Wake Forest Baptist Medical Center	Coag Specimen Processing CCL-026	Dept: 324318	Critical Care Labs
		Effective Date:	Feb 2015
		Revised Date:	Feb 2019
		Contact:	Ann Shoffner
Name & Title: Gregory Pomper, MD CLIA Laboratory Director		Date:	2/25/19
Signature: GP			

1) **General Procedure Statement:**
   a. **Purpose:** As of June 2nd 2014, the OR Lab no longer performs Coagulation testing. This procedure provides information to the OR Lab staff regarding pre-analytical processing of Coagulation samples for the Core Laboratory.
   b. **Responsible Department/Party/Parties:**
      i. Procedure owner: Ann Shoffner
      ii. Procedure: Critical Care Lab (CCL) Staff
      iii. Supervision: Ann Shoffner
      iv. Implementation: Ann Shoffner and Critical Care Lab (CCL) Staff

2) **PPE Requirements:** Lab Coat, Gloves

3) **Procedure:**
   A. Coag Sample Requirements:
   1. Citrated plasma should be obtained using a mix of freshly collected blood with one part of 3.2% sodium citrate. Invert the tube gently three or four times immediately after venipuncture to ensure proper mixing of blood to anticoagulant.
   2. A syringe or evacuated tubes may be used for collection. If an evacuated tube system is used, the coagulation sample should be the first tube collected.
   3. If blood is drawn from a vascular access device (VAD), the line should be flushed with 5.0 mL saline and the first 5.0ml of blood or six dead space volumes of the VAD discarded.
   4. Specimens containing clots, collected in the wrong tube or have less than 90% expected fill of the collection tube should be rejected. The plasma volume required for testing is 50uL with a dead volume of 100uL.

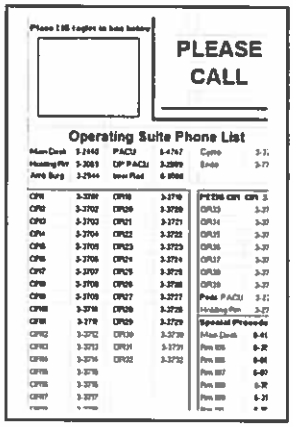
      Icteric, Lipemic and/or Turbid samples – should be forwarded to the Main Coag Lab for verification using airfuge centrifugation, BSC methodology or Fibrometer.

      Hemolyzed samples – should be noted in the LIS as hemolyzed.

      Hct values >55% - The citrate concentration of the collection tube must be adjusted in patients who have hematocrit values greater than 55%. Visually inspect the sample. If greater than half of the sample appears to be red cells, suspect an increased Hct. Review the patient's Hct history in the LIS. If a Hct > 55% is suspected, request a special tube from the Core Lab and ask the ordering location to recollect the sample using the special tube.

   B. Coag Sample Preparation, Handling and Processing:
   1. The sample should be transported at room temperature.
   2. Coagulation samples should be processed without delay.
   3. Check the sample and requisition for proper ID and matching.

4. Check the sample for clot formation using wooden applicator sticks and visual inspection prior to centrifugation.
5. Place the sample in the centrifuge as soon as it arrives in the lab.
6. Centrifuge the blood specimen for a minimum of 3 minutes at 7200 rpm as soon as possible after collection to produce platelet poor plasma (platelet count <10 x 10^3/uL).
7. Patient plasma should be tested within two hours after collection if stored at room temperature, four hours if stored at 2-4°C, within two weeks if stored at -20°C, and within 6 months at -70°C. If immediate testing is to be done, the plasma may remain on the packed cells or separated. To separate plasma, use a plastic transfer pipette; remove the plasma to a plastic tube without disturbing the buffy coat. Do not store the sample on ice. If testing is not complete within 4 hours, the plasma must be frozen. Frozen plasma samples must be rapidly thawed at 37°C while gently mixing and tested immediately after thawing. Mixing is critical before testing.
8. Order/Receive the testing in the LIS.
9. Manually complete a "call to" slip (*CCL-F052 OR Lab Call To Form*. Put a LIS taglet on the call slip and circle the patient's OR Room #. If a CBC is also ordered, complete a separate "call to" slip and give each sample a separate stat bag. This will expedite delivery to the appropriate lab area.
10. Place the call slip in the pocket of a red stat bag.



11. Place the LIS barcode label on a 12 x 75 aliquot tube. The label must contain 2 unique patient identifiers. Place one LIS taglet on the requisition and one taglet on the *Coag Tracking Sheet*.
12. Verify that all ID's are correct then aliquot the sample into the labeled 12 x 75 tube. Place the sample in the zippered part of the red stat bag.
13. Tube the sample to Central Processing Station 21.

C. Confirmation of Platelet Poor Plasma:

Confirmation of Platelet Poor Plasma is performed annually, whenever centrifuge performance is in doubt, upon return from repair or before a new centrifuge is placed into use. A platelet count is performed on the whole blood sample before the blue top tube is spun and then on the plasma from that same sample after the blue top tube is spun in the centrifuge to be tested.

1. Obtain a sample collected in a blue top tube.
2. Obtain a platelet count on the un-spun blue top tube. The un-spin platelet count should be greater than 150 x 10^3.
3. Spin the sample in the centrifuge you wish to verify.
4. Obtain a platelet count on the spun plasma (preferably using the same Core Lab Hematology analyzer that performed the un-spun plt count). The post spin platelet count should be less than 10 x 10^3.
5. Report results to the lab manager.
6. The lab manager will record results on the *CCL-F075 Platelet Poor Plasma Log* found under G:\Lab_Shared\Houska_Shoffner\QA\Plt Poor Plasma Log.xlsx.

4) **Related Procedures:** none

5) **Attachments:** none

6) **Related Forms:**
   - CCL-F052 OR Lab Call To Form found under G:\Lab_Shared\ICU_ORLab\FORMS and LOGS\REQUISITIONS\CCL-F052 OR Call To Form.xls
   - CCL-F075 Platelet Poor Plasma Log found under G:\Lab_Shared\Houska_Shoffner\QA Plt Poor Plasma Log.xlsx.

7) **References:**

   - Clinical Laboratory Standards Institute. Collection, Transport and Processing of Blood Specimens for Testing Plasma-Based Coagulation Assays: Approved Guideline-Fifth Edition. CLSI Publication H21-A5. Wayne, PA, January, 2008.
   - Pittiglio, DH. Clinical Hematology and Fundamentals of Hemostasis. USA, 1987.

8) **Review/Revision/Implementation:**
   - Review Cycle: All procedures must be reviewed at least every 2 years.
   - Office of Record: Department of Pathology, Critical Care Laboratory

9) **Previous Revision Date(s):** 2/17

10) **Revised/Reviewed Dates and Signatures:**

Reviewed/Revision Date:_____ Signature:_____

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