

SIAS

Laboratory Technician (ST0248)

Level 3 Apprenticeship Standard

End-Point Assessment Specification



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This specification describes the end-point assessment tests, the test rules and who should be involved. Preparing for end-point assessment including gateway requirements are also covered.

SIAS is the Science Industry Assessment Service. It is part of the Cogent Skills Group. For further information about apprenticeship standards and Trailblazers please contact info@siasuk.com.

In this guide, the term “employer” is used to refer to the host employer, which is the company where the apprentice gains their competency experience. It does not refer to an organisation such as an Apprenticeship Training Agency (ATA) that has the employment contract with the apprentice.

Qualification Objective

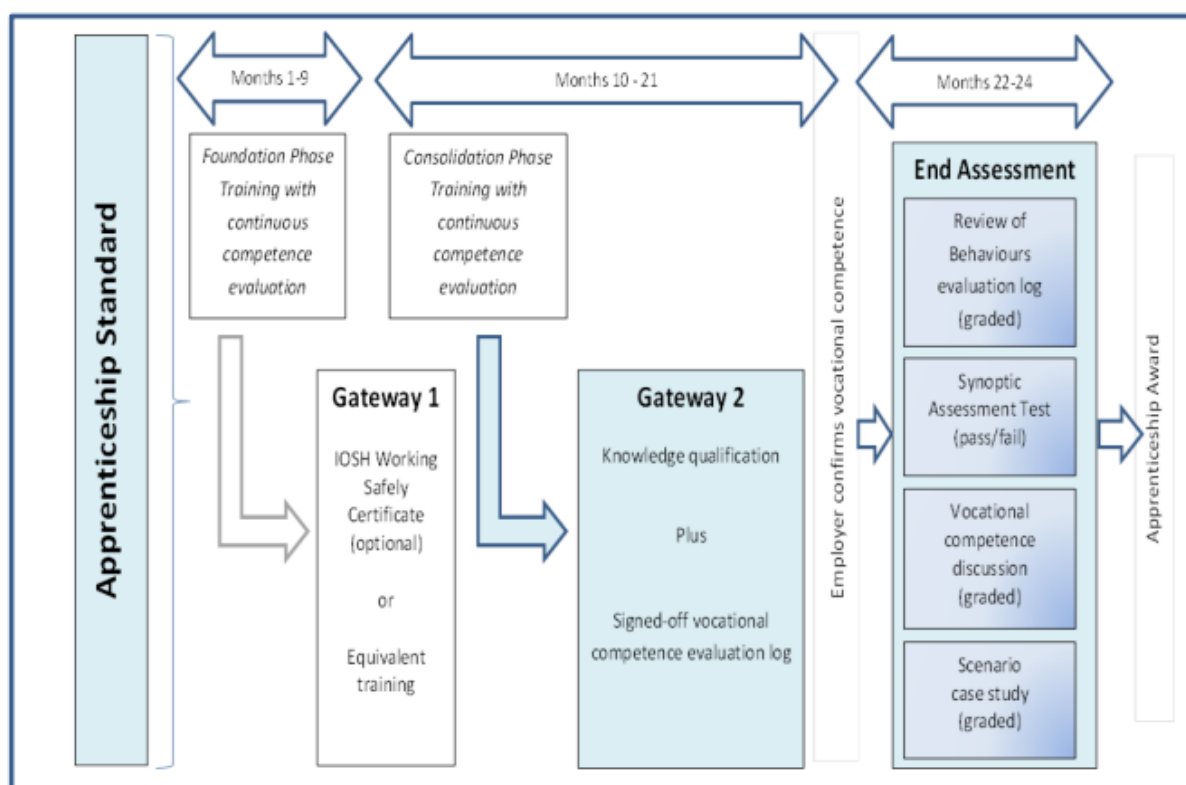
The aim of this qualification is to ensure that the apprentice is occupationally competent against the knowledge, skills and behaviours outlined in the assessment plan for this standard.

Laboratory technicians work in a wide range of organisations, including but not exclusively, chemical, primary and secondary pharmaceutical, biotechnology, formulated products, nuclear companies, and analytical science services. A laboratory technician may carry out both routine and one-off laboratory testing and perform a variety of technical support functions across the organisation. In any context working safety and ethically is paramount and many companies operate under highly regulated conditions because of the need to control the quality and safety of products, for example medicines. Laboratory technicians are expected to work both individually and as part of a laboratory team. They are able to work with minimum supervision, taking responsibility for the quality and accuracy of the work that is undertaken. They are proactive in finding solutions to problems and identifying areas for improving the business.

Prior Learning and Qualifications

There are no requirements for previous knowledge or qualifications before a learner begins this qualification.

A Summary of Laboratory Technician End-Point Assessment



There are two suggested phases of training. The **Foundation Phase**, which is typically months 1 - 9, will focus on developing the apprentice's core skills, knowledge, and behaviours, specifically around working safely, complying with internal and external regulations, and following quality procedures. This training may take place in the workplace or in a largely simulated working environment. It will culminate in Gateway 1, a review of skills by suitably qualified and experienced personnel from the employer or their nominated training partner that will provide assurance that the apprentice has the understanding of the

principles of working safely whilst following quality systems within a regulated environment. Whilst specific qualifications are not mandatory, evidence of completion of this gateway is confirmed in a log that is a record of their continuous competence evaluation. Completion of this log will be a pre-requisite for participation in the formal end assessment.

The Consolidation Phase, which is typically months 10 – 24, will focus on developing further skills capability supported by further guided learning, enabling the apprentice to eventually work effectively and independently with minimum supervision. The apprentice will work towards a qualification recognised by a professional body as suitable for registration for RsciTech. Achievement of this qualification will also be a pre-requisite for participation in the formal end assessment. At the end of the Consolidation Phase the apprentice will have completed their training and through ongoing competence evaluation, including behaviours evaluation, they will have generated a range of evidence to show they meet the apprenticeship standard. A suitably qualified and experienced assessor from the employer will sign off a log that is a record of their continuous competence evaluation to show they are ready for the formal end assessment. This assessor must be approved by the assessment organisation as meeting the required assessor standards.

About Competence Evaluation

During the apprenticeship, regular evaluation of the competence of the apprentice against the apprenticeship standard will help to ensure that they achieve full occupational competence by the end of their training, and they are ready for end-point assessment. Confirmation from the employer that the apprentice is fully competent is needed before end-point assessment can take place.

As competence evaluation is an in-programme activity, the process that is used for this has not been mandated. It is for the employer supported by their training provider to decide how they wish to do this. To help with this SIAS has produced the SIAS Competence Tracker.

Competence Evaluation Log (CEL)

The evidence that the apprentice is ready for end-point assessment is the signed SIAS Competence Evaluation Log (CEL). The CEL covers the knowledge, skills and behaviours specified in the apprenticeship standard. The signed log shows that the apprentice has demonstrated to the employer they are fully competent at the end of their training. It has the same status as a qualification certificate. Along with the qualification certificates, a signed completed CEL is one of the requirements for the Gateway.

Readiness for End-Point Assessment (EPA) – Gateway

The apprentice will be assessed at several stages during their apprenticeship. As well as the assessment / examination that is required for the knowledge qualification, there should be on-going competence evaluation during an apprentice's training programme that will be marked by two gateways, commonly taking place at the end of the first third and at the end of their training programme.

Gateway 1

Trailblazer employers have stipulated this gateway to provide assurance that the apprentice has demonstrated that they understand the principles of working safely. For new entrants to these safety critical industries and particularly young people, this will provide the necessary foundation on which to embed the skills they will need to be able to work safely under supervision whilst following quality systems within a regulated environment.

To demonstrate this gateway has been completed the employer may choose to use the IOSH working safely certificate or an equivalent course or internal training appropriate to

their organisation. Completion of Gateway 1 will be recorded in the competence evaluation log.

Gateway 2

By Gateway 2 the apprentice must have completed a specified qualification, a vocational competence evaluation log and a behaviours evaluation log.

Qualification: The apprentice must complete a qualification that is recognised for RSciTech, which is relevant to the occupation. The qualification must be at level 3 or higher and provide the theoretical knowledge needed for the apprenticeship standard.

For example:

- BTEC Level 3 Diploma in Applied Science (QCF)
- BTEC Level 3 Extended Diploma in Applied Science (QCF)
- BTEC Level 3 Subsidiary Diploma in Applied Science (QCF)
- BTEC Level 4 HNC Diploma in Applied Chemistry (QCF)
- BTEC Level 4 HNC Diploma in Applied Biology (QCF)
- Level 3 Certificate in Laboratory Technical Skills (QCF)

A range of qualifications may be used to fulfil the requirement for the knowledge component of the apprenticeship standard. This allows employers the flexibility to tailor the apprenticeship to meet their specific local needs, whilst meeting the minimum requirements of the apprenticeship standard.

The application of theoretical knowledge will be tested during the formal end assessment. Therefore, the apprentice must have completed the qualification before the end assessment occurs. The qualification will not contribute to the grading of the apprenticeship award.

Vocational Competence Evaluation Log (CEL)

By the end of the apprenticeship a record of competence evaluation should be captured in a log. This log will be a summary record of in-programme evaluation of competence against the work-based learning guide. It is through this process that the apprentice is able to demonstrate competence against the whole apprenticeship standard. This reflects the industry practice of competence management through on-going employer competence evaluation. This is all covered in the SIAS CEL document.

Behaviours Evaluation Log

During their training, the apprentice's behaviours should be evaluated against the apprenticeship standard. It is recommended that this is carried out a minimum of three times. This should be at the end of the foundation phase, at the midpoint of the consolidation phase and at gateway two. The outcome from the last evaluation should be brought as evidence to the vocational competence discussion and will contribute to the grading of the apprenticeship award.

Stages of End-Point Assessment

On completion of Gateway 1 and 2 the employer will sign off the apprentice as ready for the formal end assessment, which must be conducted in the workplace. Formal end assessment, which will take place during the last 3 months of the apprenticeship will comprise:

- Review of behaviours evaluation log
- Synoptic assessment test (SAT)
- Vocational competence discussion
- Scenario case study

Review of Behaviour Evaluation Log

During their training, an apprentice's behaviours will be evaluated on at least 3 occasions. The evaluation will be across seven categories:

- Personal Responsibility
- Communication
- Teamwork
- Independence and Responsibility
- Impact of work
- Time management
- Change Management

Outcome	Description
Does not meet Expectations	Apprentice failed to demonstrate an acceptable level of behaviour. Improvement is required.
Meets Expectation	Apprentice demonstrated acceptable level of behaviour and meets the minimum level of behaviour expected.
Exceeds Expectation	Apprentice demonstrated consistent and positive behaviours in this area that reflect those expected of outstanding apprentices.

The outcome from the final evaluation at gateway 2 will be reviewed during the vocational competence discussion and will contribute to grading of the apprenticeship award.

Synoptic Assessment Test (SAT)

The end-point assessment will include a synoptic assessment test (SAT) through workplace observation and discussion with the registered assessor. Part of the SAT must be observed by a SIAS assessor.

The SAT must be conducted before the vocational competence discussion and preferably on the same day where business operations permit.

Purpose

The purpose of the synoptic assessment test is to validate the apprentice's competence by observing him / her carrying out his / her job role in a normal working environment under normal conditions. The following aspects should be displayed:

- Working safely
- Following procedures / work instructions
- Complying with regulations
- Following quality systems
- Using appropriate vocational skills

Test Methodology

The test will be in the form of an observation in the workplace under the following conditions:

- a. observation carried out by a registered assessor
- b. a timescale of between two and four hours on a single occasion

- c. with no coaching or mentoring from colleagues
- d. in the normal working environment
- e. under observation by the external assurer
- f. where the situation demands it, simulation will be allowed
- g. walk through / talk through of the simulation should be conducted by the assessor and noted on the documentation
- h. previously planned to ensure that the proposed activity / activities meet the SAT specification
- i. the outcomes are documented using SIAS's standard documentation.

A full list of the assessment rules can be found in the assessment plan.

The registered assessor must use the following assessment criteria:

Grade	Description
Fail	For one or more elements of the specification the apprentice has an incomplete understanding, approaches tasks mechanistically and needs supervision to complete them.
Pass	For all elements of the specification, the apprentice has a good working and background understanding, sees actions in context, able to complete work independently to a standard that is acceptable.

Vocational Competence Discussion

Following the SAT, the apprentice will take part in a vocational competence discussion led by the external assurer. This will cover the whole apprenticeship standard including behaviours and the apprentice may draw on evidence from the SAT and evidence generated during the vocational competence evaluation process. The assessment specification makes clear which elements of the standard must be covered.

Purpose

The purpose is to determine the extent to which the apprentice understands the requirements of his / her role as defined by the work-based learning guide and to explore understanding of areas not observed or explained during the SAT.

Test Methodology (conditions)

The VCD

- a. will be in the format of a 1:1 discussion with the external assurer.
- b. will last between 1 and 1.5 hours.
- c. will take place in a room, free from distractions with no other people present.
- d. may be recorded with the agreement of the employer and the apprentice.

Eligible Evidence

The apprentice may bring along any of the following to refer to during the VCD:

- Vocational competence evaluation log
- Training records
- NVQ Portfolio
- Qualification assessments

- Company specific documents (e.g., risk assessments, SOPs).
- E-portfolios
- Reflective learning logs
- Behaviours evaluation log
- the outcomes are documented using SIAS's standard documentation.

A full list of the assessment rules can be found in the assessment plan.

The apprentice will achieve a mark for this element of the end assessment that will contribute to the final grade of the apprenticeship award.

Scenario Case Study

The case study will describe a scenario and the apprentice will be presented with a standardised set of questions. The apprentice will complete a written situational analysis exercise that presents a scenario that requires them to adapt quickly and function effectively after minimal instruction on new equipment or in a new environment or under revised working practices. The exercise will test the apprentice's knowledge and understanding of core elements in the work-based learning guide. The emphasis of the exercise will be on the apprentice demonstrating how to transfer and apply their understanding of the principles of working safely, following quality procedures, and complying with regulations to a new setting.

Purpose

To ensure that the apprentice is able to transfer the knowledge and skills learnt during the apprenticeship to a prescribed situation. This assessment will take the form of a situational analysis of a given case study.

Test Methodology (conditions)

- a. The case study will be invigilated by the external assurer.
- b. The case study will last for 2.5 hours.
- c. The case study will take place in a room, free from distractions.
- d. The apprentice will record his / her analysis on the documentation prescribed for the case study.
- e. The case study will be marked by the external assurer and moderation of the marked / graded paper will be conducted by the assessment organisation.
- f. The case study will be given to the apprentice at the beginning of the assessment and not before.
- g. At the end of the assessment, the case study will be collected by the external assurer

A full list of the assessment rules can be found in the assessment plan.

Moderation

Assessment organisations will undertake moderation of independent examiner and technical experts' decisions through observations and examination of documentation on a risk sampling basis, i.e., a minimum of 20% for experienced examiners / technical experts and 100% for new examiners / experts or where inconsistencies have been identified or where the technical expert has been recruited from the employer due to site requirements. Results cannot be confirmed until moderation has been completed.

Re-takes / re-sits

Re-takes / re-sits will only be available to apprentices who fail an end-point assessment element(s) i.e., they are not offered to apprentices wishing to move from Pass to Distinction. Apprentices may re-take / re-sit one or more elements within the six-month end-point assessment period. Re-take / re-sits outside of the six-month end-point assessment period would require all elements to be re-assessed. Re-sits / re-takes will not be awarded a grade higher than Pass. Apprentices must have a supportive action plan to prepare for the re-take / re-sit. Further re-takes / re-sits would be at the discretion of the employer following a 1:1 review with the apprentice to determine the suitability of the apprentice for further testing.

Final Grade

This formal end assessment for the apprenticeship award is graded and an apprentice must achieve a pass to gain a certificate of completion. The grading metrics are:

Apprenticeship Awarding Grading Matrix	Pass A pass will be awarded to individuals that achieve the specified level in all four elements.	Distinction A distinction will be awarded to individuals that achieve the specified level in all four elements
Synoptic Assessment Test	Pass	Pass
Behaviours Evaluation Log Gateway 2 score	Meets Expectations	Exceeds Expectations
Vocational Competence Discussion Up to 80 marks	Minimum 40	60 or above
Case Study Up to 60 marks	Minimum 30	45 or above

Certification

The outcomes from the end-point assessment will be reviewed and a grade conferred by SIAS in accordance with SIAS QA procedures, which are available from SIAS. SIAS will notify the employer of the outcome of each of the assessments.

SIAS will apply for the apprentice's certificate, which will be sent to the employer. The certificate confirms that the apprentice has passed the end-point assessment, has demonstrated full competency across the standard and is job-ready.

Assessment Specification

The assessment specification can be found in the published assessment plan for the standard. Details of which elements of the apprenticeship standard will be tested by each test are given in the Core Competencies section of this document.

Core Competencies

Std Ref	Competences that need to be achieved by anyone being trained for the occupation. All elements are mandatory except those marked as optional, which should be included only when required for a specific job role or sector
S1	Work safely in a laboratory, maintaining excellent housekeeping whilst following appropriate safety, environment, and risk management systems.
S2	Understand and follow quality procedures to meet the requirements of quality standards relevant to the workplace.
S3	Understand the internal and external regulatory environment pertinent to the sector and the employer and comply with regulations proficiently
General Workplace Health and Safety	
1	Understand and comply with foundations of health and safety including responsibility for health and safety under HASWA
2	Understand the procedures for first aid relevant to your workplace
3	Understand and comply with risk assessment & control including Control of Substances Hazardous to Health assessments, where appropriate and Safety Data Sheets
4	Demonstrate appropriate use of personal protective equipment e.g., face mask, fume hood
5	Understand and practice fire and electrical safety procedures in the workplace
6	Understand and practice safe manual handling and repetitive activities, including DSE
7	Understand Hazardous area classification & DSEAR regulations and how they apply within area of responsibility, where appropriate
8	Understand and comply with site and local emergency procedures
9	Understand and comply with relevant organisation safety policies and procedures
Laboratory Safety and Housekeeping	
10	Work safely in a laboratory and follow aseptic laboratory procedures where required
11	Maintain excellent housekeeping, in accordance with organisation Standard Procedures
12	Able to deal appropriately with laboratory spillages
13	Order and control stocks of laboratory materials where required
14	Understand and follow risk assessments
15	Understand and comply with laboratory health and safety and compliance with legal, regulatory, ethical requirements
Environment Management	
16	Understand the management and control of laboratory waste
17	Understand the handling and disposal of chemical substances
18	Understand environmental risk assessments (impact assessment)
19	Understand and apply the concepts of resource efficiency to energy, water, and waste

Std Ref	Competences that need to be achieved by anyone being trained for the occupation. All elements are mandatory except those marked as optional, which should be included only when required for a specific job role or sector
Quality	
20	Understand and follow quality procedures to meet the requirements of quality standards relevant to their work
Regulatory Environment	
21	Understand and adhere to the internal regulations pertinent to the sponsoring company & relative specialism in which they operate (e.g., Good Laboratory Practice, Good Manufacturing Practice, Good Documentation Practice)
22	Understand and adhere to the external regulatory requirements pertinent to the sponsoring company & relative specialism in which they operate (e.g., COMAH, MHRA, FDA, ONR, Animal Scientific Procedures Act 1986 and Directive 2010 / 63 / EU (ETS123 Guidelines))
S4	Prepare for laboratory tasks using the appropriate scientific techniques, procedures, and methods.
S5	Perform laboratory tasks following specified methodologies, such as Standard Operating Procedures.
S6	Demonstrate technical competence in the use of specified instrumentation and laboratory equipment, including calibration where required
S7	Produce reliable, accurate data and keep accurate records of laboratory work undertaken and results
23	Understand and apply a variety of documents such as Standard Operating Procedures and Test Procedures
24	Prepare for, and perform, laboratory experiments, tests or tasks following any specified methodologies to provide reliable, accurate data e.g. <ul style="list-style-type: none"> • Basic laboratory techniques e.g., weighing, pipetting, filtering • Spectroscopic techniques • Titrimetric techniques • Thermochemical techniques • Chromatography techniques
25	Understand the reasons for and apply a variety of safety management systems such as Standard Operating Procedures and Risk Assessment
26	Demonstrate technical competence in the use of specified instruments and equipment
27	Report faults and seek diagnostic advice to maintain equipment in good working order, including calibration where required
28	Complete documentation proficiently including relevant calculations
29	Understand the reason for laboratory investigations including out of specification results
30	Understand error reporting and correction techniques e.g., for traceability
31	Demonstrate an understanding of the relevant good documentation practices
32	Keep accurate records of laboratory work undertaken and results

Std Ref	Competences that need to be achieved by anyone being trained for the occupation. All elements are mandatory except those marked as optional, which should be included only when required for a specific job role or sector	
33	Contribute to the preparation of reports to a level commensurate with job role	
S8	Analyse, interpret, and evaluate data and identify results requiring further investigation seeking advice of senior colleagues as appropriate	
S9	Understand and apply statistical techniques for data presentation.	
S10	Communicate scientific information appropriately, including the use of Laboratory Information Management systems, either digital or paper based.	
34	Demonstrate use of simple statistical techniques for data presentation and evaluation	
35	Practical demonstration of one or more problem solving techniques	
36	Demonstrate identification of sources of error and how they can be reduced e.g., human error	
37	Demonstrate basic skills in the use of standard software packages and applications	
38	Understand and demonstrate the application of the principles of the use of Laboratory Information Management systems digital or paper based	
S11	Recognise problems and apply appropriate scientific methods to identify causes and achieve solutions.	
39	Understand and apply basic root cause analysis	Optional
40	Address non-routine problems with samples and instrumentation, within defined areas	
41	Identify relevant information from appropriate scientific sources e.g., supervisors, literature etc. in order to contribute to solutions	
S12	Participate in continuous performance improvement.	
42	Participate in improving systems and processes within your work environment or demonstrate where you have personally improved and become more efficient	
43	Understand how workplace organisation techniques can be applied to improve workflow of the laboratory	
44	Demonstration of one or more continuous improvement techniques e.g. <ul style="list-style-type: none"> • Workplace organisation techniques • Accreditation (e.g., ISO, UKAS) • Proficiency 	Optional
S13	Develop and apply theoretical knowledge of relevant science and technology required for the sector & job role.	
45	Theoretical knowledge of chemical science, materials science, analytical science or applied bioscience as required for the sector & job role	
S14	Understand the business environment in which the company operates including personal role within the organisation, ethical practice, and codes of conduct.	
46	Understand the business environment (customers, competitors etc.) in which the organisation operates	

Std Ref	Competences that need to be achieved by anyone being trained for the occupation. All elements are mandatory except those marked as optional, which should be included only when required for a specific job role or sector
S15	Demonstrate the required attitudes, behaviours and interpersonal skills associated with the professional workplace
	To meet Behaviours Evaluation Assessment Criteria

A full list of the competencies can be found in the Work Based Learning Guide.

Specialisms

In addition to the core competences specialisms are specific to a work context and need to be achieved by anyone being trained for a job role in that work context. The following specialisms are included:

- Laboratory technician – Life Sciences R&D
- Laboratory Technician - Animal Science
- Laboratory Technician – Coatings

Std Ref	A	Laboratory Technician – Life Sciences R&D Specialism – Competencies
S4	A1	Prepare for, and perform laboratory experiments and tests to produce reliable, accurate data to support R&D projects
S8	A2	Make recommendations for further investigations subsequent to the analysis, interpretation and evaluation of data with R&D colleagues
S3	A3	Understand good clinical practice and other good practice for clinical trial research

Std Ref	B	Laboratory Technician – Animal Science (Species may vary depending on species held at workplace) Specialism – Competencies
S4, 5, 6, 7	B1	Handle laboratory animal species and perform general husbandry practices in accordance with company Standard Procedures e.g. changing of cages, feeding, watering and provision of environmental enrichment, perform daily health checks, weighing
S4, 5, 6, 7	B2	Perform regulated procedures for species e.g. basic administration routes e.g. oral, subcut, intravenous, intranasal, intraperitoneal
S4, 5, 6, 7	B3	Demonstrate correct use of equipment e.g. syringes / needle size appropriate for species being dosed

Std Ref	B	Laboratory Technician – Animal Science (Species may vary depending on species held at workplace) Specialism – Competencies
S4, 5, 6, 7	B4	Perform recognised methods of euthanasia i.e. schedule 1 methods
S4, 5, 6, 7	B5	Perform routine sampling methods suitable for species e.g. blood sampling via cardiac puncture, tail vein, urine collection
S4, 5, 6, 7	B6	Perform routine methods of identification suitable for species e.g. ear marking, tail marking, microchipping
S4, 5, 6, 7	B7	Perform tissue collection at necropsy e.g. tumours, blood, spleens, lymph nodes, femurs, lung / lung inflation, heart, liver, spinal column / spinal cord
S13	B8	Understand the use of chemicals within an animal facility and the purpose of facility hygiene
S13	B9	An understanding of the use of small / large molecules in the treatment of disease appropriate to the therapeutic areas supported in the workplace
S3	B10	The requirements of Animal Scientific Procedures Act 1986; Directive 2010 / 63 / EU, including responsibilities of the Named Persons and AWERB
S4, 5, 6, 7	B11	Formulation – be able to prepare solutions / suspensions for administering to laboratory animals e.g. use of gilsons pipettes
S4, 5, 6, 7	B12	Demonstrate interactions with appropriate “Named” individuals in relation to Animal Welfare
S4, 5, 6, 7	B13	Administer and maintain anaesthesia for species at workplace, demonstrate understanding of choice of anaesthetics used
S4, 5, 6, 7	B14	Surgical procedures – be able to perform surgical procedures under aseptic conditions e.g. blood vessel cannulation, implantation of mini pumps, implantation of cancer cells into organs
S4, 5, 6, 7	B15	Behavioural assessments e.g. phenotyping of transgenic mouse line
S4, 5, 6, 7	B16	Breeding of transgenic mice – demonstrate a basic understanding of breeding regimes i.e. trio matings and breeding tasks e.g. mating, littering, weaning, taking of genotyping samples
S13	B17	Basic understanding of genetics used in the breeding of transgenic mice i.e. homozygous, heterozygous, wild type litter mates
S14	B18	Understanding of transgenic breeding terms i.e. speed congenics, knock outs, knock ins, rederivation, cryopreservation
S4, 5, 6, 7	B19	Understanding of facility plant, air handling units, pressure differentials and species specific environmental conditions and how these are obtained
S13	B20	Understanding of facility barrier requirements and procedures that can be used to maintain a barrier facility

Std Ref	B	Laboratory Technician – Animal Science (Species may vary depending on species held at workplace) Specialism – Competencies
S3	B21	Understanding of AAALAC accreditation process
S13	B22	Recognition of signs of ill health, adverse reactions to treatments, pain and distress in species used at workplace
S13	B23	Principles of 3Rs and applications within the workplace
S13	B24	Principles of sentinel monitoring and health status of laboratory animals
S3	B25	The individual must acquire Home Office Personal Licence

Std Ref	C	Laboratory Technician – Coatings Specialism – Competencies
S1 (22)	C1	Understand industry health and safety appropriate to the handling and use of sector specific raw materials and the use of the equipment including: <ul style="list-style-type: none"> Understanding and use of control measures including storage, PPE (appropriate to the sector specific materials)
S3	C2	Understand the key legislative drivers for the coatings industry as appropriate e.g. COSHH, REACH, process guidance notes (PG notes covering sectors), EU Product Directive 2004\42\EC, ISO Standards
S1, 2, 4, 5	C3	Understand and demonstrate practical competence of one or both of the following techniques: <ul style="list-style-type: none"> Clean and safe handling and measuring of raw materials Preparation of samples, including measuring, solution, dispersion and classification
S6	C4	Demonstrate technical competence in the use of specified instrumentation and laboratory equipment, for example: <ul style="list-style-type: none"> Quality control equipment Quality assurance equipment Dispersion equipment Colour measurement equipment Application equipment
S2, 5	C5	Understanding and application of industry relevant test methodologies including use of and appreciation of appropriate quality control parameters
S11, 13	C6	Develop and apply theoretical knowledge of relevant science and technology for all of following that apply: <ul style="list-style-type: none"> Formulation principles Colour chemistry

Std Ref	C	Laboratory Technician – Coatings Specialism – Competencies
		<ul style="list-style-type: none"> • Resin / polymer chemistry • Additive chemistry • Pigment chemistry • Solvents • Product drying and curing • Fundamentals of film formation • Substrates • Surface pre-treatment • Mechanisms of corrosion and surface protection • Paint and ink faults and remedies: <ul style="list-style-type: none"> - Prior to application - At the time of application - In service and their consequences
S14	C7	Have commercial awareness of cost and cost-effective solutions to technical challenges or areas under development

Behaviours Evaluation Assessment Criteria

	Does Not Meet Expectation Apprentice failed to demonstrate an acceptable level of behaviour. Improvement is required	Meets Expectations Apprentice demonstrated an acceptable level of behaviour and meets the minimum level of behaviour expected	Exceeds Expectations Apprentice demonstrated consistent and positive behaviours in this area that reflect those expected of outstanding apprentices
Personal Responsibility	Demonstrate personal responsibility towards safety systems (incl. risk management and environment)		
Assessment Criteria	Little evidence of personal responsibility to safety systems.	Good personal responsibility towards safety systems.	Exhibits high standards of personal responsibility toward safety systems. Seeks to influence the behaviour of others.
	Tries to play down incidents in which they are involved.	Responds positively to suggestions for own improvements in personal responsibility for safety issues.	Actively monitors the safety of self and others, challenging and making suggestions where appropriate.
Communication	Communicate effectively using a full range of skills: speaking; listening; writing; body language; presentation		
Assessment Criteria	Misinterprets or is slow to comprehend oral and / or written instructions.	Readily comprehends oral and / or written instructions when first presented.	Superior comprehension of oral and / or written instructions. Checks back to avoid any misunderstanding.
	Communications are vague or poorly written or spoken. Difficulty conveying meaning to others.	Passes on information both verbal and written, in a way that is easily understood	Is able to adapt both verbal and written communication to be understood by different audiences (e.g., peer, supervisor, senior manager, and visitor).
	Will not ask questions and demonstrates little willingness to listen.	Listens and will question and challenge appropriately to enhance own understanding.	Listens and questions to enhance own and others understanding.

	Does Not Meet Expectation Apprentice failed to demonstrate an acceptable level of behaviour. Improvement is required	Meets Expectations Apprentice demonstrated an acceptable level of behaviour and meets the minimum level of behaviour expected	Exceeds Expectations Apprentice demonstrated consistent and positive behaviours in this area that reflect those expected of outstanding apprentices
			Supports and acknowledges contributions from others
	Unable to effectively present personal viewpoint.	Able to effectively present personal viewpoint.	Able to influence others to see personal viewpoint.
	Unwilling to see other people's point of view	Receptive to other people's point of view.	Ability to reason from different points of view.
Teamwork	Work and interact effectively within a team		
Assessment Criteria	Unwilling to contribute during team discussions / problem solving.	Makes a useful contribution during team discussions / problem solving.	Contributes and willing to lead team-based discussions / problem solving.
	Can reduce morale and enthusiasm within the team.	A good team member gets on well with colleagues.	Builds working relationships between team and other groups. Seeks to diffuse conflict situations where they arise.
	Exhibits negative behaviour concerning team / organisational mission.	Demonstrates knowledge and understanding of team / organisation mission.	A strong team player helps bind the team together to achieve team / organisation mission.
	Does not accept responsibility for own impact on team performance.	Works cooperatively with others to achieve overall team goals.	Puts team goals ahead of personal achievement and recognition.
Independence and Responsibility	Work independently and take responsibility for initiating and completing tasks		
Assessment Criteria	Inclined to wait for direction on work tasks.	Normally does not need to be told what to do next, can be trusted to complete tasks.	Looks ahead and progresses work in areas of the job.

	Does Not Meet Expectation Apprentice failed to demonstrate an acceptable level of behaviour. Improvement is required	Meets Expectations Apprentice demonstrated an acceptable level of behaviour and meets the minimum level of behaviour expected	Exceeds Expectations Apprentice demonstrated consistent and positive behaviours in this area that reflect those expected of outstanding apprentices
	Regularly needs to be told what to do or how to do it.	Identifies obstacles to achieving work assigned and escalates.	Will seek to resolve obstacles to achieving work assigned themselves before escalating.
	Supervision required to progress work.	Can be relied on to manage their work with little supervision.	Holds themselves accountable for their own performance.
	Over reliance on supervisor for motivation.	Self-motivated and deals with work / learning balance in a positive way.	Maintains motivation and encourages others to do the same
Impact of Work	Understand impact of work on others, especially where related to diversity and equality		
Assessment Criteria	Others feel the need to recheck their work or have to finish off the job after them.	Works to the required standard of accuracy, neatness, and thoroughness.	Has a reputation within the work group for doing jobs right first time, every time.
	Work rarely makes a contribution to team quality.	Often makes valued contributions to team quality.	Consistently makes a valued contribution to team quality.
	Little respect for the values of others.	Respects the value of others.	Actively encourages work group to respect the values of others
	Has difficulty being tactful, considerate, and respectful in dealing with others.	Usually tactful, considerate, and respectful in dealing with others.	Always tactful, considerate, and respectful in dealing with others.
Time Management	Accepts responsibility for managing own time and workload within a given plan to complete work to schedule		
Assessment Criteria	Does not deliver consistently and can waste time on non-essentials.	Continually demonstrates efficient use of work time.	Continuously strives for improved productivity.
	Unreliable timekeeping	Timekeeping complies with company protocols.	Encourages others to comply with company timekeeping protocols.

	Does Not Meet Expectation Apprentice failed to demonstrate an acceptable level of behaviour. Improvement is required	Meets Expectations Apprentice demonstrated an acceptable level of behaviour and meets the minimum level of behaviour expected	Exceeds Expectations Apprentice demonstrated consistent and positive behaviours in this area that reflect those expected of outstanding apprentices
	Not fully prepared in advance holds up group activities.	Always prepares in advance ready to participate in group activities.	Encourages others to prepare in advance for group activities
Change Management	Ability to handle change and respond to change management processes		
Assessment Criteria	Has difficulty adjusting to changes in workload or assignments.	Is flexible, willing, and able to respond to changes in work situations and / or learn new skill.	Capable of supporting others with change in work situations and or learning new skill.
	Resists change or innovation or takes a “wait and see” approach.	Works hard to implement successful change in areas of responsibility as directed by supervisor.	Recommends changes to improve own work and work of others and implements as agreed with supervisor.
	Does not value own contribution.	Able to demonstrate examples of situations when they have changed practice or personal behaviour.	Evidence of influencing change of practice or personal behaviour by others.

Further Information

For information about SIAS policies, quality assurance, re-sits, appeals, complaints and general enquiries please see our website: www.siasuk.com

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