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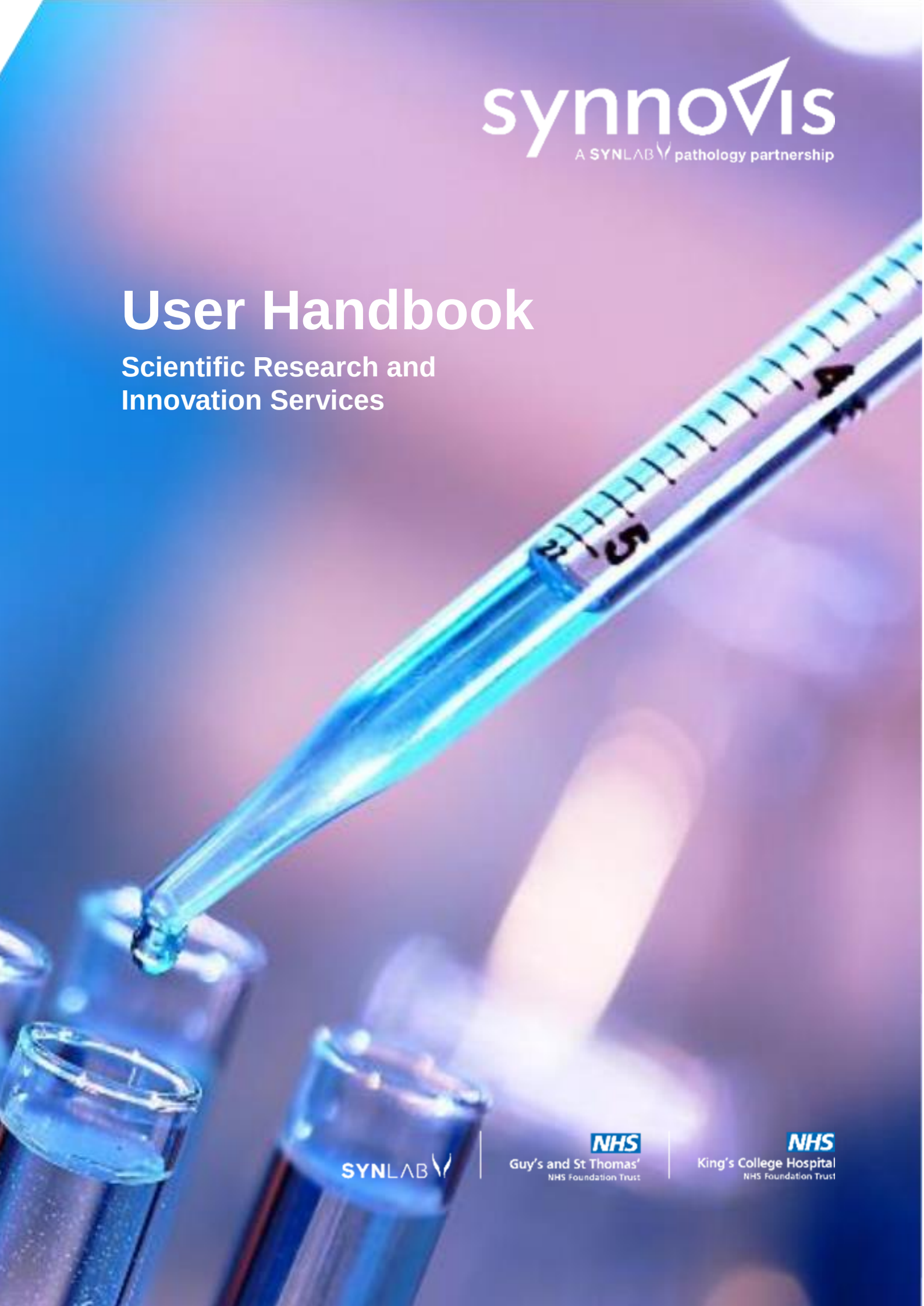
A SYNLAB pathology partnership

User Handbook

Scientific Research and Innovation Services



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1. Introduction

This document provides service users with information on how to access the services offered by the Scientific Research and Innovation Services Department (SR&I) (formerly Contract Research and Development) at King's College Hospital NHS Foundation Trust. The manual is structured to reflect the journey of a sample, from collection and submission through to the provision of results and specialist advice.

For the latest version of this manual, together with additional information and useful resources, please visit: https://synlab.co.uk/laboratories/scientific-research-and-innovation-services/

2. General Information

The Scientific Research and Innovation Services (SR&I) Department supports investigators across NHS, academic, and commercial research organisations requiring pathology services for clinical research studies, scientific research, and service evaluations. Pathology services are provided under individual contractual agreements tailored to study requirements.

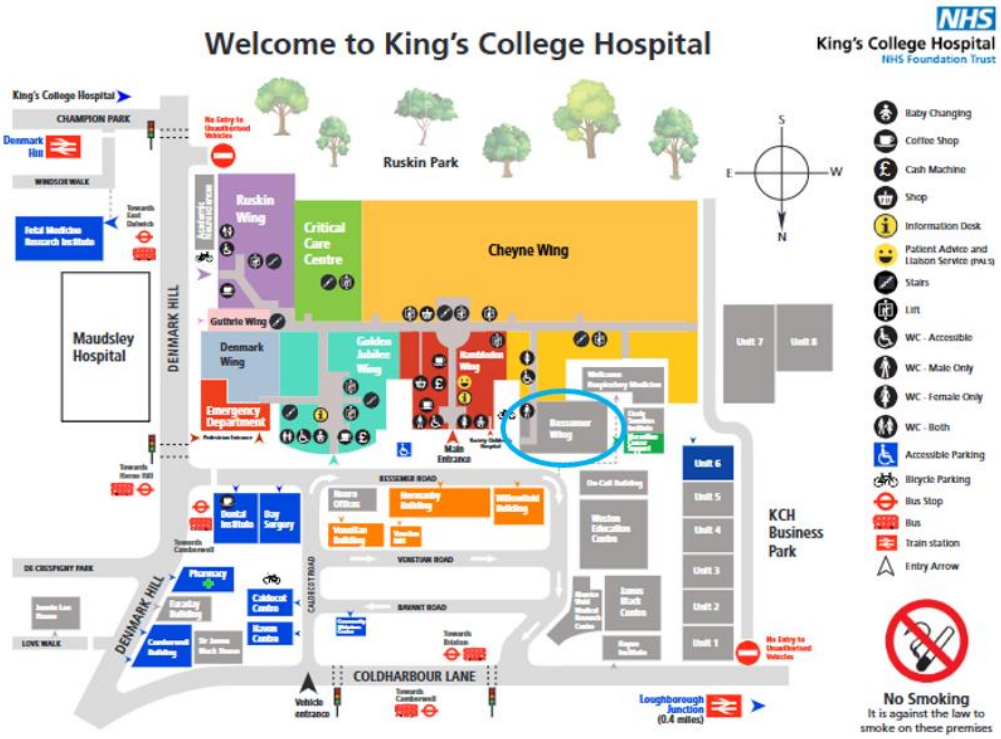
The SR&I team has extensive experience in the delivery of both routine and bespoke biomarker testing, offering access to more than 300 immunoassays, including UKAS-accredited clinical cytokine panels.

2.1 Location

The Scientific Research and Innovation Services Department is located on the Ground Floor of the Bessemer Wing at King's College Hospital NHS Foundation Trust.

2.2 Address

Scientific Research & Innovation Services
c/o Essential Services Laboratory Reception
Ground Floor, Bessemer Wing
King's College Hospital
Denmark Hill
London
SE5 9RS



2.3 Opening Hours

Monday to Friday: 09:00-17:30 (excluding Public Holidays)

2.4 General Enquiries

Enquiry Type	Telephone	Email
Laboratory & scientific enquiries	0203 299 5548	synnovis.research@synnovis.co.uk
Contracts enquiries	0203 299 4144	synnovis.researchenquiries@synnovis.co.uk

2.5 Key Contacts

Name	Position	Telephone	Email
Dr Royce Vincent	Consultant Chemical Pathologist	0203 299 4100	royce.vincent@nhs.net
Tracey Mare	Head of Scientific Research and Innovation Services	0203 299 3549	tracey.mare@synnovis.co.uk
James Luxton	Senior Biomedical Scientist	0203 299 5548	james.luxton@synnovis.co.uk
David Card	Senior Clinical Scientist - Quality Lead	0203 299 3190	david.card@synnovis.co.uk

3. Test Repertoire and Information

The current Test Repertoire can be accessed via the Scientific Research and Innovation Services website: https://synlab.co.uk/laboratories/scientific-research-and-innovation-services/

With the exception of the cytokine panels (CY19, CY20, CY21 and CY23), tests are not routinely available for immediate analysis and are subject to a signed Service Level Agreement (SLA) before testing can commence.

To request analysis of any test within the repertoire, please contact: synnovis.researchenquiries@synnovis.co.uk

The test repertoire and associated information are reviewed annually and updated as required. The Scientific Research and Innovation Services Department operates a flexible and responsive service that adapts to the needs of its users. If a required test is not listed within the repertoire, please contact the laboratory using the email address above to discuss your requirements.

4. Contracts and SLAs

Prior to submitting any clinical trial or research specimens for analysis, please contact the Scientific Research and Innovation Services Department with full details of your requirements:

Email: synnovis.researchenquiries@synnovis.co.uk

Analysis cannot commence until a suitable contractual agreement and, where applicable, a Service Level Agreement (SLA) have been established and approved by all relevant parties.

5. Requesting Investigations

All requests for analysis must be submitted using the study-specific sample request form. The exception to this is the cytokine panels (CY19, CY20, CY21 and CY23), which must be requested using the Cytokine Referral Sample Request Form (CR&D-LF-61), available via: https://synlab.co.uk/laboratories/scientific-research-and-innovation-services/

Requests may also be submitted through the Trust Epic electronic requesting system, where applicable.

5.1 Phlebotomy Services

Information on Synnovis phlebotomy services is available at: https://synlab.co.uk/phlebotomy/

Instructions for blood collection can be found at: https://www.kch.nhs.uk/services/services-a-to-z/phlebotomy/

5.2 Request Form

For clinical samples, request forms and specimens must be accurately completed and identified using a minimum of three unique patient identifiers:

- Unique identification number (e.g. trial participant identification number, hospital number, or NHS number)
- Patient name
- Date of birth

For clinical trial samples, one or two identifiers may be acceptable where a unique participant identification number has been assigned and agreed as part of the study protocol.

The information provided on the request form must exactly match that recorded on the specimen. Samples accompanied by incomplete, discrepant, or inaccurately completed documentation may be rejected.

Where handwritten request forms are used, all information must be clear, legible, and indelible.

5.3 Specimen Labelling

The individual collecting the specimen is responsible for positively identifying the patient or participant and obtaining consent where applicable.

Specimens must be labelled immediately following collection and before leaving the patient or participant. The specimen label must contain identifiers that match those recorded on the request form. Any relevant hazard labels must also be applied where required.

Specimen labelling must be clear, legible, and include the date and time of collection.

To ensure patient safety and maintain specimen integrity, unlabelled or incorrectly labelled specimens will not be accepted for analysis.

Where Epic barcode labels are used, these should be affixed to the primary specimen container in a position that allows the barcode to be readily scanned without obscuring critical specimen information.

5.4 Specimen Containers

Primary receptacle - A watertight, leak-proof receptacle containing the specimen (e.g. a blood collection tube).

Secondary packaging - A durable, watertight, leak-proof container used to enclose and protect the primary receptacle(s) (e.g. a specimen transport bag). Sufficient absorbent material must be included to absorb the entire contents in the event of leakage or breakage.

All specimens must be placed in individual plastic 'kangaroo'-type specimen bags to prevent cross-contamination. Accompanying documentation (e.g. request forms) must be placed in the separate document pocket on the outside of the bag and must not be placed in the compartment containing the specimen.

Specimen bags must not be sealed using staples, pins, or paper clips. Multiple cushioned primary receptacles may be placed within the same secondary packaging, provided sufficient absorbent material is included to absorb the entire contents of all specimens in the event of leakage or breakage.

Outer packaging - The secondary packaging must be placed within suitable outer packaging containing appropriate cushioning material. For specimens sent by post, this will typically be a UN3373-compliant transport

box. For cross-site or GP transport, this will be a Daniels transport box or an appropriate Igloo® (white polystyrene) transport container.

Needles and other sharps must never be sent to the laboratory. Specimens received leaking, damaged, or in a condition that may present a risk to staff safety will not be processed and will be discarded in accordance with laboratory procedures. In such cases, the requester will be notified via an electronic report issued through the pathology IT system.

5.5 Specimen Collection

Order of draw:

VACUETTE® SELECTION CHART

Kings College Hospital NHS Foundation Trust



Blood Cultures; Aerobic followed by Anaerobic. If insufficient blood for both culture bottles, use aerobic bottle only.

Cap Colour and Volume	Cap Colour and Volume	Tube Type	Tests	Special Instructions
3ml KFK 469	2ml KFK 333	Trisodium Citrate	Coagulation; Coagulation Tests, Heparin & Warfarin Control, Anti-XA, Thrombophilia Screen, Lupus Screen, Confirmation Platelet Clumps	Ensure tube filled to indicated mark
8ml KFK 501		Clot Activator and Separation Gel	Serology; Viral, Bacterial, Parasite, Fungal.	
5ml KFK 304	2.5ml KFK 383	Clot Activator and Separation Gel	Routine Chemistry; Endocrinology, Drug Levels (Vancomycin, Gentamicin, Amikacin, Tobramycin), Immunology, B12, Ferritin, Serum Folate, EPO, Androstenedione, Insulin, C-Peptide, DHEAS, lithium, total bile acids, serum porphyrins, calcitonin, thyroglobulin, chromogranins, fluoride	Insulin / C-peptide must be sent to lab within 30 mins.
6ml KFK 321		Lithium Heparin	Homocysteine, Ammonia (on ice), White cell enzymes (full), Glycogen storage enzyme (full), GIPT.	
6ml KFK 262		Trace Element	Plasma Trace Elements.	
4ml KFK 332	3ml KFK 338	EDTA	FBC, Adult ESR, Sickle, Malaria, Retics, HBA1C, G6PD, DCT, Cyclosporin, GF, Bloodfilm, Red-Cell Folate, Lymphocyte Subsets, HLA, B27, PNH Screen, Red Cell Protoporphyrins, Red Cell PBG-Deaminase, PTHI, ACTH, genetic tests, Viral DNA / RNA (qualitative, quantitative and sequencing), Red Cell Analysis, Gilbert's Testing, plasma metanephrines, aldosterone and renin, Whole Blood Lead, Cobalt, Chromium, Manganese, Cadmium, Arsenic, Thallium	Must send plasma metanephrines, aldosterone and renin within 30 mins.
9ml KFK 076		EDTA	HIV and HCV viral load testing, Virology Molecular PCR	
6ml KFK 339		EDTA for crossmatch	Blood Group and Screen, Cross Match, DAT, Kleihauer, Red Cell Phenotype	
2ml KFK 330		NAF Oxalate	Glucose (blood and CSF), Lactate (blood and CSF)	

Gut Hormones, plasma catecholamines & PTHrP: Sample tube (with trasylol) must be collected from the biochemistry lab

All tubes require immediate mixing following collection. Insufficient mixing can result in inaccurate test results and the need to re-draw



IMPORTANT: Hold tube in place with the thumb until filled to the required level

VACUETTE® products and ordering codes



VAKS01 VERSION 01.
Last updated May. 2012

greiner bio-one

Greiner Bio-One Ltd.
Brunel Way, Stroudwater Business Pk.
Stonehouse. Glos. GL10 3SX
sales@uk.gbo.com . www.vacuette.com

5.6 High Risk Specimens

Separate procedures are used within the laboratory for the safe handling and examination of specimens from patients known, or suspected, to have infections caused by high-risk pathogens that may pose a risk to laboratory staff or others if handled incorrectly.

It is the responsibility of the person collecting the specimen to ensure that both the request form and specimen are clearly labelled to indicate the risk of infection. The request form must include sufficient clinical information to enable laboratory staff to determine and implement any additional precautions required for the safe handling and processing of the specimen.

These specimens must be transported in an appropriately labelled biohazard specimen bag.

5.7 Other Specimen Types

If testing is required on specimen types not specified within the test requirements, for example cerebrospinal fluid (CSF), ocular fluid, pericardial fluid, or other non-routine specimen types, please contact the laboratory to discuss specimen requirements, processing arrangements, and the suitability of the sample for analysis.

5.8 Add-On Tests

For **clinical samples**, clinicians may contact the laboratory by telephone or email to request additional testing. Add-on tests may be performed where appropriate, subject to factors such as specimen type, sample volume, specimen stability, and analytical requirements.

For **clinical trial samples**, the scope of testing, including any reflex testing, is defined within the study protocol and contractual agreement. Requests for additional tests that fall outside the agreed scope of the study cannot be accepted unless prior approval has been obtained and appropriate contractual arrangements are in place.

6. Transport to the Laboratory

6.1 General Health & Safety Requirements

Please note:

- Specimens must only be submitted to the laboratory in approved containers.
- The external surfaces of specimen containers must be free from contamination by potentially infectious material.

Each specimen container must be transported in a sealed specimen transport bag. Where a request form accompanies the specimen, it must be placed in the separate document pocket of the transport bag and not with the specimen itself.

Specimens must be transported in a manner that maintains their integrity and ensures the validity of test results. Specimens must not be exposed to extreme temperatures or unnecessarily prolonged transport times.

If there is a risk that specimen integrity may be compromised during transport, please contact the laboratory to discuss the most appropriate transport arrangements.

6.2 Pneumatic Air Tube Transport System (PATTS)

The King's College Hospital NHS Foundation Trust policy for use of the Pneumatic Air Tube Transport System (PATTS) is available on the King's intranet.

6.3 Receipt of Specimens

During normal working hours, specimens should be delivered to the Synnovis Specimen Reception, Ground Floor, Bessemer Wing, King's College Hospital.

Specimens requiring urgent processing should be delivered directly to the Scientific Research and Innovation Services (SR&I) laboratory, Ground Floor, Bessemer Wing.

6.4 Courier and Postal Deliveries

When sending specimens to the Scientific Research and Innovation Services Department, it is the responsibility of the sender to ensure that specimens are packaged in accordance with current transport and postal regulations, accompanied by the appropriate documentation, and correctly labelled with both sender and recipient details.

Where courier or taxi transport is required, arrangements must be made by the sender unless otherwise agreed.

6.5 Transport by Road

Specimens transported by road may be classified as dangerous goods and must be packaged, labelled, and transported in accordance with applicable transport legislation and regulations.

The following requirements must be adhered to:

- Specimen transport containers must not be transported in the same compartment as passengers and should be placed in the boot of a car or the rear compartment of a van and secured to prevent movement during transit.
- Mail and other non-specimen items must not be transported in the same carrier box as specimens.
- Transport containers must be secured appropriately while being transported.
- Specimens must be transported in a secure transport container fitted with a leak-proof, fastened lid.
- Transport containers must comply with the relevant packaging requirements for the specimens being transported (e.g. UN3373 or UN3291, where applicable).
- Transport containers must display appropriate biohazard warning signage and include emergency contact details where required.

6.6 Inter-Hospital Transport

For information regarding inter-site courier services, please contact Synnovis Customer Services: customerservices@synnovis.co.uk

6.7 Specimen Transport Bags

Service users requiring specimen transport bags should contact Synnovis Customer Services: customerservices@synnovis.co.uk

7. Results

All results should be interpreted in conjunction with the relevant clinical presentation, medical history, and other diagnostic findings, as appropriate.

7.1 Electronic Reporting of Results

Following authorisation, results will be available electronically via EPR or CyberLab, as applicable.

7.2 Results Enquiries

All enquiries relating to results should be directed to: synnovis.research@synnovis.co.uk

7.3 Clinical Advice

For clinical advice relating to test selection, result interpretation, or further investigations, please contact the Consultant Chemical Pathologist.

7.4 Erroneous Results

Pre-analytical factors are a common cause of erroneous test results and are largely outside the control of the laboratory. Specimen collection, handling, storage, and transport can all affect the quality and integrity of a specimen and, consequently, the validity of the test result.

Where the laboratory suspects that a result may be invalid due to pre-analytical or specimen quality issues, the result may not be reported. Common causes of erroneous results and their potential effects are shown below. This list is not exhaustive.

Problem	Typical Cause	Potential Effect
Delay in specimen processing	Delay in transport or processing	Specimen degradation, haemolysis, or alteration of biomarker concentrations
Incorrect storage temperature	Specimens stored outside specified temperature requirements	Specimen degradation, haemolysis, or alteration of biomarker concentrations
Haemolysis	Traumatic venepuncture, excessive agitation during transport, exposure to extreme temperatures, freezing whole blood, or delayed processing	Analytical interference resulting in inaccurate test results
Lipaemic specimen	Non-fasting sample, recent ingestion of lipid-containing meals, hyperlipidaemia (e.g. diabetes, excessive alcohol consumption, inherited metabolic disorders), or intravenous lipid infusion	Analytical interference resulting in inaccurate test results
Multiple freeze-thaw cycles	Incorrect storage conditions or repeated testing	Specimen degradation or alteration of biomarker concentrations
Incorrect specimen volume	Insufficient specimen volume or incorrect filling of collection tubes (e.g. citrate tubes not filled to the indicated level)	Inaccurate or invalid test results
Incorrect specimen tube	Use of an inappropriate collection tube or addition of tests requiring a different specimen type	Invalid or unreliable results as assays are validated for specific specimen types
Serum tubes centrifuged before complete clot formation	Centrifugation before allowing the specimen to clot fully (typically 15-60 minutes at room temperature)	Fibrin formation, haemolysis, and incomplete separation of serum from cells
Cross-reactivity	Interference from endogenous or exogenous substances (e.g. heterophile antibodies)	Falsely elevated or falsely decreased results
Specimen mismatch	Incorrect specimen identification or labelling	Specimen rejected and not processed

8. Quality Assurance

8.1 Commitment to Quality

Synnovis' quality management systems support the organisation's vision of delivering high-quality, cost-effective pathology services.

The Synnovis Quality Policy is defined within the organisation's Statement of Purpose and applies to both Synnovis Analytics and Synnovis Services. The Synnovis Code of Conduct is available at: https://www.synlab.com/fileadmin/Corporate_Governance/Code_of_Conduct/20241025_SYNLAB_Code_of_Conduct.pdf

Synnovis is an independent pathology provider registered with the Care Quality Commission (CQC).

All assays performed within the Scientific Research and Innovation Services (SR&I) Department are validated or verified, as appropriate, and are approved through the department's quality management system before being made available to users. Internal Quality Control (IQC), External Quality Assessment (EQA), and internal audits form part of the overall quality assurance programme to monitor analytical performance, the effectiveness of operating procedures, and compliance with quality management requirements.

Accreditation to ISO 15189 includes the clinical cytokine panels CY19, CY20, CY21 and CY23.

The department monitors quality through regular quality meetings and an Annual Management Review (AMR), ensuring that quality objectives are reviewed, monitored, and achieved, and that changes to services and systems are implemented effectively. User satisfaction is considered a key measure of service performance and continual improvement. Key performance indicators and quality measures are used to monitor service delivery, drive improvement, and reduce variation in laboratory processes.

The department is committed to maintaining the confidentiality of information relating to patients, research participants, donors, and clients. Appropriate access is granted to accreditation and regulatory bodies to enable independent assessment of compliance with applicable standards and regulatory requirements.

8.2 Commitment to Meeting the Needs and Requirements of Users

To meet the needs and requirements of its users, the SR&I Department:

- Operates a quality management system that integrates organisational structure, procedures, processes, and resources.
- Establishes quality objectives and associated improvement plans, and reviews progress against these objectives at regular intervals.
- Ensures that all personnel are familiar with the Quality Policy, Quality Manual, and associated procedures to support service quality and user satisfaction.
- Is committed to the health, safety, and welfare of staff, service users, contractors, and visitors.
- Complies with relevant environmental legislation and good environmental practices.
- Is committed to meeting or exceeding the requirements of applicable standards and regulations, including ISO 15189, Good Clinical Practice (GCP), MHRA requirements, the Blood Safety and Quality Regulations (2005), and the Human Tissue Act (2004).
- Upholds professional values and promotes good professional practice, integrity, and ethical conduct.

8.3 Accredited Tests

The following cytokine panels are accredited to ISO 15189 by the United Kingdom Accreditation Service (UKAS):

- CY19: IL-1β, IL-6, IL-8, TNFα
- CY20: IL-2ra, IL-10, IL-17, IFNγ
- CY21: IL-15, GM-CSF, MCP-1, VEGF-A
- CY23: IL-5, IL-13

The UKAS certificate and Schedule of Accreditation can be accessed via the following links:

UKAS Certificate: https://verify.ukas.com/1ac46481-ad60-420c-a43a-ad18395b4c4e#acc.8vZTXAVp

UKAS Schedule of Accreditation: https://www.ukas.com/wp-content/uploads/schedule_uploads/1015552/26342-Medical-Single.pdf

8.4 Ensuring Compliance with Accrediting Bodies

To meet the requirements of ISO 15189 and Good Clinical Practice (GCP), the SR&I Department ensures:

- The recruitment, training, development, and retention of suitably qualified and competent staff to provide a comprehensive and effective service to users.
- The procurement, maintenance, and monitoring of equipment, facilities, and resources required for the delivery of the service.
- The handling, storage, and processing of all specimens in a manner that ensures their integrity and the safe performance of laboratory examinations.
- The use of examination procedures that ensure the highest achievable quality of testing, including the use of CE-marked or UKCA (UK Conformity Assessed) products, where applicable, and the validation or verification of laboratory-developed methods.
- The reporting of results in a timely, accurate, confidential, and clinically meaningful manner.
- The assessment of user satisfaction, together with internal audits and external quality assessment activities, to support continual quality improvement.

8.5 Compliments, Feedback and Complaints

The SR&I Department is committed to continually improving its services and values all feedback from service users. Comments, suggestions, compliments, and complaints provide valuable opportunities for learning and service improvement.

Complaints, incidents, errors, and near misses relating to laboratory services are recorded within the quality management system and investigated by the Quality Lead, as appropriate.

Compliments, feedback, or complaints may be submitted directly to:
synnovis.researchenquiries@synnovis.co.uk

The Synnovis Complaints Policy and Procedure is available at:
https://synlab.co.uk/wp-content/uploads/2026/06/Synnovis_CustomerServices_PATH-CUS-POL1-Synnovis-Complaints-Policy-Procedure.pdf

8.6 Data Protection

The department complies with the requirements of the UK General Data Protection Regulation (UK GDPR), the Data Protection Act 2018, the Caldicott Principles, and relevant guidance issued by the Royal College of Pathologists.

All patient-identifiable information is treated as confidential and is disclosed only where authorised and necessary for the provision of healthcare, public health activities, research governance, or other lawful purposes. Confidential information is retained only for as long as required and is stored securely in accordance with applicable legal, regulatory, and organisational requirements.

All SR&I staff undertake mandatory training in information governance and data protection. Access to laboratory information systems is controlled through secure user authentication and password protection. Information is held, processed, and transferred in accordance with applicable data protection legislation and organisational policies.

8.7 Service Continuity

The SR&I Department maintains business continuity and contingency arrangements to minimise disruption to services.

In the event that the department is unable to deliver a service as expected, for example due to equipment failure, system downtime, staffing shortages, or other unforeseen circumstances, affected users will be informed where there is an anticipated impact on service delivery or turnaround times.

The department maintains and regularly reviews business continuity plans to support the continued provision of critical services and the timely recovery of operations.