



**Send specimens to:**  
**Molecular Diagnostic Laboratory**  
Barnes-Jewish Hospital North, Room 2445  
Mailstop 90-28-372  
216 South Kingshighway  
St. Louis, MO 63110

## Specimen Requirements

General specimen requirements: Peripheral blood specimens (1-5ml) collected in purple-topped tubes (sodium or potassium EDTA anticoagulant) are delivered or shipped at ambient temperature to the lab at the address above. Bone marrow specimens should be drawn into a syringe *containing anticoagulant* and then shipped in an EDTA tube.

## Solid Tumor/ Frozen Tissue Specimens

Lymph node, tumor tissue, or skin biopsy may be utilized as a source of DNA/RNA for molecular assay. Each should be obtained in a sterile manner and transported immediately or frozen (and transported frozen) to preserve DNA/RNA integrity. Ten cubic millimeters of tissue contains about  $10^7$  cells and provides about 60 ug of DNA/RNA, sufficient for most assays including genomic Southern hybridization and are usually useful in assays for tumor-specific gene rearrangements or bone marrow engraftment studies.

## Specimen Requiring RNA Isolation

Specimens for *BCR/ABL1* or *PML/RARA* translocation analyses require isolation of RNA from the cells and special handling is required to preserve the integrity of the RNA. Peripheral blood or marrow (1-5ml) should be collected, EDTA tubes, placed on ice, and *immediately* delivered or shipped to the lab. Do not freeze whole blood or marrow. Overnight storage of the specimen may compromise the recovery and/or integrity of the RNA, producing a false negative result.

## Buccal Swabs

DNA, sufficient for PCR-based assays, may be isolated from cells obtained by buccal swab. Buccal swabs, particularly well tolerated by children, may also be used for pre-transplanted patients. Please contact the lab for details about the collection system and shipment. BMT Engraftment Studies, *F5* (Factor V Leiden), *F2* (Prothrombin), *CFTR* (Cystic Fibrosis), *ACADM* (MCAD), and *ACADL* (LCHAD) assays may utilize these specimens.

## Cell Pellets from the Flowcytometry Lab

Specimens requiring the separation of WBC's into myeloid and lymphoid cells may be sent directly to the flow lab. *Time is critical*. In order to maintain cell viability, specimens must be sent *immediately* to the flow lab. BMT engraftment studies, *IGH*, and *TRG* (TCR gamma) assays may utilize these specimens.

## Formalin-Fixed Paraffin-embedded tissue and Blood Spot cards

DNA and RNA, sufficient for PCR-based assays, may be isolated from FFPE. Ten (10 micron) FFPE tissue sections can be used for the following assays: *IGH*, *TRG* (TCR Gamma), *BCL2*, and soft tissue sarcoma translocations. DNA, sufficient for PCR, may be isolated from blood spot cards. One 10mm punch from a spotted and dried FTA<sup>®</sup> Card (cat# WB 120208, Whatman<sup>®</sup> Bioscience Ltd.) can be used for the following assays: Monitoring Engraftment (pre-transplant studies), *CFTR* (Cystic Fibrosis), *FMRI* (Fragile X PCR), *ACADM* (MCAD), *ACADL* (LCHAD), *F5* (Factor V Leiden), *F2* (Prothrombin). These specimens **may** be sent to the lab in a sterile container or tube at room temperature.

Direct any questions regarding specimen requirements to the Molecular Diagnostic Laboratory at:  
Phone: 314-454-8685 or 314-454-7601, Fax: 314-454-8485, or e-mail [jl8910@bjc.org](mailto:jl8910@bjc.org)