FDQ - Qualification Specification

FDQ number	Qualification title	EPA Plan number	EQF Level	Qualification number (QN)
311-314	FDQ Level 3 End-point Assessment for Food and Drink Technical Operator	ST0196/AP06	4	610/0415/7

Qualification objective

This End-point Assessment (EPA) qualification is designed for learners who have completed the on-programme training for the Level 3 Food and Drink Technical 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 Technical 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 Technical Operator standard apprenticeship.

Prior to taking this EPA qualification, entrants should meet the Level 3 Food and Drink Technical 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
- Portfolio of evidence to underpin the interview
- Level 2 Mathematics
- Level 2 English

Qualification Content

This qualification tests the mandatory knowledge, skills and behaviours set out in the Food and Drink Technical Operator standard.

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 Technical Operator standard and assessment plan has been developed by the Food and Drink Technical 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.

Fitness for Purpose

FDQ has in place a comprehensive quality system built to ensure its EPA qualification assessments are valid and fair. Built on validity principles - reliability, comparability, manageability, minimising bias, moderation and fairness - our policies, procedures and operational practice including assessment development and maintenance, Internal Quality Assurance and Moderation ensure our EPA qualifications are developed, delivered and remain fit for purpose.

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 Technical 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

FDQ Level 3 EPA for Food and Drink Technical Operator ST0196 AP06	Possible grades
Multiple Choice Test (MCT)	Fail/pass
Observation with Questions (OQ)	Fail/pass/distinction
Interview underpinned by a portfolio of evidence (IPE)	Fail/pass/distinction
Overall apprenticeship grading	Fail/pass/merit/distinction Minimum pass in each component

Assessment		Time
Multiple Choice Test (MCT)	40 multiple choice questions, 1 mark per question	60 min
Observation with Questions (OQ)	Assessment of a range of naturally occurring work plus a minimum of 6 open questions	2 hours plus discretionary 10%
Interview underpinned by portfolio of evidence (IPE)	8 open competence-based questions on a range of topics	60 min +/- 10%

Qualification scope

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

EPA Assessment Method	Key
Multiple Choice Test	MCT
Observation with Questions	OQ
Interview underpinned by Portfolio of Evidence	IPE

Additional Key

K= Knowledge

S = Skills

B = Behaviours

Each assessment method will assess specific Knowledge, Skills and Behaviours statements listed in the apprenticeship standard, as summarised in table below:

		Assessment Method		
Standard Ref	Knowledge to be assessed	MCT	OQ	IPE
K1	The food and drink sector. Food industry regulators: British Retail Consortium, Food Standards Agency. Types of organisations: branded and non-branded, high and low care sites. Types of food and drink products. End-to-end supply chain. Customers and consumers. Seasonal impact on product demand. Current food and drink trends.	•		
K2	Food and drink technical operator's role. Limits of autonomy. Different teams and functions involved in production. Business operation considerations: efficiency, customer satisfaction, competitiveness, minimising risks to production.			•
K3	Food and drink manufacturing methods and processes. How technology supports production. Characteristics and properties of food and drink products: ambient, frozen, fresh, chilled, confectionery, liquid. Handling requirements. Effects of external influences. Packaging types and functionality.	•		
K4	Standard operating procedures. What they are and why they are important. What they need to cover and why: Personal Protective Equipment (PPE), isolation and lock off, guarding, strip and assembly of equipment, step by step process. Use of visuals and			•

	symbols.			
K5	Food and drink industry quality management standards for example, British Retail Consortium. What they are and why they are important.		•	
K6	Food and drink tools and equipment: pumps, valves, lines, gauges, temperature controls, mixers, conveyors, depositors, sealers, touch screen technology, human machine interface, Programmable Logical Control (PLC) systems and handheld devices. Operating standards and equipment set points.		•	
K7	Customer specifications: purpose and consequences of non-compliance.		•	
K8	Line performance management. Key Performance Indicators. How line performance impacts profitability of the business.		•	
K9	Role of line trials in new product introduction	•		
K10	Legislation and standards: Food Safety Act, Hazard Analysis and Critical Control Points (HACCP), Threat Analysis of Critical Control Points (TACCP), Vulnerability Assessment of Critical Control Points (VACCP).	•		
K11	Food safety: microbiology, physical, chemical contamination hazards and control. Food	•		

	poisoning. Personal hygiene. Design of food premises and equipment. Cleaning and disinfection principles and procedures, cleaning in place (CIP). Pest control. Control measures. Supervisory management.			
K12	Food integrity: temperature control, date code responsibilities, foreign object contamination. Documentation records	•		
K13	Material and ingredient specification requirements: segregation, storage, maintaining product origin, integrity and traceability. Allergen identification and control methods.	•		
K14	Health and Safety at Work Act – responsibilities. Control of Substances Hazardous to Health (COSHH). Reporting of Injuries, Diseases, and Dangerous Occurrences Regulations (RIDDOR). Risk assessments. Safe systems of work. Manual handling. Types of hazards. Near miss reporting. Due diligence. Personal Protective Equipment (PPE). Situational awareness. Isolation and emergency stop procedures. Emergency evacuation procedures. Slips, trips and falls. Safety equipment: guards, signage, fire extinguishers.	•		
K15	Environment and sustainability. Environmental Protection Act - responsibilities. Types of	•		

	pollution and control measures: noise, smells, spills, and waste. Efficient use of resources. Environmental permits. Waste management. Recycling.			
K16	Types of incidents - fire, accidents, near misses. Mitigation methods. Incident management	•		
K17	Principles of mechanical engineering technologies and safe working practices: lubrication, hydraulics, fluid power, mechanical, bench fitting, pumps and valves, pneumatics, drives, fitting and hand tools, units and measurements, fault-location, stored energy and safe isolation.	•		
K18	Different types of maintenance activities: preventative, reactive. What they are and why they are important.	•		
K19	Food safety engineering: food grade oils, safe use of tools and equipment			•
K20	Problem solving techniques: root cause analysis, 6 thinking hats, DMAIC (Define, Measure, Analyse, Improve, Control), PDCA (Plan Do Check Act). Fault finding techniques: root cause analysis, 5 Whys, fishbone, half-split			•
K21	Continuous improvement techniques: lean, 6-sigma, KAIZEN, 5S (Sort, set, shine, standardise and sustain), SMED (Single-Minute Exchange of Dies).			•

K22	Audit requirements - internal and external. Five stages of audit. Responsibilities of auditor and auditee.			•
K23	Information technology: Management Information Systems (MIS), spreadsheets, presentation, word processing, email, virtual communication and learning platforms. General Data Protection Regulation (GDPR).			•
K24	Planning, prioritising and time management techniques. Work management systems			•
K25	Communication techniques: verbal, non-verbal.		•	
K26	Communication techniques: written. Writing using plain English principles.			•
K27	Workplace training and buddying techniques			•
K28	Team working techniques.			•
Standard Ref		Assessment Method		
	Skills to be assessed	MCT	OQ	IPE
S1	Interpret, follow and implement food and drink production SOPs		•	
S2	Interpret, follow and implement quality assurance procedures.		•	
S3	Monitor production performance, stock usage and rotation.		•	

S4	Operate or use food and drink production tools and equipment.		•	
S5	Identify hazards (Critical Control Points) and control measures to mitigate risks.		•	
S6	Comply with food safety regulations and procedures		•	
S7	Comply with health and safety regulations and procedures.		•	
S8	Comply with environment and sustainability regulations and procedures. Segregate, recycle and dispose of waste		•	
S9	Monitor and inspect production machinery.			•
S10	Apply maintenance practices. For example, check levels, parts wear, pressure, and sensors, and grease and lubricate.			•
S11	Select and use maintenance hand tools			•
S12	Follow food safe engineering standards and practices. For example, use of food safe chemicals, check out and in of components			•
S13	Follow site isolation and lock off procedures (lockout, tagout).			•
S14	Diagnose and resolve issues. Escalate issues.			•
S15	Apply fault-finding and problem-solving techniques.			•

S16	Apply continuous improvement techniques. Devise suggestions for improvement			•
S17	Collect and interpret information. Use data to apply changes.		•	
S18	Record information - paper based or electronic		•	
S19	Use information technology. Comply with GDPR			•
S20	Plan and organise self, others and resources			•
S21	Communicate with colleagues and stakeholders visually and verbally.		•	
S22	Communicate in writing			•
S23	Identify training needs. Train and buddy team members in the workplace.			•
		Assessment Method		
Standard Ref	Behaviours to be assessed	MCT	OQ	IPE
B1	Prioritise and promote health and safety, and food safety		•	
B2	Prioritise and promote the environment and sustainability.		•	
B3	Apply a professional approach		•	
B4	Take responsibility for work.		•	
B5	Team-focus to meet work goals.			•

B6	Respond and adapt to work demands		•	
B7	Committed to Continued Professional Development.			•

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
Multiple Choice Test (MCT)	Multiple choice questions: 40 questions, 1 point for each correct answer. **Total available points for MCT = 40**

Fail	Pass
Apprentice scores 0-29 marks	Apprentice scores 30-40 marks

Observation with Questions Grading Criteria

All practical observation statements must be achieved to pass this assessment component. The observation (OQ) will be graded fail, pass, or distinction, with each of the identified skills, knowledge and behaviours statements contributing to the grade (see Table below) for grading descriptors.

Practical Observation (PO)	
Knowledge, Skills and Behaviours Statement	
Run food and drink manufacturing line operation S1 S3 B4 B6	
Grading Criteria	
Pass Descriptors	**Distinction Descriptors**
Takes responsibility to interpret, implement and follow food process operational procedures to complete work with minimal supervision within limits of authority, asking for help where needed. (S1, B4) Monitor's production performance, stock usage and rotation, responding and adapting to meet work demands. (S3, B6)	Implements and follows procedures without error, mitigating against potential issues. (S1)
Knowledge, Skills and Behaviours Statement	
Operate or use food and drink production tools and equipment K6, S4	
Grading Criteria	
Pass Descriptors	**Distinction Descriptors**
Operates or uses tools and equipment in line with employer's or manufacturers'instructions. (K6, S4)	Operates or uses tools and equipment effectively to achieveproduction efficiencies. (K6, S4)
Knowledge, Skills and Behaviours Statement	
Monitor performance K18, S17, S18	
Grading Criteria	
Pass Descriptors	**Distinction Descriptors**
Collects and interprets line performance information against key performance indicators identifying any trends or adverse indicators. Uses data to make evidence-based changes. (K8, S17)	

Records information for work tasks accurately, legibly and in full. (S18)	
Knowledge, Skills and Behaviours Statement	
Undertake quality assurance to ensure compliance **K5, K7, S2**	
Grading Criteria	
Pass Descriptors	**Distinction Descriptors**
Interprets, follows, and implements quality assurance procedures to ensure final product meets customer specifications. (K5,K7, S2)	
Knowledge, Skills and Behaviours Statement	
Prioritise and promote food safety, health and safety, and environmental requirements **S5, S6, S7, S8, B1, B2**	
Grading Criteria	
Pass Descriptors	**Distinction Descriptors**
Identifies hazards (Critical Control Points) and control measures to minimise theserisks. (S5) Conducts work in line withfood safety regulations andcompany procedures. (S6) Conducts work in line with environment and sustainability regulations and procedures, including safe disposal of waste, recycling of materials and efficient use of resources. (S8) Prioritises and promotes health and safety, food safety and, the environment and sustainability over other factors for example time and cost. (B1, B2)	Justifies how chosen control measures have the potential to minimise risks. (S5)
Knowledge, Skills and Behaviours Statement	
Work as part of a team **K25, S21, B3**	
Grading Criteria	
Pass Descriptors	**Distinction Descriptors**

Uses verbal and non-verbalcommunication techniques suitable for the task and audience. (K25, S21) Applies a professional approach for example, usesappropriate language, shows respect. (B3)	Demonstrates clear communication that mitigates against potential misunderstanding. (K25, S21)
Fail: A fail grade will be awarded if the apprentice does not satisfy all of the pass criteria.	

Interview underpinned by Portfolio of Evidence (IPE)

All IPE statements must be achieved to pass this assessment component. The IPE will be graded fail, pass, or distinction, with each of the identified skills, knowledge and behaviours statements contributing to the grade (see Table below) for grading descriptors.

Interview underpinned by Portfolio of Evidence (IPE)	
Knowledge, Skills and Behaviours Statement	
Food and drink technical operator's role K2	
Grading Criteria	
Pass Descriptors	Distinction Descriptors
Explains factors that impact on the food and drink technical operator's role and production identifying: • limits of autonomy • different teams and functions • business operation considerations (K2)	
Knowledge, Skills and Behaviours Statement	
First line mechanical engineering maintenance and asset care K19, S9, S10, S11, S12, S13	
Grading Criteria	

Pass Descriptors	Distinction Descriptors
Describes how they follow safe engineering practices when they monitor and inspect production machinery and apply basic maintenance practices to address action required. (K19, S9, S10, S12) Describes how they select and use maintenance tools appropriate to the task. (S11) Describes how they follow site isolation and lock off procedures for technical operators (lockout, tagout). (S13)	

Knowledge, Skills and Behaviours Statement
Fault finding and taking action K20, S14, S15

Grading Criteria	
Pass Descriptors	Distinction Descriptors
Describes how they apply fault-finding and problem-solving techniques to diagnose and resolve or escalate problems or issues in line with procedures. (K20, S14, S15)	Evaluates the value of specific fault-finding and problem-solving techniques for different issues. (K20)

Knowledge, Skills and Behaviours Statement
Continuous Improvement K21, S16

Grading Criteria	
Pass Descriptors	Distinction Descriptors
Describes how they apply continuous improvement techniques and have devised suggestions for improvement or the benefit of the organisation, customer, or work process. (K21, S16)	Evaluates the value of specific continuous improvement techniques for different issues. (K21)

Knowledge, Skills and Behaviours Statement
Internal and external audits K22

Grading Criteria	
Pass Descriptors	Distinction Descriptors

Explains the five stages of audit and responsibilities of auditor and auditee in relation to internal and external audits. Explains the importance of accurate and compliant audits. (K22)	
Knowledge, Skills and Behaviours Statement	
Developing standard operating procedures K4, K26, S22	
Grading Criteria	
Pass Descriptors	**Distinction Descriptors**
Describes how they produce written standard operating procedures covering content requirements and why they are important. Describes use of written communication techniques to ensure content is suitable for the user. (K4, K26, S22)	Demonstrates how they use a range of written communication techniques to provide clear communication that mitigates against potential misunderstanding. (K26, S22)
Knowledge, Skills and Behaviours Statement	
Information Technology K23, S19	
Grading Criteria	
Pass Descriptors	**Distinction Descriptors**
Describes how they use information technology for different purposes (MIS, spreadsheets, presentation, word processing, email, virtual communication and learning platforms). Explains measures they take to comply with general data protection regulations (GDPR). (K23, S19)	
Knowledge, Skills and Behaviours Statement	
Team working and development K24, K27, K28, S20, S23, B5, B7	
Grading Criteria	
Pass Descriptors	**Distinction Descriptors**

Describes how they plan and schedule their own and others' work and resources using appropriate techniques and work management systems. (K24, S20) Describes how they have developed team members using different techniques to address training needs they have identified. (K27, S23) Describes how they apply team working techniques to achieve work goals. (K28, B5) Outlines personal plans for CPD, explaining how they keep up to date with industry developments. (B7)	Describes how they achieve efficiencies in use of self and others' time or efficient use of resources. (K24, S20) Explains the benefits of different training or buddying techniques in relation to team development they have undertaken. (K27)
Fail: A fail grade will be awarded if the apprentice does not satisfy all of the pass criteria.	

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

Sample Observation and Questions

Q. What is the importance of monitoring stock usage when operating in this area?

Q. How do you promote safe working practices in your working area?

Sample Questions Interview Underpinned by Portfolio of Evidence

Q. What factors of your job role directly impact on the final product quality to customers?

Q. What is meant by the term first line maintenance and asset care and provide an example of this in your role.

Additional information and guidance

Additional information relating to the EPA and the Food and Drink Technical Operator apprenticeship can be found in the following documents:

- Food and Drink Technical Operator End-point Assessment Plan ST0196/AP06, available from st0196_food-and-drink-technical-operator_l3_ap-for-publication_300721.pdf (instituteforapprenticeships.org)
- Food and Drink Advanced Process Operator Apprenticeship Standard ST0196/AP05, available from Food and drink technical 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

Version	Description of change	Date
2	Page 3 – Fitness for Purpose added	30/10/2023