where appropriate	Shows respect for others, adapts style where appropriate	Consistently shows respect for others, listens and will question and challenge appropriately	Actively encourages others to respect the values of others; listens and questions to enhance own and others' understanding

Knowledge, Skills and Behaviours Statement			
Effective communication			
B10			
Assessment Criteria			
Fail Criteria: 0 points	Pass Criteria: 1 point	Pass with Merit Criteria: 2 points	Pass with Distinction Criteria: 3 points
Fails to use a range of visual and verbal communication techniques	Uses a range of visual and verbal communication techniques	Effectively uses a range of communication techniques and demonstrates effective listening skills	Reviews effectiveness of and recommends improvements for different methods of communication; demonstrates effective influencing skills

Practical Observation Grade Boundaries

Fail	Pass	Pass with Merit	Pass with Distinction
Apprentice scores 0-14 points	Apprentice scores 15-22 points	Apprentice scores 23-37 points	Apprentice scores 38-45 points

Presentation with Interview (PI)			
Knowledge, Skills and Behaviours Statement			
Application of Continuous Improvement (CI) in the workplace			
K2, K8, K9, S3, S4, S5, S6, S9, S10, S11, S12, S14			
Assessment Criteria			
Fail Criteria: 0 points	Pass Criteria: 1 point	Pass with Merit Criteria: 2 points	Pass with Distinction Criteria: 3 points
Presentation is unclear and does not demonstrate an understanding of CI. Fails to reach a conclusion, no significant improvement identified.	Clear presentation demonstrating an understanding of CI techniques. Identifies at least one improvement for the workplace and demonstrates how CI techniques can be embedded into the workplace, which may include how they have contributed to the development and improvement of quality controls	Creative presentation, citing a range of CI techniques (at least 3) with thought provoking outcomes demonstrating a powerful impact and at least 2 improvements.	Innovative presentation with detailed and complex overview. Includes extensive and far reaching outcomes demonstrating very significant impact and well thought out identified improvements
Knowledge, Skills and Behaviours Statement			
Self- development			
B4			
Assessment Criteria			
Fail Criteria: 0 points	Pass Criteria: 1 point	Pass with Merit Criteria: 2 points	Pass with Distinction Criteria: 3 points
Shows no evidence of driving own development or understanding of the business.	Proposes objectives to support the business, seeks learning, drives the development of self and others.	Takes ownership for learning and practising new skills/techniques/tools; constantly seeks to improve own understanding and learn from	Proactively develops new skills; challenges and questions others to improve own understanding; encourages others to learn from

		others; shares knowledge and experiences with others	experiences, supporting them when they make a mistake
Knowledge, Skills and Behaviours Statement			
Working in a team B6			
Assessment Criteria			
Fail Criteria: 0 points	Pass Criteria: 1 point	Pass with Merit Criteria: 2 points	Pass with Distinction Criteria: 3 points
Shows little evidence of collaborative working; minimal contribution to team objectives.	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.
Knowledge, Skills and Behaviours Statement			
Problem solving B7			
Assessment Criteria			
Fail Criteria: 0 points	Pass Criteria: 1 point	Pass with Merit Criteria: 2 points	Pass with Distinction Criteria: 3 points
Fails to take a lead in solving problems.	Works to identify and ensure root causes of problems are resolved, demonstrating a tenacious approach.	Takes ownership for resolving problems and issues; demonstrates determination to see things through.	Adopts a preventative approach to problem solving.

Knowledge, Skills and Behaviours Statement			
Responsiveness to change B8			
Assessment Criteria			
Fail Criteria: 0 points	Pass Criteria: 1 point	Pass with Merit Criteria: 2 points	Pass with Distinction Criteria: 3 points
Struggles to adapt to change; fails to recognise the	Demonstrates flexibility to changing working	Demonstrates flexibility to get involved in different	Looks to understand the reasons behind changes;

reasons behind change in the business.	environment and demands .	tasks; consistently reacts positively to changes and finds ways to support implementation .	constructively questions and challenges change; sets a positive example for others about change.
Knowledge, Skills and Behaviours Statement			
Company/industry perspective			
B9			
Assessment Criteria			
Fail Criteria: 0 points	Pass Criteria: 1 point	Pass with Merit Criteria: 2 points	Pass with Distinction Criteria: 3 points
Shows little evidence of understanding company objectives and wider food industry.	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.

Knowledge, Skills and Behaviours Statement			
Innovation			
B11			
Assessment Criteria			
Fail Criteria: 0 points	Pass Criteria: 1 point	Pass with Merit Criteria: 2 points	Pass with Distinction Criteria: 3 points
No evidence of innovative thinking or effort to change ways of working.	Demonstrates curiosity to foster new ways of thinking and working.	Constructively challenges existing ways of working; volunteers to work across different areas of the business as appropriate.	Recommends and implements changes to improve own work and work of others, capable of supporting others with change or learning new skill.
Knowledge, Skills and Behaviours Statement			
Business vision and values			
B12			
Assessment Criteria			

Fail Criteria: 0 points	Pass Criteria: 1 point	Pass with Merit Criteria: 2 points	Pass with Distinction Criteria: 3 points
Shows no regard for business vision and values.	Acts in alignment with the business vision and values.	Assists colleagues in acting in line with business vision and values.	Actively communicates business vision and values to others .

Practical Observation Grade Boundaries

Fail	Pass	Pass with Merit	Pass with Distinction
Apprentice scores 0-7 points	Apprentice scores 8-10 points	Apprentice scores 11-17 points	Apprentice scores 18-24 points

Specimen assessments

Example multiple-choice questions

Q. When operators undertake plant maintenance this is generally known as

- a. Self-maintenance
- b. Operator asset care
- c. Operator maintenance
- d. Unplanned maintenance

Answer= c

Q. What is workplace mentoring?

- a. A system of support and feedback between employees.
- b. A training programme for a specific role.
- c. A training programme to help gain promotion.
- d. A system of recognition of good staff performance

Answer= a

Example Extended Answer Questions

Q. Explain the following terms in relation to continuous improvement:

- Kaizen
- SMED
- 5S

(2 marks for each answer)

Example Presentation and Interview questions

The following questions are typical of those that will be asked during the interview.

Standard reference	Sample sets of questions - IEs will ask all questions within each set.
B4	<p>Self-development</p> <p>Main question: Give an example of how you have driven your own development and understanding of your role.</p> <p>Extension question: Have you supported others in learning new skills and understanding of the business? Give an example.</p>
B6	<p>Working in a team</p> <p>Main question: Give an example of how you have worked collaboratively in your role.</p> <p>Extension question: Describe the goals of your team. How have you contributed to their achievement?</p>

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 and Drink Advanced Process Operator End-point Assessment Plan ST0196/AP05, available from [st0196 food-drink-advanced-process-operator l3 ap-for-publication 090719.pdf \(instituteforapprenticeships.org\)](https://www.instituteforapprenticeships.org/st0196-food-drink-advanced-process-operator-l3-ap-for-publication-090719.pdf)
- Food and Drink Advanced Process Operator Apprenticeship Standard ST0196/AP05, available from [Food and drink advanced process operator / Institute for Apprenticeships and Technical Education](#)
- Food and Drink Advanced Process Operator 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

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