



Current Status: Pending

PolicyStat ID: 9061595



**Origination:** N/A  
**Effective:** Upon Approval  
**Final Approved:** N/A  
**Last Revised:** N/A  
**Next Review:** 2 years after approval  
**Owner:** Nadera Poirier: Spvr,  
 Transfusion Services  
**Policy Area:** Lab - Transfusion Service  
**References:**  
**Applicability:** Sutter Roseville Medical Center

## Performing a Weak D Rh Type TS.ANA 10.18-RV

### Performing a Weak D Rh Type

<b>Purpose</b>	This procedure describes how to perform, interpret and result a Weak D Rh blood type.		
<b>Policy</b>	<ul style="list-style-type: none"> <li>Weak D testing must be performed on all patients with negative D results in the following situations unless previous valid Weak D typing results have been documented: <ul style="list-style-type: none"> <li>Cord Blood/Neonate &lt;7 days old</li> <li>Prior to performing Fetal Bleed Screen</li> <li>Allogeneic BMT (Bone Marrow Transplant) recipient/donor</li> </ul> </li> <li>A. Previously recorded valid Weak D results will be used in above situations and to resolve discrepancies</li> <li>B. The "Interpreting Results" section in this procedure applies to both manual and automated testing method.</li> <li>C. Weak D testing may be performed manually using this procedure or on the ECHO analyzer. See <i>Processing Assays on the ECHO Analyzer</i> to perform testing on the ECHO Analyzer</li> </ul>		
<b>Equipment/ Reagents/ Supplies</b>	<b>Equipment</b>	<b>Reagents</b>	<b>Supplies</b>
	<ul style="list-style-type: none"> <li>Centrifuge</li> <li>Agglutination viewer</li> <li>Heat block (36-38C)</li> <li>Serological cellwasher</li> </ul>	<ul style="list-style-type: none"> <li>Anti-D</li> <li>Monoclonal Control</li> <li>0.9% saline</li> <li>Anti-IgG</li> <li>Combs Control Cells</li> </ul>	<ul style="list-style-type: none"> <li>Test tubes</li> <li>Disposable pipettes</li> <li>Test tube rack</li> </ul>
<b>Specimen Requirements</b>	<ul style="list-style-type: none"> <li>Adults: One (1) 9 ml EDTA stoppered tube (preferred) or red stoppered tube without separator gel- minimum of 3ml.</li> <li>Infants, Cord Blood: Two EDTA microtainers or 1.0 ml EDTA or red stoppered</li> </ul>		

tube without separator gel

Quality Control		Daily Reagent Quality Control	
<b>Procedure:</b> Weak D Testing	Follow the steps below when the patient meets the criteria to determine a weak D type.		
	<b>Step</b>	<b>Action</b>	
	1.	Obtain the patient tube with the Anti-D from step 8 in Rh blood type procedure or label and dispense 1 drop anti D reagent and 1 drop of 3-5% patient cells into new tube. Place the patient tube into the heat block for 15 minutes.	
	2.	Wash patient Anti-D test from step 1, 3-4 times in 0.9% saline.	
	3.	Add two (2) drops of Anti-IgG and mix.	
	4.	Centrifuge for time posted on centrifuge.	
	5.	Resuspend the cell button and examine macroscopically for agglutination.	
	6.	Grade and immediately record results.	
	7.	To all negative tubes, add one (1) drop of coombs control cells and mix gently.	
	8.	Centrifuge and read macroscopically.	
	9.	Grade and immediately record results.	
	10.	If coombs control cells are not macroscopically positive, the test is invalid and must be repeated.	
<b>Additional Testing</b>	<b>Step</b>	<b>Action</b>	
	1.	Follow the chart below to determine if additional testing is needed	
		<b>If:</b>	<b>Then:</b>
	Weak D is Positive $\geq 1+$	<ul style="list-style-type: none"> <li>Perform an IgG DAT using patient cells. <i>Note: Record results in the DUC row of Weak D testing grid. See Performing Direct Antiglobulin Test by Tube Method procedure for instructions on how to perform the test.</i></li> <li>Proceed to Interpreting Results section</li> </ul>	
	Weak D test is Negative	<ul style="list-style-type: none"> <li>Proceed to Interpreting results section</li> </ul>	
<b>Interpreting Results</b>	Follow the table to interpret the Weak D test.		

		If		Then
		Patient Test	DAT	
		Weak D Positive >1+	Negative	<ul style="list-style-type: none"> <li>Weak D is positive.</li> <li>Patient Rh is reported with ETC RHDU</li> </ul>
		Weak D Positive ≥1+	Positive	<ul style="list-style-type: none"> <li>Weak D is Invalid</li> <li>Rh is reported as Invalid. Recommend retesting. Transfuse with Rh negative blood until resolved.</li> </ul>
		Negative	ND	<ul style="list-style-type: none"> <li>Weak D is negative</li> <li>Patient Rh is reported as negative.</li> </ul>
<b>Reporting</b>	Record the DAT results in the DUC row of the testing grid. Use the following table to report results. J=ND <i>Note: PB Comment will not be added for Cord Blood Test results</i>			
		<b>Report as:</b>		
	AHGD	CCD	Interp DU test=P	
DU	1-4+	J	Insert PB test. Result ABO1 and dated free text stating Weak D performed and interpretation.	
DUC	0	1-4+		
If pregnancy related,		Insert BBC and result with ETC RHSD If previously reported as Rh negative, change Rh type in BAD file to RHDU		
	AHGD	CCD	Interp DU test=N	
DU	0	1-4+	Insert PB test. Result with dated free text stating Weak D performed and interpretation.	
DUC	J	J		
	AHGD	CCD	Interp DU test=ICLR	
DU	1-4+	J	See Rh discrepancy procedure	
DUC	1-4+	J		
<b>Related Documents</b>		Performing an ABO Blood Group Performing a Rh Blood Type by Tube Method Performing Direct Antiglobulin Test by Tube Method Daily Reagent Quality Control Procedure		
<b>References</b>	Manufacturer's product insert Blood Grouping Reagent Anti-D			
All revision dates:				
<b>Attachments</b>				
No Attachments				

## Approval Signatures

Step Description	Approver	Date
Laboratory Director	Lindsey Westerbeck: Dir, Lab	pending

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