

Neonatal Blood Collection Guide

Related Department

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Test Name	Test Code	Department	Specimen Description	Specimen Container	Collection Instruction and minimum volume for NICU	Minimum volume for NON-NICU paediatric patients	Testing Site	Turnaround Times (TAT) within Laboratory	Processing instruction	Transport instruction between Site and/or Laboratories	Collection & Request Instructions
17 - Hydroxyprogesterone (17OHP; 17 alpha-hydroxy; Progesterone)	17OHPCLMS	Biochemistry (Referred)	Blood	Plain Tube - serum (NO Gel) Lithium Heparin (NO Gel)	Full tube collection (0.6 ml)	0.6mL	Monash Pathology	Weekly	Centrifuge Aliquot Store at -20 °C	On Ice	
ABG (Arterial Blood Gases)	ABG	Biochemistry	Blood	Capillary	As per blood gas training	As per blood gas training	Prahran; Footscray; Sunshine	30mins			
ACTH (AdrenoCorticoTrophic Hormone)	ACTH	Biochemistry	Blood	EDTA	Minimum 0.5mL EDTA	0.7mL	Prahran	Test performed Monday and Thursday	Centrifuge Aliquot Freeze Immediately	On Ice Send to lab immediately	Collect on Ice Collect in the morning between 8-10am. Consultation with Endocrinologist suggested. Retrospective testing not possible.
Activated Partial Thromboplastin Time (APTT) – (See Coag screen)	APTT	Haematology	Blood	Sodium Citrate	Full Tube Collection (1mL)	1 mL	Prahran; Footscray; Sandringham; Sunshine	1hr		Room Temperature Transport within 1 hour post collection	Add exactly 1mL or blood and mix by inversion. Deliver to laboratory within 60 minutes Must be venous or arterial collection, NOT capillary

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APTT correction (Heparin neutralisation test)	Additional tube to Coag screen	Haematology	Blood	Sodium Citrate	Full Tube Collection (1mL)	1 mL	Sunshine Hospital	2hrs – must be pre-arranged		Room Temperature Transport within 1 hour post collection	Add exactly 1mL or blood and mix by inversion. Deliver to laboratory within 60 minutes Must be venous or arterial collection, NOT capillary
Alpha Feto Protein (Foetoprotein; AFP)	AFP	Biochemistry	Blood	Lithium Heparin (with Gel) SST	Full tube collection (0.6mL)	0.6mL	Prahran	2hr		Room Temperature	
Ammonia; NH3	AMMON	Biochemistry	Blood	EDTA	Minimum 0.4 mL of whole blood to be collected into 1mL EDTA	0.5mL	Prahran; Footscray; Sunshine	1hr	Centrifuge immediately Time critical - Do not delay handling	On Ice Send to lab immediately	Collect on Ice Send sample to lab immediately for processing and analysis If sample received >120 mins post collection - sample will be unsuitable for analysis. False high levels are obtained after exercise and with incorrectly handled specimens
Androstenedione	D4ANDROLC MS	Biochemistry (Referral)	Blood	Plain Tube - serum (no gel) Lithium Heparin (without Gel)	Full tube collection (0.6mL)	0.6mL	Monash Pathology	Weekly	Centrifuge Aliquot Store at -20 °C	Room Temperature	

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Bilirubin; Neonatal profile	SBR (T-BIL and C-BIL)	Biochemistry	Blood	1. SST Lithium Heparin (with Gel) OR 2. Amber SST	Minimum 0.6 mL whole blood to be collected into 0.6mL SST	0.6mL	Prahran; Footscray; Sandringham; Sunshine	1hr	Protect from light	Room Temperature onsite / 4°C from external sites	Protect from light
UE, LFT, Calcium/Magnesium/Phosphate, Glucose, CRP, CK	UE, LFT, CMP, IS, GL, CRP, CK	Biochemistry	Blood	SST, Lithium Heparin (with gel)	Full tube collection (0.6mL SST) for every 5 Biochemistry Tests ordered	1 mL	Prahran; Footscray; Sandringham; Sunshine	2hr		Room Temperature onsite / 4°C from external sites	
Iron Studies	IS	Biochemistry	Blood	SST, Lithium Heparin (with gel)	Full tube collection (0.6mL SST) for every 5 Biochemistry Tests ordered	1 mL	Prahran; Footscray; Sunshine	2hr		Room Temperature onsite / 4°C from external sites	
Blood Culture	BL C	Microbiology	Blood	Paediatric Blood Culture bottle	Minimum 1mL	Minimum 1mL	Prahran	Preliminary report upon commencement of incubation. Final report after 5 days	Send to laboratory as soon as possible after collection	Room Temperature	1. Collect blood culture prior to commencement of antibiotic therapy. 2. Remove plastic flip top from culture bottle and disinfect with an alcohol pad or equivalent. 3. Paediatric: 4mL of blood per bottle. 4. Do not use blunt needles or coring devices to puncture the stopper. These

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											prevent sealing of the inoculation hole, leading to aeration or allowing the sample to leak. 5. The barcode labels on the bottle are for laboratory use ONLY. Do not remove or obscure the peel-off stickers.
Blood Group & save (Antibody screen, crossmatch)	GS	Blood Bank	Blood	EDTA – Minicollect tube	Full Tube Collection (1mL)	1 mL	Prahran; Footscray; Sandringham; Sunshine	1hr			Full given and surname, date of birth or UR number, date and time of collection, clinical diagnosis, collector's signature or initials on the specimen and request form with Signature of collector.
Chromosomes Fragility Test	CHROMFRAG	Human Molecular	Blood	Lithium Heparin (without Gel)	Minimum volume 5 mL Samples should be collected Monday to Thursday	5 mL	Monash Pathology		Do Not Centrifuge	-Room Temperature. Monash Pathology Cytogenetics laboratory MUST be contacted (Tel 0395944135) prior to ordering this test.	Monash Pathology Cytogenetics laboratory MUST be contacted (Tel 0395944135) prior to ordering this test. Must be received by testing laboratory within 72 hours of collection

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Coagulation screen (APTT, INR, TCT, Fibrinogen,)	APTT, INR, PT, FIB	Haematology	Blood	Sodium Citrate (Minicollect tube)	Full Tube Collection (1 mL citrate)	1 mL	Prahran; Footscray; Sandringham; Sunshine	1hr		Room Temperature	Add exactly 1mL or blood and mix by inversion. Prothrombin activity is expressed as the International Normalised Ratio (INR) and Prothrombin time (PT). APTT samples are stable for 4 hours only. PT/INR, Fib, TCT specimens cannot be analysed or re-analysed greater than 8 hours after collection. Must be venous or arterial collection, NOT capillary
Cord Blood Group	GS	Blood Bank	Blood	EDTA - Purple	2 mL	2 mL	Prahran; Footscray; Sandringham; Sunshine	1hr		Room Temperature	Surname, Baby of mother's given name, DOB, UR#, date and time of collection, clinical diagnosis, collector's signature or initials on the specimen and request form with Signature of collector.
Cortisol (Serum)	CORT	Biochemistry	Blood	SST Lithium Heparin (with Gel)	Full tube collection (0.6mL)	0.6mL	Prahran; Footscray; Sunshine	2hr		Room Temperature onsite /	

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										4°C from external sites	
Crossmatch	GS	Blood Bank	Blood	2 x EDTA - Purple	Note: 1 x 2 mL neonatal EDTA and 1 x 2mL maternal EDTA (if available)	2 mL	Prahran; Footscray Sandringham; Sunshine	1hr			Full given and surname, date of birth or UR number, date and time of collection, clinical diagnosis, collector's signature or initials on the specimen and request form with Signature of collector.
CSF Microscopy and Culture	CSF C	Microbiology	Cerebrospinal Fluid	CSF Tube 3	0.25 mL	0.25 mL	Prahran; Footscray; Sunshine	1 hr	Send to laboratory as soon as possible after collection	Room Temperature	1. Out-of-hours: Notify on-call staff of macroscopy and culture required. 2. A Gram stain is performed on any CSF with raised white cell count (> 5 polymorphs x 10 ⁶ /L) 3. Special tests are available on specific request. See individual test listings.
Dihydrotestosterone (DHT)	DHTLCMS	Biochemistry (Referred)	Blood	Plain Tube - serum (no gel) Lithium Heparin (without Gel)	Full tube collection (0.6mL).	0.6mL	Monash Pathology	Performed weekly	Centrifuge Aliquot Store at -20 °C	On Ice	

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Direct Antiglobulin Test (DAT); Direct Coombs Test (DCT); Coombs Test	DCT	Blood Bank	Blood	EDTA	Minimum 0.25mL whole blood to be collected into 1mL EDTA.	0.25mL	Prahran; Footscray Sandringham; Sunshine	1hr	Centrifuge	Room Temperature	Full given and surname, date of birth or UR number, date and time of collection, clinical diagnosis, collector's signature or initials on the specimen and request form with Signature of collector.
Erythrocyte Sedimentation Rate	ESR	Haematology	Blood	EDTA	Minimum 1 mL	1 mL	Prahran; Footscray; Sandringham; Sunshine	1hr		Room Temperature	
Fluid Microscopy and Culture (Ascitic Fluid; Pleural Fluid; PD Fluid; Synovial Fluid)	FLU C	Microbiology	Fluid	Fluid pot	0.25 mL	0.25 mL	Prahran; Footscray	1hr		Room Temperature	
Follicle Stimulating Hormone	FSH	Biochemistry	Blood	Lithium Heparin (with Gel) SST	Full tube collection (0.6mL).	0.6mL	Prahran; Footscray; Sunshine	2hr		Room Temperature	
Free fatty acids	FFA	Biochemistry (Referred)	Blood	Fluoride Oxalate	Minimum of 1mL whole blood.	1 mL	Royal Children's-VCGS	21 Days	Centrifuge Aliquot Store at -20 °C	On ice	
Full Blood Examination (FBC; FBE; Differential) +/- Retic	FBE	Haematology	Blood	EDTA	Minimum 0.3mL whole blood to be collected into 1mL EDTA	0.5mL in 1ml tube	Prahran; Footscray; Sandringham; Sunshine	1hr		Room Temperature	Use 1ml EDTA tubes = less clotted samples

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Galactose screen	GALS	Biochemistry (Referred)	Blood	Lithium Heparin (NO Gel)	Minimum 0.5mL whole blood to be collected.	0.6mL	Monash Pathology	Daily		Room Temperature	
Gentamicin	GENT/GENT PRE/ GENT POST	Biochemistry	Blood	SST Lithium Heparin (with Gel)	Minimum 0.4 mL whole blood to be collected.	0.5mL	Prahran; Footscray; Sunshine	1hr		Room Temperature	
Glucose	GL, GLFO, GLFOF	Biochemistry	Blood	Fluoride Oxalate Lithium Heparin (with Gel) SST	Minimum 0.4 mL whole blood to be collected.	0.5mL	Prahran; Footscray; Sandringham; Sunshine	1hr		Room Temperature	Fluoride Oxalate is the preferred sample where testing will be delay and/or a diagnostic decision is required for routine monitoring on inpatient serum is suitable.
Glucose-6-Phosphate Dehydrogenase Screen (G6PD Screen)	G6PD	Haematology	Blood	EDTA	Minimum 0.25mL whole blood to be collected into 1mL EDTA	0.5mL	Prahran; Footscray; Sunshine	2hrs if Urgent 4hrs Routine		Room Temperature	
Growth Hormone	GH	Biochemistry	Blood	SST Lithium Heparin (with Gel)	Full tube collection (0.6mL)	0.6mL	Prahran; Footscray	Test performed Monday and Thursday	Centrifuge Aliquot Store at -20 °C (Freeze only once)	On Ice	
Hepatitis C virus RNA by PCR	HEPCPCR	Microbiology	Blood	EDTA	3 x Full tube collection (0.6mL).	3.0mL	Prahran	Weekly	Unopened Tube	Room Temperature	

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Insulin	INS	Biochemistry	Blood	SST	Full tube collection (0.6mL)	0.6mL	Prahran	2hr	Centrifuge Aliquot Freeze Immediately	On Ice Send to lab immediately	Collection on Ice. Retrospective testing not possible. A Fluoride Oxalate tube for Glucose must be collected at the same time.
Lactate	LACT	Biochemistry	Blood	Fluoride Oxalate	Minimum 0.4 mL whole blood to be collected.	0.4mL	Prahran; Footscray; Sandringham; Sunshine	1hr		Send to lab immediately	
Luteinizing Hormone	LH	Biochemistry	Blood	SST	Full tube collection (0.6mL)	0.6mL	Prahran; Footscray; Sunshine	2hr		Room Temperature	
Metabolic Screen Urine; (Pyroglutamic Acid)	UMS	Biochemistry (Referred)	Urine random	Plain 70ml pot	Minimum 5 mL. Samples taken during acute episodes are most suitable otherwise an early morning sample preferred.	5 mL	VCGS	5 working days	Centrifuge Aliquot Store at -20 °C	On Ice, send to lab immediately	Samples taken during acute episodes are most suitable otherwise an early morning sample preferred
Methotrexate	METHOTREX	Biochemistry	Blood	SST Lithium Heparin (with Gel)	Note time and date of last dose. Full tube collection (0.6mL).	0.6mL	Prahran; Footscray	2hr	Aliquot Protect from light	Room Temperature	Sampling Time is dependent on dose, duration of infusion and clinical status of patient.
Parathyroid Hormone; PTH; PTH(1-84)	PTH	Biochemistry	Blood	EDTA	Minimum 0.5 mL of whole blood to be collected into 1 mL EDTA.	0.5mL	Prahran; Footscray	2hr	Centrifuge Aliquot	Transport samples between laboratories	Retrospective testing not possible.

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										at 4°C in an esky	
Phenobarbitone	PHENOBARB	Biochemistry (Referred)	Blood	SST	Full tube collection (0.6mL). Collect pre dose	0.6mL	Monash Pathology	Daily		Room Temperature	Collect Pre-dose
Phenytoin; (Dilantin)	PTN	Biochemistry	Blood	Lithium Heparin (with Gel) SST	Minimum 0.4 mL	0.5mL	Prahran; Footscray; Sunshine	1hr		Room Temperature onsite / 4°C from external sites	Collect Pre-dose
Reticulocyte Count – see FBE	RT	Haematology	Blood	EDTA	Minimum 0.3mL whole blood to be collected into 1mL EDTA.	0.5mL in 1ml tube	Prahran; Footscray; Sandringham; Sunshine	1hr			
Amino Acid Profile	AMAC	Biochemistry (Referred)	Blood	Lithium Heparin (with Gel), on ice	Full tube collection (0.6mL) on ice	1 mL	VCGS, Royal Children	7 working days	Centrifuge immediately Store frozen	Transport frozen on Dry Ice	Collect on Ice Send specimen on ice immediately to laboratory post collection. Specimen must be separated within ONE hour post collection.
Hydroxybutrate; (Serum ketones)	HYBU	Biochemistry	Blood	SST Lithium Heparin (with Gel)	Minimum 0.5mL	0.6mL	Prahran; Footscray	1hr		Room Temperature onsite / 4°C from external sites	

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Testosterone	TES	Biochemistry	Blood	SST	Full tube collection (0.6mL).	0.6mL	Prahran; Footscray	2hr		Room Temperature	Serum stable for up to 7 days at either 2-8 °C or frozen
Thrombin Clotting Time – see Coagulation screen	TCT	Haematology	Blood	Sodium Citrate	Full Tube Collection (1mL citrate)	1 mL	Prahran; Footscray; Sandringham; Sunshine	1hr		Room Temperature	Must be venous or arterial collection, NOT capillary
Thyroid Function Test (TSH+FT4)	TFT	Biochemistry	Blood	SST Lithium Heparin (with Gel)	Minimum 0.6 mL whole blood to be collected.	1 mL	Prahran; Footscray; Sunshine	2hrs		Room Temperature	It is suggested that only TSH is requested. If this is abnormal, FT4 and/or FT3 will be performed, as appropriate.
Free T3	FT3	Biochemistry	Blood	SST Lithium Heparin (with Gel)	Minimum 0.6 mL whole blood to be collected.	1 mL	Prahran; Footscray; Sunshine	2hrs		Room Temperature	
Tobramycin	TOB / TOBR PRE / TOBR POST	Biochemistry	Blood	SST Lithium Heparin (with Gel)	Minimum 0.4 mL	0.6mL	Prahran; Footscray	1 hr		Room Temperature	Collect Pre-dose, Collect Post-dose. Post dose specimen collection should be <u>30mins post completion of administration</u> . Request should be specify does, route, time(s) of dose/infusion and time of sample collection.
Troponin I (Tni)	TROPONIN	Biochemistry	Blood	SST Lithium Heparin (with Gel)	Minimum 0.6mL.	0.6mL	Prahran; Footscray; Sandringham; Sunshine	1hr		Room Temperature	

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Urinary organic acids	UOASCR	Biochemistry (Referred)	Urine random	Sterile Container	Minimum 5mL. Samples taken during acute episodes are most suitable otherwise an early morning sample preferred	5 mL	Royal Children's - VCGS	5 working days	Centrifuge Aliquot Store at -20 °C	On Ice, send to lab immediately	Samples taken during acute episodes are most suitable otherwise an early morning sample preferred
Steroid Profile Urine; (GC Profile Urine; Etiocholanolone)	USPT	Biochemistry (Referred)	Urine	Urine Bottle PLAIN	Minimum 10mL 24 hr plain bottle (Can be collected multiple times and pour into 1 pot)	10 mL	Royal Children's Hospital	Weekly (Monday)	Aliquot Store at 4 °C 10mL Aliquot Required	Send at 4°C with Ice Pack	
Urine Cell Count	URI C	Microbiology	Urine	Urine container	Minimum 10.0 mL	10 mL	Prahran; Footscray	1hr		4°C from external sites	Red cell morphology must be specifically requested. Mark specimen urgent and send immediately to the laboratory. This test is only available between 0800 and 1700.
Urine sodium	UNA	Biochemistry	Urine random	Urine container	Minimum 0.3mL	0.5mL	Prahran; Footscray	1 hr		Room Temperature	
Vancomycin	VANC/ VANC PRE/ VANC POST	Biochemistry	Blood	SST Lithium Heparin (with Gel)	Minimum 0.4 mL	0.5mL	Prahran; Footscray; Sunshine	1hr		Room Temperature	

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Viral serology: CMV, Hep B, C, HIV, Syphilis, Rubella, Toxoplasmosis.	CMV, HEPBSAG, HEPCAB, SYPHS, HIV, RUBL, TOXO	Serology	Blood	SST	5 x full 0.6mL SST tubes. 2 full 0.6ml SST if ≤ 2 tests.	5 x full 0.6mL SST tubes. 2 full 0.6ml SST if ≤ 3 tests.	Prahran; Footscray	24 hrs		Room Temperature	