

# Laboratory News

VOL. 48, NO. 4 April 25, 2025

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

Dr. Haytham Hasan, Althea Rossier

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

### Inside this Issue

Methodology.....	1
Test Details.....	2
Results.....	3
References.....	3
Questions.....	3

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 micollection 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.