



Technical Memorandum

To: Clients / DLS Staff

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Date: July 24, 2013

Subject: Dilute Russell's Viper Venom Time (DRVVT)

The Dilute Russell's Viper Venom Time (DRVVT) is one of the most commonly used screening tests for lupus anticoagulants. The Russell's viper venom triggers the coagulation cascade downstream of Factor X to cause clotting. It is not influenced by upstream coagulation factor deficiencies or inhibitors, including factors VIII and IX. The DRVVT screening test is performed with a low concentration of phospholipids. If a lupus anticoagulant is present, the clotting time is prolonged. The DRVVT confirm reagent contains a higher concentration of phospholipids that can neutralize the lupus anticoagulant and shorten the clotting time.

Beginning on August 5, 2013, Diagnostic Laboratory Services will switch to a new DRVVT reagent and testing algorithm. A DRVVT screening test will be performed. Samples with a positive DRVVT screen will be confirmed with both a DRVVT confirmatory step and a 1:1 DRVVT mixing study with normal pooled plasma. In the absence of interfering medications, specimens with a positive screening test, a positive confirmatory test, the presence of an inhibitor on the 1:1 mixing test will be considered positive for a lupus anticoagulant¹. All specimens with a suspected lupus anticoagulant will be screened with a Thrombin Time to detect the presence of heparin or a direct thrombin inhibitor. These drugs may cause false positive results.

It is recommended that positive lupus anticoagulant tests be repeated no sooner than 12 weeks to confirm the diagnosis of a lupus anticoagulant¹. It is preferable for samples to be obtained prior to, or in the absence of, anticoagulant therapy, as this may interfere with the assay.

Test Information

Test Name	Unit Code	Methodology	Specimen Requirements	Handling and transport	Reference Range
Lupus Anticoagulant (DRVVT)	6674	Clot Detection	3.2% Citrate Plasma	Double centrifuge, separate plasma and freeze @ -20°C immediately.	
• DRVVT Screen		Clot Detection			
• Screen Ratio		Calculated			<1.20 (new)
• Confirm Ratio		Calculated			
• Normalized Ratio		Calculated			<1.20 (new)
• DRVVT Mix		Clot Detection			
• Protime		Clot Detection			11.0 – 15.6 sec
• PTT		Clot Detection			24.0 – 40.0 sec
• Thrombin Time		Clot Detection			15 – 22 sec

If you have any questions please contact DLS Client Services at 589-5101 or Dr. Wesley Kim at 589-5131.

References:

¹ Pengo V et al. Update on the guidelines for lupus anticoagulant detection. J of Thrombosis and Hemostasis 2009; 7: 1737-1740.