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| **What** | Documentation and communication of requests for neutrophil testing performed by the National Neutrophil Laboratory (NNL). |
| **Who** | Customers requesting neutrophil testing and NNL staff trained to process and perform neutrophil testing. |

# Introduction

This form provides instructions for proper specimen collection, handling, and submission to the NNL for testing. The request form meets the requirements listed in 42CFR 493.1241 – Standard: Test request. A completed form must accompany each specimen sent to the NNL for testing, unless the test request is placed using other testing request software (for example, Connect). The information on this form is used by NNL staff to log, test the sample, and report results.

| **Revision Notes** | |
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| **Rev #** | **Remark** |
| 3 | * Removed “Screen Only” for HLA Class I and Class II antibodies * Revised website address * Revised Neutrophil Antibody Identification and HLA Class I and Class II Antibody storage & shipping requirements. * This is the first revision released in SSDM. |
| 4 | Updated and condensed what/who and introduction. Simplified and enhanced Instructions to submit samples for neutrophil testing for ease of use. |

**American Red Cross - National Neutrophil Laboratory**

***Neutrophil Laboratory Use Only***

Date: \_\_\_\_\_\_\_\_\_\_\_\_Time: \_\_\_\_\_\_\_ Initials: \_\_\_\_\_\_\_

Condition: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Stored: \_\_\_\_\_\_\_\_\_\_\_

Accession #

**Minnesota - Dakotas Region, St. Paul, MN**

Phone: (651) 291-6797 - Local (855) 216-9202 – Toll-Free

Fax: (651) 291-3233

Website: <https://www.redcrossblood.org/biomedical-services/blood-diagnostic-testing/neutrophil-testing.html>

***See page 2 for instructions, sample types, labeling and shipping requirements***

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| **Patient/Donor Information:**  Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Age/DOB \_\_\_\_\_\_\_\_\_  Patient ID/MR#/DID \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  S/O DIN: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Gender: male \_\_\_ female \_\_\_  Institution \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Department/Address \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  City/State/ZIP\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Contact Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Phone \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  E-Mail \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Fax \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | **Specimen Information**:  Collection date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Specimen type *(check one)*  Serum  Plasma (anticoagulant type) \_\_\_\_\_\_\_\_\_\_\_  Physician \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Reports:  E-Mail  Fax |
| **Clinical Conditions:**  Autoimmune Neutropenia  Alloimmune Neonatal Neutropenia  Drug Dependent Neutrophil Antibody  Diagnosis Unspecified  *Choose test(s) from list below* | **TRALI Investigation:** (Transfusion-Related Acute Lung Injury) *\*Please specify Donor or Recipient*  Donor  Recipient  *Choose test(s) from list below* | |
| **Test Requests:**  **Recommended Testing - Clinical Neutropenia:**  Neutrophil Antibody Identification  **Additional Specialized Testing:**  MAINA *(Monoclonal Antibody Immobilization of Neutrophil Antigens)*  Neutrophil Crossmatch  Drug Dependent Neutrophil Antibody  HLA Class I antibody screen  HNA Phenotyping (HNA-1a, 1b, 1c, 2, 3a, & 4a)  HNA Genotyping *(Select all that apply)*  HNA-1a/1b/1c  HNA-3a/3b  HNA-4a/4b  HNA-5a/5bw | **Test Requests:**  **Recommended Testing – TRALI Investigation:**  Neutrophil Antibody Identification  ***-and-***  HLA Class I and Class II Antibody  Screen + Single Antigen ID *(if screen is positive)*  ***Additional Specialized Testing:***  MAINA *(differentiation of HNA antibodies from HLA Class I antibodies)*  Neutrophil Crossmatch  HNA Phenotyping (HNA-1a, 1b, 1c, 2, 3a, & 4a)  HNA Genotyping *(Select all that apply)*  HNA-1a/1b/1c  HNA-3a/3b  HNA-4a/4b  HNA-5a/5bw | |

**Instructions to submit samples for neutrophil testing:**

1. Refer to the table below for specimen and handling requirements for each test. Specimens must be shipped following federal and local requirements for shipping biological substances category B.
2. Label each specimen vial with the patient’s name or donation identification number (DIN), a second identifier (DOB, Medical Record Number or DID) and the collection date. Patient name/Donor identification number on specimen must match name/DIN documented on request form.
3. Complete Page 1 of this form and include it with each specimen vial.
4. Send samples Monday-Thursday to ensure weekday delivery.

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| **Shipping Address:**  National Neutrophil Laboratory  Minnesota-Dakotas Region  100 South Robert Street  St Paul MN 55107 | Business Hours: 8:00 AM – 4:30 PM | Monday-Friday  Phone: (651) 291-6797 or (855) 216-9202  Fax: (651) 291-3233 |
| **Website:** <https://www.redcrossblood.org/biomedical-services/blood-diagnostic-testing/neutrophil-testing.html> | |

| **Test** | **Specimen & Handling Requirements** | **Storage & Shipping Requirements** |
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| **Neutrophil Antibody Identification**  **MAINA**  (Only performed in conjunction with a Neutrophil Antibody Identification request)  **\*Drug Dependent Neutrophil Antibody** | Minimum of 500 μL of serum or plasma   * Serum from a plain red top tube * Plasma – EDTA or anticoagulant used in donor collection are acceptable. Segments, gel tubes, and PPT tubes are NOT acceptable * Separate plasma and/or serum from red blood cells   If Drug-dependent Neutrophil Antibody testing is requested, also include 2-5mg of each drug of interest | Ship frozen on dry ice via overnight courier   * If collected ≤ 72 hours, specimens may be shipped refrigerated using ice packs or wet ice * **Send samples Mon - Thurs to ensure weekday delivery** |
| **HLA Class I and**  **Class II Antibody**  **TRALI Work-Up** | Minimum of 2 mL of serum   * Serum from a plain red top tube * Separate serum from red blood cells |
| **\*Neutrophil Crossmatch** | Sample 1. Minimum of 500 μL of serum or plasma   * Collection and handling per Neutrophil Antibody Identification requirements   Sample 2. 14 – 28 mL of EDTA whole blood   * Store at ambient temperature * DO NOT separate plasma from red blood cells | Sample 1: Serum/plasma. Per Neutrophil Antibody Identification requirements.  Sample 2: Neutrophils. Ship at ambient temperature in an insulated container.   * **Must be received within 24 hours.** * **Send samples Mon - Thurs to ensure weekday delivery.** |
| **\*HNA Phenotyping**  **(HNA-1a, 1b, 1c, 2, 3a & 4a)** | 14 – 28 mL of EDTA whole blood   * Store at ambient temperature * DO NOT separate plasma from red blood cells | * Ship at ambient temperature in an insulated container. * **Must be received within 24 hours.** * **Send samples Mon - Thurs to ensure weekday delivery.** |
| **\*HNA Genotyping** | 4 or 6 mL of whole blood collected in citrate or EDTA anticoagulant   * Store at ambient or refrigerated temperature * DO NOT separate plasma from red blood cells | * Ship at ambient or refrigerated using ice packs or wet ice. * **Send samples Mon-Thurs to ensure weekday delivery.** |

**\*Call lab (651) 291-6797 before sample collection**