FDQ Ltd - Qualification Purpose and Structure

FDQ number	Qualification title	EPA Plan number	EQF Level	Review date
328-281	Level 4 End-point Assessment for Brewer ST0580 QN 603/7300/3	ST0580/AP02	4	01/04/2026

Purpose overview

This End-point Assessment (EPA) qualification is designed for learners who have completed the on-programme training for the Brewer 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 4 Brewer 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 Brewer standard apprenticeship.

Prior to taking this EPA qualification, entrants should meet the Level 4 Brewer 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

- Brewer log book, meeting the requirements set out in the EPA plan
- Level 2 Mathematics
- Level 2 English

Qualification Content

This qualification tests the mandatory knowledge, skills and behaviours set out in the Brewer standard including: knowledge of ingredient provenance and processing of beer ingredients; principles of brewing, fermentation, maturation and processing; plant design, hygiene and maintenance; production scheduling; quality assurance; continuous improvement to optimise production; safe working in a team, amongst other requirements.

Entrants will undergo three test components as detailed on the following pages, which must all be passed to achieve the apprenticeship. The apprentice is awarded a final grade of fail, pass or distinction.

This qualification could lead to

This qualification will support progression to further learning in:

1. Subject areas including:

- Brewing, distilling or packaging
- Food safety and quality
- Team leading/management

2. Further qualifications including:

- Level 4/5 Management

Qualification support

The Level 4 Brewer standard and assessment plan have been developed by the Brewer apprenticeship employer group and approved by the Institute for Apprenticeships; Ofqual has confirmed it will carry out external quality assurance of the EPA. The FDQ EPA qualification is supported by the Food and Drink Training and Education Council and a range of employers and training providers.

Further information

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

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 Brewer 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 or distinction, which is driven by the result within the practical brewing assessment component.

The three assessment components may be undertaken in any order within the three-month gateway period.

Assessment Components and Time Allowed

FDQ Level 4 EPA for Brewer ST0580	
Component	**Possible grades**
Knowledge test	Fail/pass
Practical brewing assessment	Fail/pass/distinction
Professional discussion	Fail/pass
Overall apprenticeship grading	Fail/pass/distinction

Test structure		Time allowed
Knowledge test (KT)	30 multiple choice questions	60 mins
Practical Brewing Assessment (PBA)	Walk and talk Direct observation of brewing activities Questioning session	4.5 – 5.5 hrs
Professional Discussion (PD)	Question and answer	55 – 65 mins

Qualification scope

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

		Assessment Method		
Standard Ref	Knowledge to be assessed	PBA	KT	PD
K1	The provenance, quality and characteristics of principle ingredients used for beer production and their combined contribution to beer style and character.		•	
K2	Requirements for processing of ingredients prior to use in the brewery.		•	
K3	Importance of stock control, handling and storage of ingredients for use in the brewery to preserve ingredient quality and characteristic	•		
K4	Principles of brewing, fermentation, yeast management, conditioning, maturation, stabilisation, clarification, processing and packaging, plant design, operation and the impact of processing conditions on the characteristics, quality and consistency of beer and style	•	•	
K5	Principles and importance of plant hygiene and maintenance on production quality, safety and efficiency.			•
K6	Transport and supply chain conditions, including beer dispense, required to ensure beer quality and consistency from brewery to glass.	•	•	
K7	Brewery monitoring systems to control the quality, consistency and safety of ingredients and raw materials as well as product within the process and at final package.	•	•	
K8	Drivers of brewery operation and performance, including costings, maintaining consistent, high quality and efficient output and process, responding to consumer expectations and developing market trends; financial and business pressures, meeting expectations of responsibility and sustainable production.		•	

K9	Commercial awareness of brewery operation and all brewery inputs and outputs. Control of costs associated with production in response to drivers of brewery operation and performance, maintaining and upgrading brewery assets, plant and equipment as well as decisions on plant investment and improvements.			•
K10	Sustainability factors and environmental considerations connected with beer production and the supply chain; management and control of waste and effluent throughout production.		•	
K11	Regulatory compliance and responsibility associated with beer production, logistics and retail operation.		•	
K12	Continuous Improvement (CI) processes, for example knowledge of 5 S, and Plan, Action, Review.		•	
K13	The heritage and structure of the industry as well as the significance of changing market trends and drivers of consumer preferences.			•
Standard Ref	Skills to be assessed	PBA	KT	PD
S1	Control and safe operation of automated and/or manual plant and equipment required for brewing, fermentation, processing and packaging of beer taking appropriate personal and operational responsibility for health and safety to protect self and others at all times.	•		
S2	Maintain accurate records for existing beer recipes and as part of day-to-day brewhouse and production requirements.	•		
S3	Design and adjustment of beer recipes and specifications where necessary.			•
S4	Planning to ensure production schedules are met, with adjustments made in a timely way where necessary.			•
S5	Quality and safety control checks (microbiological, chemical, physical, sensory) and maintains records required for traceability.	•		•
S6	Monitoring quality control and consistency of ingredients, raw materials and product within the	•		

	process and at final package and to demonstrate compliance with specification and regulations.			
S7	Implementation and monitoring of cleaning and sanitation processes intended to ensure plant and process hygiene.	•		
S8	Monitoring and maintenance of yeast hygiene, vitality and viability.	•		
S8	Use technology appropriately and efficiently to support production and operation	•		
S9	Use of computer word processing and data manipulation packages	Not assessed		
S10	Contribution to CI activities to improve and optimise production processes and troubleshoot/problem solve operational issues.			•
S11	Promotion of the brewery and attributes and characteristics of key brands and styles, when hosting or attending private and/or public events.	•		•
Standard Ref	Behaviours to be assessed	PBA	KT	PD
B1	Lead by example in behaviour and approach to working safely	•		
B2	Passion for the industry and the product. Acts as a role model and ambassador for brand and brewery.			•
B3	Demonstrates integrity and confidence in daily activities			•
B4	Curiosity and desire to innovate and expand knowledge and experience of brewing.			•
B5	Calmly and consistently reacts to information.	•		
B6	Committed to delivering and maintaining high-quality product and work place standards.	•		
B7	Demonstrates responsibility, personal accountability and professionalism in all aspects of the role.	Not assessed		
B8	Flexible and adaptable to working environment.	Not assessed		

B9	Confidently and competently communicates relevant information to team members and others in an appropriate manner.	•		
B10	Works collaboratively as part of a team.	•		

Assessment Criteria

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

Assessment component	Assessment criteria
KT	Multiple choice questions: 1 mark for each correct answer Total available points for KT = 30 Grade boundaries: Fail: 0-17 correct answers out of 30 Pass: 18-30 correct answers out of 30
PBA	The PBA is marked holistically against the grading criteria below. Available grades : Fail/pass/distinction
PD	The PD is marked holistically against the grading criteria below. Available grades : Fail/pass

Grading criteria and marks for PBA

The PBA will be graded fail, pass or distinction

The table below shows the grading criteria which will be used to holistically grade the PBA.

Each of the three PBA components will be graded using the criteria. All Pass criteria must be achieved to successfully pass the EPA.

To gain a Distinction for this component, 20 Distinction criteria in total must be achieved with a minimum of 2 from each section.

Practical Brewing Assessment – Grading Criteria			
Stage	**Distinction Criteria** The apprentice demonstrates all of the Pass criteria and in addition 20 of the 35 Distinction criteria. There must be a minimum of 2 Distinction criteria achieved from each stage	**Pass Criteria** The apprentice demonstrates all of the following criteria	**Fail Criteria** The apprentice demonstrates one or more of the following criteria
	• Explains/manages raw material batch-to-batch variation and suggests actions to ensure product specification is maintained (K3) (B6) • Explains impact of process variations during raw material preparation (K3) (B6) • Can explain the importance of ingredients intake and use and how this can be recorded using other methods e.g. ERP software) (S2) • Identifies areas of improvement and explains best practice in wider	• Quality and accuracy checks for raw materials on delivery and entering into stock, in line with company procedures (K3) (B6) (S5) • Storage and handling of raw materials in line with company procedure, minimising potential for cross contamination (physical, microbiological, allergens); operates first in and first out (FIFO) stock procedures (S6) (K3) (B6) • Control and use of appropriate personal protective equipment (PPE) and safe working practices at all stages of raw material handling e.g. manual handling and grain dust exposure (B1) • Can demonstrate or explain traceability of ingredients intake and use (K7) (S2)	Doesn't complete quality checks in line with company procedures (K3) (B6) (S5) Storage and handling of raw materials isn't in line with company procedures; stock compromised (S6) (K3) (B6) Operates in a way that compromises health and safety of self and/or others (B1) Ways of working lead to wastage (s2) Work is unorganised and/or not synchronised to production schedules (B6)

1. Raw material handling	industry of the storage and handling of raw materials to minimise potential for cross contamination (physical, microbiological, allergens); operates first in and first out (FIFO) stock procedures (S6) (K3) (B6) • Explains the wider impact on minimising waste (financial, health and safety, environment) and explains industry best practice (B1) Demonstrates forward planning and adapting production to optimise efficiencies based on market pressures and impact on brewing schedules (B6) • Explains improvements to safe working practices at all stages of raw material handling e.g. manual handling and grain dust exposure based on wider industry practice (B1)	• Accurate preparation of raw materials in accordance with recipe, minimising waste (S2) • Organisation and completion of work in a logical order, according to production schedules (B6)	• Incomplete or lack of traceability in raw material intake and use within the process (K7) (S2)
2. Brewhouse	• Use of appropriate	• Common faults identification e.g. stuck	• Fails to identify common

	remedial action for common faults (S5) (B5) • Can explain alternative milling systems and how they might be used in different breweries (S1) (B6) • Can explain alternative approaches to mashing and wort separation and why they may be used in different breweries (e.g. infusion mashing, temperature stepped mashing, decoction mashing) (S1) (B6) • Explains design and approach to alternative methods of boiling in different breweries (S1) (B6) • Explains design and approach to alternative methods of wort cooling (S1) (B6)	mash, incorrect pH or temperature (S5) (B5) (B6) (S6) • Can explain the choice and use of the mill in their brewery identifying responsibility for health and safety (S1) • Can fully explain the design and safe operation of mashing and wort separation equipment in their brewery (S1) (B1) • The design and safe operation of boiling equipment in their brewery including addition of hops (S1) (B1) • The design and safe operation of cooling equipment for boiled wort (S1) (B1)	faults (S5) (B5) (B6) (S5) • Fails to identify the potential to segregate co-products from brewery waste (S6) • Cannot explain or has limited knowledge of the design and safe operation of mashing and wort separation equipment in their brewery (S1) (B1) • Cannot explain or has limited knowledge of the design and safe operation of boiling equipment in their brewery including the addition of hops (S1) (B1) • Cannot explain or has limited knowledge of the design and safe operation of cooling equipment for boiled wort (S1) (B1)
3. Fermentation and maturation	• Explains the underlying principles behind yeast handling with relation to yeast quality, health and vitality (S8)	• Yeast management according to company procedures, handling and hygiene control e.g. FIFO, yeast counts, propagation oxygenation, control of storage temperature and times (S8)	• Fails to follow company procedures with regards to yeast management, handling and hygiene control (e.g FIFO, yeast

	• Can explain the purpose of different fermentation systems and application in other breweries (S1) • Can explain the use of different and novel yeasts e.g. lager v ale and their different strains, deliberate use of wild yeasts and bacteria) (K4) • Use of appropriate remedial actions for common faults in fermentation (K5) (B5) • Understanding and achieving differences in sanitisation and sterility (S7) (B6) • Understanding of different approaches to maturation systems and methods (S1)	• Vessel design, safe use and planning in their brewery (S1) (B1) • Common faults identification e.g. acid washing, temperature, stuck fermentation (K5) (B5) • Requirements of plant hygiene (K5) (S7) (B6) • Explain the principles of the maturation system in their brewery (K4) (S1)	counts, propagation oxygenation, control of storage temperature and times (S8) • Cannot explain or demonstrate vessel design, safe use and planning in their brewery (S1) (B1) • Fails to identify common faults (K5) (B5) • Cannot explain or demonstrate the requirements of plant hygiene (K5) (S7) (B6) • Fails to explain the principles of the maturation system in their brewery (K4) (S1)
4. Beer finishing	• Demonstrates knowledge of pre- packaging processes and requirements in other breweries (S1) (K4) • Explains the application of	• Pre-packaging processes within their brewery e.g. high gravity brewing, blending, filtration, stabilisation (S1) (K4) • Application of pre-packing processes based on final package type in their	• Fails to demonstrate the correct processes for pre-packaging processes within their brewery e.g. high gravity brewing, blending, filtration, stabilisation (S1) (K4)

	pre- packaging processes based on final package for a beer style not produced in their brewery (S1) (K4) • Demonstrates an understanding of the impact of requirement for routine and remedial adjustments to reach product final specification (K4) (S1)	brewery e.g. clarification (S1) (K4) • Adjustment to achieve final product specification e.g. dilution, gas adjustments (K4) (S1)	• Fails to explain the application of pre-packaging processes based on the final package type in their brewery e.g. clarification (S1) (K4) • Does not recognise the need for adjustments or fails make appropriate adjustment to achieve final product specification e.g. dilution, gas adjustments (S1) (K4)
5. Packaging	• Understanding of alternative options in relation to packaging tasks for different beer styles (S1) (K4) • Explains the design and merits of different package formats (K4) • Design of alternative packaging plants in other breweries (S1) (B1) • Explains importance of the appropriate handling and storage conditions for	• Packaging tasks according to product/brand specifications (S1) • Use of different package types e.g. kegs, bottles, cask and/or cans, in their brewery (K4) • Design and safe operation of the packaging plant in your brewery (S1) (B1) • Handling and storage of packaged product prior to dispatch (K7)	• Does not complete packaging tasks according to product/brand specifications (S1) • Cannot explain of demonstrate the use of different packaging types (K4) • Cannot explain the design and safe operations of the packaging plan in the brewery (S1) (B1) • Fails to handle and store packaged product appropriates prior to dispatch (K7)

	different packaging formats (K7)		
6. Cellar management and dispense	• Explains key requirements for cellar and dispense requirements for beer styles and packaging formats (K6) • Can explain the impact of different approaches to presentation on the attributes and flavour characteristics for beer styles (K6) • Can explain typical attributes and characteristics for a wide range of beers styles (S11)	• Impact of cellar operation and dispense hygiene on final product quality (K6) • Demonstration of end product presentation at point of sale (K6) • Communicates attributes and style characteristics of own brand portfolio (S11) • Demonstrates safe design and operation of Cellar. (K6)	• Fails to recognise the impact of cellar operation and dispense hygiene on final product quality (K6) • Does not demonstrate end product presentation at point of sale (K6) • Fails to communicate attributes and style characteristics of own brand portfolio (S11)
7. All areas	• Demonstrates awareness of good health and safety practice on others, and communicates this clearly (B1) • Can link food safety management procedures, record keeping and traceability to relevant legislative requirement	• Working in line with Health & Safety legal requirements e.g. COSHH (Control of Substances Hazardous to Health), Health & safety at work act 1974, The Management of health and Safety at Work Regulations 1999, The Workplace (Health, Safety and Welfare) regulations 1992 Display Screen Equipment (DSE) Regulations 2002, industry accepted codes of practice e.g. Grain Dust – Guidance Note (EH66), Manual Handling Solutions for the Food	• Work isn't in line with H&S legal requirements, industry accepted codes and/or company rules (K11, B1) • Fails to understand H&S impact/hazards and does not follow control methods (S1) (B1) • Fails to implement food

	(B1) • Can communicate effectively with colleagues at all levels (B9, B10) • Explains the principles behind the cleaning methods used across the different stages of production and by others across the industry (S7) • Explains the impact of poor maintenance on the plant operation and final product quality (K5) • Explains the commercial value and use in the supply chain of co products separate from brewery waste (K10) • Explains the basis of regulatory control on the industry e.g. weights and measures (packaged goods) 2006, food information consumer (FIC) labelling 2011, general food hygiene e.g. foreign body, HACCP (B1)	and Drink Industries (HSG 196) & BBPA Manual Handling in the Brewing Industry Guidance, Managing and Working with Asbestos, Rider Operated Lift Trucks (L1, 17), Working at Height, and company rules e.g. risk assessment requirements (K11) (B1) • Understands H&S impact/hazards and follows control methods in all areas of production (S1, B1) Understands and implements food safety management procedures, record keeping and traceability (S5) • Effective communication with colleagues where necessary (B9, B5, B10) • Demonstrate or explain relevant cleaning methods employed at different stages in their brewery (S7) • Maintenance requirements and procedures for all brewery plant and services (K5) • Segregation of co-products from brewery waste; safe handling and disposal of by-products e.g. spent hops, brewer's grains, dust, spent yeast, packaging (B1, S6, K10) • Knowledge of regulatory requirements e.g. Weights and Measures (packaged goods)	safety procedures and keep records during observation (S5) • Does not communicate effectively with colleagues (B5, B9, B10) • Is unable to explain the relevant cleaning methods employed at different stages in their brewery (S7) • Is unable to explain relevant maintenance requirements and procedures for the brewery plant and services (K5) • Does not segregate or safely handle co-products from brewery waste e.g. spent hops, brewer's grains, dust, spent yeast, packaging (K10, B1, S6) • Fails to demonstrate knowledge of regulatory requirements e.g. weights and measures (packaged goods) 2006, food information consumer (FIC) labelling 2011,

		2006, Food Information to the Consumer (FIC) Legislation EC 1196/2011, General Food Hygiene Regulations (EC 178/2002 including HACCP (B1)	general food hygiene e.g. foreign body, HACCP (B1)

Professional Discussion Grading Criteria		
Area	**Pass criteria** The apprentice demonstrates the following criteria.	**Fail criteria** The apprentice demonstrates one or more of the following criteria
Quality assurance and quality control activities	• Can explain QA/QC approach in their brewery and contribution to product quality and process efficiency (S5) (S10) • Explain how QA/QC outputs can support continuous improvement activities (S5) (S10)	• Cannot explain approached to QA/QC in their brewery and fails to recognise the contribution to product quality and process efficiency (S5) (S10) • Fails to explain how QA/QC outputs can support continuous improvement activities (S5) (10)
Production planning and operation	• Contribution to production planning and operation processes; when and how adjustments are made; considerations taken into account (S4, S10) • Management of resources to match production requirements (S4)	• Cannot evidence contribution to production planning and operation processes; when and how adjustments are made; considerations taken into account (S4, S10) • Unable to demonstrate management of resources to match production requirements (S4)
Industry knowledge	• Their organisation's position within the industry, their company's distinguishing factors (B3) • How they keep up-to-date with latest brewing industry trends; how they apply knowledge in the workplace (B3, B4, K13)	• Fails to demonstrate knowledge of their organisation's position within the industry, their company's distinguishing factors (B3) • Cannot demonstrate how they keep up-to-date with latest brewing industry trends; how they apply knowledge in the workplace (B3, B4, K13)

	• Key business drivers and how they can impact on performance (K9)	• Fails to recognise key business drivers and how they can impact on performance (K9)
Recipe design	• Beer recipe design principles (S3) (K13) • Personal beer design recipe, its features and qualities (S3)	• Cannot demonstrate beer recipe design principles (K13, S3)
Promotional activities	• Participation in the promotion of product/brand, communicating unique selling points/characteristics (S11, B2)	• Cannot demonstrate participation in the promotion of a product or brand, or has not communicated the promotion of the product/brand effectively describing the products USP/ Characteristics (S11, B2)

Specimen assessments

Example multiple-choice questions:

Question 1

Which of the following chemicals is most effective in cleaning soiled CO_2 atmosphere bright beer tanks post-usage?

a. Cold 1% caustic soda solution
b. 70ºC hot water
c. Cold 1% phosphoric acid solution
d. Cold 10% proprionic acid solution

Correct answer: c

Question 2

Which one of the following exogenous enzymes is used to colloidally stabilise beer during maturation?

a. Endopeptidase
b. Amyloglucosidase
c. Peptidase
d. α-acetolactate decarboxylase

Correct answer: a

Question 3

Which microscope test is used to check the % viability of yeast prior to fermenter pitching?

a. Methylene blue test
b. Phenolphthalein test
c. Cresol red test
d. Iodine test

Correct answer: a

Examples of PBA questions:

Raw material handling	**Pass question:** Explain the importance of traceability of raw materials used in a recipe. **Distinction question:** Explain the impact on the final product of variations in process parameters during the milling of malt.
Brewhouse	**Pass question:** Explain the design and safe operation of mashing and wort separation equipment in your brewery. **Distinction question:** Give two examples of different mashing and wort separation systems and their advantages.

Additional information and guidance

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

- Brewer End Point Assessment Plan ST0580/AP01, available from https://www.instituteforapprenticeships.org/media/1670/st0580_brewer_l4_ap-for-publication_march-2018.pdf

- Brewer Apprenticeship Standard ST0580, available from https://www.instituteforapprenticeships.org/apprenticeship-standards/brewer/

- Brewer 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

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