

# COAGULATION SPECIMEN COLLECTION AND TRANSPORT GUIDELINES



Instructions for specimen collection and preparation including specific specimen type and volume requirements for a particular test or tests can be found in the [Michigan Medicine Laboratories \(MLabs\) Test Catalog](#) or by calling the MLabs Client Services at 800.862.7284. The quality of your test results depends upon proper collection, preparation and transport of the specimen according to the published criteria. In the event a specimen does not meet standards for quality laboratory testing, MLabs may need to cancel the order and will notify you of such cancellation.

Blood specimens for coagulation testing require special care when obtaining from the patient and transporting to the laboratory. Since the accuracy of the test result is a direct reflection of sample integrity, MLabs will not be able to perform coagulation assays on specimens that have not been collected and transported properly. Please follow the detailed instructions below or contact MLabs if you have questions regarding collection, transport, and testing procedures for Coagulation studies.

## Specimen Collection

Collect specimen in blue top (3.2% sodium citrate) tube. If multiple tests are being drawn, draw coagulation studies before additive-containing tubes such as the EDTA, heparin, or clot activator (SST) tubes. If only the coagulation specimen is being drawn, draw 1-2 mL into another blue top (3.2% sodium citrate) Vacutainer®, discard, and then collect the specimen. Once drawn, the tube should be gently inverted three or four times; do not over mix as excessive mixing will affect the test result.

Please note:

1. Citrate tubes must be properly filled (e.g., 2.7 mL of blood added to 0.3 mL citrate for a 3 mL draw tube). Inadequate filling of the collection tube will lead to inaccurate results.
2. When drawing the specimen, avoid contaminating the sample with tissue thromboplastin as this may affect results. Venipuncture must be clean with no trauma, and the application of the tourniquet should be limited to 1 minute.
3. Collection of the blood through lines that have been previously flushed with heparin should be avoided. If the blood must be drawn through a VAD (vascular access device), the line should be flushed with 5 mL of saline and the first 5 mL of blood or six dead space volumes of the VAD discarded.

## TRANSPORT OF WHOLE BLOOD SPECIMENS

Store and transport whole blood specimens at room temperature. A whole blood specimen should arrive at the MLabs Coagulation Laboratory within 3 hours of collection, with the exception of the Anti-Xa assays, which require the whole blood specimen to arrive at MLabs within 45 minutes of collection or the Prothrombin Time (PT) assay, which must arrive within 23 hours.

If there is any question that the specimen will not arrive within the designated time frame, it would be best to prepare platelet-poor plasma and ship the specimen frozen on dry ice.

## TRANSPORT OF PLASMA SPECIMENS

Centrifuge within 4 hours of collection at a speed of 1500g for at least 15 minutes to achieve platelet poor plasma. Transfer plasma into a polypropylene (cloudy plastic) vial, not polystyrene (clear hard plastic) being careful to avoid the buffy coat. If multiple tests are requested, please send a separate frozen aliquot for each test ordered. Freeze the specimens immediately. Specimens can be stored at 20°C for up to 2 weeks or at -70°C for up to six months. Transport frozen plasma specimens on dry ice.

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## SHIPPING OF FROZEN SPECIMENS

If you are sending specimens directly to MLabs via Express Courier, transport frozen specimens on dry ice. Ship the specimens in a Styrofoam container with sufficient dry ice to keep the samples solidly frozen until they arrive at the laboratory. Assays will not be performed on any specimen that does not arrive solidly frozen. Please note: MLabs does not provide dry ice for shipping. Send specimens by express mail or courier to:

Michigan Medicine Laboratories (MLabs)  
N-LNC Specimen Processing  
2800 Plymouth Rd. Bldg 35  
Ann Arbor, MI 48109-2800

## Questions

Call **800.862.7284** or **mlabs.umich.edu**