

JOHNSON MEMORIAL HOSPITAL
Franklin, Indiana

POLICY – LAB NURSING

CODE: 1.30

Reviewed/Revised Date: 3/2023	Next Review Date:	Approved by: Laboratory Director	Date: 9/2022	Effective Date: 3/2023
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SPECIMEN REQUIREMENTS

PURPOSE: To provide guidelines as to the requirement to properly collect specimens for Laboratory testing.

SCOPE: All Nursing and Laboratory employees

POLICY STATEMENT:

In order to cut down on the number of telephone calls between the Laboratory and Nursing units, the following tables should be utilized to determine proper collection requirements for Laboratory specimens. Should a test be ordered that is not included in the following tables, contact the Laboratory for the specific information needed. To utilize the chart, find the test and then refer to the number listed in the tube category to determine to color of tube and number needed. If a patient requires many tests, please contact the Laboratory to determine a sufficient number of tubes to meet testing requirements yet minimize amount of sample collected.

BLOOD BANK:

All Blood Bank procedures require a minimum of two lavender top EDTA specimens.

Additional red and lavender top tubes may be necessary if the patient has testing that must be sent to the reference laboratory.

CHEMISTRY (BLOOD):

*Indicates test is referred out.

** Indicates alternate specimen.

Test	Red	Gold	Dk. Green	Mint Green	Blue	Lav.	Special Tube	Collection Instructions
Acetaminophen	1							Draw @ 4 and 12 hours after suspected overdose.
Albumin		1		1**				
Aldosterone*	1	1**						Note position of patient at time of collection (supine or upright).
Alkaline Phosphatase (ALP)		1		1**				

Test	Red	Gold	Dk. Green	Mint Green	Blue	Lav.	Special Tube	Collection Instructions
Alpha Feto Protein (AFP)*		1		1				Must be 15-20 weeks gestation. Submit AFP info sheet.
Amikacin	1							See Therapeutic Drug Drawing Guidelines Policy.
Ammonia			1			1**		Mint Green preferred. Spin down and place on ice immediately. Pour off if drawn in dark green and not to the lab within 20 minutes.
Amylase		1		1**				
ANA (Ant-Nuclear Antibody)*		1						
Anti-Intrinsic Antibody*		1						No B12 one-week prior and no radioisotopes.
Beta-hydroxybutyrate			1			1**	1**	
B12		1		1**				Protect from light.
Beta hCG (Qual. & Quant.)		1						
Bilirubin		1		1**				Newborn can be drawn in red microtainer.
NT PRO BNP				1		1**		
BUN		1		1**				
Calcium		1		1**				
Calcium, Ionized*		1						Do not open tube.
CEA*		1		1**				
Chloride		1		1**				
Cholesterol		1		1**				
CKMB			1	1**				See Reflex Test Policy.
CO2		1		1**				

Test	Red	Gold	Dk. Green	Mint Green	Blue	Lav.	Special Tube	Collection Instructions
Cortisol	1			1**				Generally collect before 0800 unless otherwise specified.
Covid Antigen		1						
CPK			1	1**				
Creatinine		1		1**				
Digoxin	1							See Therapeutic Drug Drawing Guidelines Policy.
Dilantin	1		1**					See Therapeutic Drug Drawing Guidelines Policy.
Estrogen*		1						
Ethyl Alcohol	1		1**				Grey tube may be used.	Do not open tube. Use Chain of Custody Form.
Ferritin		1	1**	1**				
Folate, RBC*						1		Protect from light
Folate, Serum*		1		1**				Protect from light
FSH		1		1**				
Gastrin*		1						Patient fasting 12 hours and no radioisotopes within 24 hours. Send immediately to Lab - must be frozen.
Gentamicin	1		1**			1**		See Therapeutic Drug Drawing Guidelines Policy.
GGT		1		1**				
Glucose		1		1**				Tolerance tests must be scheduled with Lab.
Haptoglobin*		1						
HDL		1		1**				Fasting 12-14 hours.
Helicobacter pylori Ag								Stool Specimen

Test	Red	Gold	Dk. Green	Mint Green	Blue	Lav.	Special Tube	Collection Instructions
HgbA1c						1		
Hepatitis B Surface Antigen*		1						
Hepatitis C RNA by PCR*						1	1 Pearl White**	
HIV		1		1**		1**		Complete Consent Form
IgA*		1						
IgE*		1						
IgG*		1						
IgM*		1						
Iron		1						
Lactic Acid							1 Gray	Patient should rest prior to and during collection. Do not use tourniquet. Place on ice immediately. Must be in lab within 20 minutes.
LDH		1		1**				
LDH Isoenzymes*		1						
Lead*							1 Royal Blue	
LH		1		1**				
Lipase		1		1**				
Lipid Profile		1		1**				Includes cholesterol, triglycerides, HDL, LDL, risk ratio. Patient should be fasting 12-14 hours prior to collection.
Lithium	1		1**			1**		
Liver Profile		1		1**				Includes Bilirubin (Total and Direct), GPT, ALP, GGT, and LDH.

Test	Red	Gold	Dk. Green	Mint Green	Blue	Lav.	Special Tube	Collection Instructions
L/S Ratio*Or FLM (Fetal Lung Maturity)							7ml Amnio Fluid	Protect from light. Must be at Clarian prior to 1100 for same day testing.
Magnesium		1		1**				
Metabolic Profile (Newborn)							Use profile card	
NAPA*	1							See Therapeutic Drug Drawing Guidelines Policy.
Osmolarity, Serum		1						
Phenobarbital*	1							See Therapeutic Drug Drawing Guidelines Policy.
Phosphorus		1		1**				
Potassium		1		1**				
Procainamide*	1							See Therapeutic Drug Drawing Guidelines Policy.
Procalcitonin (PCT)		1**		1		1**		
Progesterone*		1						
Prolactin		1		1**				
Protein Electroph*		1						
PSA (Prostate Specific Antigen)		1		1**		1**		
PTH (Parathyroid Hormone)*		1**	1					Fasting for 12 hours.
Quantiferon Gold			2					Must draw 2 full tubes. Send to ref lab within 48 hours of collection.
Quinidine*	1							See Therapeutic Drug Drawing Guidelines Policy.
Renin*						1		Freeze plasma within 4 hours of collection time.
Salicylates	1		1**					See Therapeutic Drug Drawing Guidelines Policy.
SGOT (AST)		1		1**				

Test	Red	Gold	Dk. Green	Mint Green	Blue	Lav.	Special Tube	Collection Instructions
SGPT (ALT)		1		1**				
Sodium		1		1**				
T3 Total*		1						
T3 Uptake*		1						
T4 Free		1						
T4 Total*		1		1**				
Tegretol (Carbamazepine)	1		1**					See Therapeutic Drug Drawing Guidelines Policy.
Testosterone		1		1**		1**		
Theophylline*	1							See Therapeutic Drug Drawing Guidelines Policy.
TIBC (Total Iron Binding Capacity)		1						
Tobramycin*	1							See Therapeutic Drug Drawing Guidelines Policy.
Total Protein		1		1**				
Triglycerides		1		1**				Fasting 12-14 hours.
Troponin		1**	1	1**				
TSH		1		1**				
Uric Acid		1		1**				
Valproic Acid	1		1**			1**		See Therapeutic Drug Drawing Guidelines Policy.
Vancomycin	1**					1		See Therapeutic Drug Drawing Guidelines Policy.
Vitamin D hydroxy	1**	1				1**		

CHEMISTRY (BODY FLUIDS):

Unless Specified by the ordering physician, body fluids are tested as follows:

Tube #1: Chemistry

Tube #2: Microbiology

Tube #3: Hematology

Body Fluids can be sent in green top, lavender top, or spinal fluid tubes. Body fluids include:

Peritoneal

Pleural

Spinal

Synovial

Body Fluid Panels Include:

1. Cell Count
2. Glucose
3. Total Protein
4. Culture and Gram Stain

Other requested tests should be ordered individually.

CHEMISTRY (URINE):

*Indicates test is referred out.

**Indicates test may also be performed on a random sample if ordered.

NOTE: Additives must be added in Lab prior to collection.

Test	Additive	Collection Instructions
Amylase, 2 hr. and 24 hr.	None	Refrigerate
BUN (UUN), 24 hr.**	None	Refrigerate
Calcium, 24 hr.**	10 ml 6N HCL	Refrigerate
Catecholamines, 24 hr.*	None	Refrigerate
Chloride, 24 hr.**	None	Refrigerate
Creatinine, 24 hr.**	None	Refrigerate
Creatinine Clearance, 24 hr.	None	Refrigerate
Glucose, 24 hr.**	None	Refrigerate

Test	Additive	Collection Instructions
Heavy Metals, 24 hr.*	None	Patient should avoid seafood 48 hrs. prior to and during collection. Refrigerate.
5-HIAA (Serotonin), 24 hr.*	None	Refrigerate
HVA (Homovanillic Acid), 24 hr. *	None	D/C Levodopa 2 weeks prior. Refrigerate.
17-Ketosteroids, 24 hr.*	None	Refrigerate
Magnesium, 24 hr.**	None	Refrigerate
Metanephrines, 24 hr.*	None	Refrigerate
Microalbumin, 24 hr.**	None	Refrigerate
Phosphorus, 24 hr.**	None	Refrigerate
Potassium, 24 hr.**	None	Refrigerate
Protein Electrophoresis, 24 hr.*	None	Refrigerate
Protein, Total, 24 hr**.	None	Refrigerate
Sodium, 24 hr.**	None	Refrigerate
Uric Acid, 24 hr.**	None	Refrigerate
VMA (Vanillylmandelic Acid),24 hr*	None	Refrigerate

For all 24 hour urine collections:

1. Upon receipt of an order for a 24-hour urine collection, contact the Laboratory. The Laboratory will prepare a 24-hour urine collection container based on the type of test and label with the appropriate patient information.
2. To begin collection, have patient urinate and discard this first sample (do not put into container). Note this date/time as the start of the collection.
3. Save all urine voided after this time for 24 hours, including any urine voided at the exact time of period end. Document this date/time as the end of the collection.
4. If the container has a preservative in it, make sure the patient does not come into contact with the container and does not void directly into the container (to prevent splashing/contact with preservative).

Urine Drug Screens: Collect in sterile urine container. Initiate chain of custody form and refrigerate.

COAGULATION:

*Indicates test is referred out.

Test	Red	Gold	Green	Blue	Lav.	SpecialTube	Collection Instructions
Anti-thrombin III*				1			
D-Dimer					1		
Factor V Leiden*					2		
Prothrombin Time (PT)				1			Tube must be filled to fill line. 24 hr stability Refrigerated
PTT				1			Tube must be filled to fill line. 4 hr stability refrigerated
Fibrinogen*				1			Tube must be filled to fill line.
FDP (FSP)*				1			Tube must be filled to fill line.

HEMATOLOGY (MISC.):

Lactoferrin: A small amount of stool in stool container.

Hemoccult: iFOBT collection kit or a small amount of stool in a sterile container.

HEMATOLOGY:

Test	Red	Gold	Green	Blue	Lav.	Tube	Collection Instructions
Bone Marrow							This is performed by the Pathologist.
CBC					1		Includes: WBC, RBC, HGB, HCT, MCV, MCH, MCHC, RDW, PLT, MPV and Differential.
Differential					1		Includes: Seg, Band, Lymph, Mono, Eosin, Baso, Atypical Lymph, Meta, Myelo, Pro Myelo, Blast, IG, NRBC's and WBC, RBC, and PLT Morphology.
Hemogram					1		Includes: WBC, RBC, HGB, HCT, MCV, MCHC, RDW, PLT, and MPV.
Retic Count					1		

Test	Red	Gold	Green	Blue	Lav.	Tube	Collection Instructions
Sed Rate					1		Stability 24 hrs Room Temp or refrigerated

The parameters of Hemoglobin (HGB), Hematocrit (HCT), Red Blood Cell (RBC), White Blood Cell (WBC), platelet (PLT), Eosinophil Count can be ordered individually. A lavender top tube is required.

HEMATOLOGY (BODY FLUIDS):

Cell counts are included in each of the body fluid panels or may be ordered separately. Spinal fluid should be in a spinal fluid tube, all other body fluids should be in a green and lavender top tube.

MICROBIOLOGY:

****See Collection of Culture Specimens for proper collection methods.****

Specimens must be processed and/or tested within the time stabilities listed. All specimens should be transported to the lab within 30 minutes of collection for optimal recovery of organisms.

*Indicates test is referred out.

Culture Type	Specimen	Storage
Acid Fast Culture*	Sputum or Urine: minimum 1 ml in sterile container Body Fluid/Tissue: Sterile container	Refer to Collection of Culture Specimens procedure. Refrigerate.
Acid Fast Stain (if ordered without culture)*		Follow Acid Fast Culture procedure.
Anaerobic Culture	1ml in sterile syringe (discard needle), swab w/appropriate ana transport media, or Tissue bx	Fluid/Tissue: stored 2-8°C for up to 24hrs. Swabs stored 2-25°C up to 48hrs.
Beta Strep Culture	Opti-swab or other appropriate bacterial transport media	2-25°C up to 24hrs
Beta Strep Screen	Sterile foam tipped applicator or rayon tip/plastic shaft swab.	Return to lab immediately-No transport media.
Blood Culture	Adult: 1-4 cc blood into each bottle Pediatric (Under 13yrs.):1-4 ml blood in Aerobic bottle only for Peds	Take to Laboratory immediately to be processed. Stable at room temp up to 12hrs.
Body/Spinal Fluid Culture	1ml fluid in a sterile syringe or tube	Process immediately or refrigerate up to 24hrs
Catheter Tip Culture	Place in sterile urine container.	Transport to Laboratory immediately.

Culture Type	Specimen	Storage
Clostridioides Difficile Toxin (C. Diff)	3 grams stool in clean, dry container	Refrigerate up to 5 days.
Covid-19 ID NOW (Rapid)	Nasal or NP: Foam or rayon tip swab with plastic shaft. No transport media	1 hr Room Temp
Covid-19 Antigen	Nasal or NP: Foam or rayon tip swab with plastic shaft. No transport media	48 hrs refrigerated
Cepheid SARS CoV-2/Flu/RSV	NP swab in VTM	Up to 7 days refrigerated
Ear/Eye Culture	Opti-swab or other appropriate bacterial transport media	2-25°C up to 24hrs
ePlex Respiratory Panel	NP swab in VTM	72 hrs refrigerated
Fungus Culture	Refer to reference lab Culture Collection Policy.*	Room temperature
GC/Chlamydia PCR	Xpert specimen collection kit or urine.	2-30 degrees C
Gram Stain (if ordered without culture)		Refer to Collection of Culture Specimens procedure.
Herpes Culture*	Viral M6 media-Pink solution	Refrigerate-Obtain transport solution from lab.
Influenza A & B Screen	Sterile foam tipped applicator	Room Temperature or refrig. For 24 hours
MRSA screen (pre-surgical and outpt only)	Specimen collection device: duel swab	Room temperature
Ova & Parasites (O&P), Giardia Ag, Cryptosporidium	1 gram stool in a clean, dry container. Should not collect more than one specimen per day.	Send to Laboratory immediately.
RSV	Nasopharyngeal Foam Tipped applicator or flocked swab	Return to lab immediately-No transport media.
Sputum/Bronchial Washing Culture	Minimum 1ml in a sterile container (first morning specimen ideal)	Refrigerate up to 24hrs
Stool Culture	3 grams in a clean, dry container	Refrigerate up to 24hrs
Tissue Biopsy/Bone	Place tissue in sterile container.	Transport to Laboratory immediately.
Urine Culture	Minimum 1ml in sterile container or boric acid tube	Refrigerate (if not using preservative) up to 24hrs
Wet Prep	Swab placed in 1ml saline	Send to Laboratory immediately
Wound Culture	Opti-swab or other appropriate bacterial transport media	2-25°C up to 24hrs

SEROLOGY:

Mono Spot and HIV's require a lavender top. ASO, RA, RPR and Rubella all require a red top tube.

URINALYSIS:

Urinalysis (UA) or any part of a UA requires a preferred volume of at least 10ml urine delivered to Laboratory within 60 minutes of collection or refrigerated. Minimum volume is 4 ml.

HISTOLOGY/CYTOLOGY

1. Instructions for **ALL** specimens being sent for Cytology or Histology processing:
 - a. Each specimen container is to be labeled on the side (not the lid) with the following:
 - i. Patient identification (name, date of birth, MRN, account number)
 - ii. Container contents (date and time collected, specimen submitted)
 - iii. Submitting physician
 - b. Each submitted specimen is to be accompanied by an EMR order.
 - c. In the case of no EMR access or EMR downtime, a completed paper requisition identifying the patient's name, date of birth, MRN, account number, date and time of the procedure, patient history, the procedure, preoperative diagnosis, the specimen(s) submitted, and the doctor performing the procedure is to be submitted along with the specimen.
2. CYTOLOGY SPECIMENS
 - a. Non-Gynecological Specimens
 - i. Examples: Pleural fluids, pelvic washings, sputum, bronchial washings, urine, cyst fluid, etc.
 - ii. **DO NOT ADD FORMALIN** to these specimens; they are taken fresh to Histology/Cytology immediately
 - b. Gynecological Specimens
 - i. Example: Pap smears, ECC brushings
 - ii. **DO NOT ADD FORMALIN**; these specimens are placed in ThinPrep solution
3. HISTOLOGY SPECIMENS
 - a. Routine surgical specimens submitted for pathology review are placed in 10% neutral buffered formalin (NBF) which adequately covers the entire specimen
 - b. Unsure/questions: Call Histology/Cytology [EXTENSION -3486] before adding any fixative

c. EXCEPTIONS:

- i. Amputations (above/below the knee, etc.): Placed in a biohazard bag and transported by surgery staff directly to the morgue refrigerator. The requisition is taken to Histology/Cytology.
- ii. Gout specimens: **DO NOT ADD FORMALIN**; submitted in 100% alcohol
- iii. Kidney stones: **NO SOLUTION ADDED**; specimen sent fresh
- iv. Muscle biopsies:
 1. Specimen collected per reference laboratory guidelines (posted in the Pathology Laboratory/Frozen Section Room in Surgery)
 - a. Muscle samples must be at least 20 mm in length and 10 mm in diameter
 - b. Wrap muscle loosely in gauze that has been moistened with three (3) drops of saline only and place in plastic specimen cup with lid
 2. Completed requisition and specimen are brought immediately to Histology/Cytology for transport
- v. Placental tissue for DNA/chromosome studies:
 1. Specimen collected per reference laboratory guidelines (posted in the Pathology Laboratory/Frozen Section Room in Surgery)
 - a. Collection is done in Surgery/OB under sterile conditions
 - b. Fresh 3-10 mm³ tissue is collected aseptically and placed in a sterile container
 2. After sample collection, the remainder of the placenta is placed in 10% NBF
 3. All specimens are delivered immediately to Histology/Cytology for transport
- vi. Testicular excisions: **DO NOT ADD 10% NBF**; these are submitted in Bouin's solution

4. SUBMITTING SPECIMENS DURING WORK HOURS

- a. Surgical Specimens and accompanying paperwork are submitted in the two designated bins in surgery or brought to Histology/Cytology and placed in the Specimen Drop-off bin

- b. Fresh specimens and accompanying paperwork are brought to Histology/Cytology and staff is alerted
- c. Pap specimens and accompanying paperwork are brought to Histology/Cytology and placed in the Specimen Drop-off bin

5. SUBMITTING SPECIMENS AFTER HOURS

- a. Specimens in 10% NBF and ThinPrep solution are placed with accompanying paperwork in the Specimen Drop-off bin in Histology/Cytology
- b. Specimens in the fresh state with accompanying paperwork are placed in the Pathology Specimen bin in the refrigerator in Histology/Cytology

REFERENCES:	
RELATED POLICIES/FORMS:	
REGULATORY / ACCREDITATION STANDARDS ADDRESSED:	
REVIEWED BY:	Laboratory Director
OWNER:	Laboratory Manager
KEYWORDS:	

HISTORY:

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