

Platelet Poor Plasma

Preparation of Platelet Poor Plasma for any test requiring frozen plasma from a light blue top tube.

Coagulation assays are extremely sensitive to the manner in which samples are collected and processed before freezing the platelet poor plasma. Accurate test results require that the blood samples be processed in the following way:

1. Coagulation specimens are collected in light blue vacuum tubes, 3.2% buffered sodium citrate in 2.7 ml tubes. The use of 1.8 ml draw tubes is discouraged when plasma is to be frozen because that size tube might not yield the required 1 ml minimum of plasma for each ordered test.
2. Tubes must be filled to the frosted minimum-fill line so that the anticoagulant in the tube does not over dilute the plasma sample, which would cause erroneous test results.
3. Immediately after collection, centrifuge the specimen at 3000-3500 RPM for 15 minutes in a fixed angle centrifuge or 2700-3100 RPM for 10 minutes in a swing bucket centrifuge.
4. Remove the plasma from the centrifuged tube using a plastic transfer pipette to another labeled plastic aliquot tube.
5. Check the cells that remain in the blue-top tube with wooden applicator sticks for a clot. Do not submit plasma from any tube in which even a tiny clot is found.
6. Hemolyzed (pink to red plasma) specimens must not be used so they must be recollected.
7. Centrifuge again at 3000-3500 RPM for 15 minutes in a fixed angle centrifuge or 2700-3100 RPM for 10 minutes in a swing bucket centrifuge. This double spin process is necessary to assure that there are very few platelets in the plasma that will interfere with many tests and give erroneous results.
8. Carefully remove the top 3/4 of the plasma using a plastic transfer pipette, avoiding the tiny cell button at the bottom of the tube, to a final labeled plastic tube and clearly mark the specimen type as CITRATED PLASMA. For tests other than Prothrombin Time, PTT, Fibrinogen, D-Dimer, or AT please use the clear plastic ARUP standard transport tube for freezing the platelet poor plasma.

9. Each ordered test requires 1 ml minimum, so split the plasma for multiple tests into separate 1 ml portions/tubes. Most coagulation tests each require 1 ml frozen plasma.

10. Freeze the platelet poor plasma immediately. It will need to be transported on dry ice to the testing site to remain frozen. Plasma for most coagulation tests must be frozen within 4 hours of collection. (check individual requirements in the test directory).

11. It is helpful to include medication information (especially anticoagulant therapy) on the test request.

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