PROCEDURE FOR OBTAINING SAMPLES FROM TUBES AND BAGS

The purpose of this procedure is to obtain a small aliquot from either a tube of blood or larger bag of cells. The small aliquot is to be a representative sample of the main body of cells contained in the tube or bag. This aliquot can then be used for cell counts or flow cytometry staining. The information garnered from the aliquot can then be extrapolated to the larger source. For this procedure use biohazard precautions.

1. Obtain source to have aliquot removed. This can be either a tube or bag.
2. One must observe the sample. Look for any clots or other abnormalities with the sample.
3. If the sample is clotted or abnormal, note this and determine if the sample can be used. Extremely clotted samples cannot yield accurate results and should be re-drawn.
4. Age of the sample must be determined. If the sample is 3-4 days old, it may have abnormalities within the cell populations that may not be visible under normal observation. These older samples may need to be re-drawn.

OBTAINING SAMPLES FROM TUBES

1. Once it has been determined that the sample has no clots or abnormalities then determine if the sample is to remain sterile for future use. For sterile samples use **STERILE TECHNIQUE** to obtain the sample. If the sample does not need to remain sterile then the sample can be prepared on the bench.
2. Proceed with mixing the sample. The sample mixing is done with gentle end over end rocking. This should be done for a minimum of 8-10 times or oscillations. Never vortex the sample. If the sample sits for more than a minute before the aliquot is removed, then the sample will need to be mixed again.
3. When properly mixed remove the top of the tube. Use care to avoid any splash or spray when the top is removed.
4. With a pipet or other device remove the predetermined aliquot.
5. Place the predetermined aliquot in a receptacle (another tube, Coulter cell counting cup, slide).
6. Securely re-cap the original tube.
7. Use the obtained aliquot to determine the cell count or prep for flow stain.
8. If more than one aliquot is required from the original tube, then there is no need to re-cap the tube until all the needed aliquots are removed.

OBTAINING SAMPLES FROM A BAG

1. Once it has been determined that the sample has no clots or abnormalities then determine if the sample is to remain sterile for future use. For sterile samples use **STERILE TECHNIQUE** to obtain the sample. If the sample does not need to remain sterile then the sample can be prepared on the bench.
2. Determine if the bag has a useable way of obtaining a sample. If the bag does not have a rubber dam type of sampling site, then one will need to be installed.
3. To install a rubber dam sampling site coupler, determine the location of an access port on the bag. Apheresis bags usually have one site, transfer packs usually have two sites.
4. Once the access site has been located peel back the plastic "ears" that overwrap the port. Use care when doing this operation to avoid any contact with the inner port area. If you do come in contact with that area, then proceed with cleaning the affected area with an alcohol prep pad.
5. When the plastic ears are completely peeled back hold them along with the port between your thumb and forefinger of one hand exposing the port completely.
6. With the other hand insert a sampling site coupler.
7. There is a plastic dam inside the exposed bag port that must be pierced by the sampling site coupler. It can be pierced by applying downward pressure on the sampling site coupler with a slight twisting motion.
8. Ensure that the sampling site coupler is securely inserted into the bag port.
9. The rubber dam of the sampling site coupler can now be swabbed with an alcohol prep pad. This will ensure sterility.
10. Obtain an appropriate sized syringe with 18 gauge needle attached. Set to one side in preparation for obtaining the sample.
11. Carefully lift the bag of cells, avoid any contact with the sterilized sampling site rubber dam.
12. Use gentle end over end rocking to mix the cells in the bag. Do this at least 8-10 times.
13. Quickly hang the bag upside down to allow the sampling site port to be at the bottom of the bag.
14. Quickly but with safety in mind pierce the sampling site rubber dam with the 18 gauge needle/syringe.
15. Proceed in moving the syringe piston up and down in the syringe for at least 4-6 times to make sure there is an adequate flow of sample into the syringe.
16. Determine the amount of sample to be removed. On the last up and down motion of the syringe piston stop at the desired amount and quickly remove the syringe/18 gauge needle combination from the sampling site coupler rubber dam.
17. Carefully place the sample in the syringe into an appropriate receptacle (snap-cap tube, culture tube, culture plate). Discard the syringe/needle combination into the sharps container.
18. Proceed to use the sample for counts or flow cytometry stains. Those samples will use the method listed earlier in **OBTAINING SAMPLES FROM TUBES.**

MATERIALS NEEDED FOR THIS PROCEDURE

- Syringes
- 18 ga needles
- Pipets
- Pipet tips
- Sampling site couplers
- Alcohol prep pads
- 5 ml snap cap tubes