Lab Dept: Coagulation

Test Name: D DIMER

General Information

Lab Order Codes:	DDI
Synonyms:	D-dimer
CPT Codes:	85379 – Fibrin degradation products, D-dimer; quantitative
Test Includes:	Fibrin D-Dimer reported in mg/L FEU.

Logistics

Test Indications:	Useful for the detection of deep vein thrombosis, evaluation of disseminated intravascular coagulation (DIC), acute myocardial infarction, unstable angina, and following a leukemia patient's chemotherapy.
Lab Testing Sections:	Coagulation
Phone Numbers:	MIN Lab: 612-813-6280 STP Lab: 651-220-6550
Test Availability:	Daily, 24 hours; Minneapolis and St. Paul Laboratories.
Turnaround Time:	2 hours
Special Instructions:	None

Specimen

Specimen Type:	Whole blood
Container:	Light Blue top tube (Buffered Na Citrate 3.2%)
Draw Volume:	1.8 mL blood (in 2 mL tube) or 2.7 mL blood (in a 3 mL tube).
Processed Volume:	0.9 mL plasma
Collection:	● A clean venipuncture is essential, avoid foaming. ● Entire sample must be collected with single collection, pooling of sample is unacceptable. ● Capillary collection is unacceptable.

	● Patient's with a hematocrit level >55% must have a special tube made to adjust for the hematocrit; contact lab for a special tube. ● Mix thoroughly by gentle inversion. Deliver immediately to the laboratory at room temperature via courier or pneumatic tube. **Off campus collections:** ● Must be tested within 4 hours. ● Do not refrigerate. ● If not received in our lab within 4 hours of collection, sample must be centrifuged and *platelet-poor plasma removed from cells and transferred to an aliquot tube being careful not to disturb the cell layer. Centrifuge the plasma a second time and transfer into a clean aliquot tube being careful not to include any residual platelets on the bottom of the tube. Freeze at -20°C and deliver to the lab on dry ice within 2 weeks. ***Validation of your lab's centrifuge for platelet poor plasma is required.**
Special Processing:	Lab staff: Centrifuge in Stat Spin for 5 minutes or 10 minutes at 3000 rpm at room temperature. For primary tube testing, leave plasma on cells OR remove plasma and place in a 4 mL plastic cup; allow for 100 mL of dead-space. Test within: ● Four (4) hours when stored in the capped tube above the packed cells 18 to 24°C. ● Four (4) hours as plasma that has been separated from cells by centrifugation when stored 2 to 8°C or 18 to 24°C. ● Two (2) weeks when stored -20°C. ● Six (6) months when stored -70°C (rapidly frozen). ● Plasma must be frozen if testing cannot be completed within four (4) hours. ● Frozen plasmas are thawed at 37°C for three (3) minutes, test immediately.
Patient Preparation:	None
Sample Rejection:	Improper tube; clotted sample; under-filled tube; mislabeled or unlabeled specimens

Interpretive

Reference Range:	A clinical cut-off of 0.5 mg/L FEU when used along with a low clinical pretest probability assessment model has been established to exclude DVT/PE. **Interpretation:** Results of D-Dimer should always be interpreted in conjunction with the patient's medical history, clinical presentation and other findings. Clinical diagnosis should not be based on the results of D-Dimer alone.
Critical Values:	N/A

Limitations:	Elevated D-dimer levels are not specific for the presence of DIC or of deep vein thrombosis. False-positive or false-negative results may occur when attempting to confirm a diagnosis of DIC.
Methodology:	Immunoturbidometric (optical)
References:	Wayne, PA (January 2008).Clinical Laboratory Standards Institute, Collection, Transport and Processing Blood Specimens for Testing Plasma-Based Coagulation Assays: Approved Guideline, 5th Edition,CLSI Publication H21-A5, An Algorithmic Approach to Hemostasis Testing, Kottke-Marchant,CAP Press
Updates:	7/16/2012: Method update. Previously a screening test; Monoclonal Antibodies Attached to Latex Particles CPT update, previously listed as 85378. 9/15/2014: Added Off Campus collection info. 7/18/23: Updated special processing instructions.