

## UHSFT Pathology Laboratory Medicine List of Investigations

**For information on the basis of reference intervals or decision limits, please contact the laboratory**

Please note multiple requests and cascade requests have a cumulative effect on turnaround times. Please contact the laboratory if an expected result time is required.

DEPARTMENT/TEST	Section / Area code	Units	TAT days(working)	Special requirements	Accreditation Status
<b>CHEMICAL PATHOLOGY</b>					
<b>RAPID TURNAROUND – SEND ONLY 6 ML SERUM SEPARATOR GEL (SST BUFF TOP) BLOOD SAMPLE FOR ALL TESTS UNLESS OTHERWISE STATED. FOR PAEDIATRIC/CHILDREN SEND FULL 2 ML PAEDIATRIC LITHIUM HEPARIN BLOOD SAMPLE</b>					
<b>RENAL PROFILE</b>					
SODIUM	Automated	mmol/L	<1		Accredited
POTASSIUM	Automated	mmol/L	<1		Accredited
CREATININE	Automated	umol/L	<1		Accredited
<b>BONE PROFILE</b>					
CALCIUM (actual NOT adjusted)	Automated	mmol/L	<1		Accredited
ALBUMIN	Automated	g/L	<1		Accredited
TOTAL PROTEIN	Automated	g/L	<1		Accredited
<b>LIVER PROFILE</b>					
ALT	Automated	iu/L	<1		Accredited
ALBUMIN	Automated	g/L	<1		Accredited
ALP	Automated	iu/L	<1		Accredited
BILIRUBIN (TOTAL)	Automated	umol/L	<1		Accredited
TOTAL PROTEIN	Automated	g/L	<1		Accredited

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<b>OTHER AUTOMATED LABORATORY TESTS (EXCLUDING URINE TESTS)</b>					
ACE	Automated	iu/L	<1	SST or CLOTTED	Accredited
AFP	Automated	ku/L	<1		Accredited
ALPHA-1 ANTITRYPSIN	Automated	g/L	2	SST	Accredited
AMMONIA	Automated	umol/L	1	EDTA-SEND IMMEDIATELY	Accredited
AMYLASE	Automated	iu/L	<1		Accredited
AST	Automated	iu/L	<1		Accredited
BICARBONATE	Automated	mmol/L	<1		Accredited
BILE ACIDS	Automated	umol/L	<1	SST	Accredited
BILIRUBIN - DIRECT	Automated	umol/L	<1		Accredited
BILIRUBIN - NEONATAL	Automated	umol/L	<1		Accredited
CA 125	Automated	ku/L	1	SST	Accredited
CA19-9	Automated	ku/L	1	SST	Accredited
CARBAMAZEPINE	Automated	mg/L	<1	Collect trough level	Accredited
CEA	Automated	ug/L	1	SST	Accredited
CHLORIDE	Automated	mmol/L	<1		Accredited
CHOLESTEROL	Automated	mmol/L	<1		Accredited
CK (creatine kinase)	Automated	iu/L	<1		Accredited
CORTISOL (PLASMA)	Automated	nmol/L	1	SST	Accredited
C-REACTIVE PROTEIN (CRP)	Automated	mg/L	<1		Accredited
DIGOXIN	Automated	nmol/L	<1	COLLECT AT LEAST 6 HOURS POST DOSE	Accredited
ETHANOL (alcohol)	Automated	mg/100ml	7	FLUORIDE/OXALATE	Accredited
FERRITIN	Automated	ug/L	<1		Accredited

DEPARTMENT/TEST	Section / Area code	Units	TAT days(working)	Special requirements	Accreditation Status
FOLATE (PLASMA)	Automated	ug/L	<1		Accredited
FREE T3	Automated	pmol/L	<1		Accredited
FREE T4	Automated	pmol/L	<1		Accredited
FSH	Automated	iu/L	<1		Accredited
GAMMA GT	Automated	iu/L	<1		Accredited
GLUCOSE	Automated	mmol/L	<1	FLUORIDE OXALATE	Accredited
HAPTOGLOBIN	Automated	g/L	<1	SST	Accredited
hCG	Automated	iu/L	<1		Accredited
HDL CHOLESTEROL	Automated	mmol/L	<1		Accredited
IRON	Automated	umol/L	<1		Accredited
LDH	Automated	iu/L	<1		Accredited
LH	Automated	iu/L	<1		Accredited
LITHIUM	Automated	mmol/L	<1	SST or CLOTTED. Collect at least 10 hrs post dose	Accredited
MAGNESIUM	Automated	mmol/L	<1		Accredited
METHOTREXATE	Automated	umol/L	4 hours	SST	Accredited
OESTRADIOL	Automated	pmol/L	<1		Accredited
OSMOLALITY-SERUM/PLASMA	Automated	mOsm/KgH2O	<1		Accredited
PARACETAMOL	Automated	mg/L	<1		Accredited
PHENOBARBITONE	Automated	mg/L	<1	collect trough level	Accredited
PHENYTOIN	Automated	mg/L	<1	collect trough level	Accredited
PHOSPHATE	Automated	mmol/L	<1		Accredited
PROGESTERONE	Automated	mmol/L	<1		Accredited
PROLACTIN	Automated	mu/L	<1		Accredited
PSA	Automated	ug/L	<1		Accredited

DEPARTMENT/TEST	Section / Area code	Units	TAT days(working)	Special requirements	Accreditation Status
PTH	Automated	pmol/L	2	LI/HEP - SEND TO LAB WITHIN 8 HOURS	Accredited
SALICYLATE	Automated	mg/L	<1		Accredited
SHBG	Automated	nmol/L	1	SST	Accredited
TESTOSTERONE	Automated	nmol/L	<1	SST	Accredited
THEOPHYLLINE	Automated	mg/L	<1	collect trough level	Accredited
TRANSFERIN	Automated	g/L	<1		Accredited
TRIGLYCERIDES	Automated	mmol/L	<1		Accredited
TROPONIN - I	Automated	ng/L	<1	SST (routine requests) OR BD Rapid Serum tube (Emergency Department Low risk chest pain pathway <u>ONLY</u> )	Accredited
TSH	Automated	mu/L	<1		Accredited
URATE (uric acid)	Automated	umol/L	<1		Accredited
UREA (nitrogen)	Automated	mmol/l	<1		Accredited
VALPROATE	Automated	mg/L	<1	collect trough level	Accredited
VITAMIN B 12	Automated	ng/L	<1		Accredited
VITAMIN D, 25-OH VITAMIN D (25-OH-CHOLECALCIFEROL)	Automated (routine method)	nmol/L	<1	SST	Accredited
<b>GENERAL BIOCHEMISTRY TESTS (including urine tests)</b>					
17 OH PROGESTERONE - BLOOD SPOT	LC-MS	nmol/L	11	GUTHRIE CARD	Not Accredited
17 OH PROGESTERONE – SERUM	LC-MS	nmol/L	5	SST OR HEPARIN	Accredited
5 –HIAA	Chromatography	umol/24 hours	5	24h URINE ONLY – PRESERVED WITH GLACIAL ACETIC ACID	Accredited
ACTH	Special Biochem	ng/l	2	EDTA PLASMA TO BE RECEIVED IN LAB TO BE	Accredited

DEPARTMENT/TEST	Section / Area code	Units	TAT days(working)	Special requirements	Accreditation Status
				SEPARATED AND FROZEN WITHIN 24 HOURS	
ACYL CARNITINES (BLOOD SPOT)	LC-MS	N/A	5	GUTHRIE CARD (from Li Hep plasma)	Accredited
ALBUMIN (URINE)	Automated	mg/L	1	RANDOM URINE	Accredited
ALDOSTERONE	Special Biochem	pmol/L	5	<b>EDTA IF RENIN ALSO REQUIRED</b> SST OK IF ALDO REQUEST ONLY	Accredited
ALK PHOS ISO ENZYMES	Special Biochem	qualitative	10	SST	Accredited
ALPHA-1 AT PHENOTYPE	Special Biochem	qualitative	10	SST	Accredited
AMINO ACIDS (CSF)	Chromatography	umol/L	5	CSF	Accredited
AMINO ACIDS (PLASMA)	Chromatography	umol/L	5	LI/HEP or SST	Accredited
AMINO ACIDS (URINE) – <b>FOR CYSTINURIA ONLY</b>	Chromatography	umol/mmol creat	5	RANDOM URINE	Accredited
ANDROSTENEDIONE (SERUM)	Chromatography	nmol/L	5	SST	Accredited
C-PEPTIDE	Special Biochem	pmol/L	5	SST OR LI/HEP - SEND TO LAB WITHIN 2 HOURS	Accredited
CAERULOPLASMIN	Automated	mg/L	2	SST	Accredited
CALCITONIN	Special Biochem	ng/L	2	FASTING A.M. PLAIN SAMPLE / SST / Li HEP	Accredited
CALCIUM (URINE)	Automated	mmol/spec mmol/spec mmol/mmol crea	1	24h PREFERRED, CHILDREN RANDOM	Accredited
CARBOXYHAEMOGLOBIN	Critical Care Lab	%	1	Whole blood Lithium Heparin – Send to Main Lab.	Accredited
CHOLINESTERASE - PHENOTYPE	Send Away		10	SST or CLOTTED	Accredited
CITRATE (URINE)	Automated	mmol/spec	6	24h URINE COLLECTION	Accredited

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CITRATE (RANDOM URINE)	Automated	mmol/mmol creat	6	RANDOM URINE	Accredited
CORTISOL (BLOOD SPOT)	Special Biochem	nmol/L	10	GUTHRIE CARD	Not Accredited
CORTISOL (SALIVA)	Special Biochem	nmol/L	10	SALIVA	Accredited
CORTISOL (URINE)	Special Biochem	nmol/spec	5	24h URINE COLLECTION	Accredited
CREATININE CLEARANCE	Automated	mL/min	1	24h URINE COLLECTION AND SST	Accredited
CREATININE (URINE)	Automated	mmol/L	1	URINE	Accredited
CREATININE (FLUID)	Automated	umol/L	1	24h URINE COLLECTION	Accredited
CICLOSPORIN	Automated	ug/L	1	EDTA	Accredited
CYSTINE	Chromatography	umol/mmol creat	10	URINE	Accredited
DHEA-SULPHATE	Chromatography	umol/L	5	SST	Accredited
DRUG SCREEN	Toxicology		7	RANDOM URINE	Accredited
ELF test (enhanced liver fibrosis)	Special Biochem	None		SST / SERUM <u>ONLY</u> REQUIRES HA, P3NP & TIMP ANALYSIS	Accredited
ERYTHROPOIETIN (EPO)	Special Biochem	IU/L	2	SST	Accredited
FAECAL ELASTASE	Special Biochem	ug E1/g stool	5	RANDOM FAECES	Accredited
FAECAL IMMUNOCHEMICAL TESTING (FIT)	Special Biochem	ug Hb /g Stool	11	FIT sample Collection KIT	Accredited
GROWTH HORMONE (SERUM)	Special Biochem	ug /L	2	SST	Accredited
Homocysteine	Special Biochem	umol/l	5	Lithium heparin plasma or EDTA plasma. Patients must be fasting and the sample separated and frozen at -20°C within 30 minutes of collection.	Accredited

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HAEM PIGMENTS	Automated	Abs Unit	4 hours		Accredited
HMMA & HVA (neuroblastoma screen in children)	Chromatography	umol/mmol creat	5	RANDOM URINE - Frozen if sent from an external laboratory.	Accredited
HYALURONIC ACID	Special Biochem	ug/L	5	SST <u>ONLY</u>	Accredited
HYDROXYBUTYRATE	Toxicology	mmol/L	12	CLOTTED	Accredited
IGF-1	Special Biochem	nmol/L	2	SST	Accredited
INSULIN	Special Biochem	mu/L	5	SST - SEND TO LAB WITHIN 2 HOURS	Accredited
LACTATE (BLOOD)	Critical Care Lab	mmol/L	1	Lithium heparin or SST – SEND TO LAB WITHIN 10 MINUTES of venesection.	Accredited
LACTATE (CSF)	Critical Care Lab	mmol/L	1	Plain sample only (no anticoagulant) - SEND TO LAB WITHIN 10 MINUTES of venesection	Accredited
MAGNESIUM (URINE)	Automated	mmol/L	1	24 HR URINE COLLECTION: Bottle preserved with 20mL 6M HCl.	Accredited
METANEPHRINES - URINE (Normetanephine, Metanephine and 3-Methoxytyramine)	Chromatography	umol/24 hr or umol/mmol creatinine	5	24h URINE COLLECTION IN ACETIC ACID (Adults) or RANDOM URINE (Children, <b>for phaeochromocytoma screen only</b> )	Accredited
METHAEMALBUMIN	Automated		2	LI/HEP	Accredited
METHAEMOGLOBIN	Critical Care lab	%	2	Whole blood Lithium Heparin – Send to Main Lab	Accredited

DEPARTMENT/TEST	Section / Area code	Units	TAT days(working)	Special requirements	Accreditation Status
MICROSCOPY (FAECAL, FAT GLOBULES, PAEDIATRIC)	Automated		3	FRESH FAECES	Accredited
NT-ProBNP	Special Biochem	ng/L	2	<b>MUST BE</b> Lithium Heparin Plasma	Accredited
ORGANIC ACIDS (URINE)	Chromatography		5	RANDOM URINE, FRESH	Accredited
OSMOLALITY - URINE	Automated	mosmol/kg (H2O)	1	RANDOM URINE	Accredited
OXALATE (TIMED URINE)	Automated	mmol/24h	6	24h URINE COLLECTION	Accredited
OXALATE (RANDOM URINE)	Automated	mmol/mmol creat	6	RANDOM URINE	Accredited
P3NP (Intact N-terminal propeptide of type III collagen)	Special Biochem	ug/L	5	SST <b>ONLY</b>	Accredited
pH (FAECES)	Chromatography	pH units	5	A MINIMUM 1g OF FAECES.W HICH MUST REACH THE LABORATORY AND BE HANDED DIRECTLY TO A MEMBER OF STAFF WITHIN 1 HOUR OF COLLECTION.	Accredited
pH (URINE)	Chromatography	pH units	1	<b>FRESH</b> SAMPLE REQUIRED	Accredited
PHENYLALANINE (BLOODSPOT)	Send Away	µmol/L	2	MONITORING KNOWN CASES OF PHENYLKETONURIA <b>ONLY</b>	Accredited
PLASMA METANEPHRINES	Chromatography	pmol/L	5	Send immediately. Samples to be separated and frozen within 30 minutes of collection.	Accredited
PORPHOBILINOGEN	Automated	qualitative	1	RANDOM URINE, FRESH - PROTECT FROM LIGHT	Accredited
PORPHYRIN (URINE)	Send Away	nmol/L	1	EARLY MORNING URINE	Accredited
PROTEIN CREATININE RATIO (URINE)	Automated	g/L			Accredited

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PROTEIN (URINE)	Automated	mg/L	1	RANDOM URINE	Accredited
PROTEIN (CSF)	Automated	mg/L	1	CSF IN PLAIN CONTAINER	Accredited
RENIN	Special Biochem	mU/L	5	EDTA, SEP, FREEZE WITHIN 30 MINS	Accredited
SOMATOMEDIN C (IGF-1)	Special Biochem	nmol/L	1	SST	Accredited
STONE ANALYSIS	Special Biochem		10	RENAL CALCULUS	Accredited
SWEAT CHLORIDE	Trace Elements	mmol/L	2	WESCOR MACRODUCT	Accredited
SOLUBLE TRANSFERIN RECEPTOR		nmol/L	30	EDTA	Accredited
TACROLIMUS	Send Away	ug/L	4		Accredited
TIMP-1 (Tissue inhibitor of matrix metalloproteinase-1)	Special Biochem	ug/L	5	<b>SST <u>ONLY</u> ONLY available as part of ELF test</b>	Accredited
THYROGLOBULIN	Special Biochem	ug/L	2	SST	Accredited
THYROGLOBULIN ANTIBODIES	Special Biochem	KU/L	2	SST	Accredited
TYROSINE (BLOODSPOT)	Chromatography	µmol/L	3	MONITORING KNOWN CASES OF PHENYLKETONURIA OR TYROSINAEMIA <b>ONLY</b>	Accredited
VITAMIN A	Chromatography	µmol/L	5	SST	Accredited
VITAMIN E	Chromatography	µmol/L	5	SST - Vitamin E concentration is affected by plasma lipids. Vitamin E to total cholesterol ratio is a better indicator of status (Adult ref: 1.3-16.2 umol/mmol)	Accredited
<b>POINT OF CARE TESTS</b>					

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BLOOD GAS (Arterial, Venous or Capillary whole blood)	POCT	N/A	1	Heparinised syringe on blood gas analyser.	
CARBOXYHAEMOGLOBIN	POCT	% Saturation	1	Whole blood Lithium Heparin – SEND TO LAB or Heparinised syringe on blood-gas analyser.	
LACTATE (BLOOD)	POCT	mmol/L	1	Lithium heparin or SST – SEND TO LAB WITHIN 10 MINUTES of venesection or Heparinised syringe on blood-gas analyser	
LACTATE (CSF)	POCT	mmol/L	1	Plain sample only (no anticoagulant) - SEND TO LAB WITHIN 10 MINUTES of venesection	
METHAEMOGLOBIN	POCT	%	2	Whole blood Lithium Heparin – SEND TO LAB or Heparinised syringe on blood-gas analyser.	
<b>TRACE ELEMENT LABORATORY TESTS</b>					
ALUMINIUM	Trace Elements	umol/L	5	6ml Greiner Trace Element Na Hep tube (Royal blue top)	Accredited
ANTIMONY (BLOOD)	Trace Elements		5	Adults: 6ml Greiner Trace Element Na Hep tube (Royal blue top)	Accredited
				Paed: 2ml Teklab Hep TE tube	Accredited
ANTIMONY (URINE)	Trace Elements		5	20ml 'Sterilin' Universal container, or 24hr collection	Accredited
ARSENIC (BLOOD)	Trace Elements	umol/L	5	Lithium heparin, sodium heparin or EDTA	Accredited

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ARSENIC (URINE)	Trace Elements		5	20ml 'Sterilin' Universal container, or 24hr collection	Accredited
BARIUM	Trace Elements	nmol/L	5	6ml Greiner Trace Element Na Hep tube (Royal blue top)	Accredited
BERYLLIUM (URINE)	Trace Elements	nmol/L	5	20ml 'Sterilin' Universal container, or 24hr collection	Accredited
BISMUTH (BLOOD)	Trace Elements	nmol/L	5	Lithium heparin or EDTA	Accredited
BISMUTH (URINE)	Trace Elements		5	20ml 'Sterilin' Universal container, or 24hr collection	Accredited
BORON (PLASMA)	Trace Elements	umol/L	5	6ml Greiner Trace Element Na Hep tube (Royal blue top)	Accredited
BORON (URINE)	Trace Elements		5	20ml 'Sterilin' Universal container, or 24hr collection	Accredited
CADMIUM (BLOOD)	Trace Elements	nmol/L	5	Lithium heparin, sodium heparin or EDTA	Accredited
CADMIUM (URINE)	Trace Elements		5	20ml 'Sterilin' Universal container, or 24hr collection	Accredited
CHROMIUM (BLOOD)	Trace Elements	nmo/L	5	6ml Greiner Trace Element Na Hep tube (Royal blue top)	Accredited
CHROMIUM (PLASMA)	Trace Elements	nmo/L	5	6ml Greiner Trace Element Na Hep tube (Royal blue top)	Accredited
CHROMIUM (URINE)	Trace Elements		5	20ml 'Sterilin' Universal container, or 24hr collection	Accredited
COBALT (BLOOD)	Trace Elements	nmol/L	5	6ml Greiner Trace Element Na Hep tube (Royal blue top)	Accredited
COBALT (PLASMA)	Trace Elements	nmol/L	5	6ml Greiner Trace Element Na Hep tube (Royal blue top)	Accredited
COBALT (URINE)	Trace Elements		5	20ml 'Sterilin' Universal container, or 24hr collection	Accredited

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COPPER (PLASMA)	Trace Elements	umol/L	4	Adults: 6ml Greiner Trace Element Na Hep tube (Royal blue top)	Accredited
				Paed: 2ml Teklab Hep TE tube	Accredited
COPPER (URINE)	Trace Elements	umol/24hr	5	24 hour collection in a 2.5 litre container with no preservative added.	Accredited
GOLD (PLASMA)	Trace Elements	umol/L	5	6ml Greiner Trace Element Na Hep tube (Royal blue top)	Accredited
GOLD (URINE)	Trace Elements		5	20ml 'Sterilin' Universal container, or 24hr collection	Accredited
IODINE (URINE)	Trace Elements	umol/L	5	20ml 'Sterilin' Universal container, or 24hr collection	Accredited
IRON (URINE)	Trace Elements	umol/24 hr	5	24 hour collection in a 2.5 litre container with no preservative added.	Accredited
LEAD (BLOOD)	Trace Elements	umol/L	5	Lithium heparin, sodium heparin or EDTA	Accredited
LEAD (URINE)	Trace Elements	nmol/mmol creatinine	5	20ml 'Sterilin' Universal container, or 24hr collection	Accredited
MANGANESE (BLOOD)	Trace Elements	nmol/L	5	Adults: 6ml Greiner Trace Element Na Hep tube (Royal blue top)	Accredited
				Paed: 2ml Teklab Hep TE tube	Accredited
MERCURY (BLOOD)	Trace Elements	nmol/L	5	Lithium heparin, sodium heparin or EDTA	Accredited
MERCURY (URINE)	Trace Elements	nmol/mmol creatinine	5	20ml 'Sterilin' Universal container, or 24hr collection	Accredited
MOLYBDENUM (PLASMA)	Trace Elements	nmo/L	5	2ml Teklab Li Hep Trace Element tube	Accredited

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MOLYBDENUM (BLOOD)	Trace Elements	nmo/L	5	6ml Greiner Trace Element Na Hep tube (Royal blue top)	Accredited
NICKEL (PLASMA)	Trace Elements	nmol/L	5	6ml Greiner Trace Element Na Hep tube (Royal blue top)	Accredited
NICKEL (URINE)	Trace Elements		5	20ml 'Sterilin' Universal container, or 24hr collection	Accredited
PLATINUM (BLOOD)	Trace Elements	nmol/L	5	Lithium heparin, sodium heparin or EDTA	Accredited
PLATINUM (URINE)	Trace Elements		5	20ml 'Sterilin' Universal container, or 24hr collection	Accredited
RELATIVE EXCHANGABLE COPPER (PLASMA)	Trace Elements	%	4	Adults: 6ml Greiner Trace Element Na Hep tube (Royal blue top) Paed: 2ml Teklab Hep TE tube Send immediately	Accredited
SELENIUM (PLASMA)	Trace Elements	umol/L	5	Adults:6ml Greiner Trace Element Na Hep tube (Royal blue top)	Accredited
				Paed: 2ml Teklab Hep TE tube	Accredited
SELENIUM (URINE)	Trace Elements		5	20ml 'Sterilin' Universal container, or 24hr collection	Accredited
SILVER (BLOOD)	Trace Elements	nmol/L	5	Lithium heparin, sodium heparin or EDTA	Accredited
SILVER (URINE)	Trace Elements		5	20ml 'Sterilin' Universal container, or 24hr collection	Accredited
STRONTIUM (PLASMA)	Trace Elements	umol/L	5	6ml Greiner Trace Element Na Hep tube (Royal blue top)	Accredited
THALLIUM (BLOOD)	Trace Elements	nmol/L	5	Lithium heparin, sodium heparin or EDTA	Accredited
THALLIUM (URINE)	Trace Elements		5	20ml 'Sterilin' Universal container, or 24hr collection	Accredited

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TIN (PLASMA)	Trace Elements	umol/L	5	6ml Greiner Trace Element Na Hep tube (Royal blue top)	Accredited
TIN (URINE)	Trace Elements		5	20ml 'Sterilin' Universal container, or 24hr collection	Accredited
TITANIUM (PLASMA)	Trace Elements	nmol/L	5	6ml Greiner Trace Element Na Hep tube (Royal blue top)	Accredited
TITANIUM (URINE)	Trace Elements		5	20ml 'Sterilin' Universal container, or 24hr collection	Accredited
VANADIUM (URINE)	Trace Elements	nmol/L	5	20ml 'Sterilin' Universal container, or 24hr collection	Accredited
URANIUM (URINE)	Trace Elements	pmol/L	5	20ml 'Sterilin' Universal container, or 24hr collection	Accredited
ZINC (PLASMA)	Trace Elements	umol/l	4	Adults: 6ml Greiner Trace Element Na Hep tube (Royal blue top)	Accredited
				Paed: 2ml Teklab Hep TE tube	Accredited
TOXIC METALS SCREEN (BLOOD)	Trace Elements		2	6ml Greiner Trace Element Na Hep tube (Royal blue top) Please send with paired random urine sample. Blood sample is primary sample required for TMS analysis. Urine will only be tested if required.	Accredited
TOXIC METALS SCREEN (URINE)	Trace Elements		2	20ml 'Sterilin' Universal container Please send with paired whole blood sample. Blood sample is primary sample required for TMS analysis. Urine will not be tested unless received with a blood sample.	Accredited

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<b>HAEMATOLOGY</b>					
ESR	mm/1st hour	<1	2mL EDTA. Please ensure maximum fill	36-48 hours	Accredited
<b>FULL BLOOD COUNT – INCLUDING:</b>		<1	EDTA	36-48 hours	Accredited
HAEMOGLOBIN	g/L				
WBC - WHITE CELL COUNT	x10 <sup>9</sup> /L				
RBC - RED CELL COUNT	x10 <sup>12</sup> /L				
PLATELETS	x10 <sup>9</sup> /L				
PCV	L/L				
MCV	fl				
MCH	pg				
MCHC	g/L				
NEUTROPHILS	x10 <sup>9</sup> /L				
LYMPHOCYTES	x10 <sup>9</sup> /L				
EOSINOPHILS	x10 <sup>9</sup> /L				
BASOPHILS	x10 <sup>9</sup> /L				
MONOCYTES	x10 <sup>9</sup> /L				
BLOOD FILM				1 week	Accredited
G6PD SCREEN	Normal/deficient	2	EDTA	3 days	Accredited
PYRUVATE KINASE	Normal/deficient	30	<b>Sent away to KingsPath</b>		Accredited

IM SCREEN	Pos/Neg	1	EDTA	36-48 hours	Accredited
MALARIAL SCREEN	Pos/Neg	<1	EDTA	36-48 hours	Accredited
ABSOLUTE RETICULOCYTES	x10 <sup>9</sup> /L	<1	EDTA	36-48 hours	Accredited
SICKLE SCREEN	Pos/Neg	<1	EDTA	3 days	Accredited
CSF CYTOSPIN	Cells present/absent	<1	CSF	1 week	Accredited
HBA1c	mmol/mol	2	EDTA	36-48 hours	Accredited
<b>HAEMOSTASIS (1 x 2.7 ml citrate (blue top) bottle required unless otherwise indicated)</b>					
HEPARIN (ANTI-Xa ASSAY) for monitoring LMW Heparin Anti Xa assay for Rivaroxaban Anti Xa assay for Apixaban Anti Xa assay for Edoxaban  Dilute Thrombin Time assay for Dabigatran	See report	2	Deliver straight to lab	1 day	Accredited
D-DIMER ASSAY	ugFEU/ml	<1			Accredited
FACTOR X ASSAY	u/dL	30	Needs to be delivered directly to the coagulation laboratory within 30 minutes of venesection	Stored for up to 6 months in -70oC Freezer	Accredited
FACTOR XI ASSAY	u/dL	30			Accredited
FACTOR XII ASSAY	u/dL	30			Accredited
FACTOR II ASSAY	u/dL	30			Accredited
FACTOR V ASSAY	u/dL	30			Accredited
FACTOR VII ASSAY	u/dL	30			Accredited
FACTOR VIII ASSAY	u/dL	7			Accredited

FACTOR VIII INHIBITOR	Bethesda	30	Needs to be delivered directly to the coagulation laboratory within 30 minutes of venesection	Stored for up to 6 months in -70oC Freezer	Accredited
FACTOR IX ASSAY	u/dL	30			Accredited
FACTOR XIII SCREEN		30	2 x 2.7ml citrate		Accredited
HEPARIN (APTR)	Ratio	<1		1 day	Accredited
HEPARIN-INDUCED THROMBOCYTOPENIA (HIT) SCREEN	Pos/Neg	1	6mL Plain clotted	1 day	Accredited
ACTIVATED PARTIAL THROMBOPLASTIN RATIO (APTR)	ratio	<1		1 day	Accredited
INR - INTERNATIONAL NORMALISED RATIO	ratio	<1		1 day	Accredited
FIBRINOGEN (DERIVED)	g/L	<1		1 day	Not Accredited
LUPUS ANTICOAGULANT	Pos/Neg	2	2 x 2.7 ml citrate	1 day	Accredited
WARFARIN (INR)	Ratio	<1		1 day	Accredited

<p>THROMBOPHILLIA SCREEN <b>must be authorised by Haematology medic</b> Includes; Clotting screen, APCR, Protein C &amp;S, Antithrombin, Thrombin Time</p>	<p>See individual tests</p>	<p>30</p>	<p>1 x EDTA, 4 x citrate Needs to be delivered directly to the coagulation laboratory within 30 minutes of venesection</p>	<p>Stored for up to 6 months in -70oC Freezer</p>	<p>Accredited</p>
<p>ANTITHROMBIN</p>	<p>IU/dL</p>	<p>30</p>	<p>1 x citrate Needs to be delivered directly to the coagulation laboratory within 30 minutes of venesection</p>	<p>Stored for up to 6 months in -70oC Freezer</p>	<p>Accredited</p>
<p>PROTEIN C</p>	<p>IU/dL</p>	<p>30</p>	<p>1 x citrate Needs to be delivered directly to the coagulation laboratory within 30 minutes of venesection</p>	<p>Stored for up to 6 months in -70oC Freezer</p>	<p>Accredited</p>

PROTEIN S	IU/dL	30	1 x citrate Needs to be delivered directly to the coagulation laboratory within 30 minutes of venesection	Stored for up to 6 months in -70oC Freezer	Accredited
THROMBIN TIME	Ratio	30	1 x citrate	Stored for up to 6 months in -70oC Freezer	Accredited
THROMBOELASTOGRAPH (TEG)		1	2 x citrate Needs to be delivered directly to the coagulation laboratory within 30 minutes of venesection	Stored for up to 6 months in -70oC Freezer	Accredited
VON WILLEBRAND SCREEN Includes; clotting screen, Factor VIII, VWF Ag, CBA & RiCof if indicated	See individual tests	30	4 x citrate Needs to be delivered directly to the coagulation laboratory within 30 minutes of venesection	Stored for up to 6 months in -70oC Freezer	Accredited

VON WILLEBRAND ANTIGEN	IU/dL	30	1 x citrate Needs to be delivered directly to the coagulation laboratory within 30 minutes of venesection	Stored for up to 6 months in -70oC Freezer	Accredited
ADAMTS13 (also known as von Willebrand Cleavage Protease)	% (IU/dL)	1	1 x citrate Needs to be delivered directly to the coagulation laboratory within 30 minutes of venesection		Accredited
COLLAGEN BINDING ASSAY (CBA)	IU/dL	30	1 x citrate Needs to be delivered directly to the coagulation laboratory within 30 minutes of venesection	Stored for up to 6 months in -70oC Freezer	Accredited



RISTOCETIN CO-FACTOR ASSAY (RICOFA)	IU/dL	30	1 x citrate Needs to be delivered directly to the coagulation laboratory within 30 minutes of venesection	Stored for up to 6 months in -70oC Freezer	Accredited
PFA-200	seconds	1	2 x citrate Needs to be delivered directly to the coagulation laboratory within 30 minutes of venesection	Stored for up to 6 months in -70oC Freezer	Accredited
Platelet Aggregation Screen		1	<b>Must be by prior arrangement with laboratory</b> 4xcitrate samples must be delivered straight to lab		Accredited
<b>DEPARTMENT/TEST</b>	Units	TAT days(working)	Special requirements	Lab sample storage time	Accreditation Status
<b>BLOOD TRANSFUSION</b>	Units	TAT days(working)	Special requirements		
ANTIBODY SCREEN (AUTOMATED)		1	6mL EDTA	10 days	Accredited
BLOOD GROUP (AUTOMATED)		1	6mL EDTA	10 days	Accredited
AUTOMATED GROUP & SCREEN		1	6mL EDTA	10 days	Accredited

FMH	ml	3 or 6 ml EDTA TUBE			
GROUP AND DIRECT ANTIGLOBULIN TEST (DAT)		1	Cord sample: 6mL EDTA Neonatal sample: 0.5mL	10 days	Accredited
CROSS MATCH		Based on clinical need. If atypical antibodies requires 1-2 working days	6mL EDTA To be received in advance of blood requirement complying with BCSH sample validity guidelines	10 days	Accredited
DIRECT ANTIGLOBULIN TEST (DAT)		1	6mL EDTA	10 days	Accredited
Foetal Maternal Haemorrhage Estimation (FMH)		2	6mL EDTA	10 days	Accredited
INVESTIGATION OF TRANSFUSION REACTIONS		Variable	See Transfusion Record for details To be sent upon discussion with laboratory ASAP after suspected reaction	10 days	Accredited
ANTI-A/ANTI-B TITRES		2	6mL EDTA	10 days	Accredited

ANTENATAL ANTIBODY TITRE OR QUANTITATION		10	6mL EDTA	Referred	Accredited
ANTIBODY INVESTIGATION & EXTENDED PHENOTYPING		1	6mL EDTA	10 days testing carried out if antibody screen is positive	Accredited
CELL FREE FOETAL DNA TESTING		16	6ml EDTA	Referred	Accredited
<b>ALL TESTS LISTED BELOW MUST BE AUTHORISED BY A HAEMATOLOGY MEDIC</b>					
HEPARIN-INDUCED THROMBOCYTOPENIA (HIT) ELISA (Confirmatory test)		1	6mL Plain clotted	10 days	Accredited
HLA ANTIBODY SCREEN		13	10mL Plain clotted	Referred	Accredited
HLA CLASS 1 TYPING FOR PLATELET REACTIVENESS		13	2 x 6mL EDTA 10mL Plain clotted	Referred	Accredited
PLATELET ANTIBODIES (AUTO OR ALLO)		10	3 x 6mL EDTA 10mL Plain clotted <b>If drug-related, a sample of drug is required</b>	Referred	Accredited

FOETAL/NEONATAL ALLO-IMMUNE THROMBOCYTOPENIA		10	Maternal: 6mL EDTA 10mL Plain clotted Paternal: 6mL EDTA Neonatal: 1mL EDTA	Referred	Accredited
NEONATAL ALLO-IMMUNE NEUTROPENIA		30	Maternal: 6mL EDTA 10mL Plain clotted Paternal: 6mL EDTA Neonatal: 1mL EDTA	Referred	Accredited
NEUTROPHIL/GRANULOCYTE ANTIBODIES		30	10mL Plain clotted	Referred	Accredited
DONATH LANDSTEINER		10	6mL Plain clotted plus 6mL EDTA  To be arranged with Lab for transport at 37'c. Must arrive within 30 minutes of venesection at 37'c		Accredited

HERIDATRY SPHEROCYTOSIS (EMA BINDING)		7	3ml EDTA To be sent mon-wed only with required blood film	Referred	Accredited
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DEPARTMENT/TEST	Units	TAT days(working)	Special requirements	Lab Storage time	Accreditation Status
<b>IMMUNOLOGY</b>					
6 ML SERUM SEPARATOR GEL (SST BUFF TOP) BLOOD SAMPLE FOR ALL TESTS UNLESS OTHERWISE STATED					
ACETYL CHOLINE RECEPTOR ANTIBODY	nmol/L	20	Sent away if results are borderline		Accredited
ADRENAL ANTIBODIES	Pos/Neg	15			Accredited
ACLA (ANTI CARDIOLIPIN ABS)	u/mL	10	B2GP1 reflex tested if pos		Accredited
ALLERGEN SPECIFIC IGE (RAST)	kUA/L	5			Not Accredited
ANA (see CONNECTIVE TISSUE ANA SCREEN)					Accredited
ANCA (ANTINEUTROPHIL CYTOPLASMIC ANTIBODY)	Pos/Neg	5			Not Accredited
ANTI COLLAGEN TYPE 2 (send away)	Pos/Neg	20			Accredited
ANTI CHOLINESTERASE (send away)	Pos/Neg	20			Accredited
AMYLOID –A (send away)	Pos/Neg	20			Accredited
ANTI C1Q (send away)	Pos/Neg	20			Accredited
ANTI-GLUTAMIC DECARBOXYLASE	U/mL	20			Accredited
ANTI-IGA (send away)	Pos/Neg	20			Accredited
ASPERGILLUS PRECIPITINS	mg/L	10			Accredited
AVIAN PRECIPITINS	mg/L	10			Accredited

BENCE JONES PROTEIN	present/absent	10	10 ML URINE (MSU)	Accredited
BETA 2 MICROGLOBULIN	mg/L	5		Accredited
BETA 2 GLYCOPROTEIN	u/mL	15		Accredited
C1 ESTERASE INHIBITOR (ANTIGENIC)	g/L	10		Accredited
C1 ESTERASE INHIBITOR (FUNCTIONAL)	%	20	SAMPLE NEEDS FREEZING WITHIN 6 HOURS	Accredited
C3 NEPHRITIC FACTOR (sent away)	Pos/Neg	20	<b>Only sent away for testing if C4 is normal range and C3 is below normal</b>	Accredited
CALPROTECTIN	ug/g	15	FAECAL SAMPLE	Accredited
CARDIAC MUSCLE ANTIBODY (send away)	Pos/Neg	20		Accredited
CARTILAGE AUTOANTIBODY (send away)	Pos/Neg	20		Accredited
CENTROMERE ANTIBODIES	Pos/Neg	5		Accredited
CCP ANTIBODY	u/mL	5		Accredited
COMPLEMENT C3/C4	g/L	5		Accredited
SPECIALIST COMPLEMENT COMPONENTS (Send away)		20	SAMPLE NEEDS FREEZING WITHIN 6 HOURS	Accredited
COMPLEMENT PATHWAY FUNCTION CH50	%	20	SAMPLE NEEDS FREEZING WITHIN 6 HOURS	Not Accredited
ALTERNATIVE COMPLEMENT PATHWAY AP50	%	20	SAMPLE NEEDS	Accredited

ALTERNATIVE COMPLEMENT PATHWAY FACTOR H	mg/L	20	FREEZING WITHIN 6 HOURS		Accredited
CONNECTIVE TISSUE ANA SCREEN	Pos/Neg	5			Accredited
COMPONENT RESOLVED DIAGNOSIS	interpretive	25	SPECIALIST REQUEST, IMM CONSULTANTS ONLY		Accredited
CRYOGLOBULIN	pos.neg	10	MUST BE KEPT AT 37C PRIOR TO SEP'N		Not Accredited
DNA ANTIBODIES	IU/mL	5			Accredited
ENA ANTIBODY SCREEN	Pos/Neg	5			Accredited
ENA ANTIBODY PROFILE	Pos/Neg	5	REFLEX TEST		Accredited
ENA EXTENDED SCREEN	Pos/Neg	15	REFLEX TEST		Accredited
EXTENDED LIVER AUTOANTIBODY BLOT	Pos/Neg	10			Accredited
ENDOMYSIAL ANTIBODIES	Pos/Neg	15			Accredited
FARMERS LUNG PRECIPITINS	mg/L	10			Accredited
FREE LIGHT CHAINS/LIGHT CHAIN RATIO	mg/l	20			Accredited
GANGLIOSIDE AUTO ANTIBODY	Pos/Neg	20			Accredited
GLOMERULAR BASEMENT MEMBRANE ANTIBODY	U/mL	5			Accredited
HEP2 SCREEN	interpretive	10			Accredited
HISTONE AUTOANTIBODY	U/mL	20			Accredited
HIB FUNCTIONAL ANTIBODYS	mg/L	15			Accredited
IMMUNOGLOBULINS + SERUM ELECTROPHORESIS	g/L	5			Accredited
IMMUNOGLOGULIN E (TOTAL)	ku/L	5			Accredited
IMMUNOGLOBULIN G SUBCLASSES	g/L	20			Accredited
IMMUNOGLOBULIN A –LOW CONCENTRATION	g/L	20			Accredited

IMMUNOFIXATION	interpretive report	10	REFLEX TEST		Accredited
INTRINSIC FACTOR ANTIBODIES	U/ml	10			Accredited
KAPPA INDEX (CSF AND SERUM)	mg/L and Index	15	<b>Paired CSF and Serum samples required</b>		Accredited
LIVER AUTOANTIBODY SCREEN	Pos/Neg	5			Accredited
MAST CELL TRYPTASE	u/ml	10	2 samples req'd. 1st at event, 2 <sup>nd</sup> 24hrs post event		Accredited
MITOCHONDRIAL (M2) ANTIBODIES	u/ml	10			Accredited
MYELOPEROXIDASE (MPO) ANTIBODIES	u/ml	5			Accredited
MUSCLE SPECIFIC KINASE AUTOANTIBODY (send away)	Pos/Neg	20			Accredited
MYELIN ASSOCIATED GLYCOPROTEIN (send away)	BTU	20			Accredited
MYOSITIS	Pos/Neg	20			Accredited
NMDA	Pos/Neg	20	SEND AWAY		Accredited
NUCLEOSOME AUTOANTIBODY	U/mL	20	REFLEX TEST		Accredited
OLIGOCLONAL BANDS	interpretive result	10	<b>Paired serum/CSF sample required</b>		Accredited
OVARIAN AUTOANTIBODY	Pos/Neg	20			Accredited
PARATHYROID AUTOANTIBODY (send away)	Pos/Neg	20			Accredited
PEMPHIGOID/PEMPHIGUS (SKIN) ANTIBODIES	Pos/Neg	10			Accredited
PNEUMOCOCCAL (functional antibodies)	mg/ml	15			Accredited
PREVNAR SEROTYPES		20	SEND AWAY		Accredited
PROTEINASE 3 (PR3) ANTIBODIES	u/ml	5			Accredited

PURKINJE CELL AUTOANTIBODY (Hu, Yo)	Pos/Neg	15			Accredited
PARANEOPLASTIC AUTOANTIBODIES	Pos/Neg	25			Accredited
RHEUMATOID FACTOR QUANTITATION	iu/mL	5			Accredited
SCANNED MONOCLONAL COMPONENT	g/L	5	Total protein essential		Accredited
SCLERODERMA	Pos/Neg	20			Accredited
SKELETAL MUSCLE ANTIBODIES	Pos/Neg	10			Accredited
TETANUS ANTIBODIES	iu/ml	10			Accredited
THYROID PEROXIDASE ANTIBODIES	u/ml	5			Accredited
TISSUE TRANSGLUTAMINASE ANTIBODIES IgA	u/ml	5			Accredited
TISSUE TRANSGLUTAMINASE ANTIBODIES IgG	u/ml	5			Accredited
VGCC ANTIBODIES	pmol/L	20	SEND AWAY		Accredited
VGKC ANTIBODIES	pmol/L	20	SEND AWAY		Accredited

DEPARTMENT/TEST	Units	TAT days(working)	Special requirements	Lab Storage time	Accreditation Status
<b>FLOW CYTOMETRY</b>					
LEUKAEMIA/LYMPHOMA SCREEN	interpretive report	<b>5</b>	EDTA 4.5 mL or Bone Marrow, <72 hrs old Monday – Friday 12:00 pm		
Lymphocyte Subsets (T, B and NK Subsets)	Interpretive comment	<b>10</b>	EDTA 4.5 ml, <72 hrs old Monday – Friday 12:00 pm		
Neutrophil Oxidative Burst	Interpretive comment	<b>5</b>	Lithium Heparin 3ml <48 hrs old <b>Monday – Wednesday</b> <b>By appointment only</b>		Not Accredited
PNH Screen	Interpretive comment	<b>5</b>	EDTA 4.5 ml, <72 hrs old Monday – Friday 12:00 pm		
Neutrophil Phagocytosis	Interpretive comment	<b>5</b>	Lithium Heparin 3ml <48 hrs old <b>Monday – Wednesday</b> <b>By appointment only</b>		
T cell receptor (TCR) repertoire (TCR Vβ)		<b>4</b>	EDTA 4.5 ml, <72 hrs old Monday – Friday 12:00 pm		

Memory B cell subsets (CVID)	% B memory Subsets	<b>10</b>	EDTA 4.5 ml, <72 hrs old Monday – Friday 12:00 pm		
Memory T cell Subsets	% T memory Subsets	<b>10</b>	EDTA 4.5 ml, <72 hrs old Monday – Friday 12:00 pm		
Hairy Cell Leukaemia Screen	interpretive report	<b>5</b>	EDTA 4.5 ml, <72 hrs old Monday – Friday 12:00 pm		
T Cell Subsets (CD4 count)	% & Abs count	<b>5</b>	EDTA 4.5, <72 hrs old Send FBC result. Monday – Friday 12:00 pm		
Therapeutic Antibody Evaluation Rituximab (Rituxan) (CD20)	B cells % & Abs Count	<b>5</b>	EDTA 4.5, <72 hrs old Monday – Friday 12:00 pm		

- Test turnaround times defined by National Test directory at NHSE