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Hematology

Test	Mediatech Laboratory Mnemonic	Specimen Container	Optimum Specimen Holding Temperature	Turn Around Time	Notes / Specimen Criteria
CBC (Complete Blood Count)	CBC	4.0 mL lavender top K ₂ EDTA tube 500 uL K ₂ EDTA Microtainer lavender top Cord Blood (K ₂ EDTA-Lavender)	Room Temperature	STAT: 1 hour Routine: 4 hours	<ul style="list-style-type: none"> Stable at 24 hours If a delay of greater than 4 hours is anticipated, sample should be refrigerated. Samples that are greater than 24 hours, clotted, or with excessive hemolysis will be rejected.
Reticulocyte Count	RET	4.0 mL lavender top K ₂ EDTA tube 500 uL K ₂ EDTA Microtainer lavender top Cord Blood (K ₂ EDTA-Lavender)	Room Temperature	STAT: 1 hour Routine: 4 hours	<ul style="list-style-type: none"> Stable at 24 hours If a delay of greater than 4 hours is anticipated, sample should be refrigerated. Samples that are greater than 24 hours, clotted, or with excessive hemolysis will be rejected.
Blood for Peripheral Smear	MDIFF or automatically reflexed.	4.0 mL lavender top K ₂ EDTA tube Cord Blood (K ₂ EDTA-Lavender)	Room Temperature Optimal: Smears should be made within 4 hours	STAT: 1 hour Routine: 4 hours	<ul style="list-style-type: none"> If Health Care Provider are questioning the presence of schistocytes (fragments), smear should be prepared within 3 hours at RT, or within 8 hours refrigerated.
Erythrocyte Sedimentation Rate (ESR)	ESR	4 mL lavender top K ₂ EDTA tube	Room Temperature: less than 4 hours 2-8°C: up to 24 hours	24 hours	<ul style="list-style-type: none"> All tubes for ESR must have a minimum of 2 mL

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Test	Mediatech Laboratory Mnemonic	Specimen Container	Optimum Specimen Holding Temperature	Turn Around Time	Notes / Specimen Criteria
Mononucleosis Screen Test	MONO	5 mL gold top (SST) tube	2-8°C: up to 8 days	Routine: 24 hours	<ul style="list-style-type: none"> Hemolyzed specimens should not be used.
Malaria Smear	MALPSCR	4 mL lavender top K ₂ EDTA tube is acceptable if received in lab within 1 hour of collection.	Room Temperature: up to 1 hour	STAT: 1 hour	<p>Contact Laboratory at extension 8019 to obtain "Malaria Blood Parasite Patient Questionnaire".</p> <p>Must be filled out at bedside.</p> <p>Note: If patient has already been diagnosed positive for malarial parasites (positive BiNax Now and Positive identification on smears), repeat BiNax Now Rapid Testing is not required.</p>
Kleihauer Betke Stain –Fetal Hemoglobin	KL	4 mL lavender top K ₂ EDTA tube	Room Temperature: up to 24 hours Refrigerated: 2-3 weeks	24 hours	<ul style="list-style-type: none"> The Kleihauer stain determines the amount fetal hemoglobin in blood smears. Maternal blood used
Solubility Test of Hemoglobin S (Sickle Test)	SICKLE	2 x 4 mL lavender top K ₂ EDTA tube	1-10°C: up to 45 days	24 hours	<ul style="list-style-type: none"> 2 tubes of EDTA: 1 tube will be used for the Sickle Cell Screening test (Minimum 1 mL blood collected in EDTA) 1 tube will be referred out for Hemoglobin electrophoresis Infants less than 6 months old cannot be tested for sickle cells with this method: sample must be referred to a reference laboratory for hemoglobinopathy investigation. Blood Bank Unit Segment containing whole blood or packed cells

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Test	Meditech Laboratory Mnemonic	Specimen Container	Optimum Specimen Holding Temperature	Turn Around Time	Notes / Specimen Criteria
Urine for Eosinophils	UEOSS	Urine in Sterile Container	Must be sent to Lab within 10 minutes post collection	24-72 hours	<ul style="list-style-type: none"> Eosinophils may be present in urine of patients with acute interstitial nephritis

Hemostasis/Coagulation:

Test	Mediatech Laboratory Mnemonic	Specimen Container	Optimum Specimen Holding Temperature	Turn Around Time	Notes / Specimen Criteria
Prothrombin Time (INR)	PT	2.7 mL light blue top Na. Citrate tube (3.2% only)	Samples should be tested within 24 hours provided tubes are unopened and samples are stored at 18- 24°C.	STAT: 1 hour Routine: 4 hours	<ul style="list-style-type: none"> Refrigerated samples are unacceptable. 9:1 (sample to anticoagulant) ratio MUST be met. Fill tube until vacuum is depleted. Samples that are clotted, or display excessive hemolysis will be rejected.
Activated Partial Thromboplastin Time (aPTT)	PTT	2.7 mL light blue top Na. Citrate tube (3.2% only)	Samples should be tested within 4 hours provided tubes are unopened and samples are stored at 18- 24°C.	STAT: 1 hour Routine: 4 hours	<ul style="list-style-type: none"> Specimens for routine APTT assays from nonheparinized patients can be maintained in an unopened tube should be tested within four hours provided tubes are unopened and are stored at 18-24°C. aPTT for Unfractionated Heparin (UFH): Samples should be centrifuged within one hour of collection and tested within four hours provided tubes are unopened and samples are stored at 18-24 °C. Platelet poor plasma may be stored at - 20°C for up to two weeks or -70°C for up to six months. Samples that have been frozen should not stand at 37°C for more than five minutes after being thawed. 9:1 (sample to anticoagulant) ratio MUST be met. Fill tube until vacuum is depleted.
D-Dimer	DD	2.7 mL light blue top Na. Citrate tube (3.2% only)	Room Temperature less than 8 hours	STAT: 1 hour	<ul style="list-style-type: none"> Refrigerated samples are unacceptable. 9:1 (sample to anticoagulant) ratio MUST be met. Fill tube until vacuum is depleted. Samples that are clotted, or

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					display excessive hemolysis will be rejected.
Fibrinogen	FIB	2.7 mL light blue top Na. Citrate tube (3.2% only)	Room Temperature less than 8 hours	STAT: 1 hour Routine: 4 hours	<ul style="list-style-type: none"> Refrigerated samples are unacceptable. 9:1 (sample to anticoagulant) ratio MUST be met. Fill tube until vacuum is depleted. Samples that are clotted, or display excessive hemolysis will be rejected.
Factor IX	FAC09	2.7 mL light blue top Na. Citrate tube (3.2% only)	Transport and centrifuge samples at room temperature. Analyze within 4 hours of collection		<ul style="list-style-type: none"> If unable to process the specimens within 4 hours, platelet poor citrated plasma may be frozen at -20°C for up to 2 weeks or -70°C or colder for 6 months.
Factor VIII	FAC08	2.7 mL light blue top Na. Citrate tube (3.2% only)	Transport and centrifuge samples at room temperature. Analyze within 2 hours of collection		<ul style="list-style-type: none"> If unable to process the specimens within 2 hours, platelet poor citrated plasma may be frozen at -20°C for up to 2 weeks or -70°C or colder for 3 months. NOTE: Factor VIII is a labile protein – improper handling of a specimen may give a false result
Thrombin Time	TT	2.7 mL light blue top Na. Citrate tube (3.2% only)	15-25°C: up to 8 hours If patient is on Heparin therapy, must perform testing within 2 hours.	STAT: 1 hour Routine: 4 hours	<ul style="list-style-type: none"> Refrigerated samples are unacceptable. 9:1 (sample to anticoagulant) ratio MUST be met. Fill tube until vacuum is depleted. Samples that are clotted, or display excessive hemolysis will be rejected.
Referred in Tests (Coagulation)	Specific	2.7 mL light blue top Na. Citrate tube (3.2% only)	Frozen - Plasma		<p>Any samples sent from a referring Laboratory must be received in the frozen state. Thaw sample at 37C and mix well prior to analysis.</p> <p>Specimens arriving in a thawed or partially thawed state must be rejected.</p>

Hematology – Body Fluids & Cerebral Spinal Fluids

Test	Mediatech Laboratory Mnemonic	Specimen Container	Optimum Specimen Holding Temperature	Turn Around Time	Notes / Specimen Criteria
CSF Cell Count + Differential	CSFCELLC	CSF tubes from CSF collection tray (collected in order), or Sterile container if specimen is from Shunt.	Room Temperature	1 hour	<ul style="list-style-type: none"> • Tube #1 – Chemistry (e.g. protein, glucose). Note: If traumatic tap is suspected, cell count and differential should also be performed on Tube #1. • Tube #2 – Microbiology (Gram stain and cultures) • Tube #3 or Tube #4 – Hematology (Cell count and differential) • This is an irretrievable sample. DO NOT send through pneumatic tube system. • Transport to the laboratory immediately by hand.
Pleural Fluid Cell Count	PLCELLC	EDTA or Sterile container* *Note: body fluids/peritoneal dialysate received in sterile container will be transferred to a labelled EDTA or non-additive tube prior to analysis.	Room Temperature If a significant delay is anticipated, the specimen may be stored at 2-8°C		<p>Body fluids must be hand delivered to the lab at room temperature [Do not use pneumatic tube system (PTS)] and analyzed as soon as possible after collection.</p> <p>Specimens should be processed within 24 hours of collection.</p> <p>Bronchial washing and related samples are not suitable for automated cell count.</p>
Peritoneal Fluid Cell Count	PFCELLC	EDTA or Sterile container*	Room Temperature If a significant delay		<p>Body fluids must be hand delivered to the lab at room temperature [Do not use pneumatic tube system (PTS)] and</p>

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		*Note: body fluids/peritoneal dialysate received in sterile container will be transferred to a labelled EDTA or non-additive tube prior to analysis.	is anticipated, the specimen may be stored at 2-8°C		analyzed as soon as possible after collection. Specimens should be processed within 24 hours of collection.
Pericardial Fluid – Cell Count	PERICELLC	EDTA or Sterile container* *Note: body fluids/peritoneal dialysate received in sterile container will be transferred to a labelled EDTA or non-additive tube prior to analysis.	Room Temperature If a significant delay is anticipated, the specimen may be stored at 2-8°C		Body fluids must be hand delivered to the lab at room temperature [Do not use pneumatic tube system (PTS)] and analyzed as soon as possible after collection. Specimens should be processed within 24 hours of collection.
Synovial Fluids – Cell Count	SYNCELLC	EDTA or Sterile container* *Note: body fluids/peritoneal dialysate received in sterile container will be transferred to a labelled EDTA or non-additive tube prior to analysis.	Room Temperature If a significant delay is anticipated, the specimen may be stored at 2-8°C		Body fluids must be hand delivered to the lab at room temperature [Do not use pneumatic tube system (PTS)] and analyzed as soon as possible after collection. Specimens should be processed within 24 hours of collection.
Synovial Fluids – Crystals	SYNCRYS	Sodium Heparin OR Sterile container	Room Temperature If a significant delay is anticipated, the specimen may be stored at 2-8°C		

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<p>Peritoneal Dialysate – Cell Count</p>	<p>DIALCELLC</p>	<p>EDTA or Sterile container* *Note: body fluids/peritoneal dialysate received in sterile container will be transferred to a labelled EDTA or non-additive tube prior to analysis.</p>	<p>Room Temperature If a significant delay is anticipated, the specimen may be stored at 2-8°C</p>		<p>Body fluids must be hand delivered to the lab at room temperature [Do not use pneumatic tube system (PTS)] and analyzed as soon as possible after collection.</p> <p>Specimens should be processed within 24 hours of collection.</p> <p>Bronchial washing and related samples are not suitable for automated cell count.</p>
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Biochemistry – General

Unless specified, 3.5 mL SST Vacutainer – **Yellow Top** Tubes can be used instead of 3.0 mL **mint green** (PST) Gel Lithium Heparin tube

Test	Meditect Laboratory Mnemonic	Specimen Container	Optimum Specimen Holding Temperature	Turn Around Time	Notes / Specimen Criteria
Acetaminophen	ACET	4.0 mL Lithium Heparin dark green (no gel) tube	Room Temperature: < 2 weeks Frozen: <45 days	4 hours	
Albumin	ALB	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: <7 days Refrigerated: <1 month Frozen: Indefinite	8 hours	
ALP (Alkaline Phosphatase)	ALP	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: <4 days Refrigerated: <4 days Frozen: <4days	8 hours	
ALT (Alanine Aminotransferase)	ALT	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: <18 hours Refrigerated: <1 week Frozen: Not recommended	8 hours	Centrifuge the specimen within 3 days.
Ammonia	NH3 OR AMM	3.0 mL mint green (PST) Gel Lithium Heparin tube	Frozen: <24 hours Refrigerated: <3 hours	4 hours	Hemolyzed samples are not suitable for analysis and will be rejected. Must be centrifuged within 45 minutes of collection.

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Amylase	AMY	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: <7 days Refrigerated: < 1 month Frozen: Not recommended	8 hours	Centrifuge the specimen within 4 hours.
ANA (Anti-Nuclear Antibodies)	ANA	3.5 ML SST Vacutainer – Yellow Top	3 days @ 2 – 8oC 1 month @-20 oC		
AST (Aspartate Aminotransferase)	AST	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: <3 days Refrigerated: < 7 days Frozen: <3 months	24 hours	Hemolysed samples should not be tested.
Bilirubin – Conjugated	BILID	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: <4 hours Refrigerated: <7 days Frozen: <6 months	8 hours	Centrifuge the specimen within 4 hours.
Bilirubin – Neonatal	BILIN	600 uL Lithium Heparin Microtainer PST - Amber	Room Temperature: < 4hours Refrigerated:<7 days Frozen: <6 months	4 hours	Minimize sample exposure to light. Usually ordered until patient is 16 days old.
Bilirubin – Total	BILIT	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature:< 4 hours Refrigerated: < 7 days Frozen: <6 months	8 hours	If sent in PTS carrier, bubble wrap must be present or test will not be performed.

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Bilirubin – Unconjugated	BILII	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: <4 hours Refrigerated: < 7 days Frozen: <6 months	8 hours	Centrifuge the specimen within 4 hours.
Blood Urea Nitrogen (BUN)	UREA or BUN	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: <1 day Refrigerated: <5 days Frozen: <6 months	24 hours	Centrifuge the specimen within 4 hours.
CA-125 (Cancer Antigen 125)	CA125	3.0 mL mint green (PST) Gel and Lithium Heparin tube	Room Temperature: <24 hours Refrigerated: <7 days Frozen: 4 weeks	24 hours	
Calcium Total	CA	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: <4 hours Refrigerated: <7 days Frozen: <1 year	8 hours	Centrifuge the specimen within 24 hours.
Carbamazepine (Tegretol)	CARB	4.0 mL Lithium Heparin dark green (no gel) tube	Room Temperature: <5 days Refrigerated: < 5 days Frozen: <6 months	8 hours	Centrifuge the specimen within 4 hours.

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CEA (Carcinoembryonic Antigen)	CEA	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: < 7 days Refrigerated: < 7 days Frozen: Indefinite	24 hours	Patient should refrain from taking Biotin supplements.
Chloride	CL	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: < 7 days Refrigerated: < 7 days Frozen: Indefinite	24 hours	Centrifuge the specimen within 4 hours.
Cholesterol	CHOL	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: Not recommended Refrigerated: < 3 days Frozen: <3 weeks	24 hours	Centrifuge the specimen within 3 hours.
CK (Creatine Kinase)	CK	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: <4 hours Refrigerated: <5 days Frozen: <1 month	24 hours	Centrifuge the specimen within 4 hours.
ECO2	CO2	3.0 mL mint green (PST) Gel Lithium Heparin tube	Room Temperature: < 24 hours Refrigerated: < 3 days Frozen: <1 month	8 hours	Centrifuge the specimen within 4 hours. Not eligible for add on testing.

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Complement – C3	COMC3	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: <1 day Refrigerated: <3 days Frozen: <1 year	24 hours	Centrifuge the specimen within 2 hours.
Complement – C4	COMC4	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: <1 day Refrigerated: < 7 days Frozen: Indefinitely	24 hours	Centrifuge the specimen within 2 hours.
Cortisol	CORTR (Random) CORTAM CORTPM	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Refrigerated: < 5 days Frozen: 4 weeks	24 hours	AM Cortisol is collected at 0800 hr PM Cortisol is collected at 1600 hr Note: Urine cortisol is referred out for testing.
Creatinine (EGFR)	CREAT	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: <5 days Refrigerated: <7 days Frozen: Indefinite	8 hours	
CRP (C-Reactive Protein)	CRP	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: < 4 hours Refrigerated: <3 days Frozen: <6 months	24 hours	

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Digoxin	DIG	6.0 mL Red Top Serum Vacutainer	Room Temperature: <8 hours Refrigerated: <7 days Frozen: <4 months	8 hours	Centrifuge the specimen within 4 hours.
DNA	DNAAB	3.5 mL SST Vacutainer – Yellow Top	3 days @ 2 – 8oC 1 month @-20 oC		Centrifuge the specimen within hours.
Ethanol	ALC	3.0 mL mint green (PST) Gel Lithium Heparin tube	Room Temperature: < 2 days Refrigerated: < 2 weeks Frozen: 1 month	4 hours	Sample is not eligible for add on testing. Do not cleanse the sample site with alcohol or other volatile disinfectants.
Ferritin	FER	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: <5 days Refrigerated: < 5 days Frozen: <4 weeks	24 hours	
Folate	FOL	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Refrigerated: < 7 days Frozen: 4 weeks	24 hours	
Free T4	FT4	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Refrigerated: <7 days Frozen: 4 weeks	24 hours	

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Free T3	FT4	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Refrigerated: <7 days Frozen: 4 weeks	24 hours	
FSH (Follicle Stimulating Hormone)	FSH	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Refrigerated: < 6days Frozen: 4 weeks	24 hours	
GGT (Gamma-Glutamyl Transferase)	GGT	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: <7 days Refrigerated: <7days Frozen: 2 months	24 hours	
Gentamycin	GENTP (Peak) or GENTT(Trough)	4.0 mL Lithium Heparin dark green (no gel) tube	Room Temperature: <2 hours Refrigerated: <7 days Frozen: <14 days	8 hours	Centrifuge the specimen within 1 hour. Peak collected 60-90 minutes post dose. Trough collected 30 before next dose.
Glucose - Blood	GLUF (Fasting) GLUC (Random)	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: <24 hours Refrigerated: <7 days Frozen: 1 year	8 hours	Centrifuge the specimen within 1 hour.

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Glycated Hemoglobin (HbA1C)	HBA1C	4.0 mL EDTA purple tube.	Room Temperature: <3 days Refrigerated: <3 days	24 hours	
HCG Quantitative	BHCGQ	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Refrigerated: <5 days Frozen: 4 weeks	4 hours	
HCG Tumour	BHCGTM	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: < 24 hours Refrigerated: <5 days Frozen: 4 weeks	72 hours	
Hepatitis B Surface Antigen (HBsAg)	HBSAG	3.5 mL SST Vacutainer – Yellow Top	Refrigerated: <5 days Frozen : 4 weeks	24 hours	
HDL (High Density Lipoprotein)	LIPID	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Refrigerated: <3 days Frozen: 3 weeks	24 hours	
IgA Quantitation	IGA	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature:<24 hours Refrigerated: <7 days Frozen: <4 weeks	24 hours	Centrifuge the specimen within 2 hours.

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IgG Quantitation	IGG	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: <24 hours Refrigerated: <7 days Frozen: <4 weeks	24 hours	Centrifuge the specimen within 2 hours.
IgM Quantitation	IGM	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: <24 hours Refrigerated: <7 days Frozen: <4 weeks	24 hours	Centrifuge the specimen within 2 hours.
Iron (Fe)	FE	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: < 4 days Refrigerated: <7 days Frozen: <3 months	24 hours	Centrifuge the specimen within 1 hour.
Ketone – Serum (β-Hydroxybutyrate)	KET	3.5 mL SST Vacutainer – Yellow Top	Room Temperature: <2 hours	8 hours	Hemolyzed samples will not be processed.
Lactate (Lactic Acid)	LA	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: <8 hours once centrifuged Refrigerated: <7 days Frozen: <1 month	4 hours	Centrifuge the specimen within 45 minutes. Must send down on ice.
LDH (Lactate Dehydrogenase)	LDH	3.0 mL mint green (PST) Gel Lithium Heparin tube	Room Temperature: < 2 days	24 hours	Centrifuge the specimen within 1 hour.

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LH (Luteinizing Hormone)	LH	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Refrigerated: <5 days Frozen: <4 weeks	24 hours	
Lipase	LIPA	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: <7 days Refrigerated: <7 days Frozen: <5 months	8 hours	
Lithium	LI	6.0 mL Red Top Serum Vacutainer	Room Temperature: <8 hours Refrigerated: <24 hours Frozen: <6 months	8 hours	Centrifuge the specimen within 4 hours.
Magnesium	MG	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: <7 days Refrigerated: <7 days Frozen: < 1 month	24 hours	
Methotrexate	METHO	4.0 mL Lithium Heparin dark green (no gel) tube	Refrigerated: <14 days	4 hours	
NT proBNP	BNPNTPRO	3.0 mL mint green (PST) Gel Lithium Heparin tube	Room Temperature: <2 days Refrigerated: < 3 days Frozen: <1 year	7 days	

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Osmolarity - Serum	OSMO	3.5 mL SST Vacutainer – Yellow Top	Room Temperature: < 3 hours Refrigerated: < 24 hours Frozen:	8 hours	Uncapped samples should not exceed 45 minutes
pH – Serum	PH	3.5 mL SST Vacutainer – Yellow Top	Room Temperature: <2 hours	2 hours	
Phenytoin (Dilantin)	PHENY	4.0 mL Lithium Heparin Vacutainer – No Gel (Dark Green)	Room Temperature: <8 hours Refrigerated: <7 days Frozen: <12 weeks	8 hours	Centrifuge the specimen within 4 hours.
Phosphorus	PHOS	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: <3 days Refrigerated: <7 days Frozen: <2 months	24 hours	
Potassium	K	3.0 mL mint green (PST) Gel and Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: <7 days Refrigerated: <7 days Frozen: <1 year	4 hours	Centrifuge the specimen within 2 hours. Test not validated to be sent without bubble wrap in pneumatic tube systems.
Prolactin	PROL	3.0 mL mint green (PST) Gel Lithium Heparin tube	Room Temperature: Refrigerate ASAP Refrigerated: <5 days Frozen: 4 weeks	24 hours	

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Protein – Total	TP	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: <4 hours Refrigerated: <3 days Frozen: <6 months	24 hours	
PSA (Prostate Specific Antigen)	PSA	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: Refrigerate ASAP Refrigerated: <7 days Frozen: <4 weeks	24 hours	
PTH (Parathyroid Hormone)	PTH	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: <6 hours Refrigerated: <2 days Frozen: <4 weeks	8 hours	
RF (Rheumatoid Factor)	RF	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: <1 day Refrigerated: <3 days Frozen: 6 months	24 hours	
Salicylate	SAL	4.0 mL Lithium Heparin dark green (no gel) tube	Room Temperature: <7 days Refrigerated: <7 days Frozen: <6 months	4 hours	Centrifuge the specimen within 4 hours.

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Sodium	NA	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: <1 day Refrigerated: <7 days Frozen: <6 months	4 hours	Centrifuge the specimen within 48 hours.
Testosterone	TESTT	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: Refrigerate ASAP Refrigerated: <7 days Frozen: <4 weeks	24 hours	
Tobramycin	TOBRAP(Peak) TOBRAT (Trough)	4.0 mL Lithium Heparin dark green (no gel) tube	Room Temperature: <2 hours Refrigerated: <7 days Frozen: <2 weeks	8 hours	Centrifuge the specimen within 1 hours.
Triglycerides	TRIG	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: < 3 days Refrigerated: < 7 days Frozen: <6 months	24 hours	Centrifuge the specimen within 4 hours.
Troponin I	TROPI	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: < 6 hours Refrigerated: <7 days Frozen: <4 weeks	4 hours	Hemolysed samples will not be tested.

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TSH (Thyroid Stimulating Hormone)	TSH	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: Refrigerate ASAP Refrigerated: <7 days Frozen: <4 weeks	24 hours	
Transferrin	TRANS	3.0 mL mint green (PST) Gel Lithium Heparin tube or 600 µL Lithium Heparin Microtainer PST - Amber	Room Temperature: <1 days Refrigerated: <3 days Frozen: Indefinitely	24 hours	
Uric Acid	URIC	3.0 mL mint green (PST) Gel Lithium Heparin tube	Room Temperature: <3 days Refrigerated: <5 days Frozen: <6 months	24 hours	Centrifuge the specimen within 4 hours.
Vancomycin	VANCR (Peak) VANCT(Trough)	6.0 mL Red Top Serum Vacutainer	Room Temperature: <2 hours Refrigerated: <3 days Frozen:	8 hours	Centrifuge the specimen within 4 hours.
Valproic Acid (Depakene)	VAL	4.0 mL Lithium Heparin dark green (no gel) tube	Room Temperature: <1 day Refrigerated: <7 day Frozen: 14 days	8 hours	
Vitamin B12	B12	3.0 mL mint green (PST) Gel Lithium Heparin tube	Room Temperature: <6 hours Refrigerated: <7 days Frozen: <4 weeks	24hours	

Biochemistry - Urine

Test	Mediatech Laboratory Mnemonic	Specimen Container	Optimum Specimen Holding Temperature	Turn Around Time	Notes / Specimen Criteria
Calcium – Urine	UCA24HR (24 hour collection) UCAR (Random)	Orange Sterile Container or 24 hour Urine Collection container	Room Temperature: <5 days Refrigerated: <5 weeks	24 hours	Laboratory will acidify sample prior to analysis.
Creatinine - Urine	URCREAT24HR(24 hour collection) UCREAR (Random)	Orange Sterile Container or 24 hour Urine Collection container	Room Temperature: <3 days Refrigerated: <5 days	8 hours	
Drugs of Abuse Screen – Urine	UDSRAPID OR	Orange Sterile Container	Room Temperature: 24 hours Refrigerated: < 48 hours Frozen: Indefinitely	8 hours	Screen includes Amphetamines, Barbiturates, Benzodiazepines, Buprenorphine, Cocaine, Fentanyl, Methamphetamines, Methadone, Opiates, Tricyclic Antidepressants, Oxycodone, Phencyclidine, THC, and Propoxyphene. Contact Laboratory for “List of Cross Reactant Substances” if needed.
Glucose – Urine	UGLUR (Random) UGLU24HR (24 hour)	Orange Sterile Container or 24 hour Urine Collection container	Refrigerated: Not determined	24 hours	
HCG – Urine Screen	UBHCG	Orange Sterile Container	Refrigerated: <48 hours		Serum screen unavailable, please order HCG Quantitative if requested for serum.

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Magnesium - Urine	UMG24HR UMGR	Orange Sterile Container or 24 hour Urine Collection container	Room Temperature: <7 days Refrigerated: <7 days	24 hours	Laboratory will acidify sample prior to analysis.
Microalbumin	UMACRRATIO	Orange Sterile Container	Room Temperature: <1 day Refrigerated: <7 days	24 hours	
Osmolality – Urine	UOSMO	Orange Sterile Container, or Non Additive Clear Vacutainer	Room Temperature: <3 hours Refrigerated: < 7 days	8 hours	
Phosphorus – Urine	UPHOS24HR UPHOSR	Orange Sterile Container or 24 hour Urine Collection container	Room Temperature: <6 days Refrigerated: < 2 days	4 hours	Laboratory will acidify sample prior to analysis.
Potassium – Urine	UK24HR (24 hour) UKR (Random)	Orange Sterile Container or 24 hour Urine Collection container	Room Temperature: <4 days Refrigerated: <7 days	24 hours	
Protein – Urine	UPROT24 UPROTR	Orange Sterile Container or 24 hour Urine Collection container	Room Temperature: <4 hours Refrigerated: <3 days	24 hours	

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Sodium – Urine	UNAR UNA24HR	Orange Sterile Container or 24 hour Urine Collection container	Room Temperature: <24 hours Refrigerated: <7 days	24 hours	
Urea – Urine	UUREA24HR UUREAR	Orange Sterile Container or 24 hour Urine Collection container	Refrigerated: Refrigerate until analysis.	24 hours	
Uric Acid – Urine	UURICR UURIC24HR	Orange Sterile Container or 24 hour Urine Collection container	Room Temperature: <3 days	24 hours	Laboratory will alkalize sample prior to analysis.
Urinalysis	UA	Orange Sterile Container	Room Temperature: <2 hours	8 hours	Strongly colored urines will not be processed due to interferences. A microscopic examination will be performed.

Biochemistry – Blood Gases

Test	Mediatech Laboratory Mnemonic	Specimen Container	Optimum Specimen Holding Temperature	Turn Around Time	Notes / Specimen Criteria
Arterial Blood Gas	ABG	Lithium Heparin Syringe	Sent down on ICE Room Temperature: 15 minutes Refrigerated/Ice Slurry: 60 minutes		
Capillary Blood Gas	CAPBG	Capillary Gas Collection tubes	Run immediately		
Carboxyhemoglobin	CO OR OXIM	Lithium Heparin Syringe	Room Temperature: <30 days	4 hours	
Ionized Calcium	IONCA	Lithium Heparin Syringe	Sent down on ICE Room Temperature: 15 minutes Refrigerated/Ice Slurry: 60 minutes	8 hours	Note: If specimen is exposed to air it is deemed unsuitable for analysis. Must fill 50% of the syringe.
Venous Blood Gas	VBG	4.0 mL Lithium Heparin dark green (no gel) tube sent down on ice.	Sent down on ICE Room Temperature: 15 minutes Refrigerated/Ice Slurry: 60 minutes		If both a VBG and Ionized Calcium are ordered than only a single lithium heparin syringe is required.

Biochemistry – Cerebral Spinal Fluid

Test	Meditech Laboratory Mnemonic	Specimen Container	Optimum Specimen Holding Temperature	Turn Around Time	Notes / Specimen Criteria
Glucose – CSF	CSFGLUC	CSF tubes from CSF collection tray (collected in order), or Sterile container if specimen is from Shunt.	Room Temperature: < 4hours Refrigerated: < 1 week	4 hours	<ul style="list-style-type: none"> • Tube #1 – Chemistry (e.g. protein, glucose). Note: If traumatic tap is suspected, cell count and differential should also be performed on Tube #1. • Tube #2 – Microbiology (Gram stain and cultures) • Tube #3 or Tube #4 – Hematology (Cell count and differential) • This is an irretrievable sample. DO NOT send through pneumatic tube system. Transport to the laboratory immediately by hand.
Protein – CSF	CSFTP	CSF tubes from CSF collection tray (collected in order), or Sterile container if specimen is from Shunt.	Room Temperature: < 4 hours Refrigerated: < 3 days	4 hours	<ul style="list-style-type: none"> • Tube #1 – Chemistry (e.g. protein, glucose). Note: If traumatic tap is suspected, cell count and differential should also be performed on Tube #1. • Tube #2 – Microbiology (Gram stain and cultures) • Tube #3 or Tube #4 – Hematology (Cell count and differential) • This is an irretrievable sample. DO NOT send through pneumatic tube system. Transport to the laboratory immediately by hand.

Biochemistry – Body Fluids

Meditech Mnemonic Test codes are body site dependent. Please use the following prefixes, followed by the test Ex: PLALB (Pleural Albumin)

Pleural: PL

Peritoneal: PF

Pericardial: PERI

Synovial: SYN

Dialysate Fluid: DIAL

Test	Meditech Laboratory Mnemonic	Specimen Container	Optimum Specimen Holding Temperature	Turn Around Time	Notes / Specimen Criteria
Albumin – Body Fluid	Site + ALB	Sterile sample container, or 4.0 mL Lithium Heparin dark green (no gel)	Room Temperature: <7 days Refrigerated: < 1 month	24 hours	Samples are kept in the Laboratory for 30 days post testing.
Amylase – Body Fluid	Site + AMY	Sterile sample container, or 4.0 mL Lithium Heparin dark green (no gel)	Room Temperature: < 7 days Refrigerated: < 1 month	24 hours	Samples are kept in the Laboratory for 30 days post testing.
AST – Body Fluid	Site + AST	Sterile sample container, or 4.0 mL Lithium Heparin dark green (no gel)	Room Temperature: < 7 days	24 hours	Samples are kept in the Laboratory for 30 days post testing.
Calcium – Body Fluid	Site + CA	Sterile sample container, or 4.0 mL Lithium Heparin dark green (no gel)	Room Temperature: < 7 days	24 hours	Samples are kept in the Laboratory for 30 days post testing.
Cholesterol – Body Fluid	Site + CHOL	Sterile sample container, or 4.0 mL Lithium Heparin dark green (no gel)	Refrigerated: < 3 days	24 hours	Samples are kept in the Laboratory for 30 days post testing.

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Creatinine – Body Fluid	Site + CR	Sterile sample container, or 4.0 mL Lithium Heparin dark green (no gel)	Room Temperature: <5 days Refrigerated: <7 days	24 hours	Samples are kept in the Laboratory for 30 days post testing.
Fecal Occult Blood	OB1,OB2,OB3	Orange Sterile Container	Room Temperature: 14 days	3 days	
Fetal Fibronectin	FFN	Adeza/Hologic Biomedical Specimen Collection Kit Container	Room Temperature: <8 hours Refrigerated: <3 days		
Glucose – Body Fluid	Site + GLU	Sterile sample container, or 4.0 mL Lithium Heparin dark green (no gel)	Refrigerated: <7 days	24 hours	Samples are kept in the Laboratory for 30 days post testing.
LDH – Body Fluid	Site + LDH	Sterile sample container, or 4.0 mL Lithium Heparin dark green (no gel)	Room Temperature:<2 days	24 hours	Samples are kept in the Laboratory for 30 days post testing.
pH – Body Fluid	Site + PH	Sterile sample container	Room Temperature: Refrigerated:	24 hours	Samples are kept in the Laboratory for 30 days post testing.
Protein – Body Fluid	Site + TP	Sterile sample container, or 4.0 mL Lithium Heparin dark green (no gel)	Room Temperature: <4 hours Refrigerated: <3 days	24 hours	Samples are kept in the Laboratory for 30 days post testing.
Sweat Chloride	SWTCLP	Macroduct sweat collection device.	Room Temperature: 7 days	24 hours	Samples are kept in the Laboratory for 30 days post testing. Performed Monday - Friday
Triglycerides – Body Fluids	Site + TRIG	Sterile sample container, or 4.0 mL Lithium Heparin dark green (no gel)	Room Temperature: <3 days Refrigerated: < 7 days	24 hours	Samples are kept in the Laboratory for 30 days post testing.

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Uric Acid – Body Fluid	Site + URIC	Sterile sample container, or 4.0 mL Lithium Heparin dark green (no gel)	Room Temperature: <3 days Refrigerated: <7 days	24 hours	Samples are kept in the Laboratory for 30 days post testing.
Urea – Body Fluid	Site + UREA	Sterile sample container, or 4.0 mL Lithium Heparin dark green (no gel)	Room Temperature:	24 hours	Samples are kept in the Laboratory for 30 days post testing.
Vitreous Fluid Panel	VITFLD	Sterile Serum Vacutainer	Due to sample nature, all samples will be processed. See Notes section	8 hours	All samples will be processed except if a red color is noted. Samples are kept in the Laboratory for 2 years post autopsy.

Transfusion Medicine

For referral sites, prior to sending ANY specimen, call Transfusion Medicine Reference Laboratory (705) 523-7294.

State nature of the investigation, the mode of shipping and the estimated arrival time. Obtain specimen collection requirements. Send two 7ml EDTA anticoagulated blood unspun. Additional specimen may be required depending on patient's hemoglobin and expected testing required

Test	Mediatech Laboratory Mnemonic	Specimen Container	Optimum Specimen Holding Temperature	Notes / Specimen Criteria
Type and Screen	TS	10 mL Lavender K ₂ EDTA Vacutainer	Testing of sample must be complete within 5 days of collection. Store at 2-8°C	EDTA anticoagulated whole blood free from hemolysis (if possible) is the preferred specimen.
Antibody Identification	ABID	10 mL Lavender K ₂ EDTA Vacutainer	2-8°C	
Cord Blood Testing	CORDAT (Cord DAT) CORDTYPE (Cord Type)	Red Top 6.0 mL Vacutainer with Cord Blood sample	2-8°C	Cord blood is collected on all new born babies, sent to the blood bank and stored for a minimum of one week. However routine cord blood testing will only be performed under the following circumstances: <ul style="list-style-type: none"> • Babies born to Rh Negative (or Weak D) mothers • Babies born to mothers who have an identified clinically significant antibody (will be done on a STAT basis) • Babies whose mother's ABO/Rh typing is unknown • Upon Doctor's request • Stillborn cords

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				A venous or capillary sample should be used for all pre-transfusion testing of neonates. Cord samples are NOT an acceptable alternative
Crossmatch – Packed Red Blood Cells	PRC	10 mL Lavender K ₂ EDTA Vacutainer	2-8°C	<p>For patients who have been transfused or pregnant within the last three months, or if history of transfusion or pregnancy is uncertain or unknown, specimens for compatibility testing shall be no more than 96 hours old.</p> <p>For patients who have not been transfused or pregnant in the past three months, plasma for compatibility testing may be stored and used up to 31 days from the collection date.</p>
DAT (Direct Coombs) Report includes Anti IgG, and Anti-C3d	DAT	10 mL Lavender K ₂ EDTA Vacutainer	2-8°C	<p>The Direct Antiglobulin Test (DAT) may be performed for investigation of:</p> <ul style="list-style-type: none"> • autoimmune hemolytic anemia • transfusion reactions • sensitization caused by drugs • investigation of an incompatible crossmatch <p>EDTA plasma is the specimen of choice. Testing should be performed within 5 days of specimen collection. Samples that cannot be tested immediately should be stored at 2-8°C, however samples must be at room temperature prior to analysis.</p>

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Fetal Bleed Screen	FMSCREEN	10 mL Lavender K ₂ EDTA Vacutainer	1°C to 10°C Testing of the sample must be done within 48 hours of collection.	<p>300 micrograms (one dose) of Rh(D)Immune globulin (RhoGam) protects an Rh negative mother against Rh immunization when there is a fetal-maternal bleed of 30 mLs or less of Rh positive whole blood.</p> <p>This test is only for testing fetal bleed in Rh negative mothers who have given birth to a Rh Positive baby. If there is a request for a fetal hemoglobin screen on a woman who is currently pregnant or on an Rh Positive or Weak D positive mother, or if the baby is Weak D positive, order and perform a Kleihauer test instead of this test to detect fetal cells in the maternal circulation.</p> <p>The test procedure requires a blood specimen collected from the MOTHER after delivery of all products of conception. It is best to wait about an hour after delivery to allow any fetal blood to mix thoroughly in the maternal circulation, but the sample should be collected as soon as possible thereafter</p>
Weak D Typing	WEAKD (ABO/Rh Type Du included)	Lavender K ₂ EDTA Vacutainer Cord blood specimen collected into a red top tube (no anticoagulant and no serum separator)	2-8°C	<p>Weak D typing shall be done in the following situations:</p> <ul style="list-style-type: none"> • all Rh negative newborn Cord or Infant specimens, when testing is performed to determine maternal Rhogam requirements • cases of weak (less than 2+) agglutination of patient red cells with Anti-D • discrepant Rh typing results between current and historical typing (if a patient has a history of being Weak D positive reported only once, the Weak D typing needs to be repeated another time for confirmation)

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<p>Transfusion Reaction Investigation</p>	<p>TXRXN (Workup) TXRXSCREEN (Screen)</p>	<p>10 mL Lavender K₂EDTA Vacutainer</p>	<p>2-8°C</p>	<p>If a Transfusion Reaction is suspected or patient is exhibiting signs and symptoms of a transfusion reaction. Reference Transfusion Reaction Algorithm</p> <ol style="list-style-type: none"> 1. Nurse is to STOP THE TRANSFUSION IMMEDIATELY and keep the IV line open with 0.9% saline 2. Contact the physician for medical assessment 3. Check vital signs every 15 minutes until stable 4. Check all labels, forms, and the patient's identification band to determine if there is a clerical discrepancy. <p>Other samples that might need to be collected/ordered:</p> <ul style="list-style-type: none"> • Pre-DAT • Pre and Post Antibody Screen • Pre and Post crossmatch • LDH and Total and Direct Bilirubin • Hemoglobin and signs of hemolysis (CBCD in Meditech Expanse + Manual Diff) • Urine color, blood, hemoglobin, bilirubin, urobilinogen (if received) (Urinalysis in Meditech Expanse) • Antibody Identification
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Flow Cytometry

Specimens must be received in the Flow Cytometry Laboratory no later than 12:00 noon on Fridays.

Test or Specimen Type	Meditech Laboratory Mnemonic	Specimen Container	Optimum Specimen Holding Temperature	Turn Around Time	Notes / Specimen Criteria
Peripheral blood specimens for CD3/CD4/CD8 (Lymphocyte subset analysis) quantitation	LYMAR	One 4 ml EDTA CBC count with Differential 1 unstained blood smear.	Store and ship at room temperature.		Other names: Tetra, TBNK, or "Immune Status" Must be processed within 24 hours post collection.
Peripheral blood specimens for lymphoproliferative disorders or acute leukemia	LYMAR	One 4mL EDTA and One 4 mL Sodium Heparin (Dark Green) 2 unstained blood smears with a CBC count	Store and ship at room temperature (may be refrigerated)		Must be processed within 48 hours after collection.
Bone marrow specimens for lymphoproliferative disorders or acute leukemia	LYMAR	One 4mL EDTA and One 4 mL Sodium Heparin (Dark Green) with 2 mL of specimen in each. 3 unstained bone marrow slides 2 unstained peripheral blood smears	Store and ship at room temperature.		
Bone Marrow specimen for Minimal Residual Disease Testing	FLAWS + Source (BM)	First draw One EDTA – 1 mL of non-clotted bone marrow.	Store and ship at room temperature.		Please complete "Minimal Residual Disease Testing for Acute Lymphoblastic Leukemia Requisition" at bedside during bone marrow collection Only collect Monday-Thursday before noon ONLY.

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Excised lymph node, Fine Needle Aspirate or other tissue specimens (Specify Site)	LYMAR	Excised lymph node full covered in RPMI solution, or sterile saline. 2 unstained touch preps.	Store and ship samples at 2-8C, protected from light. Process within 48 hours of collection.		
CSF	LYMAR	2 mL of neat CSF – specify which tube. Cell count – 2 unstained cytopsin slides required.	Store and ship samples at 2-8C, protected from light. Process within 24 hours of collection.		
Other body fluids (Specify Site)	LYMAR	2 mL of neat sample in EDTA or Sodium Heparin (Dark Green) Sterile fluid container Cell count – 2 unstained cytopsin slides required.	Store and ship samples at 2-8C. Process within 24 hours of collection		

Microbiology

Test	Mediatech Laboratory Mnemonic	Specimen Container	Optimum Specimen Holding Temperature	Turn Around Time	Notes / Specimen Criteria
Anaerobic Culture	ANC+ Source	Anaerobic transport medium (available in the Microbiology Lab)		Gram Stain: Same day Culture: 3-5 days	Specimen types: Aspirates Body Fluids Tissue/Biopsy Deep wound
Blood Culture	BC	Blood Culture C&S (including yeasts): BacT/ALERT bottles Plus (Aerobic) 10mL, FA-Mint Plus (Anaerobic) 10mL, FN-Orange Plus (Peds) Volume based on weight-PF -Yellow Fungal Blood Culture: 10mL Heparin Tube	Send to the laboratory ASAP. If a delay in transport or processing is anticipated, keep the specimen at Room Temperature.	Negative: 5 days	Simultaneously from separate sites or within 30min of each other Suspected endocarditis (as specified by physician): 2-3 sets from separate sites over 1-2 hrs.
Bone Marrow	BMC BMCAFB BMCFUN	Routine culture: Green top heparin (sodium or lithium)	Fungal: Refrigerate specimen until referral to PHL for processing.	Expected time for culture results: 2-5 days	Aspirate aseptically using established technique.

		<p>vacutainer tube (≥ 1 ml)</p> <p>Fungal culture: Green top heparin (sodium or lithium) vacutainer tube (≥ 1 ml)</p> <p>Acid-fast bacilli (AFB): Green top heparin (sodium or lithium) vacutainer tube (≥ 1 ml)</p> <p>Virus culture: Virus Transport Media (≥ 1 ml)</p>	<p>AFB: Do NOT refrigerate. Hold at room temperature until referral to PHL for processing.</p> <p>Virus Culture: Refrigerate specimen in viral transport media until referral to PHL for processing.</p>		
<p>Catheter Tip</p> <p>Intravascular (intra-arterial or intravenous)</p>	ICTC + Source	Sterile dry container.		<p>Expected time for culture results: 2-5 days</p> <p>Recommend peripheral Blood Culture to aid in interpretation.</p> <p>Foley catheters are NOT cultured since growth represents distal urethral flora.</p>	<p>1. Decontaminate skin.</p> <p>2. Aseptically remove and clip 5 cm. distal tip of catheter directly into sterile container.</p> <p>Note: Careful aseptic removal mandatory.</p>

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Cerebrospinal Fluid (CSF)	<p>CSFC (CSF Culture)</p> <p>CSFAFB</p> <p>CSFCFUN (Fungal)</p> <p>CSFCJD (Creutzfeldt-Jakob Disease)</p>	<p>Sterile screw-cap CSF collection tubes.</p> <p>Bacteria: ≥ 1 ml.</p> <p>Fungi: ≥ 2 ml.</p> <p>AFB: ≥ 2 ml.</p> <p>Virus culture: ≥ 1 ml.</p> <p>or PCR: 1 ml.</p>	<p>. Never refrigerate. If only one tube is collected, submit to Microbiology first.</p>	<p>Direct Gram Stain and culture are performed on a STAT basis.</p> <p>Expected time for results:</p> <p>Gram Stain – 1-2 hours</p> <p>Culture 1-5 days</p> <p>Positive results are called immediately.</p>	<p>Aspirate aseptically using established technique.</p> <p>One to two ml. of fluid is collected into each of 3 or 4 sterile CSF collection tubes.</p> <p>Note: Ventricular shunt fluid or Ommaya reservoir fluid – disinfect reservoir site. Collect fluid through reservoir site and place in sterile container.</p> <p>Tube 1 should not be used for Microbiology testing as it is the most likely to be contaminated with skin flora.</p> <p>Tube 2 or 3 should be used for Culture and sensitivity and send out tests.</p>
Ear	<p>EARC</p> <p>EARFUN (Ear – Fungal)</p>	<p>Aspirate: sterile dry container</p> <p>Swab: routine charcoal transport medium</p>		<p>Expected time for results:</p> <p>Gram Stain – same day.</p> <p>Culture – 1-2 days.</p>	<p>Inner Ear</p> <p>Intact ear drum: Clean canal with mild detergent and collect fluid via syringe aspiration technique. Ruptured ear drum: Collect fluid on flexible-shaft swab via auditory speculum.</p> <p>Outer Ear</p>

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					<p>1. Use moistened swab to remove any debris or crust from ear canal.</p> <p>2. Obtain specimen by firmly rotating swab in outer canal.</p>
<p>Fluids: (Normally sterile body fluids)</p> <p>Ascitic</p> <p>Pericardial</p> <p>Peritoneal</p> <p>Pleural</p> <p>Synovial</p>	<p>BFC+ SOURCE (Body Fluid Culture)</p> <p>BFCFUN (Body Fluid Fungal Culture)</p> <p>BFCAFB</p>	<p>Sterile dry container.</p> <p>Bacterial culture: > 5 ml</p> <p>Fungi: > 10 ml.</p> <p>AFB: > 10 ml.</p>		<p>Direct Gram Stain and bacterial culture are performed without delay.</p> <p>Expected time for results:</p> <p>Gram Stain – within 2 hours</p> <p>Culture – 1-5 days.</p> <p>Expected time for results: Fungi - referred to PHL</p> <p>Microscopy – 1-2 days</p> <p>Culture – up to 4-5 weeks</p>	<p>1. Disinfect overlying skin.</p> <p>2. Aspirate aseptically via percutaneous needle aspiration or at surgery</p>

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				<p>AFB - referred to PHL Microscopy – 1-2 days</p> <p>Culture – up to 8 weeks</p>	
<p>Genital Tract: Female - Cervix</p>	<p>GENC + SOURCE</p>	<p>Routine culture: Swab in charcoal transport medium.</p>		<p>Culture for <i>Neisseria gonorrhoeae</i> only.</p> <p>Expected time for results:</p> <p>Gram Stain – not performed</p> <p>Culture – 2-3 days.</p>	<p>1. Visualize cervix using speculum without lubricant.</p> <p>2. Remove mucous/secretions from cervix with swab. Discard swab.</p> <p>3. Sample endocervical canal by firmly rotating a second sterile swab 10-30 seconds.</p>
<p>Genital Tract: Female - Vagina</p>	<p>VAGC <i>or</i> GENC +SOURCE</p>	<p>Routine charcoal transport medium</p>		<p>Microscopic screening for yeast, <i>Trichomonas</i> and bacterial vaginosis.</p>	<p>1. Wipe away excessive secretion/discharge.</p> <p>2. Using a sterile swab, collect secretions from mucosal membrane of vaginal vault.</p>

Genital tract: Male - Urethra	GENC + SOURCE	Routine culture: charcoal transport medium.		Culture for <i>Neisseria gonorrhoeae</i> only. Expected time for results: Gram Stain – same day Culture – 3-4 days.	1. Insert sterile urethrogenital swab 2-4 cm. into urethral lumen, rotate swab and leave in place at least 5 seconds.
Lower Tract: Bronchoscopy specimens: Broncho-alveolar lavage; Bronchial washing; Bronchial brushing; Tracheal aspirate	RC (Respiratory Culture) RCAF RCCF (Respiratory Culture – Cystic Fibrosis) RCFUN (Respiratory Culture – Fungal)	Culture for bacteria, AFB, fungi: Bacteria: > 1 ml. Fungi: > 3 ml. AFB: > 5 ml.		Routine bacterial culture - Expected time for results: Gram Stain – same day Culture – 1-2 days. AFB - referred to PHL Direct microscopic – 1-2 days Culture – 7-8 weeks	
Lower Tract Endotracheal aspirate	RC (Respiratory Culture) RCAF	Sterile container. Bacteria: > 1 ml. Fungi: > 3 ml. AFB: > 5 ml			See Sputum (below) for information re: expected time for results for routine culture, AFB and Fungi.

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	RCCF (Respiratory Culture – Cystic Fibrosis)				
	RCFUN (Respiratory Culture – Fungal)				
Lower Tract Sputum	<p>SPUTC (Sputum Culture)</p> <p>SPUTCAFB (Sputum Culture – AFB)</p> <p>SPUTCFUN (Sputum Culture – Fungal)</p>	<p>Sterile container.</p> <p>Bacteria: > 1 ml. Fungi: > 3 ml. AFB: > 5 ml</p>		<p>Routine culture - Expected time for results: Gram Stain – same day Culture – 1-2 days.</p> <p>Note: Sputum specimens for bacterial culture are screened to determine quality. Unsatisfactory specimens are not processed and a repeat specimen is requested.</p> <p>AFB - referred to PHL Expected time for results:</p>	<ol style="list-style-type: none"> 1. Specimen should be collected under direct supervision of nurse or physician. 2. Patient should rinse/gargle with water (to remove superficial flora). 3. Instruct patient to cough deeply to produce lower respiratory specimen. Collect in sterile container.

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				<p>Direct microscopic – 1-2 days Culture – 7-8 weeks</p> <p>Fungi - referred to PHL Expected time for results: Direct microscopic 1-2 days; Culture – 4-5 weeks</p>	
<p>Respiratory - Upper Tract</p> <p>Nasopharynx: Swabs Aspirates</p>	<p>COVID19</p> <p>INFABPCF (Influenza A and B PCR)</p> <p>RPCR (Complex Respiratory PCR Panel)</p>	<p>Respiratory Virus Detection NP swab in Universal transport media</p>	<p>If delay in transport or processing is anticipated, NP swab in UTM should be kept at 4°C for up to 3 days.</p>	<p>Influenza A &B, RSV, Human Metapneumovirus and SARS-CoV-2 PCR testing is performed at HSN Microbiology Department. Expected time for results <24hrs</p>	<p>Nasopharyngeal swab:</p> <ol style="list-style-type: none"> 1. Gently insert flexible calcium alginate swab into posterior nasopharynx via nares. 2. Rotate swab slowly to absorb secretions. Place swab in virus transport medium.
<p>Throat</p>	<p>TC (Throat Culture)</p>	<p>Routine charcoal transport medium for GAS</p>		<p>Culture is for Group A streptococcus only.</p> <p>Expected time for culture results: 1-2 days.</p>	<ol style="list-style-type: none"> 1. Depress tongue gently with tongue depressor. 2. Sample posterior pharynx, tonsils and inflamed areas with sterile swab. <p>Note: For SARS-CoV-2 upper airway sample, first swab the throat then insert the same swab approximately 3-4cm into</p>

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					EACH nostril (deep nasal sample). Rotate swab inside the nostril for 3 sec covering all surfaces
Stool- Bacterial culture	SC (Stool Culture)	Bacterial culture: Enteric Pathogen (Green Top) Transport (EPT) medium – transfer several spoonfuls of bloody/mucous portions to fill line		Routine examination includes testing for <i>Salmonella</i> , <i>Shigella</i> , <i>Yersinia</i> (<12 years of age), <i>Campylobacter</i> , and <i>E coli</i> O157:H7 Expected time for results: 2-3 days.	Stool is passed into clean, dry container or bedpan. Note: Inpatients (hospitalized 72 hours or more) whose admitting diagnosis was not gastroenteritis or diarrhea, should have specimens requested for <i>C. difficile</i> PCR, rather than bacterial culture.
Stool- Clostridium difficile PCR	CDIFFMIC	<i>Clostridium difficile</i> PCR: Sterile dry container; 5-10 ml.		Expected time for results: 24 hours	Diarrhoeal/liquid/soft stool only. Dry or formed stool will <u>not</u> be processed.
Stool- Parasites/ova	OP	Parasites/ova: SAF preservative (yellow top) - transfer several spoonful's of bloody; mucous; watery or formed portions to fill line.		Specimen referred to PHL. Expected time for results: 5-7 days.	Submit one specimen/day for 3 days. Anti-diarrhoeal agents, antibiotics and radiological dyes (e.g. barium) interfere with detection/identification of intestinal parasites. Avoid contamination with urine or water

<p>Virus culture, including: Rotavirus Norwalk-like virus Enteroviruses Adenovirus Torovirus Astrovirus Calicivirus</p>	<p>VS (Viral Screen) + Source VSE (Enteric)</p>	<p>Sterile dry container; 1-2 grams.</p>		<p>Specimen referred to PHL. Expected time for results: 7-10 days.</p>	
<p>Multi-Drug Resistant Organisms (MRSA; VRE) Surveillance/ Screening, Candida auris screening</p>	<p>MRSA VRE MRSAVRE CPE CAURIS</p>	<p>Swab in routine charcoal transport medium</p>		<p>Expected time for results: 1-3 days.</p>	<p>Moisten swab in sterile saline before collection – all sites. After collection, place swabs in charcoal transport medium.</p> <p>Nares: Insert swab in one nare, rotate and remove. Using same swab repeat in second nare.</p> <p>Rectal/perineal: Swab perineum from front to back ending by entering rectum.</p> <p>Open lesions/draining wounds: Swab the lesion/drainage.</p> <p>C.auris: Swabbing includes a single bilateral swab of the axilla and groin areas using a charcoal swab.</p>

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<p>Tissue/biopsy</p>	<p>TISC (Tissue Culture)</p> <p>TISCAFB (AFB)</p> <p>TISCFUN (Fungal)</p>	<p>Culture for bacteria, AFB, fungi: Sterile dry container</p>		<p>Tissues are submitted to Microbiology on a STAT basis. Direct Gram Stain and culture are performed without delay.</p> <p>Routine bacterial culture - Expected time for results: Gram Stain – within 2 hours Culture 1-5 days.</p> <p>AFB - referred to PHL Expected time for results: Direct microscopic – 1-2 days Culture – 7-8 weeks</p> <p>Fungi - referred to PHL Expected time for results: Direct microscopic – 1-2 days Culture 4-5 weeks</p>	<ol style="list-style-type: none"> 1. Submit in sterile container 2. For small specimens, add several drops of sterile water to keep specimen moist.
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<p>Urine</p> <p>Culture</p>	<p>UC</p>	<p>All urine specimens: Sterile dry container.</p> <p>Bacteria: > 5 ml. AFB: > 40 ml. Fungi: > 5 ml.</p>	<p>Specimen must be refrigerated unless transported to Lab immediately.</p>	<p>Expected time for bacterial culture results: 1-3 days.</p> <p>AFB - referred to PHL Expected time for results: Culture 7-8 weeks</p> <p>Fungi - referred to PHL Expected time for results: Culture 4-5 weeks</p>	<p>Female, midstream;</p> <ol style="list-style-type: none"> 1. Clean urethral, vaginal vestibule area with soap and water. 2. Rinse with wet gauze wipes. 3. While holding labia apart, begin voiding. 4. Allow a few ml of urine to pass; collect midstream portion without stopping urine flow. <p>Male, midstream:</p> <ol style="list-style-type: none"> 1. Clean glans with soap & water. 2. Rinse with wet gauze wipes. 3. While holding foreskin retracted, begin voiding. 4. Allow a few ml of urine to pass; collect midstream portion without stopping urine flow. <p>Catheter urine:</p> <ol style="list-style-type: none"> 1. Clean the catheter collection port with 70% alcohol 2. Using sterile technique, aseptically aspirate 5-10 ml. 3. Transfer to sterile container.
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<p>Wounds Abscesses Burns Cellulitis Drainage Incision Lesions Ulcers</p>	<p>WC + Source</p>	<p>Aspirate or Drainage: Sterile dry container. Aerobic Swab: routine charcoal transport Medium Anaerobic swabs must be received in anaerobic transport media (Amie's gel).</p>		<p>Expected time for results: Gram stain – same day Aerobic culture 1-2 days Anaerobic culture 2-5 days</p>	<ol style="list-style-type: none"> 1. Remove surface material by wiping with sterile saline or 70% alcohol. 2. Aspirate material, if possible, or pass swab deep into area of inflammation. Only surgically obtained swabs will be considered appropriate for anaerobic culture.
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Anatomical Pathology - Histology

Test	Meditech Laboratory Mnemonic	Specimen Container/Fixative	Optimum Specimen Holding Temperature	Notes / Specimen Criteria
Tissue Biopsy	Must be ordered in OM (Order Management)	Tissue specimens for routine histopathology should be submitted in a container of 10% neutral buffered formalin (NBF).	Room Temperature	<p>The optimum volume of fixative is 15-20 times the specimen volume. Do NOT force a large specimen into a small container and do not use a large container for a tiny specimen. Containers of various sizes that are pre-filled with 10% buffered formalin are available in the histology department, Center Tower, level 1.</p> <p>Place the specimen container in the main compartment of a transport bag. Fold and place the requisition in the side pocket. Specimens are placed in a designated area until they are transported to the lab receiving area by hospital porters or directly to the histology department by OR attendants.</p>
Limbs	Must be ordered in OM (Order Management)	Formalin container or if too large, double bagged (any color) and transported to the lab with the requisition.	Room Temperature	In cases where Pathology is not requested on a limb and it is identified by the patient or patient's agent as desired to be returned due to a religious belief, the care giver is responsible for making arrangements with security to store the limb in the morgue.
Breast: <ul style="list-style-type: none"> •lumpectomy •simple mastectomy •modified radical mastectomy •needle localization 	Must be ordered in OM (Order Management)	10 % formalin or fresh	Room Temperature	All breasts are marked as STAT. Total ischemic time (removal from body to time in formalin) must NOT exceed 1 hour.

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<p>Lung:</p> <ul style="list-style-type: none"> •lobectomy •partial lobectomy •pneumonectomy •wedge •resection •lingula 	<p>Must be ordered in OM (Order Management)</p>	<p>10 % formalin or fresh</p>	<p>Room Temperature</p>	<p>All lung tissues are marked as STAT. Total ischemic time (removal from body to time in formalin) must NOT exceed 1 hour.</p>
<p>Lymphoma Protocol</p>	<p>Must be ordered in OM (Order Management)</p>	<p>No fixative (Sterile container)</p>	<p>Room Temperature</p>	<p>Send STAT to the laboratory in a sterile container.</p>
<p>Muscle Biopsy</p>	<p>Must be ordered in OM (Order Management)</p>	<p>A fresh strip of muscle about 3 x 1 cm shall be carefully isolated and removed. Stretch the tissue to it's natural in-situ size onto a piece of cardboard or a wooden tongue depressor and secure the ends with pins/needles. This is necessary to avoid artefactual contraction of the sample. Wrap the tissue with saline moistened gauze and send it STAT to the lab. It should not be fully immersed in saline, nor fixed in formalin or other fixatives.</p>		<p>Best muscles to be sampled include: Deltoid Bicep Quadricep</p>

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Renal Biopsy	Must be ordered in OM (Order Management)	Gauze dampened with 0.85% saline		3 good cores consisting of renal parenchyma should be obtained	
Skin Biopsy for Immunofluorescence	Must be ordered in OM (Order Management)	Michel's transport media and 10% formalin		<p>Two 4-5mm skin punch biopsies are needed:</p> <ul style="list-style-type: none"> • One lesional biopsy in formalin • One perilesional biopsy in Michel's Media <p>Send to lab as soon as possible. Michel's media may be held at room temperature or 4°C for up to 5 days.</p>	
Fresh Tissue for Frozen Sections	Must be ordered in OM (Order Management)			Time/Day:	Instructions
				Monday to Friday 08:00-15:00	1. Send to OR frozen section room 2. Call ext. 1218 to inform of frozen section
				Monday to Friday 15:00-22:30	1. Call ext.1218 to inform them of frozen section coming 2. Hand deliver specimen to lab receiving window
				Saturday/Sunday 08:00-16:00	1. Call ext.1218 to inform them of frozen section coming 2. Hand deliver specimen to lab receiving window
				Saturday/Sunday after 16:00	1. Call ext.3230 to inform them that a frozen section is coming. The pathologist on-call can be paged by the OR surgeon/delegate or the lab can page the pathologist as well an MLT to cut the specimen. Please give 30 minutes notice if possible so called in staff have time to get to the hospital 2. Hand deliver specimen to lab receiving window

Cytology/Cytopathology

For referral sites, (Mattawa, Espanola, Little Current, Temiskaming Shores, Blind River, Manitoulin Health Centre, and Elliot Lake), please refer to procedure “Cytopathology specimen fixation guidelines and cytology specimen collection container preparation – Off site Locations” for cytology specimen handling.

Within Health Sciences North, please refer to the HUB’s Procedure for specimen collections.

Test /Specimen Type	Meditech Laboratory Mnemonic	Specimen Container/Fixative	Optimum Specimen Holding Temperature	Turn Around Time	Notes / Specimen Criteria
Body Cavity Fluid <ul style="list-style-type: none"> • Pleural • Peritoneal • Pericardial 	Must be ordered in Order Management	Cytology fixative Technique: 1. Place 1 ml of 10,000 IU/ml of heparin into the fluid collection container. 2. Perform the paracentesis following accepted clinical procedure. 3. Amounts as of 20- 50 ml of unfixed heparinized sample is preferred to provide adequate cellular material for diagnosis. A maximum of 250ml is acceptable.	Refrigerate the sample		If any delay in transportation to the lab is anticipated, or if the specimen is coming from a referral site, add up to 50 ml of unfixed heparinized body cavity fluid to the Cytology fixative container and mix well. Send the appropriately labeled fixed sample with a completed Cytopathology requisition to the Laboratory for handling.
Cerebrospinal Fluid (CSF)	Must be ordered in Order Management	Cytology Fixative	Refrigerate the sample		If any delay in transportation to the lab is anticipated, the cytology sample must be fixed with minimally an equal amount of Cytology fixative (more fixative than sample is acceptable).

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Fine Needle Aspirates -all body sites	Must be ordered in Order Management	Cytology Fixative	Refrigerate the sample		
Other Cytology Specimens •all Washings, Brushings •Bronchiolar alveolar lavages (BAL) and all other specimens	Must be ordered in Order Management	Cytology Fixative	Refrigerate the sample		
Sputum	Must be ordered in Order Management	Cytology Fixative (Cytolyt) at point of collection Pre-filled Cytolyt fixative container contains 30 mL of Cytology fixative (CytoLyt®). Up to 50 mL of sample can be fixed in one Cytology specimen container	Refrigerate the sample		Unfixed specimens will not be processed. Request a repeat specimen that is properly fixed in Cytolyt at point of collection.
Urine	Must be ordered in Order Management	Cytology Fixative (Cytolyt) at point of collection Pre-filled Cytolyt fixative container contains 30 mL of Cytology fixative (CytoLyt®). Up to 50 mL of sample can be fixed in one Cytology specimen container	Refrigerate the sample		Unfixed specimens will not be processed. Request a repeat specimen that is properly fixed in Cytolyt at point of collection.

Genomics

Test/Specimen Type	Meditech Laboratory Mnemonic	Specimen Container	Optimum Specimen Holding Temperature	Notes / Specimen Criteria
Blood or liquid bone marrow aspirate (ship ambient*)		Please Refer to Genomics Requisition for current specimen requirements.	Ship ambient temperature	To avoid sways in sample temperature during shipping, it is recommended that samples shipped ambient are sent in a Styrofoam cooler with a wet ice pack.
Paraffin-embedded material		Please Refer to Genomics Requisition for current specimen requirements.	Ship ambient temperature	To avoid sways in sample temperature during shipping, it is recommended that samples shipped ambient are sent in a Styrofoam cooler with a wet ice pack.
Fresh frozen solid tissue (ship on dry ice)		Please Refer to Genomics Requisition for current specimen requirements.	Ship on dry ice	
Fresh solid tissue		Please Refer to Genomics Requisition for current specimen requirements.	Ship ambient temperature	To avoid sways in sample temperature during shipping, it is recommended that samples shipped ambient are sent in a Styrofoam cooler with a wet ice pack.

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Body fluids		Please Refer to Genomics Requisition for current specimen requirements.	Ship ambient temperature	To avoid sways in sample temperature during shipping, it is recommended that samples shipped ambient are sent in a Styrofoam cooler with a wet ice pack.
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