**Change in Grey**

1. **Principle:** Pre-Analytical systems are the most important part of the Clinical Laboratory Testing process. Issues with specimen collection can affect lab results. This document details the collection and processing procedures for client based specimen collection of samples for Bioreach Laboratories.
2. **Phlebotomy: Specimen Collection/Processing/Transport Policy overview.**
	* 1. All instructions (written and those given verbally) for patient collected specimens should be clearly stated and understood by the patient before collection.
		2. Any issues with specimen collection should be referred to Bioreach Laboratory Staff.
		3. Ensure that any Reference Lab tests are accounted for and proper specimen collection protocols are adhered to.
			1. Additional tubes/sample may be required for reference lab testing.
			2. See the appropriate reference laboratories website for complete collection details.
			3. Most referred tests at Bioreach go to ARUP Laboratories. See *ARUPlabs.com* for complete collection details.
			4. Some tests may require special tubes such as Royal Blue EDTA or Sodium(Litium) Heparin green top tubes.
		4. Labeling: Bioreach labels are to be used for specimen collection.
			1. **Specimen labeling should include:**
				1. **Full Patient name**
				2. **Patient’s Date of Birth**
				3. **Date and time of collection**
				4. **Initials of phlebotomist.**
			2. Fasting status should be noted on the specimen order/requisition.
			3. **Labels should be placed on tubes to ensure a clear window to specimen** to ensure complete filling of tube and allow testing staff to visualize any specimen issues such as clots or hemolyzed specimens.
		5. **Criteria for Rejection of a Specimen**: Bioreach Laboratories establishes criteria for rejection of a test specimen. Improperly labeled containers, improper containers and improper methods of collection will be rejected. Grossly Hemolyzed specimens will be rejected and recollection initiated. If a question of specimen integrity exists, contact Bioreach Laboratories for consultation.
3. **Phlebotomy procedure**: *Please follow your approved specimen collection protocol. The following protocol is to be used if no client protocol exists.*
	1. Patient Preparation: Patients should be aware of the blood collection process and be willing to provide a sample.
		1. Patients should be relaxed and sitting down.
		2. Patients are to be asked their fasting status. If a patient is fasting, then this should be noted on the tube or on the requisition.
	2. Ensure order or test requisition is accurate.
	3. Ensure that you have identified the patient using two discrete identifiers.
	4. Select tube or tubes appropriate for required specimen.
	5. Assemble needle in holder. Be sure the needle is firmly seated to ensure the needle does not unthread during use.
	6. Place the tube into the holder. Note: Do not puncture the stopper.
	7. Select site for venipuncture.
	8. Apply a tourniquet. Tourniquets should only be tight around the arm for 60 seconds maximum.
	9. Prepare venipuncture site with an appropriate antiseptic. DO NOT PALPATE VENIPUNCTURE AREA AFTER CLEANSING.
	10. Place the patient's arm in a downward position.
	11. Remove the needle shield.
	12. Perform venipuncture with the arm in a perpendicular or downward angle.
	13. Push tube onto needle, puncturing stopper diaphragm.
	14. REMOVE TOURNIQUET within one minute of placement on arm.
	15. Practice Universal Precautions to minimize exposure hazard.
	16. If no blood flows into tube or if blood ceases to flow before an adequate specimen is collected, the following steps are suggested to complete satisfactory collection:
		1. Push tube forward until tube stopper has been penetrated. If necessary, hold in place to ensure complete vacuum draw.
		2. Confirm the correct position of needle cannula in vein.
		3. Remove tube and place a new tube on the needle holder.
		4. If the second tube does not draw, remove needle, apply gauze on the venipuncture site and discard the needle and used tubes.
		5. Repeat procedure.
	17. When the first tube has filled to its stated volume and blood flow ceases, remove it from the holder.
	18. Place succeeding tubes in the holder, puncturing the diaphragm to begin flow.
	19. Recommended Order of Draw:
		1. NaCitrate/Blue Top
		2. Serum Separator/SST/Gold Top/Red/Yellow Top
		3. Green top Li Heparin or Na Heparin
		4. EDTA/Purple Top
		5. Royal Blue EDTA
	20. While each successive tube is filling, Invert filled tubes 8-10 times.
	21. As soon as blood stops flowing in the last tube, remove tube from holder, remove needle from vein, apply pressure to puncture site with dry sterile cotton swab or gauze until bleeding stops.
	22. Apply bandage.
	23. After venipuncture, ensure tubes have all been inverted 8-10 times.
	24. Dispose of needle and holder in a sharp container.
	25. Specimens are then labeled with the patient still present.
	26. Ensure venipuncture site is bandaged and that the patient is ok before leaving the patient.
4. **Offsite/Client based processing of specimens:**
	1. Samples should be completely clotted, with a recommended minimal clot time of 30 minutes.
	2. Centrifugation of specimens: Serum Separator tubes (SST’s) are to be centrifuged for 10 min at 2500 rpm.

1. **Transportation of specimens to lab**: Samples collected outside the lab will be safely transported or shipped to lab.
	1. Transportation of specimens is directed by the phlebotomist to ensure specimens arrive in a timely manner.
		1. SST tubes and EDTA/purple tops are to be placed in a cooler at 2 -8 degrees for transport to lab.
		2. **Blue tops tubes must remain at room temperature.**
		3. Excessive delays in transport may result in certain tests not being performed.
2. **Specimen rejection:**
	1. Unlabeled specimens will be rejected by lab staff and recollection initiated.
	2. Blue Top/NaCitrate tubes received refrigerated will be rejected.
	3. Plain Red top serum tubes are not to be utilized for lab testing.
	4. Grossly Hemolyzed specimens will be rejected and recollection initiated