

Neonatal and Pediatric Collection Guidelines

Effective Date: April 11, 2011

 This document is applicable at site(s):

All Sites - Edmonton Zone

Neonatal and Pediatric Collection Guidelines

Hematology

Pediatric Whole Blood

Hematology Tests	Tube Type	Minimum Volume	Notes
CBC/CBCD CBC includes Hemoglobin, hematocrit, WBC, platelet and RBC and RBC indices. CBCD includes all of the above as well as a differential.	2.7 ml mauve	1 ml	Will also be adequate for reticulocyte count
Hemoglobin	2.7 ml mauve	1 ml	
Hematocrit	2.7 ml mauve	1 ml	
Platelets	2.7 ml mauve	1 ml	
WBC	2.7 ml mauve	1 ml	
Smear to pathologist	2.7 ml mauve	1 ml	CBCD will also be performed
Erythrocyte sedimentation Rate	2.7 ml mauve	2 ml	
Reticulocyte count	2.7 ml mauve	1 ml	
Monos	Gel tube/mauve	1 ml	
Prothrombin time	2.7 ml blue	2.7 ml	Will also be adequate for PTT, Fibrinogen, & D-Dimer.
Partial Thromboplastin time	2.7 ml blue	2.7 ml	Will also be adequate for PT, , Fibrinogen, & D-Dimer
Fibrinogen	2.7 ml blue	2.7 ml	Will also be adequate for Pt, PTT, & D-Dimer
D-Dimer	2.7 ml blue	2.7 ml	Will also be adequate for PT, PTT and Fibrinogen

Neonate Whole Blood

Hematology Tests	Tube Type	Minimum Volume	Notes
CBC.CBCD CBC includes Hemoglobin, hematocrit, WBC, platelet and RBC and RBC indices. CBCD includes all of the above as well as a differential.	Mauve microtainer	500 ul	
Hemoglobin	Mauve microtainer	250 ul	
Hematocrit	Mauve microtainer	250 ul	
Platelets	Mauve microtainer	500 ul	
WBC	Mauve microtainer	500 ul	
Smear to pathologist	Mauve microtainer	500 ul	
Reticulocyte count	2.7 ml mauve	1 ml	Will also be adequate for CBC/CBCD
Prothrombin time	1.8 ml blue	1.8 ml	Will also be adequate for PTT & Fibrinogen
Partial Thromboplastin time	1.8 ml blue	1.8 ml	Will also be adequate for PT & Fibrinogen
Fibrinogen	1.8 ml blue	1.8 ml	Will also be adequate for PT and PTT
D-Dimer	1.8 ml blue	1.8 ml	Will also be adequate for PT and PTT

Note:

- ☐ 1.8 ml blue top tubes are not stocked in hospital stores. The use of these tubes is limited to neonates and can be purchased directly from VWR.
- ☐ If Hepzyme is requested for PTT, only PT & PTT can be performed on the 1.8 ml blue top tube. If additional tests are required, the 2.7 ml tube should be collected.

Chemistry

General Chemistry Tests	Tube Type	Minimum Volume	Notes
Acetaminophen	3 mL Lithium Heparin Or 500 µL Lithium Heparin Microtainer	250 µL	Rules of Thumb: <u>Microtainer Tubes:</u> <ul style="list-style-type: none"> • Minimum Volume 250 µL • 250 µL whole blood is sufficient for 1-5 of the listed tests. • 500 µL of whole blood is sufficient for 6-20 of the listed tests. <u>Vacutainer Tubes:</u> <ul style="list-style-type: none"> • Minimum Volume 1 mL • 1mL whole blood is sufficient for all of the listed tests.
Albumin		250 µL	
Alkaline Phosphatase		250 µL	
Alanine Aminotransferase		250 µL	
Amylase		250 µL	
C3, C4		250 µL	
Calcium		250 µL	
Carbamazepine		250 µL	
Carbon Dioxide		250 µL	
Cholesterol		250 µL	
C-Reactive Protein		250 µL	
Creatine Kinase		250 µL	
Creatinine		250 µL	
Digoxin		250 µL	
Direct Bilirubin		250 µL	
Ethanol		250 µL	
Gamma-Glutamyl Transferase		250 µL	
Gentamicin		250 µL	
Glucose		250 µL	
HDL		250 µL	
Immunoglobulin A		250 µL	
Immunoglobulin G		250 µL	
Immunoglobulin M		250 µL	
Sodium		250 µL	
Potassium		250 µL	
Chloride		250 µL	
Iron		250 µL	
Lactate Dehydrogenase		250 µL	
Magnesium		250 µL	
Osmolality		250 µL	
Phenobarbital		250 µL	
Phenytoin		250 µL	
Phosphorous		250 µL	
Prealbumin	250 µL		
Rheumatoid Factor	250 µL		
Salicylate	250 µL		
Theophylline	250 µL		
Total Bilirubin	250 µL		
Total Protein	250 µL		
Triglycerides	250 µL		
Unsaturated Iron Binding Capacity	250 µL		
Urea	250 µL		
Uric Acid	250 µL		
Valproic Acid	250 µL		
Vancomycin	250 µL		

Tests Requiring Special Handling	Tube Type	Minimum Volume	Notes
Ammonia	3 mL Lithium Heparin	Fill tube	Tube must be completely filled. Send to lab immediately on ice.
ICa	Or 500 µL Lithium Heparin Microtainer	½ tube	Tube must be at least half full. Send to lab immediately on ice.
BNP	2.7 mL Mauve	500 µL	
Lactate	Grey top	250 µL	

Immuno Chemistry Test	Tube Type	Minimum Volume	Notes
AFP 270	3 mL Lithium Heparin Or 500 µL Lithium Heparin Microtainer	500 µL	
B HCG		500 µL	
CK-MB		500 µL	
Troponin		500 µL	
Ferritin		500 µL	
Folate		500 µL	
Folicle Stimulating Hormone		500 µL	
FT3		500 µL	
IgE		500 µL	
Lutinizing Hormone		500 µL	
Progesterone		500 µL	
Prolactin		500 µL	
Testosterone		500 µL	
Thyroid Stimulating Hormone		1 mL	
Vitamin B12	3 mL Gold top or 500 µL gold top Microtainer	500 µL	

Whole Blood Chemistry Tests	Tube Type	Minimum Volume	Notes
B Hydroxybutyrate	3 mL Lithium/ Sodium Heparin or Lithium Heparin Microtainer	1 mL or 250 µL	
HbA1c	3 mL Mauve or Mauve Microtainer	1 mL or 250 µL	
Cyclosporine	3 mL Mauve or Mauve Microtainer	1 mL or 250 µL	

Special Chemistry and Endocrinology Tests	Tube Type	Minimum Volume	Notes
Alpha-1-antitrypsin	Pediatric Red	1 mL	
Androstenedione	Microtainer Red	0.3 mL	
	Pediatric Red	0.3 mL	
Carotene	Pediatric Red	3 mL	
Growth hormone	Pediatric Red	1 mL	
17-Hydroxyprogesterone	Microtainer Red	0.7 mL	
	Pediatric Red	0.7 mL	
IgD	Microtainer Red	0.5 mL	
	Pediatric Red	0.5 mL	
Insulin	Pediatric Red	1 mL	
Insulin-like growth factor 1	Microtainer Red	0.5 mL	
	Pediatric Red	0.5 mL	
Pyruvate	Special Tube	2 mL	Tube prepared by Lab.
Renin	Pediatric Mauve	0.7 mL	
Vitamin D	Microtainer Red	0.7 mL	