

End-point assessment plan for the food and drink technical operator apprenticeship standard

Apprenticeship standard reference number	Apprenticeship standard level	Integrated end-point assessment
ST0196	3	No

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Introduction and overview

This document sets out the requirements for end-point assessment (EPA) for the food and drink technical operator apprenticeship standard. It explains how EPA for this apprenticeship must operate.

It provides the EPA design requirements for end-point assessment organisations (EPAOs) for this apprenticeship standard. It will also be useful for apprentices undertaking this apprenticeship, their employers and training providers.

EPA must be conducted by an EPAO approved to deliver EPA for this apprenticeship standard. Each employer should select an approved EPAO from the Education & Skills Funding Agency's Register of end-point assessment organisations (RoEPAO).

Full-time apprentices will typically spend 30 months on-programme (before the gateway) working towards this occupational standard. All apprentices must spend a minimum of 12 months on-programme. All apprentices must spend a minimum of 20% of on-programme time undertaking off-the-job training.

Before starting EPA, an apprentice must meet the gateway requirements. For this apprenticeship they are:

- the employer must be content that the apprentice is working at or above the occupational standard
- apprentices must have achieved English and mathematics at Level 2¹
- apprentices must have compiled and submitted a portfolio of evidence to underpin the interview

The EPAO must confirm that all required gateway evidence has been provided and accepted as meeting the gateway requirements. The EPAO is responsible for confirming gateway eligibility. Once this has been confirmed, the EPA period starts. This EPA should then be completed within an EPA period lasting typically for 3 months.

This EPA consists of 3 discrete assessment methods.

¹ For those with an education, health and care plan or a legacy statement, the apprenticeship's English and mathematics minimum requirement is Entry Level 3. British Sign Language (BSL) qualifications are an alternative to English qualifications for those who have BSL as their primary language.

It will be possible to achieve the following grades in each end-point assessment method:

Assessment method 1. Observation with questions:

- fail
- pass
- distinction

Assessment method 2. Interview underpinned by a portfolio of evidence:

- fail
- pass
- distinction

Assessment method 3. Multiple-choice test:

- fail
- pass

Performance in these end-point assessment methods will determine the overall apprenticeship standard grade of:

- fail
- pass
- merit
- distinction

EPA summary table

On-programme (typically, 30 months)	<ul style="list-style-type: none"> • Training to develop the knowledge, skills and behaviours (KSBs) of the relevant occupation. • Training towards English and mathematics Level 1 and 2¹, if required. • Compiling a portfolio of evidence.
End-point assessment gateway	<ul style="list-style-type: none"> • The employer must be content that the apprentice is working at or above the level of the occupational standard. • Apprentices must have achieved English and mathematics Level 2¹. • Apprentices must submit a portfolio of evidence to underpin the EPA interview. • For the observation with questions and interview underpinned by a portfolio of evidence, the employer must provide any workplace specific policies, requirements and or instructions as requested by the EPAO.
End-point assessment (typically, 3 months)	<p>Assessment method 1: Observation with questions</p> <ul style="list-style-type: none"> • fail • pass • distinction <p>Assessment method 2: Interview underpinned by a portfolio of evidence</p> <ul style="list-style-type: none"> • fail • pass • distinction <p>Assessment method 3: Multiple-choice test</p> <ul style="list-style-type: none"> • fail • pass <p>Performance in these assessment methods will determine the EPA/overall apprenticeship standard grade of:</p> <ul style="list-style-type: none"> • fail • pass • merit • distinction

Length of EPA period

The EPA will be completed within an EPA period lasting typically for 3 months, starting when the EPAO has confirmed that all gateway requirements have been met.

EPA gateway

The apprentice should only enter the gateway once the employer is content that the apprentice is working at or above the level of the occupational standard. In making this decision, the employer may take advice from the apprentice's training provider(s), but the decision must ultimately be made solely by the employer.

The EPAO determines when all other gateway requirements have been met, and the EPA period will only start once the EPAO has confirmed this.

In addition to the employer's confirmation that the apprentice is working at or above the level of the occupational standard, the apprentice must have completed the following gateway requirements prior to starting EPA:

- achieved English and mathematics at Level 2. For those with an education, health and care plan or a legacy statement, the apprenticeship's English and mathematics minimum requirement is Entry Level 3. British Sign Language (BSL) qualifications are an alternative to English qualifications for those who have BSL as their primary language
- for the interview, the apprentice is required to submit a portfolio of evidence – see below for details
- for the observation with questions and interview underpinned by portfolio of evidence, the employer must provide any workplace specific policies, requirements or instructions as requested by the EPAO
- for the multiple-choice test, there are no specific requirements to submit supporting materials

Portfolio of evidence requirements:

- apprentices must compile a portfolio of evidence during the on-programme period of the apprenticeship
- it must contain evidence related to the KSBs that will be assessed by the interview
- the portfolio of evidence will typically contain 10 discrete pieces of evidence
- evidence should be mapped by the apprentice against the KSBs assessed by the interview
- evidence may be used to demonstrate more than one KSB; a qualitative as opposed to quantitative approach is suggested
- evidence sources may include:
 - workplace documentation, for example workplace policies/procedures, records, job sheets
 - witness statements
 - annotated photographs
 - video clips (maximum total duration 10 minutes): the apprentice should always be in view and identifiable

This is not a definitive list; other evidence sources are possible.

- it should not include any methods of self-assessment
- any employer contributions should focus on direct observation of performance (for example witness statements) rather than opinions
- the evidence provided must be valid and attributable to the apprentice: the portfolio of evidence must contain a statement from the employer and apprentice confirming this
- the portfolio of evidence must be submitted to the EPAO at the gateway

The portfolio is not directly assessed. It underpins the interview and therefore should not be marked by the EPAO. EPAOs should review the portfolio in preparation for the interview but are not required to provide feedback after this review of the portfolio.

End-point assessment methods

The assessment methods can be delivered in any order.

The result of one assessment method does not need to be known before starting the next.

The apprentice will be assessed against the KSBs assigned to the assessment methods outlined below, as shown in the mapping section of this EPA plan.

End-point assessment method 1: Observation with questions

Overview

This assessment method has 1 component.

An observation with questions involves an independent assessor observing and questioning an apprentice undertaking work as part of their normal duties, in the workplace. This allows for a demonstration of the KSBs through naturally occurring evidence. The observation must be of an apprentice completing their usual work and simulation is not permitted.

The independent assessor will ask questions in relation to KSBs that have not been observed although these should be kept to a minimum.

The rationale for this assessment method is:

- this is a practical role, best demonstrated through completing tasks in a real work setting
- observation makes use of employer resources and equipment which will be familiar to the apprentice and thus allow them to perform at their best
- questioning allows for the assessment of the breadth and depth of underpinning knowledge against the grading descriptors
- tasks completed during the observation should contribute to workplace productivity and are valid
- it is a holistic assessment method

Delivery

The observation with questions must take 2 hours (assessment time). The time for questioning is included in the overall assessment time.

The observation with questions may not be split, other than to allow comfort breaks as necessary or to allow the apprentice to move from one location to another as required.

Where breaks occur, they will not count towards the total assessment time. EPAOs must manage invigilation of apprentices during breaks to maintain security of the assessment in line with their malpractice policy.

The independent assessor has the discretion to increase the time of the observation with questions by up to 10% to allow the apprentice to complete a task or respond to a question.

The independent assessor may observe only 1 apprentice at any one time, to ensure quality and rigour.

Apprentices must be provided with information on the format of the observation with questions, including the timescales they will be working to before the start of the observation with questions. The time taken to give this information is exclusive of the

assessment time.

The following activities should be observed during the observation:

- run food and drink manufacturing line operation including at least one of the following procedures: start-up, close-down, changeover or handover
- operate or use food and drink production tools and equipment
- monitor performance
- undertake quality assurance to ensure compliance
- prioritise and promote food safety, health and safety, and environmental requirements
- work as part of a team

The observation should be conducted in the following way, to take account of the occupational context in which the apprentice operates:

- activities may or may not relate to the same food and drink product

The independent assessor must be unobtrusive whilst conducting the observation.

Questions must be asked. The purpose of questioning is to test the apprentice's breadth and depth of underpinning knowledge against the grading descriptors.

As only naturally occurring work is observed, those KSBs that the apprentice did not have the opportunity to demonstrate can be assessed via questioning, although these should be kept to a minimum.

The independent assessor must ask a minimum of 6 open questions. They may ask follow-up questions where clarification is required.

The questions can be asked by the independent assessor both during and after work completion. To remain as unobtrusive as possible, independent assessors should ask questions during natural stops between tasks or after completion of work rather than disrupting the apprentice's flow.

The performance observed and responses to questions will be assessed holistically, against the grading descriptors for this assessment method.

KSBs observed, and answers to questions, must be recorded by the independent assessor.

The independent assessor will make all grading decisions.

Assessment location

The observation with questions must take place in the apprentice's workplace.

The employer should ensure the necessary tools, equipment and materials are available for the apprentice during the observation with questions.

Question and resource development

EPAOs will create and set open questions to assess KSBs mapped to this assessment method. Each EPAO must develop a question bank of sufficient size to prevent predictability and review them regularly (at least once a year) to ensure the questions they contain are fit for purpose. Independent assessors must use the question bank as a source for questioning and are expected to use their professional judgment to tailor those questions appropriately. Independent assessors are responsible for generating suitable follow-up questions, in line with the EPAOs training and standardisation process. The questions relating to underpinning KSBs must be varied yet allow assessment of the relevant KSBs.

EPAOs must ensure that apprentices have a different set of questions in the case of re-sits/re-takes.

EPAOs will produce the following material to support this assessment method:

- independent assessor training materials
- observation specifications
- grading guidance
- a question bank
- assessment recording documentation
- outline of the assessment method's requirements
- marking materials
- guidance document for employers and apprentices on the process/timescales for the observation with questions as well as a description of the purpose
- guidance document for independent assessors on how to carry out the assessment

End-point assessment method 2: Interview underpinned by a portfolio of evidence

Overview

This assessment method has 1 component.

An interview consists of an independent assessor asking an apprentice a series of questions to assess their competence against the KSBs. The independent assessor leads this process to obtain information from the apprentice to enable a structured assessment decision-making process.

The rationale for this assessment method is:

- allows for assessment of KSBs that do not occur on a predictable or regular basis
- it allows for testing of responses where there are a range of potential answers that cannot be tested through the multiple-choice test
- it can be conducted remotely, potentially reducing cost

Delivery

An independent assessor will conduct and assess the interview underpinned by a portfolio of evidence.

The interview must last for 60 minutes. The independent assessor has the discretion to increase the time of the interview by up to 10% to allow the apprentice to complete their last answer.

The interview will have a minimum of 8 open questions – one for each theme. During this method, the independent assessor must combine questions from the EPAO's question bank and those generated by themselves.

The purpose of the questions will be to cover the following themes:

- food and drink technical operator's role
- first line mechanical engineering maintenance and asset care
- fault-finding and taking action
- continuous improvement
- internal and external audits
- developing standard operating procedures
- information technology
- team working and development

The interview will be conducted as follows:

EPAOs must arrange the interview in conjunction with the apprentice's employer.

Apprentices must be given at least two-weeks' notice of the date and time of the interview. The independent assessor will have a minimum of two weeks to review the portfolio.

Questions should be open and competence based. Additional follow up questions are allowed, to seek clarification and to make a judgement against the grading descriptors.

Apprentices must have access to their portfolio of evidence during the interview.

Apprentices can refer to, and illustrate their answers, with evidence from their portfolio of evidence, however the portfolio of evidence is not directly assessed.

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Apprentices are expected to understand and use relevant occupational language that would be typical of a competent person in this occupation.

Evidence from the interview must be assessed holistically using the grading descriptors for this assessment method.

KSBs met and answers to questions, must be recorded by the independent assessor.

The independent assessor will make all grading decisions.

Assessment location

The interview should take place in a quiet room, free from distractions and influence.

Video conferencing can also be used to conduct the interview, but the EPAO must have processes in place to verify the identity of the apprentice and ensure the apprentice is not being aided.

The interview can take place in any of the following:

- employer's premises
- a suitable venue selected by the EPAO, for example a training provider's premises

Question and resource development

A question bank must be developed by EPAOs. The question bank must be of sufficient size to prevent predictability and the EPAO must review it regularly (at least once a year) to ensure that it, and its content, are fit for purpose. The questions relating to the KSBs, must be varied yet allow assessment of the relevant KSBs. Independent assessors must use the question bank as a source for questions and are expected to use their professional judgment to tailor those questions appropriately. Independent assessors are responsible for asking suitable questions in line with the EPAO's training and standardisation process.

EPAOs must ensure that apprentices have a different set of questions in the case of re-sits/re-takes.

EPAOs will produce the following material to support this assessment method:

- independent assessor training materials
- a question bank
- outline of the assessment method's requirements
- marking materials
- guidance document for employers and apprentices on the process/timescales for the interview as well as a description of the purpose
- guidance document for independent assessors on how to carry out the assessment

End-point assessment method 3: Multiple-choice test

Overview

This assessment method has 1 component.

A multiple-choice test is a controlled assessment which consists of a series of questions in which apprentices are asked to provide a response.

The rationale for this assessment method is:

- it allows for the efficient testing of knowledge where there is a right or wrong answer
- it allows for flexibility in terms of when, where and how it is taken
- it allows larger volumes of apprentices to be assessed at one time

Delivery

Test format

The multiple-choice test can be:

- computer based
- paper based

It will consist of 40 questions.

These questions will consist of multiple-choice questions. The multiple-choice questions will have four options of which one will be correct. The questions must be varied, to avoid the multiple-choice test becoming too predictable, yet allow assessment of the relevant KSBs.

Test administration

Apprentices must have 60 minutes to complete the multiple-choice test.

The multiple-choice test is closed book which means that the apprentice cannot refer to reference books or materials.

Assessment

Multiple-choice tests must be marked by independent assessors or markers employed by the EPAO following a marking guide produced by the EPAO. Alternatively, marking by computer is permissible where question types allow this.

A correct response will be assigned one mark.

Any incorrect or missing answers must be assigned zero mark.

Grading boundaries

The following grade boundaries apply to the multiple-choice test:

Grade	Minimum mark	Maximum mark
Fail	0	29
Pass	30	40

Assessment location

Apprentices must take the multiple-choice test in a suitably controlled environment that is a quiet space, free from distractions and influence, in the presence of an invigilator. The invigilator may be any independent person appointed by the EPAO. The EPAO is required to have an invigilation policy that will set out how the multiple-choice test is to be carried out. This will include specifying the most appropriate ratio of apprentices to invigilators to best take into account the setting and security required in administering the multiple-choice test.

The EPAO is responsible for ensuring the security of any multiple-choice tests they administer to ensure the test remains valid and reliable (this includes any arrangements made using online tools). The EPAO is responsible for verifying the identity of the person taking the multiple-choice test. The EPAO must also verify the suitability of the venue for multiple-choice test-taking.

Question and resource development

Questions must be written by EPAOs and must be relevant to the occupation. It is recommended that this be done in consultation with employers of this occupation. EPAOs should maintain the security and confidentiality of their questions when consulting employers.

EPAOs must develop 'multiple-choice test specifications' and 'question banks' of sufficient size to prevent predictability and review them regularly (at least once a year) to ensure they, and the questions they contain, are fit for purpose. The specifications, including questions relating to underpinning KSBs must be varied, yet allow assessment of the relevant KSBs.

EPAOs must ensure that apprentices have a different set of questions in the case of re-sits/re-takes.

EPAOs will produce the following material to support this assessment method:

- a question bank
- a multiple-choice test specification
- sample multiple-choice tests and mark schemes
- live multiple-choice tests and mark schemes
- analysis reports which show areas of weakness for completed multiple-choice tests/exams and an invigilation policy

Reasonable adjustments

The EPAO must have in place clear and fair arrangements for making reasonable adjustments to the assessment methods for the EPA for this apprenticeship standard. This should include how an apprentice qualifies for reasonable adjustments and what reasonable adjustments will be made. The adjustments must maintain the validity, reliability and integrity of the assessment methods outlined in this EPA plan.

Overall EPA grading

Performance in the EPA will determine the apprenticeship grade of fail, pass, merit or distinction.

Independent assessors must individually grade the observation with questions and interview supported by a portfolio of evidence assessment methods, according to the requirements set out in this plan. A person appointed by the EPAO must grade the multiple-choice test. Alternatively, marking by computer is permissible where question types allow this.

EPAOs must combine the individual assessment method grades to determine the overall EPA grade.

Apprentices who fail one or more assessment method will be awarded an overall EPA fail.

To gain an overall EPA pass, apprentices must achieve a pass in all the assessment methods.

To achieve an overall EPA merit, apprentices must achieve a distinction in the observation with questions, a pass in the interview underpinned by a portfolio of evidence and a pass in the multiple-choice test.

To achieve an overall EPA distinction, apprentices must achieve a distinction in the observation with questions, and a distinction in the interview underpinned by a portfolio of evidence and a pass in the multiple-choice test.

Grades from individual assessment methods should be combined in the following way to determine the grade of the EPA as a whole:

Assessment method 1 – Observation with questions	Assessment method 2 – Interview underpinned by a portfolio of evidence	Assessment method 3 – Multiple-choice test	Overall grading
Fail	Any grade	Any grade	Fail
Any grade	Fail	Any grade	Fail
Any grade	Any grade	Fail	Fail
Pass	Pass	Pass	Pass
Pass	Distinction	Pass	Pass
Distinction	Pass	Pass	Merit
Distinction	Distinction	Pass	Distinction

Any grade = fail, pass, distinction

Re-sits and re-takes

Apprentices who fail one or more assessment method(s) will be offered the opportunity to take a re-sit or a re-take at the employer's discretion. The apprentice's employer will need to agree that either a re-sit or re-take is an appropriate course of action.

A re-sit does not require further learning, whereas a re-take does.

Apprentices should have a supportive action plan to prepare for a re-sit or a re-take.

The timescale for a re-sit or re-take is agreed between the employer and EPAO. A re-sit is typically taken within 2 months of the EPA outcome notification. The timescale for a re-take is dependent on how much re-training is required and is typically taken within 4 months of the EPA outcome notification.

All failed assessment methods must be re-sat or re-taken within a 6-month period from the EPA outcome notification, otherwise the entire EPA will need to be re-sat or re-taken.

Re-sits and re-takes are not offered to apprentices wishing to move from pass to a higher grade.

Where any assessment method has to be re-sat or re-taken, the apprentice will be awarded a maximum EPA grade of pass, unless the EPAO determines there are exceptional circumstances.

Roles and responsibilities

Role	Responsibility
Apprentice	<p>As a minimum, apprentices should:</p> <ul style="list-style-type: none"> • participate in and complete on-programme training to meet the KSBs as outlined in the occupational standard for a minimum of 12 months • undertake at least 20% off-the-job training as arranged by the employer and training provider • understand the purpose and importance of EPA • undertake the EPA including meeting all gateway requirements
Employer	<p>As a minimum, employers should:</p> <ul style="list-style-type: none"> • select the EPAO and training provider • work with the training provider (where applicable) to support the apprentice in the workplace and to provide the opportunities for the apprentice to develop the KSBs • arrange and support a minimum of 20% off-the-job training to be undertaken by the apprentice • decide when the apprentice is working at or above the occupational standard and so is ready for EPA • ensure that all supporting evidence required at the gateway is submitted in accordance with this EPA plan • remain independent from the delivery of the EPA • confirm arrangements with the EPAO for the EPA (who, when, where) in a timely manner (including providing access to any employer-specific documentation as required, for example company policies) • ensure that the EPA is scheduled with the EPAO for a date and time which allow appropriate opportunity for the KSBs to be met • ensure the apprentice is well prepared for the EPA • ensure the apprentice is given sufficient time away from regular duties to prepare for and complete all post-gateway elements of the EPA, and that any required supervision during this time (as stated within this EPA plan) is in place • where the apprentice is assessed in the workplace, ensure that the apprentice has access to the resources used on a daily basis • pass the certificate to the apprentice • for the observation with questions and interview underpinned by a portfolio of evidence provide any workplace specific policies, requirements and or

	instructions as requested by the EPAO as a gateway requirement
EPAO	<p>As a minimum, EPAOs should:</p> <ul style="list-style-type: none"> • conform to the requirements of this EPA plan and deliver its requirements in a timely manner • conform to the requirements of the Register of End-point assessment organisations (RoEPAO) • conform to the requirements of the external quality assurance provider (EQAP) for this apprenticeship standard • understand the occupational standard • make all necessary contractual arrangements, including agreeing the price of the EPA • develop and produce assessment materials including specifications and marking materials (for example mark schemes, practice materials, training material) • appoint suitably qualified and competent independent assessors • appoint administrators (and invigilators where required) to administer the EPA as appropriate • provide training for independent assessors in terms of good assessment practice, operating the assessment tools and grading • provide adequate information, advice and guidance documentation to enable apprentices, employers and training providers to prepare for the EPA • arrange for the EPA to take place, in consultation with the employer • where the apprentice is not assessed in the workplace, ensure that the apprentice has access to the required resources and liaise with the employer to agree this if necessary • develop and provide appropriate assessment recording documentation to ensure a clear and auditable process is in place for providing assessment decisions and feedback to all relevant stakeholders • have no direct connection with the apprentice, their employer or training provider. In all instances, including when the EPAO is the training provider (i.e., HEI), there must be no conflict of interest • have policies and procedures for internal quality assurance (IQA), and maintain records of regular and robust IQA activity and moderation for external quality assurance (EQA) purposes

	<ul style="list-style-type: none"> • deliver induction training for independent assessors, and for invigilators and/or markers (where used) • undertake standardisation activity on this apprenticeship standard for all independent assessors before they conduct an EPA for the first time, if the EPA is updated and periodically as appropriate (a minimum of annually) • manage invigilation of apprentices in order to maintain security of the assessment in line with the EPAO's malpractice policy • verify the identity of the apprentice being assessed • use language in the development and delivery of the EPA that is appropriate to the level of the occupational standard • provide details of the independent assessor's name and contact details to the employer • have and apply appropriately an EPA appeals process • request certification via the Apprenticeship Service upon successful achievement of the EPA
Independent assessor	<p>As a minimum, independent assessors should:</p> <ul style="list-style-type: none"> • have the competence to assess the apprentice at this level and hold any required qualifications and experience in line with the requirements of the independent assessor as detailed in the IQA section of this EPA plan • understand the occupational standard and the requirements of this EPA • have, maintain and be able to evidence up-to-date knowledge and expertise of the subject matter • deliver the end-point assessment in-line with the EPA plan • comply with the IQA requirements of the EPAO • have no direct connection or conflict of interest with the apprentice, their employer or training provider; in all instances, including when the EPAO is the training provider (i.e., HEI) • attend induction training • attend standardisation events when they begin working for the EPAO, before they conduct an EPA for the first time and a minimum of annually on this apprenticeship standard • assess each assessment method, as determined by the EPA plan, and without extending the EPA unnecessarily • assess against the KSBs assigned to each assessment method, as shown in the mapping of assessment methods and as determined by the EPAO, and without extending the EPA unnecessarily • make all grading decisions • record and report all assessment outcome decisions, for each apprentice, following instructions and using

	<p>assessment recording documentation provided by the EPAO, in a timely manner</p> <ul style="list-style-type: none"> • use language in the development and delivery of the EPA that is appropriate to the level of the occupational standard • mark open (constructed) test answers accurately according to the EPAO's mark scheme and procedures
Training provider	<p>As a minimum, training providers should:</p> <ul style="list-style-type: none"> • work with the employer and support the apprentice during the off-the-job training to provide them with opportunities to develop the knowledge, skills and behaviours as listed in the occupational standard • conduct training covering any knowledge, skill or behaviour requirement agreed as part of the Commitment Statement (often known as the Individual Learning Plan). • monitor the apprentice's progress during any training provider led on-programme learning • advise the employer, upon request, on the apprentice's readiness for EPA • remain independent from delivery of the EPA. Where the training provider is the EPA (i.e., a HEI) there must be procedures in place to mitigate against any conflict of interest
Marker	<p>As a minimum, markers should:</p> <ul style="list-style-type: none"> • attend induction training • have no direct connection or conflict of interest with the apprentice, their employer or training provider in all instances including when the EPAO is the training provider (i.e., HEI) • mark multiple-choice test answers accurately according to the EPAO's mark scheme and procedures
Invigilator	<p>As a minimum, invigilators should:</p> <ul style="list-style-type: none"> • attend induction training as directed by the EPAO • have no direct connection or conflict of interest with the apprentice, their employer or training provider; in all instances, including when the EPAO is the training provider (i.e., HEI) • invigilate and supervise apprentices during tests and in breaks during assessment methods to prevent malpractice in accordance with the EPAO's invigilation procedures

Internal quality assurance (IQA)

Internal quality assurance refers to the strategies, policies and procedures that EPAOs must have in place to ensure valid, consistent and reliable end-point assessment decisions. EPAOs for this EPA must adhere to all requirements within the roles and responsibilities section and:

- have effective and rigorous quality assurance systems and procedures that ensure fair, reliable and consistent assessment across employers, places, times and independent assessors
- appoint independent assessors who are competent to deliver the end-point assessment and who:
 - have recent relevant experience of the occupation and sector to at least occupational level 3 gained in the last 3 years or significant experience of the occupation and sector
 - hold Food Safety Level 4 Award qualification
 - hold HACCP Level 4 Award qualification
- operate induction training for independent assessors and any other personnel involved in the delivery and or/assessment of the EPA (e.g., markers and invigilators)
- provide training for independent assessors in terms of good assessment practice, operating the assessment tools and grading
- where appropriate provide ongoing training for markers and invigilators
- provide standardisation activity for this apprenticeship standard for all independent assessors:
 - before they conduct an EPA for the first time
 - if the EPA is updated
 - periodically as appropriate (a minimum of annually)
- conduct effective moderation of assessment decisions and grades
- conduct appeals where required, according to the EPAO's appeals procedure, reviewing and making final decisions on assessment decisions and grades

Value for money

Affordability of the EPA will be aided by using at least some of the following:

- completing applicable assessment methods online (i.e., computer-based assessment)
- utilising digital remote platforms to conduct applicable assessment methods
- assessing multiple apprentices simultaneously for the multiple-choice test
- using the employer's premises
- conducting assessment methods on the same day

Mapping of knowledge, skills and behaviours (KSBs)

End-point assessment method 1: Observation with questions

Knowledge
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.
K25: Communication techniques: verbal, non-verbal.
Skills
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.
S17: Collect and interpret information. Use data to apply changes.
S18: Record information - paper based or electronic.
S21: Communicate with colleagues and stakeholders visually and verbally.
Behaviours
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.
B6: Respond and adapt to work demands.

End-point assessment method 2: Interview, underpinned by a portfolio of evidence

Knowledge
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.
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.
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
K26: Communication techniques: written. Writing using plain English principles.
K27: Workplace training and buddying techniques
K28: Team working techniques.

Skills
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.
S19: Use information technology. Comply with GDPR.
S20: Plan and organise self, others and resources.
S22: Communicate in writing.
S23: Identify training needs. Train and buddy team members in the workplace.

Behaviours

B5: Team-focus to meet work goals.
B7: Committed to Continued Professional Development.

End-point assessment method 3: Multiple-choice test

Knowledge
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.
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.
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.

Grading descriptors

End-point assessment method 1: Observation with questions

Theme KSBs	Pass descriptors To achieve a pass, apprentices must demonstrate all of the pass descriptors	Distinction descriptors To achieve a distinction, apprentices must demonstrate all the pass descriptors and all the distinction descriptors
Run food and drink manufacturing line operation S1 S3 B4 B6	<p>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)</p> <p>Monitor's production performance, stock usage and rotation, responding and adapting to meet work demands. (S3, B6)</p>	<p>Implements and follows procedures without error, mitigating against potential issues. (S1)</p>
Operate or use food and drink production tools and equipment K6 S4	<p>Operates or uses tools and equipment in line with employer's or manufacturers' instructions. (K6, S4)</p>	<p>Operates or uses tools and equipment effectively to achieve production efficiencies. (K6, S4)</p>
Monitor performance K8 S17 S18	<p>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)</p> <p>Records information for work tasks accurately, legibly and in full. (S18)</p>	
Undertake quality assurance to ensure compliance K5 K7 S2	<p>Interprets, follows, and implements quality assurance procedures to ensure final product meets customer specifications. (K5, K7, S2)</p>	

<p>Prioritise and promote food safety, health and safety, and environmental requirements</p> <p>S5 S6 S7 S8</p> <p>B1 B2</p>	<p>Identifies hazards (Critical Control Points) and control measures to minimise these risks. (S5)</p> <p>Conducts work in line with food safety regulations and company procedures. (S6)</p> <p>Conducts work in line with health and safety regulations and procedures. (S7)</p> <p>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)</p> <p>Prioritises and promotes health and safety, food safety and, the environment and sustainability over other factors for example time and cost. (B1, B2)</p>	<p>Justifies how chosen control measures have the potential to minimise risks. (S5)</p>
<p>Work as part of a team</p> <p>K25</p> <p>S21</p> <p>B3</p>	<p>Uses verbal and non-verbal communication techniques suitable for the task and audience. (K25, S21)</p> <p>Applies a professional approach for example, uses appropriate language, shows respect. (B3)</p>	<p>Demonstrates clear communication that mitigates against potential misunderstanding. (K25, S21)</p>
<p>Fail: A fail grade will be awarded if the apprentice does not satisfy all of the pass criteria.</p>		

End-point assessment method 2: Interview underpinned by a portfolio of evidence

Theme KSBs	Pass descriptors To achieve a pass, apprentices must demonstrate all of the pass descriptors	Distinction descriptors To achieve a distinction, apprentices must demonstrate all the pass descriptors and all the distinction descriptors
Food and drink technical operator's role K2	Explains factors that impact on the food and drink technical operator's role and production identifying: <ul style="list-style-type: none"> • limits of autonomy • different teams and functions • business operation considerations (K2) 	
First line mechanical engineering maintenance and asset care K19 S9 S10 S11 S12 S13	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)	
Fault-finding and taking action K20 S14 S15	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)
Continuous improvement K21	Describes how they apply continuous improvement techniques and have devised suggestions for improvement	Evaluates the value of specific continuous improvement techniques for different issues. (K21)

S16	for the benefit of the organisation, customer, or work process. (K21, S16)	
Internal and external audits K22	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)	
Developing standard operating procedures K4 K26 S22	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)
Information technology K23 S19	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)	
Team working and development K24 K27 K28 S20 S23 B5 B7	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 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)

	<p>Describes how they apply team working techniques to achieve work goals. (K28, B5)</p> <p>Outlines personal plans for CPD, explaining how they keep up to date with industry developments. (B7)</p>	
<p>Fail: A fail grade will be awarded if the apprentice does not satisfy all of the pass criteria.</p>		

End-point assessment method 3: Multiple-choice test

KSBs	
K1 K3 K9 K10 K11 K12 K13 K14 K15 K16 K17 K18	Test mark will determine whether apprentice achieved fail or pass.

The following grade boundaries apply to the multiple-choice test:

Grade	Minimum mark	Maximum mark
Fail	0	29
Pass	30	40