

Laboratory News

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New Test Offering for neonatal ABO/RH blood group testing and Direct Antiglobulin Testing (DAT)

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Starting **May 14, 2025**, MCHS Transfusion Services laboratories will begin offering neonatal ABO/RH (NEO ABORH) and neonatal Direct Antiglobulin Testing (NEO DAT) to determine the presence or absence of A, B and D antigens on red cells and determination of in vivo coating of red cells with IgG antibody. **Neonates are defined as infants from birth to less than 4 months of age.**

This testing was previously only orderable for newborns, through the cord blood testing (CORD-B) workflow or inpatient neonate transfusion candidates testing, through the neonate transfusion (BBNBSCN) workflow. The new test codes NEO ABORH and NEO DAT are appropriate for both inpatient and outpatient clinical settings where transfusion is not a consideration. When fetomaternal ABO incompatibility exists, potential for ABO Hemolytic Disease of the Fetus and Newborn (HDFN) exists.

Neonatal ABO/RH (NEO ABORH)

ABO blood types are determined by the presence or absence of A and/or B antigens on RBCs, and by the presence or absence of Anti-A and/or Anti-B in the serum. Samples from infants less than 4 months old will not regularly contain expected Anti-A or Anti-B in serum; therefore, only RBC ABO typing is required.

Rh-positive and Rh-negative phenotypes are determined by the presence or

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absence of D antigens on RBCs. When Rh typing is performed for newborns of Rh-negative mothers (to determine maternal RhIG candidacy) the method for Rh typing must be capable of detecting weak expression of D; therefore, Weak D testing may also be performed.

Neonatal Direct Antiglobulin Testing (NEO DAT)

Direct antiglobulin testing is used in the investigation of immune-mediated RBC destruction when IgG may be bound to RBCs in vivo. This test may be useful in investigation of suspected HDFN. RBCs obtained directly from the patient are washed free of unbound globulins and tested against monospecific Antihuman globulin (AHG) reagents (Anti-IgG). Agglutination by a monospecific reagent suggest that the RBCs are coated with the corresponding globulin.

Test Details

Specimen Collection

- Preferred: 3 mL (1 mL min) EDTA Lavender Top Tube (LTT)
- Acceptable: Two 0.5 mL whole blood micocollection tubes (EDTA)

Transport Temperature & Stability

- Refrigerated: < 48 hours
- Storage/Transport Temperature: Refrigerated

Rejection Criteria

- Frozen
- Hemolyzed
- Clotted
- Serum separator tubes (SST)
- Specimens > 48 hours

Other

➤ Neonatal ABO/RH Performed:

| Performing Location | Day(s) Test Performed | Analytical Time | Methodology/Instrumentation |
|---------------------|-----------------------|-------------------|-----------------------------|
| Beaver Dam | Monday through Sunday | Less than 2 hours | Gel |
| Eau Claire | Monday through Sunday | Less than 2 hours | Serological |
| Ladysmith | Monday through Sunday | Less than 2 hours | Gel |

| | | | |
|-------------|-----------------------|-------------------|-------------|
| Marshfield | Monday through Sunday | Less than 2 hours | Serological |
| Minocqua | Monday through Sunday | Less than 2 hours | Serological |
| Neillsville | Monday through Sunday | Less than 2 hours | Gel |
| Park Falls | Monday through Sunday | Less than 2 hours | Serological |
| Rice Lake | Monday through Sunday | Less than 2 hours | Serological |
| Weston | Monday through Sunday | Less than 2 hours | Serological |

➤ **Neonatal DAT Performed:**

| Performing Location | Day(s) Test Performed | Analytical Time | Methodology/Instrumentation |
|---------------------|-----------------------|-------------------|-----------------------------|
| Beaver Dam | Monday through Sunday | Less than 2 hours | Gel |
| Eau Claire | Monday through Sunday | Less than 2 hours | Serological |
| Marshfield | Monday through Sunday | Less than 2 hours | Serological |
| Rice Lake | Monday through Sunday | Less than 2 hours | Serological |
| Weston | Monday through Sunday | Less than 2 hours | Serological |

➤ **CPT Code:**

- Blood group ABORH –
 - ABO CPT = 86900
 - RH CPT = 86901
- DAT IgG CPT = 86880

➤ **Test Code:**

- NEO ABORH
- NEO DAT

Results

Neonatal ABO/RH

ABO Typing: A, B, AB, O

Rh Typing: Rh positive / Rh negative

Neonatal DAT

Neonates <4 months:

Specimen is tested with monospecific IgG. If DAT is positive, an antibody elution may be performed and charged based on maternal antibody history.

Reference Range Information

Neonatal ABO/RH

| Performing Location | Reference Range |
|----------------------|-----------------------------------|
| All Performing Sites | No reference ranges are available |

Neonatal DAT

| Performing Location | Reference Range |
|----------------------|-----------------|
| All Performing Sites | Negative |

Questions

Please call Marshfield Labs Customer Service at 1-800-222-5835 with questions.