

**LSUHSC-SHREVEPORT  
CLINICAL LABORATORY POLICY AND INFORMATION MANUAL  
MOLECULAR PATHOLOGY/CYTOGENETICS**

**Hours of operation: 8:00 AM- 5:00 PM, Monday – Friday. A Molecular Path/Cytogenetics Lab Test Requisition (Form S/N 7480) must accompany all samples; testing will not be completed without this form. For any questions during routine working hours, contact the laboratory at extension 58545. Personnel are on call 24/7. For questions after normal hours of operation contact Clinical Lab office (x55700) and ask that Molecular or cytogenetics personnel on call be paged. Laboratory information is also available at www.lsuhs.org**

<b>CYTOGENETICS</b>					
	<b>Blood Chromosome Analysis:</b> Constitutional	Blood	Sodium heparin, peripheral blood Adult: 2-5 ml Pediatric: 1-3 ml (less for a newborn)	Transport at room temperature. TAT: 14 days	None
	<b>Blood Chromosome Analysis:</b> Oncology	Blood	Sodium heparin, peripheral blood Adult: 2-5 ml Pediatric: 1-3 ml (less for a newborn)	Transport at room temperature. TAT: 7-10 days NOTE: For peripheral blood or bone marrow specimens sent with a tentative diagnosis of a B-cell disorder (including chronic lymphocytic leukemia, prolymphocytic leukemia, hairy cell leukemia and multiple myeloma), an additional culture will be set up using a B-cell mitogen. This should provide metaphases from the disease-related cell population.	No recent transfusions.
	<b>Bone Marrow Chromosome Analysis:</b> Oncology	Bone Marrow	Sodium heparin 1-2 ml bone marrow	Transport at room temperature. TAT: 7-10 days NOTE: For peripheral blood or bone marrow specimens sent with a tentative diagnosis of a B-cell disorder (including chronic lymphocytic leukemia, prolymphocytic leukemia, hairy cell leukemia and multiple myeloma), an additional culture will be set up using a B-cell mitogen. This should provide metaphases from the disease-related cell population.	None
	<b>Tissue Chromosome Analysis:</b> Lymph node, Tumor	Lymph node Tissue	Tissue	1 x 1 inch fragment sent in sterile RPMI transport media or Hanks BSS  TAT : 14 days	Transport at room temperature. Refrigerate if held overnight.
	<b>Tissue Chromosome Analysis:</b> Product of conception	Tissue	Tissue	1 x 1 inch fragment sent in sterile RPMI transport media or Hanks BSS  TAT: 14 days	Transport at room temperature. Refrigerate if held overnight.
	<b>Amniotic fluid Chromosome Analysis</b>	Amniotic fluid by transabdominal	15 cc screw-top polypropylene centrifuge tube	Transport at room temperature. TAT: 10-14 days	None

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**FLUORESCENCE IN-SITU HYBRIDIZATION (FISH)**

	<b>Fluorescence in situ hybridization (FISH):</b> Prenatal	Amniotic fluid Blood Bone Marrow	Same as for Chromosome Analysis Sodium heparin or EDTA	Transport at room temperature. TAT: 2-4 days NOTE: Helpful in assessing copy number of specific chromosomes present. Most probes available for all chromosomes.	None
	<b>Fluorescence in situ hybridization (FISH):</b> Oncology	Blood Bone Marrow Tissue	Purple Top 1-2 cc peripheral blood or 1-2 cc bone marrow; 1 x 1 inch fragment sent in sterile RPMI transport media or Hanks BSS	Transport at room temperature. TAT: 2-4 days NOTE: Many cancer-related probes are available. Very good in identifying common translocations/abnormalities in cancer: e.g. t(9;22), t(15;17), t(2;5), inv(16) Call laboratory for specific questions regarding probes	None
	<b>Fluorescence in situ hybridization (FISH):</b> Prenatal, Postnatal, and pre-implantation Genetics	Amniotic fluid Blood, PUBS, Bone Marrow	Same as for Chromosome Analysis	Transport at room temperature. TAT: 7 days NOTE: Helpful in assessing Trisomies 13,18, 21 (Downs Syndrome), X AND Y, and sex chromosome aneusomies (such as Klinefelter and Turner Synd)	None
	<b>Fluorescence in situ hybridization (FISH):</b> Microdeletion Syndromes	Amniotic fluid Blood Bone Marrow	Same as for Chromosome Analysis	Transport at room temperature. TAT: 7 days NOTE: Probes for Prader-Willi/ Angelman, DiGeorge / VCFS, Cri-du-Chat, Williams, and other microdeletion syndromes.	None

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<b>MOLECULAR PATHOLOGY</b>					
	<b>B Cell Immunoglobulin Heavy Chain , Kappa Light Chain, or Lambda light chain gene rearrangement:</b>  by PCR	Blood, Bone marrow, or Tissue	EDTA 10 cc peripheral blood or 2-3 cc bone marrow 0.5 gms. Fresh tissue in transport medium (or frozen Paraffin-embedded material	Transport blood or bone marrow at room temperature. Keep fresh tissue cold or frozen with dry ice. TAT: 7-10 days	None
	<b>T Cell receptor (Gamma, Beta, or Delta chain rearrangements):</b> by PCR	Blood, Bone marrow, or Tissue	EDTA 10 cc peripheral blood and/or 2-3 cc bone marrow 0.5 gms. Fresh tissue in transport medium (or frozen) Paraffin-embedded tissue	Transport blood or bone marrow at room temperature. Keep fresh tissue cold or frozen with dry ice. TAT: 7-10 days	None
<b>**Hypercoag. Panel: Includes Factor II, Factor V, MTHFR</b>	<b>Factor II (prothrombin) Mutation DNA Test: By PCR</b>	Blood	EDTA 5 cc peripheral blood	Transport at room temperature TAT: 7 days	None
	<b>Factor V (Leiden) Mutation DNA Test: By PCR</b>	Blood	EDTA 5 cc peripheral blood	Transport at room temperature TAT: 7 days	None
	<b>Methylenetetrahydrofolate reductase (MTHFR) Mutation DNA Test: By PCR</b>	Blood	EDTA 5 cc peripheral blood	Transport at room temperature TAT: 7 days NOTE: Both C677T and A1298C mutations assessed	None
	<b>Cytogenetic Translocations in Leukemia: e.g., t(9;22) BCR/ABL and t(15;17)PML/RARA</b>	Blood or Bone marrow		Transport at room temperature TAT: 7-10 days  NOTE: Please indicate specific translocation or disease suspected. Also include stained slides/smears (if possible and clinical history)	
	<b>Hereditary Hemochromatis Mutations (HFE) by PCR</b>	Blood	EDTA 5 cc peripheral blood	Transport at room temperature TAT: 7 days NOTE: H63D, C282Y, and S65C mutations assessed	None

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	<b>Translocations in Lymphoma:</b> e.g., t(11;14)-BCL-1 and t(14;18)- BCL-2 detection by PCR	Blood or Tissue	EDTA 5 cc peripheral blood and/or 1-2 cc bone marrow	Transport at room temperature TAT: 7-10 days  NOTE: Please indicate specific translocation or disease suspected. Also include stained slides/smears (if possible) and clinical history.	None
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