



# 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	Storage and Transportation
Bone Marrow Aspirate	Sodium Heparin 1-2 mL (Green Top)	Sodium Heparin 1-2 mL (Green Top) EDTA OK if Sodium Heparin is not available	EDTA 1mL (Purple Top) Provide CBC Sodium Heparin OK if EDTA is not available	EDTA with 4-6 smears/slides	N/A	EDTA 2 mL (Purple Top)	Use cool pack during transport. Overnight delivery or courier pickup.*
Peripheral Blood	Sodium Heparin 2-5 mL (Green Top) Provide CBC	Sodium Heparin 2-5 mL (Green Top) EDTA OK if Sodium Heparin is not available	EDTA 1mL (Purple Top) Provide CBC Sodium Heparin OK if EDTA is not available	EDTA with 2-3 smears/slides	N/A	EDTA 5 mL (Purple Top)	Use cool pack during transport. Overnight delivery or courier pickup.*
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	Use cool pack during transport. Overnight delivery or courier pickup.
Fresh Bone Marrow Core Biopsy	1-2 cm core (length) tissue in RPMI	1-2 cm core (length) tissue in RPMI	1-2 cm core (length) tissue in RPMI	N/A	N/A	1-2 cm core (length) tissue in RPMI	Use cool pack during transport. Overnight delivery or courier pickup.*
Fresh/Unfixed Tissue	Tissue in RPMI two pieces minimum 0.2 cm <sup>3</sup>	Tissue in RPMI two pieces minimum 0.2 cm <sup>3</sup>	Tissue in RPMI	N/A	N/A	Tissue, fresh in RPMI, or frozen Two pieces minimum 0.2 cm <sup>3</sup>	Refrigerate and use cool pack during transport, or send frozen if applicable (Molecular only). Overnight delivery or courier pickup.*
Fluids	Equal part RPMI to specimen volume	Equal part RPMI to specimen volume	Equal part RPMI to specimen volume	N/A	N/A	Equal part RPMI to specimen volume except for CSF. CSF: Freeze undiluted fluid and send on ice.	Refrigerate and use cool pack during transport. Overnight delivery or courier pickup.*
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. 1 H&E slide, plus paraffin block or 4 unstained slides cut at 4-5 microns. Use positively-charged slides and 10% NBF fixative. Avoid zinc fixatives.	N/A	N/A	FFPE tissue block 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. 1 H&E slide, plus paraffin block or 5-10 unstained slides cut at 5 or more microns. Use positively-charged slides and 10% NBF fixative. Avoid zinc fixatives.	Use cool pack during transport. Overnight delivery or courier pickup.
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	Refrigerate and use cool pack during transport. Overnight delivery or courier pickup.*
Decalcified Specimens	N/A	Not acceptable	N/A	Acceptable	Acceptable for bone; inquire for non-bone	Not acceptable	Use cool pack during transport. Overnight delivery or courier pickup.

\*Ship same day as drawn whenever possible; specimens < 72 hours old preferred. (Does not apply to fixed specimens.)

\*\*Impact of environmental stress on various histology slide types. Ventana. 2013; N4629 0313B. <https://neogenomics.com/sites/default/files/Brochure/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 <https://neogenomics.com/client-services/forms-and-kits>.**