



Date of Amendment	Description of Amendment	Page No.	Approved by
15/10/2015	Metanephrines	23	J Grimwood
16/11/2015	Cat Scratch	8	J Grimwood
16/11/2015	Cannabinoids	8	J Grimwood
16/11/2015	Drug screen Urine	11/12	J Grimwood
16/11/2015	Chlamydia Trachomatis urine	9	J Grimwood
16/11/2015	Swab Instructions Chlamydia/ N gono	37	J Grimwood
18/11/2015	Free PSA	15	J Grimwood
18/11/2015	Neisseria gonorrhoea	25	J Grimwood
17/12/2015	Antenatal Screen {1 st } - added extra EDTA for HbA1c	5	J Bird
17/12/2015	Karyotype – added Karyotype only Hep tube required	20	J Bird
17/12/2015	Testosterone – instructions added	32	J Bird
22/12/2015	Haemophilia Screen, (added genetic)	17	J Bird
04/02/2016	AMH added.	4	J Batger
04/02/2016	Anti Mullerian Ab's – change to instructions	6	J Batger
04/02/2016	Thalassaemia Screen – new instructions.added.	32	J Batger
05/02/2016	Added DCT – Direct Coombs Test to Abbreviations	46	J Batger
12/02/2016	Aldosterone/Renin – change to instructions	4	J Batger
12/02/2016	Insulin – no glucose or fasting required. Change to instructions	19	J Batger
09/03/2016	Chikungunya Virus Serology - added	9	J Batger
09/03/2016	West Nile Virus Serology - added	36	J Batger
09/03/2016	Zika Virus serology and PCR - added	36	J Batger
09/03/2016	Yellow Fever Serology - added	36	J Batger
09/03/2016	Anti Diuretic Hormone/ADH added	6	J Batger
16/03/2016	TSH Receptor antibodies - added	32	J Batger
16/03/2016	Thyroxine Total - added	33	J. Batger
16/03/2016	Salivary Progesterone – removed, no longer available	27	J Batger
16/03/2016	Salivary Testoserone – removed, no longer available	32	J Batger
30/03/2016	Potassium – change to instructions	28	J Batger
01/04 2016	Coeliac HLA typing/Genetic Markers	10	J Batger
20/04/2016	CMV Viral Load/PCR - instructions	10	J Batger
20/04/2016	Karyotype – Molecular – change to volume required.	20	J Batger
06/05/2016	Homocysteine – change in instructions	18	J Batger
12/05/2016	Metanephrines – plasma – change in instructions	23	J Batger
19/05/2016	Inhibin B – change to instructions	19	J Batger

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02/06/2016	17 OH Progesterone – change to tube required	28	Jan Batger
02/06/2016	Macroprolactin – done at NPL change from LTA	23	Jan Batger
02/06/2016	Added Bilirubin Neonatal	7	Jan Batger
15/06/2016	Electrolytes – instructions added	14	Jan Batger
04/07/2016	HCV Genotype – change to tube requirement and instructions added.	17	Jan Batger
04/07/2016	HCV RNA/Viral Load – change to tube type and instructions added	18	Jan Batger
15/07/2106	Specimen Collection Instructions: Notes added	3	Jan Batger
15/07/2016	ESR – instructions added	14	Jan Batger
15/07/2106	Reticulocyte – instructions added	30	Jan Batger
03/08/2016	C1Q – added test	8	Jan Batger
03/08/2016	C1Q Binding Assay – change to tube requirement.	8	Jan Batger
12/08/2016	Drug Urine Test – self request removed (now unavailable)	13	Jan Batger
16/09/2016	Quantiferon TB Gold – number of tubes changed and instructions.	29	Jan Batger
06/10/2016	Complement (C3C4) – change in tube type	10	Jan Batger
06/10/2016	Lipase – change in tube size	21	Jan Batger
06/10/2016	Complement Fixation Antibody – added test	10	Jan Batger
11/10/2016	Huntington Disease – added Not on a Friday	18	Jan Batger
12/10/2016	Chromogranin A – instruction added	9	Jan Batger
12/10/2016	Nortriptyline – instructions added	25	Jan Batger
20/10/2016	CDT – Carbohydrate Deficient Transferrin – added take dedicated tube	8	Jan Batger
20/10/2016	Hepatitis B Viral Load / DNA / PCR – change of tube	17	Jan Batger
02/11/2016	Paul Bunnell test deleted	27	Jan Batger
02/11/2016	Glandular Fever – comment added	16	Jan Batger
02/11/2016	Infectious Mono – comment added	19	Jan Batger
02/11/2016	Epstein Barr Virus – comment added	14	Jan Batger
11/11/2016	Red Cell Folate – comment added: measurement is no longer offered in NZ. Do not cross test request off form.	15, 30	Jan Batger
23/11/2016	DHT – Dihydrotestosterone – instructions added	12	Jan Batger

SPECIMEN COLLECTION INSTRUCTIONS

- Note:** All vacutainer tubes should be filled to their capacity draw where possible.
- Blood specimens should not be refrigerated before centrifuging, unless specific instructions say so.
 - For tests done at Northland Pathology requiring Gel tube, only **one full 8.5ml tube** is required regardless of the number of tests. If you are unsure of the minimum volumes required please contact the laboratory.
 - If a Bicarbonate is also requested this must be a **full 8.5ml Gel or a full 3.5ml Gel**. Micro tubes are unacceptable.
 - Please refer to the Test Guide for Send-A-Way tube requirements.
 - For each LTA (LabTests) test approximately 2 ml is required (unless otherwise stated). Therefore 4 tests can be done on 1 x full 8.5ml tube.
 - When using a Citrate tube fill to line etched on tube.

Code:	Plain	=	Red top tube without gel
	EDTA	=	Purple top tube
	G	=	Gel Gold top tube 8.5ml
	G 3.5ml	=	Gel Gold top tube 3.5ml (when > 1 S/A test take 2 tubes)
	Citrate	=	Blue top tube
	Heparin	=	Green top tube
	Trace Metal	=	Navy top tube
	CPD Tissue	=	Yellow top tube
	Fluoride	=	Grey top
	Pink	=	Pink Top, K2 pink

TEST	MINIMUM AMOUNT REQ'D	TYPE OF TUBE REQ'D	SEND AWAY	SPECIFIC INSTRUCTIONS
ABO Rh (Blood Group)	6ml	Pink		
ACA (cardiolipin antibodies)	3.5ml	G 3.5ml	Lab+	
ACE (angiotension converting enzyme)	5ml	G	Lab+	
Acetylcholinesterase (Red Cell Cholinesterase)	5ml	Heparin	Lab+	Long term exposure to organophosphates.
Acetylcholine Receptor Antibodies	3.5ml	G 3.5ml	Lab+	
ACR (Albumin/ Creatinine Ratio)	40mls	Random Urine	LTA	Early morning urine, no preservative.
ACTH (Adenocorticotrophic Hormone)	4ml	EDTA	Lab+	Collect into EDTA tube chilled on ice, and send on ice to lab immediately. Rust Ave only.
Activated Protein C	2.7ml	Citrate	Lab+	
Acylcarnitines Profile	5ml	Heparin	Lab+	Separate and freeze within 3 Hours.
AFP – Alpha fetoprotein	3.5ml	G 3.5ml	Lab+	Except for HepB Free Programme. Refer HepBFree.
Albumin	0.5ml	G		
Alcohol	Full 8.5ml	G	LTA	Dedicated tube. Do not swab with alcohol. Do not remove lid. Parafilm tube.
ALD	2 x 4ml	EDTA	Lab+	See “Genetic Disorders at DNA level”.
Aldosterone	4ml	EDTA	Lab+	Take with patient sitting and at least 1 hr after rising. Must be collected and sent to Lab at room temperature, do not put near ice bricks.
Aldosterone/Renin	4ml	EDTA	Lab+	
Alkaline Phosphatase (ALP)	0.5ml	G		
Alpha 1 Antitrypsin	3.5ml	G 3.5ml	Lab+	Fasting preferred.
Alpha 1 Antitrypsin Genotype	4ml	EDTA	Lab+	
Alpha Fetoprotein (AFP)	3.5ml	G 3.5ml	Lab+	Except for HepB Free Programme (refer HepB Free)
ALT (Alanine Aminotransaminase)	1ml	G		Part of Liver Function Test
Aluminium	5 ml	Trace metal	Lab+	
AMH (Anti Mullerian Hormone)	5 ml	G	LTA	<u>Must be paid for except for Fertility Associates patient.</u> Fertility Plus patients are to pay.

Amino Acids (Plasma)	1ml	Heparin	Lab+	Collect on ice and send to lab immediately. Separate & freeze if delay to lab.
Amino Acids (Urine)	30ml	Random Urine	Lab+	Random sample, no preservative. Keep cool, freeze within 4hrs.
Amikacin	Full	Plain	Lab+	Prior to next dose. Record last dose time and date.
Amiodarone	5ml	Plain	Lab+	Prior to next dose. Record last dose time and date.
Amitriptyline	10ml	Plain	Lab+	Prior to next dose. Record last dose time and date
Amylase	1ml	G		
Amylase - urine	24 hr urine or random	Plain bottle	Lab+	No preservative. Random urine acceptable.
ANA (Antinuclear Antibodies, ANF)	2ml	G	LTA	
ANA Panel	2ml	G	LTA	
ANA Pattern	2ml	G	LTA	
ANCA (Antineutrophil Cytoplasmic Antibody)	2ml	G	LTA	
ANCA – MPO, ANCA-PR3, anti GBM, Urgent Vasculitis Ab Screen	5ml	G	Lab+	This assay is restricted and must be approved by pathologist prior to assay being performed.
ANCA Pat/Myelo/Prot 3 EIA	2ml	G	LTA	
Androgen Group	5ml	G	Lab+	
Androstenedione	5ml	Plain	Lab+	Subject to Lab+ Pathologist approval.
ANF (Anti nuclear factor/ ANA)	2ml	G	LTA	
Angelman Syndrome Genetic Testing	2 x 4ml	EDTA	Lab+	Not on Friday. See Genetic Disorders at DNA level.
Angiotension Converting Enzyme (ACE)	5ml	G	Lab+	To be separated within 2hrs of collection.
Antenatal screen (1 st)	3ml 6ml 4ml	1 G 1 Pink 2 EDTA		
Antenatal screen (2 nd)	6ml 4ml	1 Pink 1 EDTA		
Antibody titre (known Positive i.e. anti-D etc)	2 x 6ml	Pink		Check which specific antibody.
Anticardiolipin	2ml	G	LTA	
Anti CCP (cyclic citrullinated peptide antibodies)	3.5ml	G 3.5ml	Lab+	

Anti Diuretic Hormone (ADH)	4ml	EDTA	Lab+	
Anti Ds DNA = ds DNA	2ml	G	LTA	
Anti-Gliadin Antibodies	2ml	G	LTA	
Anti-mitochondrial Antibodies (AMA)	2ml	G	LTA	
Anti Mullerian abs (AMH)	5ml	G	LTA	Must be paid for except for Fertility Associates patient. Fertility Plus patients are to pay.
Antineutrophil (ANCA) Cytoplasmic Antibodies	2ml	G	LTA	
Anti Phospholipid Ab (cardiolipin antibodies)	2ml	G	LTA	
Anti SM AB's (smooth muscle antibodies)	2ml	G	LTA	
Anti Streptolysin –O (ASOT/Streptococcal antibodies)	2ml	G	LTA	
Antithrombin III	2.7 ml	Citrate	Lab+	Part of Thrombophilia screen. Specimens collected at Kerikeri need to be filtered and frozen.
Anti <u>X</u> a (Clexane)	2.7ml	Citrate	Lab+	Kerikeri - Double spin plasma before freezing
Apolipoprotein A1 & B	5ml	Plain	Lab+	
Apolipoprotein E Genotyping	4ml	EDTA	Lab+ LTA	Labplus Pathologist vetted test or Charge Applies.
APC Resistance	2.7ml	Citrate	Lab+	Specimens collected at Kerikeri to be filtered and frozen. Included in Thrombophilia screen
APTT Activated partial Thomboplastin time	2.7ml	Citrate		Tube must be filled to mark.
Arbovirus Group	3.5ml	G	Lab+	
ASOT, Anti-Streptolysin O Titre (Streptococcal antibodies)	2ml	G	LTA	
Aspergillus Serology/Precipitins	5ml	G	Lab+	
Aspergillus PCR	4ml	EDTA	Lab+	Collect 11am-1pm. Not on a Friday
AST (Aspartate Amino-transferase) – see Liver	1ml	G		Part of Liver Function Test
Auto Antibodies (see ANA Anti-nuclear Antibodies)	2ml	G	LTA	

B				
B2 Glycoprotein	3.5ml	G 3.5ml	Lab+	
B2 Microglobulin (serum)	3.5ml	G 3.5ml	Lab+	
B2 Microglobulin Urine	30mls	Random Urine	Lab+	Attend NPL Rust Ave. Random Sample, immediately take to Biochemistry for pH adjustment. No preservative.
B12 and Folate	2ml	G		
Bartonella (Cat Scratch)	3.5ml	G	Lab+	
BCR-ALB	9ml	CPD	Lab+	Transport room temperature. Not on a Friday
Bence Jones Protein (Light chain urine)	30ml	Urine	LTA	Random Sample. No preservative. Separate sample required.
Bicarbonate	8.5ml or 3.5ml	G		Tubes must be full. Tube must stay sealed. Centrifuge.
Beta Carotene	5ml	Plain	Lab+	Wrap in foil to light protect.
Beta 2 Glycoprotein 1	3.5ml	G 3.5mlp	Lab+	
Bile acids (bile salts)	5ml	G	Lab+	
Bilharzia (Schistosoma)	Faeces & urine	Faeces & 3 x400ml Urine		3 urine collections over 3 days - entire voided including terminal (end) portion collected between the hours of 1200 and 1500, preferably following exercise.
Bilharzia serology (Schistosoma)	3.5ml	G 3.5 ml	Lab+	
Bilirubin	1ml	G		
Bilirubin - Direct/Indirect Neonatal (< 6 mths)	1 full dedicated	Micro G		Use aluminium foil to protect from light.
Bleeding Times (thrombin clotting time)		Specialist Only Request		Only performed at Rust Ave, after consultation with Haematologist at Labtests
Blood Count (FBC, CBC)	1ml	EDTA		
Blood Culture	2 sets			Refer to procedure manual
Blood Group	6ml	Pink		
BNP B –Natriuretic Peptide	3.5ml	G 3.5 ml	Lab+	Does not need to be transported on ice.
Bordetella pertussis (whooping cough) Serology	3.5ml	G 3.5ml	Lab+	
Bordetella pertussis (PCR)		UTM Swab/ Medium	Lab+	Nasopharyngeal swab (refer procedure manual) using white flock swab and place in Universal Transport Medium. Do not use wire shafted swabs.
Borrelia Antibodies	3.5ml	G 3.5ml	Lab+	
Brucella	3.5ml	G 3.5ml	Lab+	

C				
C-Peptide	5 ml	Plain	Lab+	Send to lab immediately. Separate immediately and freeze.
C1 (Esterase) Inhibitor Assay	3.5ml	G 3.5ml	Lab+	
C1Q	3.5ml	G 3.5ml	Lab+	
C1Q Binding Assay	4ml	G	Lab+	
C3C4 (Complement)	3.5ml	G 3.5ml	Lab+	
Ca 15-3	3.5ml	G 3.5ml	Lab+	
Ca 19-9	5ml	G	Lab+	
Ca 125	3.5ml	G 3.5ml	Lab+	
Cadmium (whole blood))	4ml	EDTA	Lab+	
Cadmium (urine)	24 hour or random urine	Plain 24 hour bottle or random	Lab+	24hr urine in plain container or 70ml Random sample no preservative. Collect following 4 days in the workplace.
Calcitonin	5ml	G	Lab+	Collect on ice. To lab immediately. Separate and freeze immediately. Attend 11 Rust Ave only.
Calcium/Ca (serum)	1.0ml	G		
Calcium Ionised	5ml	Heparin	WBH	Tourniquet should not be used. To lab immediately. Dedicated tube. Must be at least 80% full
Calcium (urine)	24 hour urine preferred	In HCl Acid bottle		24 hr urine in acid preferred. Or 11 Rust Ave 70ml random sample, no preservative. Refer Urine Chart.
Cannabinoids urine drug test (Legal) -Pre employment -Custody Cases -Court Orders				Refer patient to Staffcare
Carbamazepine (Tegretol)	5ml	G		Prior to next dose. Record time and date of last dose.
Cardiac Enzymes	3ml	G		
Cardiolipin Antibodies	2ml	G	LTA	
Catecholamine (urine)	24 hour urine	HCl acid bottle	Lab+	24hr urine in acid.
Cat Scratch Disease	3.5ml	G 3.5ml	Lab+	
CD3	4ml + 4ml	EDTA + Heparin	Lab+	Not on Friday. Take immediately to Lab.
CD8 & CD4 Markers	4ml	Heparin	Lab+	Not on Friday. Take immediately to Lab.
CDT (carbohydrate deficient transferrin)	5ml	Plain	Lab+	Take dedicated tube
C.E.A. (Carcinoembryonic Ag)	3.5ml	G 3.5ml	Lab+	See tumour markers.

Ceruloplasmin	5ml	G	Lab+	
Chicken Pox (Varicella Zoster serology)	3.5ml	G 3.5ml	Lab+	
Chikungunya Virus Serology	5ml	G	Lab+	Requires prior approval by Clinical Virologist Lab+
Chlamydia Pneumoniae serology	3.5ml	G 3.5ml	Lab+	
Chlamydia Psittacosis serology	3.5ml	G 3.5ml	Lab+	Paired sera (acute and convalescent) required for test to be performed.
Chlamydia Trachomatis PCR/NAAT (urine) Preferred sample: • Male: urine • Female: swab	2.0 ml	Aptima NAAT Urine collection kit	LTA	First catch urine, at least 1 – 2 hrs after last voiding. Transfer 2ml to Aptima Urine PCR tube as per instructions. (Note fill volume markings on tube).
Chloride (serum)	2ml	G		
Chloride (urine)	30ml	Urine Jar	Lab+	Random Collection, no preservative.
Cholesterol	1ml	G		
Cholinesterase	5ml	Plain	Lab+	
Cholinesterase Red Cell	5ml	Heparin	Lab+	Chronic (long-term) exposure to organophosphates. Do not spin.
Cholinesterase Phenotype	4ml	EDTA	Lab+	
Chromium (blood)	6ml	Trace Metal	Lab+	
Chromium (urine)	24 hr urine or random	Plain bottle or random	Lab+	24 hr urine in plain container, or random urine no preservative.
Chromogranin A	5-10ml	Plain	Lab+	Do not refrigerate or store at 4°C. Separate and freeze within 24 hrs.
Chromosome Analysis	4ml	Heparin	Lab+	Clinical details must be provided by GP. Collect using sterile technique Not on Friday.
CK (Creatinine Kinase)	1ml	G		
Clobazam (Frisium)	5ml	Plain	Lab+	Collect pre-dose (just prior to patient taking next dose) Note time and date of last dose on the form.
Clomipramine	5ml	Plain	Lab+	Prior to next dose. Record time & date of last dose.
Clonazepam (Rivotrol)	5ml	Plain	Lab+	Collect pre-dose (just prior to patient taking next dose) Note time and date of last dose on the form.
Clostridium Difficile Toxin	1gm min faeces (loose or liquid stools)	Faeces Jar	WBH	Loose or soft stools (that take the shape of the container) only accepted. Deliver to lab within 3 hours or refrigerate. If over 12 hours, freeze specimen.

Clozapine (Clozaril)	5ml	Plain	Lab+	Prior to next dose. Record time & date of last dose. New request form required.
CMV serology (Cytomegalovirus)	2ml	G	LTA	
CMV - DNA/RNA PCR - Viral Load	5ml	2x EDTA	Lab+	Dedicated tubes. Centrifuge and separate within 24 hours.
Coagulation Screen	4ml 2.7ml	EDTA Citrate		Citrate tube must be full.
Cobalt (blood)	6ml	Trace Metal	Lab+	
Cobalt (urine)	50mls random or 24 hour urine	Random urine/ Plain bottle	Lab+	Random Sample no preservative, or 24 hour urine in plain container.
Coeliac Antibodies	2ml	G	LTA	
Coeliac HLA typing/Coeliac Genetic Markers (HLA DQ2/DQ8)	2 x 4ml	EDTA	Lab+	Not on Friday
Cold Agglutinins	1 x Full	Pink		Pre-label and Pre-warm tube to 37°C. Use thermos. Take immediately to lab in thermos.
Complete Blood Count	1ml	EDTA		
Complement (C3, C4)	3.5ml	G 3.5ml	Lab+	If form is requesting any other sort of complement apart from the standard complement or C3, C4 please ring the lab for specific instructions.
Complement Fixation	3.5ml	G 3.5ml	Lab+	
Complement Pathway Activity	5ml	G	Lab+	Spin separate and freeze within 1 hr.
Connexin 26 Gene Analysis	3 x 4ml	EDTA	Lab+	Not on a Friday
Coombs Test (Direct) (DCT)	4ml	EDTA		If FBC also requested, may be taken from same tube.
Copper	5ml	Trace Metal	Lab+ LTA	Labplus Pathologist vetted test or Charge Applies
Copper (urine)	24hr Urine	24 hr bottle	Lab+	24 hr urine in plain container.
CoQ10 (co-enzyme Q10)	5ml	Heparin	Lab+ LTA	Labplus Pathologist vetted test or Charge Applies. Protect from light. Rust Ave only. Straight to Lab
Cortisol	1ml	G		Preferrably taken between 7:30am – 9:00am.
Cortisol Binding Globulin	4ml 8ml	EDTA G	Lab+ LTA	Labplus Pathologist vetted test or Charge Applies.

		(if charged)		
Cortisol with Synacthen Stimulation Test (Short Synacthen Test)	5ml	G		Must be before 9am Synacthen in phlebotomy fridge. Refer to procedure manual.
Cortisol (urine)	24 hr Urine	Plain Bottle	Lab+ LTA	Labplus Pathologist vetted test or Charge Applies. 24 hr urine in plain container.
Creatinine Kinase (CK, CPK,)	1ml	G		
Creatinine	1ml	G		
Creatinine - urine	24 hr urine or random urine	24 hr plain bottle	LTA	No preservative.
Creatinine Clearance	1ml + 24 hr Urine	G + 24 hour Plain Bottle	LTA	24 hr urine. Record height and weight. Do blood test when urine returned. Blood must be taken within 24hrs of urine collection.
CRP (C Reactive Protein)	1ml	G		
H.S. CRP (High Sensitivity CRP)	1ml	G		
Cross Match (also group and hold)	6ml	Pink	S/A	Cross Match form filled in by Dr. Phlebotomist must fill in form and sign tube.
Cryoglobulins - Cryoprotein	2 full 2 full	Plain EDTA		Not on a Friday. Not after 3pm. Pre-label and Pre-warm tubes to 37°C use thermos. Warn BioChem and take immediately to lab in thermos. Done 11 Rust Ave only.
Cyclic Citrullinated Peptide antibodies (ACCP)	3.5ml	G 3.5ml	Lab+	
Cyclosporin	4ml	EDTA	Lab+	Prior to next dose. Record time and date of last dose.
CYS 282 (haemochromatosis)	Full	CPD	Lab+	Not on Friday.
Cyst Fluid	Entire Sample	Sterile container		Submit immediately or refrigerate if delayed.
Cytomegalovirus (CMV)	2ml	G	LTA	

D				
Dabigatran	2.7ml	Citrate	Lab+	
D-dimers	2.7ml	Citrate		Tube must be filled to mark. Take to lab immediately.
Dengue Fever	3.5ml	G 3.5ml	Lab+	
Desipramine	Full	Plain	Lab+	Prior to next dose. Record time & date of last dose.
Dexamethasone Suppression Test	5ml	G		Check patient has tablet. 1st day blood test:7.30-9am, 11pm Dexamethasone tablet. 2nd day blood test:7.30-9am
DHAS/DHEA/DHEAS – Dehydroepiandrosterone sulphate	5ml	G	Lab+ LTA	Labplus Pathologist vetted test or Charge Applies.
Diatranz tests (ICA, GADA, IA2A)	5ml	G	Lab+	
Diazepam	5ml	Plain	Lab+	Prior to next dose. Record last dose time and date.
Digoxin	5ml	G		Minimum 6 hours post dose. Record time and date last dose.
Dihydrotestosterone DHT	5ml	Plain Or EDTA (if charged)	Lab+ LTA	Labplus Pathologist vetted test - Centrifuge, separate and freeze within 3 hrs or Charge Applies.
Dilantin (Phenytoin)	5ml	G		Prior to next dose or 6 hrs post dose. Record time and date of last dose.
DNA, anti ds DNA, ds DNA	2ml	G	LTA	
DNA Extraction/Isolation /storage	Adult: 2x 4ml Paed: 1x 4ml	EDTA	Lab+	Not on Friday.
DNA/RNA Genetic, DNA array, Molecular Karyotype	2 x 4ml	EDTA	Lab+	Not on Friday. Specialist only. Transfusion Service Form completed. NB: Tubes specified for each class of test on form.
Doxepin	Full	Plain	Lab+	Prior to next dose. Record time & date of last dose.
Drug urine test (Legal) -Pre employment -Custody Cases -Court Orders				.Refer to Staffcare

Drug Urine Test (non-legal) -Medically indicated -Detoxification programme	30ml random	Urine jar	Lab+	No Cost for clinically indicated or Detoxification programme. No Preservative Must sight photo ID.
DRVVT - Dil. Russell Viper Venom Time (Lupus anticoagulant)	2 x 2.7ml	Citrate	Lab+	
Ds DNA	2ml	G	LTA	
Duchenne Muscular Dystrophy	Adult: 2x 4ml Paed 1 x 4ml	EDTA	Lab+	Not on Friday.
DQ8 & DQ2 (HLA DQ8/DQ2)	2 x 4ml	EDTA	Lab+	Not on Friday.

E				
E2 (Oestradiol/Estradiol))	5ml	G		
eGFR	2ml	G		
Electrophoresis	2ml	G	LTA	
Electrolytes	0.5ml	G		Specimen should not be cooled unless centrifuged first.
ENA	2ml	G	LTA	
Endomysial Antibodies (tissue transglutiminase)	2ml	G	LTA	
Epilim (Valproate)	3ml	G		Prior to next dose. Record time and date of last dose.
Epstein Barr Virus (EBV) Antibodies	2ml	G	LTA	If only EBV requested can take a 3.5ml Gel
Epstein Barr Virus (EBV) DNA/viral load/PCR	5ml	2 xEDTA	Lab+	
Erythropoietin	5ml	Plain	Lab+	
ESR (Erythrocyte Sedimentation Rate)	4ml	EDTA		Full tube required. Can be shared with FBC if difficult collect. Note on form.
Ethanol	Full 8.5ml	G	LTA	Dedicated tube. Do NOT swab arm with alcohol (can use sterile water swab). Do NOT remove lid.
Ethanol (Urine)	2ml	Urine	Lab+	
Ethosuximide (Zarontin)	5ml	Plain	Lab+	Prior to next dose. Record last dose time and date.
Extractable Nuclear Antigens	2ml	G	LTA	

F				
Factor V Leiden Mutation Analysis	9ml	CPD	Lab+	Not on Friday.
Factor VII, VIII, Activated Protein C Resistance	2.7 ml	Citrate	Lab+	
Familial Adenomatous (FAP)	2 x 4ml	EDTA	Lab+	See Genetic Disorders at DNA Level.
FARR Assay (dsDNA)	2ml	G	LTA	
FBC (Full Blood Count)	4ml	EDTA		
FDP – See D-dimer	2.7ml	Citrate	Lab+	
Ferritin	1ml	G		
Fibrinogen Assay	2.7ml	Citrate		
FISH	6ml	Heparin	Lab+	Do not under fill tube, accurate volume required.
Fish (Paediatric)	1ml	Heparin	Lab+	Not on a Friday
Filariasis	3.5ml	G	Lab+	Mark tube with test.
Flecainide	5ml	Plain	Lab+	Prior to next dose. Record time and date of last dose.
Flow Cytometry	4ml + 4ml	EDTA Heparin	Lab+	Transport at Room Temp.
Fluoride	5ml	Plain	Lab+	
Folate	1ml	G		
Folate Red Cell				RCF measurement is no longer offered in NZ. Do not cross test request off form.
Follicle Stimulating Hormone (FSH)	1ml	G		
Fragile X Syndrome	Adult: 2 x 4 ml Paed: 1 x 4ml	EDTA	Lab+	See Genetic Disorders at DNA level. Micro tube not suitable.
Free Androgen Index	5ml	G	Lab+	See Free Testosterone.
Free Light Chains Serum	4ml	G	Lab+	
Free Light Chains Urine (BJP)	30mls random	Urine Jar	LTA	Separate urine sample.
Free PSA	5ml	Plain	S/A	Spin, separate & freeze within 3 hr
Free T4 – see Thyroxine	1ml	G		
Free T3 (triiodothyroxine)	1ml	G		
Free Testosterone	5ml	G	Lab+ LTA	Labplus Pathologist vetted test or Charge Applies.
Frisium (Clobazam)	5ml	Plain	Lab+	Prior to next dose. Record time and date of last dose.
Fructosamine	1ml	G		
FSH (Follicle Stimulating Hormone)	1ml	G		
Full Blood Count	1ml	EDTA		

G				
G-6-PD Screen	4ml	EDTA	Lab+	
GAD & IA2 (insulin Abs)	5ml	G	Lab+	
Galactosidase A Deficiency (Fabry Disease)	3 x 4ml	EDTA	Lab+	
Gastrin	5ml	G	Lab+	Attend 11 Rust Ave. Fasting patient. To Lab immediately for separation.
Gentamicin	5ml	G	WBH	Sample collection times: Trough: within 1 hour prior to next dose. Peak IV: 15 min post dose. IV infusion: 1hr after commencement. IM: 1 hr post dose.
GFR	2ml	G		
GGT (Gamma Glutamyl Transferase)	1ml	G		Part of a Liver Function Test.
Glandular Fever (Infectious mononucleosis, Monospot, Paul Bunnell)	2ml	G	LTA	These tests replaced by Epstein Barr Virus (EBV)
Gliadin Antibodies	3.5ml	G 3.5ml	Lab+	
Beta 2 Glycoprotein 1 Antibodies	3.5ml	G 3.5ml	Lab+	
Glucose	1ml	Fluoride		All collects use fluoride tube only. Note whether patient is fasting, non-fasting or 2hr PC (after meal).
Glycosylated Haemoglobin (HbA1c)	1ml	EDTA		
Gonadotrophins (LH, FSH, Alpha Subunit Gonadotrophin)	1ml 5ml	G Plain	Lab+	
GPH screen – pre-eclampsia screen	5ml + 4ml + 70ml Urine	G EDTA Random urine	LTA	Early morning urine preferred. Not to be ordered by midwives.
Growth Hormone (HGH)	5ml	G	Lab+	
GTT (Glucose Tolerance Test)	2 x	Fluoride		Refer procedure manual.

H				
H63A S65C mutation	9ml	CPD	Lab+	Not on Friday.
Haemochromatosis (HFE) (HLA Cys 282)	9ml	CPD	Lab+	Not on Friday.
Haemoglobinopathy Screen (Thalessemia)	4ml	EDTA	Lab+	Not on Friday.
Haemophilia A & B Genetic Screen	9ml	CPD	Lab+	Not on Friday.
Haemoglobin Electrophoresis	4ml	EDTA	Lab+	Not on Friday.
HbA1C (Glycosylated Haemoglobin)	1ml	EDTA		
Haemoglobin A2	5ml	EDTA	Lab+	Not on Friday. Part of Haemoglobinopathy.
Haemoglobin F	5ml	EDTA	Lab+	Not on Friday. Part of Haemoglobinopathy.
Haptoglobin	3.5ml	G 3.5ml	Dunedin	
HCG (Beta Human Chorionic Gonadotrophin)	1ml	G		If HCG requested for a male then refer to Tumour Marker HCG
HCG Tumour Marker	3.5ml	G 3.5ml	Lab+	
HDL – See Lipids	1ml	G		
Helicobacter pylori Antibodies	5ml	G	Lab+	
Hepatitis A Serology: Antibody (IgG/immunity) Antigen (IgM)	2ml	G		
Hepatitis B Serology: Antibody (IgG/Immunity) Antigen (IgM)	2ml	G		
Hep B e antigen	2ml	G	LTA	Except for Hep B Free bloods
Hep B core antibody	2ml	G	LTA	
Hep B Free Programme	2 x 8ml 1 x 4ml	G EDTA	M'more Hosp	For tests: AFP, HbsAg, HbeAg, LFT, FBC
Hepatitis B Genotype (Drug Resistance Genotype)	2 x 4ml	EDTA	Lab+	Spin and separate within 4 hours. A current viral load result (or request) MUST accompany request.
Hepatitis B - Viral load/ PCR/ DNA	3.5ml	G 3.5ml	Lab+	Dedicated tube. Do not open. All micro collects require EDTA (x2).
Hepatitis C Serology - Antibody	2ml	G		
Hepatitis C - Genotype	1 x 4ml	EDTA	Lab+	Dedicated tube. Do not open. Current Hep C viral load result (or request) MUST accompany request. Separate within 4 hrs. Store / transport 2-8°C up to 48 hrs.

Hepatitis C - Viral Load/ PCR/RNA or Hepatitis C – Viral Load with Hep C Serology	3.5ml 8.5ml	G G	Lab+ Lab+	If Hepatitis C viral load is requested on it's own, collect a dedicated single 3.5 ml SST tube. All micro collects must be 1ml EDTA. If Hepatitis C antibody (serology) is requested together with Hepatitis C viral load, only collect one (8.5 ml) SST for HCV. For HCV RNA no requirement to freeze if collect to transport time <5day – i.e. store at 2 – 8° C.
Hep C Confirm Arch	2ml	G	LTA	Do not open
Herpes Simplex Virus (HSV) type 1 & 2 antibodies	5ml	G	Lab+	
Herpes simplex virus culture - PCR (Shingles, Varicella, CMV)		UTM Kit Swab	Lab+	Vesicle swab. Viral Swab. See procedure manual.
Herpes zoster Serology (Varicella zoster)	3.5ml	G 3.5ml	Lab+	
HFE Gene Testing (Haemochromatosis)	9ml	CPD	Lab+	Not on Fridays.
HGH (Human Growth Hormone)	5ml	G	Lab+	
5 HIAA	24 hour urine	HCl Acid bottle	LTA	24 hr urine. Dietary restrictions apply for 72 hrs prior to test.
HIV Screening Test (HTLVIII)	2ml	G		Do not open.
HIV Viral Load	3 x 4ml	EDTA	Lab+	
HLA (For Bone marrow Donor)	9ml+ 10ml	CPD+ Plain	S/A	Not on Friday.
HLA – B27 only	9ml	CPD	Lab+	Not on Friday.
HLA – H Cys 282 mutation DNA	9ml	CPD	Lab+	Not on Friday.
Homocysteine	5ml	G G	Lab+ LTA	Labplus Pathologist vetted test Collect on Ice. Stable on ice for up to 6hrs. Spin, separate and freeze if longer. or Charge Applies: send to lab
HSV Antibodies	5ml	G	Lab+	
HZV Antibodies Herpes Zoster	3.5ml	G 3.5ml	Lab+	
HsCRP	2ml	G		
Human Chorionic Gonadotrophin (HCG)	2ml	G		
Human Growth Hormone	5ml	G	Lab+	
Huntington Disease	2 x 4ml	EDTA	Lab+	Not on a Friday
Hydatid	3.5ml	G 3.5ml	Lab+	
Hydroxy-Methoxy- Mandelic Acid (HMMA/VMA))	24 hr urine	HCl Acid bottle	Lab+	24 hr urine in acid container. Children < 15yrs Random urine possible – must reach lab in 2 hours for acidification
Hydroxyprogesterone or,17- Hydroxyprogesterone	5ml	Plain	Lab+	

I				
IBC (Iron Binding Capacity) Total – see Iron	1ml	G		
IGA	2ml	G	LTA	
IgE Specific Antibody (RAST)	3.5ml	G 3.5ml	Lab+	Children: 5 allergens per tube. Adult: 3 allergens per tube.
IgE Total	2ml	G	LTA	
IgF 1	5ml	G	Lab+ LTA	Labplus Pathologist vetted test or Charge Applies. Spin,separate,freeze. Spin within 3hrs.
IgF Binding Protein 3	5ml	G	Lab+ LTA	Specialist Only or Charge Applies.
IgG	2ml	G	LTA	
IgM	2ml	G	LTA	
Imipramine	10ml	Plain	Lab+	Prior to next dose. Record time and date of last dose.
Immunoglobulins (IgG, IgM, IgA)	2ml	G		
Infectious Mononucleosis (IM) (Glandular Fever, Monospot, Paul Bunnell)	2ml	G	LTA	These tests replaced by Epstein Barr Virus (EBV)
Influenza A + B serology	5ml	G	Lab+	
Inhibin B	5ml	Plain	Lab+	Take dedicated sample.
Insulin <u>NB Not to performed on insulin dependent diabetics</u>	5ml	G	Lab+ LTA	Labplus Pathologist vetted test or Charge Applies. Clinical details should be provided. Separate and freeze within 8hrs.
INR (International normalized ratio)	2.7ml	Citrate		Must be filled to the line. Do not under or over fill.
Intrinsic Factor Antibodies	3.5ml	G 3.5ml	Lab+	
Iodine	5ml urine	Urine Jar	Lab+ LTA	Labplus Pathologist vetted test or Charge Applies. Random Collection, no preservative.
Ionised Calcium	5ml	Heparin	WBH	Tourniquet should not be used. To lab immediately. Dedicated tube. Must be at least 80% full
Iron (Iron studies)	1ml	G		
Iron Binding Capacity	1ml	G		
Iron Saturation	1ml	G		
Islet Cell Antibodies	5ml	G	Lab+	
Isoniazid	5ml	Plain	Lab+	

J				
Jak 2 mutation	Full	CPD	Lab+	Not on Friday.
K				
Karyotype	5ml	Heparin	Lab+	If Karyotype only ordered assume for chromosome analysis See details below
Karyotypes - Molecular	Adult: 1 x 4ml Paed.: 1 x 0.5ml	EDTA	Lab+	Not on Friday. Name & phone number of referrer. Clinical details. Paed. up to 6 mths
Karyotypes – Chromosome analysis	5ml	Heparin	Lab+	Not on Friday. Collect using sterile technique. Name & phone number of referrer. Clinical details
Ketones (Serum) / (Betahydroxybutyrate)	3.5ml	G 3.5ml	Lab+	To be separated within 6hrs.
Ketones (Urine)	Random urine	Urine jar	LTA	Fresh random sample, no preservative.
K + / K (potassium)	1ml	G		Do not cool specimen.

L				
Lactase Deficiency	4ml	EDTA	Lab+	No tourniquet. Transport room temperature.
Lactate	1ml	Fluoride	Lab+	No tourniquet. To be separated within 15 minutes.
Lactose Tolerance Test	3x 4ml	Fluoride		Appt necessary. Order drink from Rust Ave Chemist. Refer to procedure manual.
LDH (LD, Lactate Dehydrogenase)	2ml	G		To be spun within 3hrs.
Lamotrigine (Lamictal)	5ml	Plain	Lab+	Prior to next dose. Spin and separate ASAP
Lead Blood	4ml	EDTA	Lab+	
Lead Urine	24 hr urine	24 hr plain	Lab+	24 hr urine no preservative.
Legionella Serology	3.5ml	G 3.5ml	Lab+	
Legionella Culture		Sputum	Lab+	Random Collection. To lab asap.
Leiden Factor - Factor V	9ml	CPD	Lab+	Not on Friday.
Leptospirosis Serology	3.5ml	G 3.5ml	Lab+	
Leucocyte count - see White Cell Count	1ml	EDTA		
Leucocyte Adhesion Markers	9ml	CPD	Lab+	Not on Friday.
LH (Luteinising Hormone)	4ml	G		
Light chains urine (BJP)	20ml Random urine	Urine jar	LTA	
Lipase	3.5ml	G 3.5ml	Lab+	Take dedicated tube
Lipids	1ml	G		
Lipoprotein Electrophoresis	5ml	Plain	Lab+	Not on a Friday. Must be fasting.
Lipoprotein (a)	5ml 4ml	G EDTA (if charged)	Lab+ LTA	Labplus Pathologist vetted test or Charge Applies.
Listeria			S/A	2 sets of Blood culture if specifically requested.
Lithium	5ml	G		12 hours post dose or before next dose. Record last dose time and date.
Liver Function Tests	2ml	G		
Liver Autoantibody Screen	2ml	G	LTA	
Liver Cytosol ABs	2ml	G	LTA	
Liver/Kidney/ Microsomal (LKM) Antibodies	2ml	G	LTA	

Lupus Anticoagulant (LA)	2 x 2.7ml or 3 x 1.8ml	Citrate	Lab+	Citrates to be spun and separated, and filtered. Frozen within 6 hours.
Lupus Antibodies (SLE, ANA)	2ml	G	LTA	
Lymphocyte Phenotyping and Function (Surface Markers)	4ml 4ml	EDTA + Heparin	Lab+	Not on Friday.
Lymphocyte Cell Markers	4ml 4ml	EDTA + Heparin	Lab+	Not on Friday

M				
6 MMP (6-methyl mercaptopurine)	2 x 4ml	EDTA	Lab+	Not on Friday.
Macroprolactin	2ml	G		
Magnesium	2ml	G		
Magnesium RBC	5ml	Heparin	LTA	Charge applies.
Magnesium Urine	24 hr urine	HCL bottle	S/A	24 hr urine in acid container
Malaria Parasites	1ml	EDTA or micro collect		Give full clinical particulars and list countries visited outside New Zealand. Can be done with FBC. To lab asap, inform lab when arriving after 2 PM
Manganese - blood	4ml	EDTA	Lab+	Whole blood. Separate tube
Manganese - plasma	5ml	Heparin	Lab+	Separate tube
Maternal Peripheral Blood Karyotyping	4ml	Heparin	Lab+	Collect using sterile technique.
Maternal Serum Screen	8ml	G	Lab+	Special request form (filled out by doctor or midwife). Separate if >4 hrs delay to lab.
Measles – English (Morbilli)	3.5ml	G 3.5ml	Lab+	Full clinical details essential.
Memory & Naïve B – Cell Markers	5ml	Heparin	Lab+	
Mercury	4ml	EDTA	Lab+ LTA	Labplus Pathologist vetted test or Charge Applies.
Mercury Urine	random urine	Urine jar	Lab+ LTA	Labplus Pathologist vetted test or Charge Applies.
Metanephrine - urine	24 hr urine	HCl Acid	Lab+	24 hr urine in acid container.
Metanephrines - plasma	2 x 4ml	EDTA	Lab+	Note medications. No Smoking or caffeine prior to test. Blood can be taken in the sitting position or better if supine for 30 min. Please note which position on form. Place at 4C immediately and separate within 6 hrs.
Methadone	5ml	Plain	Lab+	Prior to next dose or 16 – 24 hours post dose. For Trough/Peak: Trough: before dose. Then dose. Peak: 4 hours post dose or as requested by Dr.
Methotrexate	5ml	Plain	Lab+	Prior to next dose and record time and date of last dose.
Microalbumin (incl. M/A + Creat ratio)	10ml random	Urine jar		Early morning urine. No Preservative.
Microfilaria	4ml	EDTA	Lab+	
Microfilaris Serology	4ml	G	Lab+	
Mitochondrial Antibodies	2ml	G	LTA	

MODY – TYPE 1,2, 3,5	2 x 4ml	EDTA	Lab+	For paediatrics: 1 x 4ml G
Molecular Genetics	3 x 4ml	EDTA	Lab+	
MRSA (Methicillin Resistant Staphylococcus Aureus)			Swab	Health Care Workers: Swab from nose, perineum and any wound. Patients: Swab from nose, perineum, any wounds or urine if indwelling catheter.
MTHF Reductase Gene Analysis C 677 Mutation	1x	CPD	Lab+	Not on Friday.
Muscle Enzyme (CK)	1ml	G		
Mumps Serology	3.5ml	G 3.5ml	Lab+	
Mumps PCR		UTM swab	Lab+	Throat Swab.
Mybbc3 gene	3 x 4ml	EDTA		
Mycoplasma Serology	3.5ml	G 3.5ml	Lab+	
Myotonic Dystrophy	2 x 4ml	EDTA	Lab+	See Genetic Disorders at DNA Level.
Myocardial Enzymes (Troponin T)	3ml	G		Mark as Urgent
Myositis antibody panel	5ml	G	Lab+	
Mysoline (Primidone)	5ml	Plain	Lab+	See Phenobarbitone.

N				
Na (Sodium)	1ml	G		
Native Gliadin Ab	3.5ml	G 3.5ml	Lab+	
N-BNP	3.5ml	G 3.5ml	Lab+	Branches transport 2-8° C.
Neisseria gonorrhoea		Culture swab and/or urine/swab for PCR/NAAT	LTA	Culture: Room temperature, do not refrigerate. PCR/NAAT: as per chlamydia
Nephritic Factor	4ml	EDTA	Lab+	Separate and freeze within 1 hour.
Neutrophil Oxidative Burst Assay	2 x 4ml	EDTA	Lab+	Tested Mon – Fri 0730hrs Prearranged with cell marker staff ph 0943074949 ext 22061. Store 4°C. Immediately on ice. Transport at 4°C. 2 nd tube as control. Sample must be received at Labplus by 1400 same day as collected, ie must be on courier at 0800.
Ni urine (nickel)	10ml random	Urine Jar	Lab+	Random urine.
Noradrenaline (Catecholamines)	24 hour urine	HCl Acid bottle	Lab+	24 hr urine in acid container.
Norovirus	5g	Faeces Jar	Lab+	Specimen must be received within 2 hrs. Advise patient to refrigerate if stored overnight.
Normetanephrines - urine	24 hr urine	HCl Acid bottle	Lab+	24hr urine in acid container.
Normetanephrines - plasma	4ml	EDTA	Lab+	
Nortriptyline	Full	Plain	Lab+	Prior to next dose. Record time and date of last dose. Centrifuge and separate blood as soon as possible (at least within 6 hours) after collection.
Nuelin – see Theophylline	3.5ml	G 3.5ml	Lab+	Prior to next dose. If SR (slow release) collect 5-6hrs post dose. If uncoated, non-sustained release preparation collect 2 hrs post dose Record time and date of last dose on form.

O				
Occult Blood (faeces)		Faeces	LTA	No diet restriction. Use OC-Auto sampling Kit.
Oestrodiol (Oestrogen)	2ml	G		LMP date on form if applicable.
Olanzapine	5ml	Plain	Lab+	Prior to next dose, record time and date of last dose.
Organic Acids	10ml random urine	Urine Jar	Lab+	Random urine, no preservative. Keep cool. Must reach lab within 4 hrs or be frozen. Brief clinical history essential.
Organo-phosphates (Cholinesterase red cell)	6ml	Heparin	Lab+	For long term exposure to organophosphates.
Osmolality (Serum and urine)	5ml + 50ml random urine	G + Urine Jar	WBH	Urine and serum need to be taken at same time. Urine -No Preservative. Dedicated samples.
Ovarian Antibodies	4ml	G	Lab+	
Oxalate	24 hr urine	HCl Acid bottle	Lab+	Adults: 24 hr urine in acid. Children: random urine may be used and to lab urgently.

P				
P1NP	5ml	G	Lab+	.
P3NP	5ml	Plain	Lab+	Separate within 2 hours of collection.
Pancreatic polypeptide	4ml	EDTA	Lab+	Overnight fasting required.
Paracetamol	5 ml	G	WBH	
Paraprotein Level	5ml	G	LTA	
Parathyroid Hormone	4ml	EDTA	Lab+	
Parietal Cell Antibody	2ml	G	LTA	
Parvovirus Antibodies (Slapped Cheek Syndrome) 5 th disease	3.5ml	G 3.5ml	Lab+	Full clinical details are essential. If query infection paired sera required.
PCR for BCR	Full + 6ml	CPD + Heparin	Lab+	Not on Friday.
Perhexaline	5ml	Plain	Lab+	6 – 12 hrs post dose. Record time and date of last dose.
Pertussis (Whooping Cough/Bordetella)	3.5 ml	G 3.5ml	Lab+	
Phenobarbitone	5ml	Plain	Lab+	Prior to next dose. Record time and date of last dose on form.
Phenylketonuria (PKU)		Baby heel prick	S/A	Cards available through the hospital with instructions.
Phenytoin (Dilantin)	5ml	G		Prior to next dose. Record time and date of last dose on form.
Phosphate Serum	0.5ml	G		
Phosphate Urine	24hr urine	HCl Acid Bottle	LTA	24 hr urine collection in acid container.
Phosphate/creatinine ratio	Random urine	Urine jar	LTA	
PKU – see Phenylketonuria				
Plasma free Metanephrines	1 x 4ml	EDTA	Lab+	Note medications. Patient must rest for ½ hr before test. No Smoking or caffeine. Do not use heparin.
Platelet Antibodies	1 x 10ml + 4 x Full	Plain CPD	Lab+	Not on Friday. Take to lab immediately. Please give diagnosis and details of previous transfusion.
Platelet Count	4ml	EDTA		Part of Full Blood Count.
Platelet Function Assay				Patient must attend WBH
Pneumococcal Serology	3.5ml	G 3.5ml	Lab+	
Polycose	4ml	Fluoride		Give patient 50g carbotest to drink in 5mins. Collect specimen 60 mins after start of drink.

Porphyrins –Blood Urine Faeces	5ml blood 10ml urine 10gm Faeces	Heparin random urine & faeces	Lab+	<u>Porphyrins</u> random urine & faeces sample to be taken also. Urine, faeces and blood containers to be labeled and wrapped in tinfoil before samples are taken. Faeces refrigerate.
Potassium (Serum) (K, K+)	1ml	G		Specimen should not be cooled unless centrifuged first
Potassium (urine)	24hr or spot urine	Plain Urine container	LTA	Random or 24 hour urine, no preservative.
Prader Willi Syndrome	3 x 4ml	EDTA	Lab+	Not on Friday. To be sent immediately to Lab. Must reach Molecular Genetics Lab within 48 hrs of collection.
Pregnancy Test (beta HCG)	1ml	G		
Primidone (Phenobarbitone/ Mysoline)	5ml	Plain	Lab+	Prior to next dose. Record time and date of last dose.
Pro BNP	3.5ml	G 3.5ml	Lab+	Branches transport 2-8 ^o C.
Procalcitonin	5ml	Plain	Lab+	Only for acute pancreatitis – ?presence of infection
Procollagen				See P1NP or P3NP
Progesterone	1ml	G		
17 OH Progesterone	5ml	Plain	Lab+	
Prolactin	1ml	G		
Prostate Specific Antigen (PSA)	2ml	G		
Protein (Serum)	0.5ml	G		Part of a liver function.
Protein (Urine)	24 hr urine	Plain urine bottle	LTA	24 hr urine no preservative. Random urine request protein/creatinine ratio.
Protein/Creatinine Ratio	30mls urine	Urine Jar	LTA	Random urine, no preservative.
Protein C & S	1 x 2.7ml	Citrate	Lab+	Citrate to be spun, separated, filtered and frozen within 1hour.
Protein Electrophoresis	2ml	G	LTA	
Prothrombin Variant	9ml	CPD	Lab+	Not on a Friday. Stable only 2-3 days do not take before a long weekend.
PSA (Prostate Specific Antigen)	2ml	G		
PSA Free	5ml	Plain	Lab+	Separate and freeze within 3 hrs.
Pseudocholinesterase (cholinesterase)	5ml	Plain	Lab+	
Psittacosis Serology (Chlamydia psittacosis)	3.5ml	G 3.5ml	Lab+	Acute and convalescent samples required always.
PTH – see Parathyroid Hormone	4ml	EDTA	Lab+	Transport room temperature.

Pyridoxine Vit B6	4ml	EDTA	Lab+	Labplus Pathologist vetted test or Charge Applies. Protect from light.
Pyruvate Serum	5ml	Heparin	Lab+	Notify laboratory. Collect on ice. Take immediately to lab - it must be deproteinised immediately (within 5 mins). No capillary/arterial samples.
Pyruvate Kinase	2 x 4ml	EDTA	Lab+	
Q				
Q Fever Serology (Coxiella Burnetii)	3.5ml	G 3.5ml	Lab+	
Quantiferon – TB Gold	4x Tubes from Lab Plus	1ml into each tube	Lab+	Not on Friday at any site. Any time of day. Appointment not necessary. Order of draw is Grey, Green, Yellow, Purple. Shake tubes 10x firmly enough to ensure inner surface of the tube is coated with blood. Take immediately to lab.
Quinidine	5ml	Plain	Lab+	

R				
Rabies IgG	5ml	G	Lab+	Patient must pay for test. Sample must be aliquoted and frozen at -20°C if not tested within 24 hours. Transport at -20°C.
RAST (IgE)	3.5ml	G 3.5ml	Lab+	Please request specific allergens – if > than below take extra tubes. Child one tube does 5 allergens Adult one tube does 3 allergens.
RBC Antibodies	6ml	Pink		
RBC Cholinesterase	6ml	Heparin	Lab+	Do not spin
RBC Folate				RCF measurement is no longer offered in NZ. Do not cross test request off form.
Reducing Substances - faeces	1gm	Faeces	Lab+	Random separate specimen. Immediately to lab. Freeze the specimen if not analysed within 2 hours of collection. Deliver on ice.
Reducing Substances - urine	Fresh random	Urine	LTA	Deliver immediately. Freeze if more than 2 hour delay.
Renin	1 x 4ml	EDTA	Lab+	Take with patient sitting and at least 1 hr after rising. Must be collected and sent to Lab at room temperature, Do not put near ice bricks.
Renin/Aldosterone	1 x 4 ml	EDTA	Lab+	
Reticulocyte Count	4ml	EDTA		Part of FBC
Rheumatoid Serology	1ml	G		
Rickettsia Antibodies	3.5ml	G 3.5ml	Lab+	
Rifampicin	5ml	Plain	Lab+	Wrap in foil , light protected collection, separate within 6hrs and freeze.
Rivitol (Clonazepam)	5ml	Plain	Lab+	Prior to next dose. Record time and date of last dose.
Ross River Fever	3.5ml	G 3.5ml	Lab+	Full clinical details are essential.
Rotavirus	1gm	Faeces	LTA	Collect during acute phase of illness during first 3-5 days. Store at room temp deliver same day.
RPR (Rapid Plasmin Reagin)	1ml	G		
Rubella: IgG: (Immunity) IgM:(Current infection)	1ml 3.5ml	G G 3.5ml	Lab+	
RVV (Russell Vipor Venom)	2 x 2.7ml	Citrate	Lab+	Part of Lupus Anticoagulant.

S				
Salicylate Serum	5ml	Plain	Lab+	
Salicylate Urine	5ml urine	Urine Jar	Lab+	Random Sample.
Salivary Progesterone	Saliva	Urine Jar	LTA	Charge Applies. Must attend Rust Ave at 7:30am.
Salmonella Serology	3.5ml	G 3.5ml	Lab+	
Scabies				Refer to Procedure Manual.
Schistosomal Antibodies	3.5ml	G 3.5ml	Lab+	
Selenium	Full	Trace Metal	Lab+ LTA	Labplus Pathologist vetted test or Charge Applies.
Serotonin	4ml	EDTA	Lab+	
SHBG (Sex Hormone Binding Globulin)	3.5ml	G 3.5ml	Lab+	Spin and separate.
Shingles	3.5ml	G 3.5ml	Lab+	
Sirolimus (Rapamycin)	4ml	EDTA	Lab+	Transport 2 - 8°C
SLA/LP Abs	2ml	G	LTA	
Smooth Muscle Antibodies	2ml	G	LTA	
Sodium Serum (Na)	1ml	G		
Sodium Urine	24 hr or random urine	24 hr plain urine	Lab+	No preservative.
Soluble Transferrin Receptors, sTfR	5ml	G	Lab+	
SPE (Serum Protein Electrophoresis)	2ml	G	LTA	
Specific Gravity	Random urine	Urine Jar	LTA	
Spinocerebellar ataxia type I, II (Machó-Joseph Disease)	2 x 4ml	EDTA	Lab+	See Genetic Disorders at DNA level. Not on Friday.
Streptococcal Serology/Antibodies	2ml	G	LTA	
Synacthen Stimulation Test	2.5ml	G		Take Baseline Cortisol. Synacthen 0.25mg/ml intramuscular. 60min serum Cortisol Synacthen in Phlebotomy fridge. Refer Procedure Manual.
Syphilis (RPR)	1ml	G		

T				
T Cell Receptor Gene rearrangement study	Full	CPD	Lab+	Not on Friday.
Tacrolimus	4ml	EDTA or micro	Lab+	Prior to next dose. Record time and date of last dose.
Tegretol (Carbamazepine)	5ml	G		Pre dose, note time and date of last dose.
Testosterone	5ml	G		Males: Specimens must be collected before 10am. Females: Specimen may be collected at any time
Testosterone Free	5ml	G	Lab+ LTA	Labplus Pathologist vetted test or Charge Applies Males: Specimens must be collected before 10am. Females: Specimen may be collected at any time
Tetanus	3.5ml	G 3.5ml	Lab+	
TFT (Thyroid Function Tests)	5ml	G		
6 - TGN	4ml	EDTA	Lab+	
Thalassaemia Screen	4ml	EDTA	LTA	Not on a Friday after 3.30pm.
Theophylline	5ml	Plain	Dunedin	Prior to next dose. If SR (slow release) collect 5-6hrs post dose. If uncoated, non-sustained release preparation collect 2 hrs post dose Record time and date of last dose on form.
Thiamine Vit B1	5ml	Heparin	Lab+	Labplus Pathologist vetted test. Refer to Lab+ collection guidelines.
Thrombin Clotting Time (TCT, TT)	2.7ml	Citrate	WBH	Must be filled to the etched mark.
Thrombophilia Screen (includes Protein C, and Protein S, Antithrombin III, Activated Protein C. NB: If Factor V Leiden Mutation included:	2x 2.7 or 3 x 1.8ml 9ml	Citrate CPD	Lab+ Lab+	Citrate to be spun, separated, and frozen within 1hour. Not on Friday if Factor V Lieden
Thyroglobulin	5ml	G	Lab+	
Thyroid Antibodies	2ml	G	LTA	
Thyroid Function Test	5ml	G		
Thyroid Stimulating Hormone (TSH)	5ml	G		
TSH Receptor Antibodies/TRAB/TSIG	4ml	G	Lab+	
Thyroxine free(Free T4)	5ml	G		
Thyroxine Total	5ml	Hep	Lab+	

Tissue Auto-Antibodies: Includes: Salivary, Adrenal, Parietal, smooth muscle, mitochondrial	2ml	G	LTA	
Tissue Typing: (HLA-A,B,C,DR)	4x 9ml 1x Plain 1x Pink	CPD Plain Pink	Lab+	Done Monday, Tuesday, Wednesday at Auckland Regional Blood Centre. Courier same day. To lab immediately.
HLA B 27, DQ	1x 9ml	CPD		
TMPT Assay	2 x 4ml	EDTA	Lab+	
Transplant Tray	10ml	Plain	Lab+	
Tobramycin	10ml	Plain	Lab+	Record date and time of last dose on request form.
Toxoplasmosis/ IGM/IGG	2ml	G	LTA	
Transferrin	1ml	G		
Transferrin receptors	5ml	G	Lab+	
Transglutaminase abs (Coeliac Screen)	2ml	G	LTA	
Treponemal antibodies – TPHA	1ml	G		
Triglycerides – see Lipids	1ml	G		The patient preferably fasting for 12 hours before test.
Trimipramine	Full	Plain	Lab+	Prior to next dose. Record time and date of last dose.
Troponin T	2ml	G		To lab immediately. Mark Urgent.
TSIG (Thyroid stimulating immunoglobulin)	4ml	G	Lab+	
Tumour Marker HCG	3.5ml	G 3.5ml	Lab+	

U				
Urate serum (uric Acid)	1ml	G		
Urate urine	24hr Urine	Plain Urine Bottle	Lab+	Kerikeri needs to be sent with first courier. Not on Friday.
Urea	1ml	G		
Uric Acid serum (Urate)	1ml	G		
Uric Acid urine (Urate)	24hr Urine	Plain Urine Bottle	Lab+	Kerikeri needs to be sent with first courier. Not on Friday.

V				
Valproic Acid (see Epilim)	5ml	G		
Vancomycin	5ml	G or Heparin	WBH	Trough: within 1 hour before next dose.
Varicella	3.5ml	G 3.5ml	Lab+	
VDRL (same as RPR)	1ml	G		
Vitamin A	5ml	Plain		Wrap in foil.
Vitamin B1 Thiamine	5ml	Heparin	Lab+	Labplus Pathologist vetted test.
Vitamin B6	4ml	EDTA	Lab+	Labplus Pathologist vetted test or Charge Applies. Wrap in foil
Vitamin B12	5ml	Plain	Lab+	
Vitamin B12 + Folate	2ml	G		
Vit B12 + Folate + Red Cell Folate	5ml + 4ml	G + EDTA		
Vitamin C				Can't be done at NPL.
Vitamin D, 25-hydroxyvitamin D, Cholecalciferol , 25- dihydroxycholecalciferol , D25	5ml	G	Lab+	<u>Labplus Pathologist vetted test</u>
<u>VitD as above but on Personal request and paid for.</u>	2ml	G	LTA	<u>Must be paid for.</u>
Vitamin E	5ml	Plain	Lab+	Wrap in foil.
Vitamin K	5ml	Plain	Lab+	Wrap in foil.
Von Willebrand's Disease Screen	2 x2.7ml	Citrate	Lab+	To lab immediately. Spin and separate within the hour.

W				
West Nile Virus Serology	3.5ml	G 3.5ml	Lab+	Requires prior approval by Clinical Virologist Lab+
White Cell Count and Differential	1ml	EDTA		Part of a FBC.
Whooping Cough (Bordetella/Petussis)	3.5ml	G 3.5ml	Lab+	
Y				
Yellow Fever Serology	5ml	G	Lab+	Requires prior approval by Clinical Virologist Lab+
Yersinia Antibodies	5ml	Plain	Lab+	
Z				
Zarontin	Full	Plain	Lab+	Prior to next dose. Record time and date of last dose.
Zika Virus Serology/PCR	4ml	G	Lab+	
Zinc	5ml	Trace Metal	Lab+ LTA	Labplus Pathologist vetted test or Charge Applies.

SWABS

Test	Collection Instructions
Bordetella pertussis culture	<u>Nasopharyngeal swab</u> (blue swab with charcoal transport medium) Insert naso-pharyngeal swab (wire shaft) into each nostril to the naso-pharynx and twirl gently and remove. Insert in charcoal media. Bordetella pertussis culture is only successful up to 2 weeks following an acute illness. Not suitable for Pertussis PCR (use UTM Kit). Refer to Bordetella pertussis PCR (DNA)
Bordetella pertussis PCR (DNA)	UTM swab/kit. DNA testing is only successful up to 3-4 weeks following an acute illness. After this time serology is used to determine acute infections.
Chlamydia Trachomatis/ Neisseria gonorrhoea	Note: Combination Chlamydia and gonorrhoea test on PCR/NAAT swab. *DO NOT USE ROUTINE SWABS FOR CHLAMYDIA TESTING. If patient symptomatic for N. gonorrhoea please take a culture swab as well (see instructions below). Use Chlamydia Aptima Unisex Swab collection kit and place in liquid medium. See specific instructions below for Endocervical, Vaginal self-swabbing, Urethral and Conjunctival samples.
Urethral Swab (Males) for Chlamydia trachomatis /Neisseria gonorrhoea	If swab requested, to ensure accurate results instruct patient not to urinate 1 hour prior to sampling. Insert blue swab provided) 2 - 4cm into the urethra and rotate for 3 - 5 seconds and then break blue swab (at score mark) into Aptima collection tube provided. Do not pierce foil lid. Discard white swab.
Endocervical Samples for Chlamydia Trachomatis/Neisseria gonorrhoea	Remove excess mucus from the exocervix with white shaft swab provided. Discard. Rotate clean blue shaft swab in the endocervical canal 5 times in one direction. Do not over-rotate. Carefully withdraw the swab avoiding contact with the vaginal wall. Break blue swab (at score mark) into collection tube provided. Do not pierce foil lid.
Vaginal Self-Swab for Chlamydia / Neisseria gonorrhoea	Instruct patient to part labia and insert blue swab into lower vagina 5 cm (2 inches) and rotate swab against the wall of the vagina for 30 seconds. Break blue swab (at score mark) into collection tube provided and label. Do not pierce foil lid. Discard white swab.
Conjunctival Samples	Using the blue swab, firmly stroke the lower conjunctivae 2 - 3 times. Break blue swab (at score mark) into collection tube provided and label. Do not pierce foil lid. Discard white swab.
Herpes Zoster (shingles)/ Varicella (chickenpox) viral culture - PCR	Vesicle swab. UTM Kit – flocced swab.
Influenza A /B - PCR	Throat swab. UTM Kit – flocced swab.
Mumps Viral Culture - PCR	Throat swab. UTM Kit – flocced swab.
MRSA - Methicillin Resistant Staphylococcus aureus is a very resistant strain of Staph. Aureus. MRSA is transmitted primarily person to person spread most often on the hands of Healthcare personnel which may have been transiently contaminated by contact with infected or colonized patients.	<ol style="list-style-type: none"> 1. <u>Health Care Workers</u> Magenta Trans swab from nose and perineum and any wound 2. <u>Patients</u> <ol style="list-style-type: none"> a. Magenta trans swab from nose and perineum plus b. ulcers/wounds if known positive c. urine if in-dwelling catheter

Neisseria gonorrhoeae culture (Symptomatic)	<u>Males:</u> Fine Wire Orange trans swab– insert 1cm into the urethra and turn swab remove and place into tube. Alternatively use charcoal (pernasal) swab. Urine Aptima also required. <u>Females:</u> Endocervical swab for culture and susceptibilities required as well as the Aptima swab.
Culture and Susceptibility	<u>Magenta trans swab or orange mini trans swab:</u> Throat, wound, vaginal, urethral, ear, eye, anus, nail bed, and nose. Please ensure these swabs are taken following the correct procedure.

Faeces Samples – Maximum ½ pot

Test	Instructions
Bilharzia	Random sample. To lab same day
Calprotectin	Random separate sample required. Specimen must be received within 24 hrs of collection. Advise patient to store at room temperature overnight. Deliver to laboratory immediately.
Clostridium difficile Toxin	1gm minimum. Only performed on loose stools that take the shape of the container. Specimen must be delivered within 3 hours otherwise refrigerate. If over 12 hours delay freeze and transport frozen. Deliver sample on ice.
Elastase	Separate sample required 2 gm min. Specimen must be received within 24 hours of collection. Advise patient to refrigerate if stored overnight. Deliver specimen on ice.
Helicobacter pylori antigen	Need a dedicated sample. Fresh faecal sample (1 gm minimum). Samples are stable up to 72hrs if stored at 2-8 °C, or else freeze. Antibiotics (within 4 weeks) and proton inhibitors or bismuth preparations (within 2 weeks) suppress H. pylori. Recent ingestion of these gives false negative results.
Listeria	Faeces as screening test. Plus blood culture (2 x sets) if required.
Micro/Culture Pathogens, Salmonella Campylobacter	Specimens must be received in a Stool Sample (white) Container within 24hrs of collection. Store at room temperature.
Occult Blood	No diet restrictions. Use OC Auto sampling kit.
Parasites Giardia, cryptosporidia Ova cysts & parasites	Specimen must be received in a Stool Sample (White) Container within 24hrs of collection. Store at room temperature.
Porphyrins	Light protect. Keep cool. Freeze within 5 hours of collection. Deliver on ice.
Reducing Substances	1gm minimum separate specimen required. Immediately to lab. Freeze the specimen if not analysed within 2 hours of collection. Deliver on ice.
Rotavirus	Sample must be collected during acute phase of illness. Sample to arrive at laboratory same day. Store at room temperature.
Schistosomiasis	Random sample to lab same day.
Steatocrit	10 grams minimum and refrigerate. Patients should have been on a diet containing 70 to 100gm fat per day for at least 3 days prior to, and during collection. No laxatives should be given. It is preferable that patients have been on a diet containing 70-100g fat per day for at least 3 days prior to and during the collection period. No laxatives should be given. Stool for steatocrit testing is stable for seven days under refrigeration. If longer term storage is necessary, it should be frozen. Specimen must not contain foreign material such as toilet paper.

URINE TESTS

TEST	PRESERVATIVE	INSTRUCTIONS
AFB	No Preservative	3 collections on 3 consecutive days. Each day early morning whole sample into a 400ml container.
Albumin	No Preservative	24 hour urine, or early morning random urine.
Albumin/Creatinine Ratio	No Preservative	Early morning urine recommended.
Amino Acids	No Preservative	10 mL fresh, random specimen for initial screening. Keep cool and freeze (-20°) if not sent to the laboratory within 4 hours. * A brief clinical history is essential.
Amylase	No Preservative	24 hour urine, timed collection or random.
Arsenic	HCl Acid or random	24 hour urine or 70ml random.S/A.
Bence Jones Protein	No Preservative	Fresh random sample, at least 30ml.
Bilharzia (Schistosoma)	No Preservative	Collect 3 specimens over 3 days of entire urine voided including terminal portion collected between the hours of 1200 and 1500, preferably after exercise and jumping activity. 400ml container.
Cadmium	No Preservative	Samples should preferably be collected following 4 days in the workplace environment. 24 hour urine or 70ml spot plain container. S/A
Calcium	HCl Acid	24 hour urine in acid preferred. 11 Rust Ave only. Can acidify with acid on arrival if patient collected in plain or can accept a random urine 70ml plain container and acidify on arrival at lab.
Catecholamines	HCl Acid	24 hour urine. S/A
Chlamydia	No Preservative	10-20mls only of first catch sample at least 1 - 2 hours after last voiding. Transfer to PCR tube as per instructions
Chromium	No Preservative	24 hour urine or random spot urine no preservative. Samples should be taken at the end of a shift, following 4 days in the workplace environment. S/A
Cobalt	No Preservative	24 hour or 50 mls random sample no preservative. Samples should be taken at the end of a shift, following 4 days in the workplace environment. S/A
Copper	No Preservative	24 hour urine. S/A
Cortisol	No preservative	24 hour urine. S/A <u>Labplus Pathologist vetted test or charged applies</u>
Citrate	HCl Acid	24 hour urine. S/A
Creatinine Clearance	No Preservative	24 hour urine, provide height and weight. Serum creatinine required on delivery of urine (or can be within 24 hours).
Cytology	No Preservative	3 collections on 3 consecutive days. NOT first morning urine. Each day collect whole sample into a 400ml container.
Drugs	No Preservative	3 container collection. Legal: ESR kit. Special procedure – refer to Procedures Manual.
5 HIAA	HCl Acid	24 hour urine. S/A
Iodine	No preservative	Spot urine. S/A. <u>Specialist request or charge applies</u>
Ketones	No Preservative	Fresh random sample.
Magnesium	HCl Acid	24 hour urine preferred for adults. S/A
Mercury	No Preservative	Spot urine no preservative. <u>Specialist only.</u> S/A
Metanephrines	HCl Acid	24 hour urine. S/A
Microalbumin (inc. Microalbumin/Creatinine ratio)	No Preservative	Spot urine.
Mid Stream Urine, (MSU, Routine Urine)	Fresh sample	Fresh sample. Refrigerate if delays in transporting.
Osmolality	No Preservative	Random 70 ml (spot) sample. S/A (take with blood sample)
Oxalate	HCl Acid	Adults: 24 hour urine Children: spot urine to lab urgently S/A.
Phosphate	HCl Acid	24 hr urine
Porphyrins	No Preservative	Random – protect from light.
Potassium	No Preservative	24 hr urine or spot urine no preservative
Protein	No Preservative	24 hr urine or early morning urine.
Reducing Substances	No Preservative	Fresh random sample. Freeze if more than 2 hour delay.
Sodium	No Preservative	24 hr urine or spot urine no preservative.
Specific Gravity	No Preservative	Random sample.
T.B. Urine	No Preservative	3 collections on 3 consecutive days. Each day early morning whole sample into a 400ml container.
Urate (Uric Acid)	No preservative	24 hr urine. Send urgently. S/A
VMA (HMMA) (Catecholamines)	HCl Acid	24 hr urine. Catecholamines will be tested first.
Zinc	No preservative	Random spot urine. Only at 11 Rust Ave. Send to lab to acidify

Instructions for Patients for 24 Hour Urine Collection

On the day of collection rise and PASS URINE INTO THE lavatory to empty the bladder. This is the starting time of your 24 hour urine collection (e.g. 8:00am). Write the start time and date on the doctors request form and in the space provided on the label on the bottle.

OVER THE NEXT 24 HOURS PASS ALL URINE INTO THE CONTAINER.

24 hours later at exactly the same time as you started the collection (e.g. 8:00am) empty your bladder INTO THE CONTAINER TO COMPLETE THE COLLECTION. Write finish time and the date on the request form and in the space provided on the label on the bottle.

BRING THE CONTAINER TO THE LABORATORY AS SOON AS POSSIBLE. (If this is not possible keep in a cool place).

IMPORTANT: If you forget and pass urine into the toilet during the 24 hour period or spill any urine, IT IS IMPORTANT TO OBTAIN A NEW CONTAINER AND START AGAIN.

NB Some 24 hour urine tests require the patient following a special diet prior to, and during the collection. Remember to pass this information on to the patient and hand them an instruction sheet.

Instructions for 24 Hour Urine Creatinine Clearance Test

Drink approximately 600mls, (3 average glasses) ten to fifteen minutes before beginning the test. During the twenty-four hours of the collection, consume at least one litre (5 average glasses) of fluid. This includes milk on cereal etc. Tea, coffee and certain drugs (ACTH, cortisone and thyroxine) are to be withheld on the day of testing.

Avoid vigorous exercise.

Then follow the instructions above for 24 Hour Urine Collection.

NB: When the specimen is returned to the laboratory, a serum creatinine sample must be taken.

Midstream Urine Specimens

For Males

- a) **Before beginning** the procedure, the patient should wash his hands with soap and water and dry thoroughly.
- b) Urination should begin, **passing the first portion into the toilet**. The **mid** portion should be collected into the appropriate container (white plastic) and any further urine should be passed into the toilet.
- c) For a midstream for urine culture it may be advisable in some cases, to request the male to retract the foreskin and wipe around the urethral meatus with a sterile wipe. The decision to request this is to be based upon observation of the patients cleanliness and ability to understand. Do not make an issue of it to the patient just let it appear to be part of the normal requirement.

For Females

- a) **Before beginning** the procedure, the patient should wash her hands with soap and water and dry thoroughly.
- b) Urination should begin, **passing the first portion into the toilet**. The **mid** portion should be collected into the appropriate container (white plastic) and any further urine should be passed into the toilet.
- c) See (c) above for information on reasons for requesting cleansing of the external genitalia.

TRANSPORTATION OF SAMPLES FOR MICROBIOLOGY

All specimens should be promptly transported to the laboratory, preferably within 2 hours of being collected. The following guidelines for specific specimen types for microbiological investigations have been prepared using the “Manual of Clinical Microbiology, 8th ed.” For reference.

URINE (FOR MICROBIOLOGICAL INVESTIGATIONS)

Early morning midstream urines are preferred.

Urine should be transported to the lab immediately, otherwise refrigerated at 4°C as soon as possible after collection. Urines for Chlamydia PCR should not be taken into containers containing boricon. They should be refrigerated if a delay in transport is expected.

Urine samples for “reducing substances” must arrive within 24 hours of collection, refrigerate & transport on ice.

Urine for TB culture should be collected in plain bottles without preservatives. A minimum sample of 50ml is preferred.

SWABS (FOR MICROBIOLOGICAL INVESTIGATIONS)

Should be transported as soon as possible after collection.

Most swabs may be refrigerated at 4°C if there is a delay in transport to the laboratory, the following is a list of exceptions which should be kept at room temperature until transport to the laboratory:

- Genital Swabs

- Nasopharyngeal Swabs or any swabs or specimens for pertussis culture.

- Conjunctival swabs

- Any swabs taken into PCR tubes for Chlamydia PCR

SWABS/SPECIMENS (FOR VIROLOGY)

Should be transported as soon as possible after collection, but if a delay in transport is unavoidable they may be refrigerated at 4°C for up to 2 days.

FAECES:

For Microscopy and Culture, Parasites (Giardia etc): Half fill container do not overfill.

Specimens should be as fresh as possible and, ideally, reach the laboratory on the day of collection.

Specimens can be stored in the refrigerator overnight (or for up to two days) at 4°C.

Clostridium difficile specimens are to be received within 3 hours or refrigerate – over 12 hours delay specimen should be frozen.

Stool samples for “reducing substances” must arrive within 2 hours. Freeze the specimen if not analysed within 2 hours of collection. Deliver on ice.

Rotavirus investigations must arrive within 24 hours of collection. Store at room temperature.

If 3 stool samples are submitted then all specimens should be clearly labeled with their individual collection dates and times. Samples not clearly labeled, or labeled as the same day, will be treated as 1 specimen.

SPUTUM (FOR MICROBIOLOGICAL INVESTIGATIONS)

Specimens should be as fresh as possible and, ideally, reach the laboratory on the day of collection. Specimens can be stored in the refrigerator overnight (or for up to two days at 4°C).

BLOOD CULTURES

Specimens should reach the laboratory the same day. They may be stored at room temperature if there is a delay in transporting.

ASPIRATES/BODY FLUIDS (FOR MICROBIOLOGICAL INVESTIGATIONS)

Specimens should be as fresh as possible and, ideally, reach the laboratory on the day of collection. However, if a delay in transport is unavoidable they may be refrigerated overnight at 4°C. Handle aseptically, aliquot a small portion into EDTA (for cell counts & differential) and the majority into a sterile container for culture etc. NOTE: EDTA sample is not suitable for culture. Clotted samples are not suitable for cell counts. It is NOT acceptable for a needle and syringe to be transported to the laboratory (Health and Safety regulations).

SKIN SCRAPINGS (FOR MICROBIOLOGICAL INVESTIGATIONS)

Should be transported promptly to the laboratory but may be stored at room temperature if delayed.

TRANSPORTATION OF SAMPLES FOR CYTOLOGY

QUICK REFERENCE GUIDE FOR CYTOLOGY (NON-GYNAECOLOGICAL) SAMPLES

SPECIMEN		
CYST FLUID	Entire sample in sterile container	Submit immediately or refrigerate if delayed.
FINE NEEDLE ASPIRATE	Slides and needle washings	Label air-dried or wet fixed and site (if multiple sites aspirated). Refrigerate washings if delayed.
SEROUS FLUIDS	Entire sample in sterile container or containing anticoagulant (EDTA or sodium citrate)	Submit immediately or refrigerate if delayed.
SPUTUM	Deeply coughed early morning sample	Date specimen. Refrigerate if delayed.
URINE	Freshly voided mid-morning whole output sample in 400ml container	Submit immediately. The receiving laboratory should add an equal volume of 50% alcohol and refrigerate if delayed.

LIST OF ABBREVIATIONS AND TERMINOLOGY

Ab	Antibody
ACE	Angiotensin Converting Enzyme
ACTH	Adrenocortotropic Hormone
AFB	Acid Fast Bacilli (Tuberculosis, TB. Mycobacteria)
AFP	Alpha Fetoprotein
AIDS	Acquired Immuno Deficiency Syndrome
ALP	Alkaline Phosphatase
ALT	Alanine Transaminase (Amino Transferase – part of Liver Function Test)
ANA	Anti-nuclear Antibody
ANF	Anti-nuclear Factor
APPT	Activated Partial Thromboplastin Time
ASOT	Anti-Streptolysin Titre
AST	Aspartate Transaminase (Amino transferase – part of Liver Function Test)
BACT	Bacteria
BG	Blood Glucose or Blood Group (check history)
Bic	Bicarbonate
B. GP	Blood Group
Bili	Bilirubin
BP	Blood Pressure
BS/BSL	Blood Sugar / Blood Sugar Level
BT	Blood Test or Bleeding Time or Blood Transfusion (check history)
Bx	Biopsy
Ca	Calcium (Take blood without using tourniquet)
CBC	Complete Blood Count (same as FBE)
CBP	Complete Blood Picture (as above)
CE	Cardiac Enzymes
CEA	Carcinoembryonic Antigen
CH/TG	Cholesterol / Triglycerides
CK	Creatinine Kinase
CMV	Cytomegalovirus
CR CL	Creatinine Clearance
Cr	Creatinine
CRP	C Reactive Protein
Cx	Cervix
DCT	Direct Coombs Test
DNA	Desoxyribonucleic Acid
E2	Oestrogen/Oestrodial
E3	Oestrial (Pregnant patients)
E & U	Electrolytes and Urea
EBV	Epstein Barr Virus
ECG	Electrocardiogram
ELECT	Electrolytes
EP	Electrophoresis (can be either Hb or Protein)
ESR	Erythrocyte Sedimentation Rate
FBC	Full Blood Count
FBE	Full Blood Examination
FBS	Fasting Blood Sugar
FNA	Fine Needle Aspiration
FSH	Follicle Stimulating Hormone
FTA	Fluorescent Treponema Antibodies (Syphilis Test)

G6PD	Glucose 6 Phosphate Dehydrogenase
GGT	Gamma Glutamyl Transferase - (part of Liver Function Test)
GH	Growth Hormone
GTT	Glucose Tolerance Test
Hb	Haemoglobin
HBAb	Hepatitis B Antibody
HBSAg	Hepatitis B Surface Antigen
HBs	Hepatitis B Surface Antigen
HBV	Hepatitis B Virus
HCG	Human Chorionic Gonadotrophin (Pregnancy Test)
HcT	Haematocrit (PCV – part of FBE)
HDL	High Density Lipoprotein (Ratio of Cholesterol)
HIV	Human Immunodeficiency Virus (or HTL VIII)
HLA	Human Leucocyte Antigen
HSV	Herpes Simplex Virus (Cold Sores)
HZV	Herpes Zoster Virus (Shingles, Chicken pox)
HVS	High Vaginal Swab
IEP	Immuno-Electrophoresis
Ig	Immuno-globulins (IgG, IgA, IgM, IgE)
IM	Infectious Mononucleosis (Glandular Fever)
INR	International Normalised Ratio (Warfarinised Patients)
LDH / LD	Lactate Dehydrogenase
LDL	Low Density Lipoprotein (Ratio of cholesterol)
LS	Lipid Studies (Cholesterol & Triglycerides)
LFT	Liver Function Test
LPEP	Lipoprotein Electrophoresis
LH	Luteinizing Hormone
MBA	Multiple Biochemistry Analysis (Doctor needs to state which tests)
Monospot	Paul Bunnell , Glandular Fever
MSU	Mid Stream Urine
M/S/C	Micro Culture and Sensitivity
NAP	Neutrophil Alkaline Phosphatase
O3/E3	Oestrial (Pregnant patients)
O2/E2	Oestrogen/oestrodial
PAP	Papanicolaou Smear (Women) or Prostatic Acid Phosphatase (Men)
PB	Paul Bunnell or Glandular fever
PCV	Packed Cell Volume (HcT part of FBE)
P4	Progesterone
PEP	Protein Electrophoresis
PKU	Phenylketonuria (Guthrie Test screening on new born babies)
PLTS	Platelets
PP BSL	Post Prandial Blood Sugar Level (Take 2 hours after a meal)
PROTH	Prothrombin
PSA	Prostate Specific Antigen
PT	Prothrombin Time (same as INR)
RA	Rheumatoid Arthritis
RAST	Radio Allergo Sorbent Test (for allergies)

SCIENTIFIC ABBREVIATIONS

Au	Gold
Fe	Iron
Pb	Lead
Li	Lithium
Mg	Magnesium
Mn	Manganese
Hg	Mercury
Ni	Nickel
P	Phosphorus
Pt	Platinum
K / K ⁺	Potassium
Se	Selenium
Na / Na ⁺	Sodium
Tl	Thallium
Zn	Zinc
HCO ₃	Bicarbonate
H ₂ O	Water
CO ₂	Carbon Dioxide
O ₂	Oxygen
PO ₄	Phosphate

VITAMINS

A	Retinol (Carotenoids)
B1	Thiamine
B2	Riboflavin
B3	Niacin
B5	Pantothenic Acid
B6	Pyridoxine
B12	Cobalamin
C	Ascorbic Acid
D	Cholecalciferol
E	Tocopherols
K	Phylloquinone Folic Acid
H	Biotin