NEO GENOMICS

Specimen requirements and handling procedures

The quality of laboratory results is highly dependent upon proper specimen collection and handling.
Listed below are specimen requirements and handling procedures for tests performed by NeoGenomics Laboratories.

Specimen type	Cytogenetics	FISH	Flow cytometry	Bone marrow morphology	IHC	Molecular
Bone marrow aspirate†	1-2 mL sodium heparin	• 1-2 mL sodium heparin • EDTA is acceptable if sodium heparin not available • FISH non-PCE: 0.5-1 mL single probe, 1-2 mL panel	•1-2 mL EDTA •Provide CBC report •Sodium heparin is acceptable •Lithium heparin and ACD not acceptable	EDTA with 4-6 smears/slides	N/A	• 2 mL EDTA preferred • Sodium heparin is acceptable* if EDTA not available; however, performance is optimized for EDTA
Peripheral blood†	•2-5 mL sodium heparin • Provide CBC report	• 1-5 mL sodium heparin • EDTA is acceptable if sodium heparin not available • FISH non-PCE: 0.5-1 mL • Single probe, 1-2 mL panel	• 1-2 mL EDTA • Provide CBC report • Sodium heparin is acceptable • Lithium heparin and ACD not acceptable	EDTA with 2-3 smears/slides	N/A	• 3-5 mL EDTA preferred • Sodium heparin is acceptable* if EDTA not available; however, performance is optimized for EDTA • Two x 10 mL Streck Cell-Free DNA BCT® tubes for PanTracer LBx
Bone marrow core biopsy and/or aspirate clot (10% NBF)†	N/A	N/A	N/A	• >1.5 cm core (length) 10x formalin to specimen volume • Additional 2 touch imprints preferred	1-2 cm core (length) core and clot sent in separate formalin containers	N/A
Fresh bone marrow core biopsy†	1-2 cm core (length) tissue in RPMI	0.5 cm core (length) tissue in RPMI	1-2 cm core (length) tissue in RPMI	N/A	N/A	N/A
Fresh/unfixed tissue†	>0.3 cm3 in RPMI	0.2 cm3	0.5-1 cm3 tissue in RPMI	N/A	N/A	N/A
Fluids†	• CSF: 1-3 mL • All other fluid: 5-10 mL	50-100 mL	50-100 mL	N/A	N/A	50-100 mL
Paraffin block or cut slide† *(For cut slides, place sections from only one block on each slide.)*	N/A	• Suitable only for select assays; see website to confirm • Paraffin block preferred • Please use positively-charged slides and 10% NBF fixative • Do not use zinc or mercury fixatives (B5)	N/A	N/A	Paraffin block prefered or 4-5 micron thick tissue sections on positively-charged slides, at least 3 slides per antibody No additives in waterbath *See article** for slide use and storage recommendations*	• Suitable for select assays: see website to confirm • Paraffin block preferred • Please use positively-charged slides and 10% NBF fixative • Do not use zinc or mercury fixatives (B5)
Voided urine†	N/A	33-60 mL voided urine mixed 2:1 with supplied PreservCyt within 30 minutes of collection for total volume ≥50 mL	N/A	N/A	N/A	N/A

**Sodium heparin is not acceptable for AML Express™*

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Decalcified specimens†	N/A	Not acceptable	N/A	Acceptable	Acceptable for bone; inquire for non-bone	Not acceptable
Specimen viability requirements *Please visit our test menu for a complete list of specimen requirements.*	Preferred Collection Tube: **Sodium heparin** • If bone marrow and peripheral blood are collected, bone marrow is always preferred • Stability 7 days from DOC	Preferred Collection Tube: **Sodium heparin** • If bone marrow and peripheral blood are collected, bone marrow is always preferred • Stability 72 hours/3 days from DOC (PCE only) 7 days from DOC (non-PCE) – can attempt with disclaimer, but only up to 30 days	Preferred Collection Tube: **EDTA** • If bone marrow and peripheral blood are collected, bone marrow is always preferred unless the test is FLOW PHN • Stability 4 days from DOC PNH: 48 hours from DOC **NY client requirements** Sodium heparin: 48 hours from DOC EDTA: 30 hours from DOC FISH Bladder Cancer: Stable for 1 week; however, it is recommended that specimens be processed to the point of fixed cell pellets with 72 hours of collections	72 hours	N/A	**Non-liquid biopsy:** Preferred Collection Tube: EDTA If bone marrow and peripheral blood are collected, bone marrow is always preferred. • Stability **RNA tests:** 5 days from DOC **DNA and plasma tests:** 7 days from DOC **TNA tests:** 7 days from DOC **Liquid biopsy:** Required Collection tube: Streck Cell-Free DNA BCT® tubes • Stability Ensure delivery within 7 days

Storage and transportation

† Use cold pack for transport, making sure cold pack is not in direct contact with specimen. For fresh specimens, ship same day as drawn whenever possible. EXCEPTION — For liquid biopsy specimens, please contact Client Services for special kit and instructions.

† Refrigerate and use cold pack for transport. For fresh specimens, ship same day as drawn whenever possible.

‡ Impact of environmental stress on various histology slide types. Ventana. 2013; N4629 0313B. https://cms.neogenomics.com/sites/default/files/2025-03/Impact-of-env-stress-on-histology-slide-types-Ventana-2013.pdf

NeoGenomics cannot accept category A infectious substances as defined by IATA (Dangerous Goods Regulations 3.6.2.1.1 Definition – Infectious Substances), including, but not limited to, specimens that may harbor variant Creutzfeldt-Jakob Disease (mad cow disease), variant Creutzfeldt-Jakob Disease, or microbiologic cultures of Mycobacterium Tuberculosis. FFPE, fresh blood or bone marrow specimens, and body fluids are acceptable from patients with tuberculosis. For full details, see NeoGenomics.com/client-services/forms-and-kits.

NeoGenomics, Inc. is a premier cancer diagnostics company specializing in cancer genetics testing and oncology data solutions. We offer one of the most comprehensive oncology-focused testing menus across the cancer continuum, serving oncologists, pathologists, hospital systems, academic centers, and pharmaceutical firms with innovative diagnostic and predictive testing to help them diagnose and treat cancer. Headquartered in Fort Myers, FL, NeoGenomics operates a network of CAP-accredited and CLIA-certified laboratories for full-service sample processing and analysis services throughout the US and a CAP-accredited full-service, sample-processing laboratory in Cambridge, England, United Kingdom.

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