

Placenta Collection Protocol

Supplies:

Collection bag contains:

- Forceps
- Scissors
- 50 ml corning tube containing 20 ml RNAlater
- 50 ml blue top tube for unfixed placenta
- Styrofoam corning tube holder
- 4x4 gauze
- Permanent marker
- Tracking notebook
- Pen
- Collection slip to be placed in the Placenta bag (containing the name of study, PI, RA, Date, Participant MRN#, amount of sample taken and phone number to be reached)
- Nitrile gloves
- Sanitizing wipes
- Plastic lined absorbent pads
- Plastic plates to weigh the sample
- Plastic apron

Procedure:



Fig. 1

1. After locating the placenta (see Fig.1), glove one hand to hold the bag containing the placenta and other hand w/o glove to open door, place the placenta bag in your collection bag and proceed to the assigned space for the collection. If it is a non-pathology bound placenta collection can be done in an appropriate place in labor and

delivery otherwise proceed to the pathology lab at the first floor where you would need a pathologist to initial the collection slip.

2. On the bench or examination table, place the plastic lined absorbent pad then place all others supplies needed for the collection on the pad including the sanitary wipes which must be removed from the container prior you cut samples.



Fig. 2

3. Place the participant ID label on the 50 ml orange top corning tube containing RNAlatter with the participant number, date and the time of specimen collection (see Fig. 2).
4. Place the participant ID label 50 ml blue top tube and collection date. There is no RNAlatter in this tube. This is the “unfixed” placenta (see Fig. 2).
5. Also record the sample collection number and time in the tracking notebook. Note: Collection takes about seven minutes and should be counted in the collection time.
6. Put on a glove on the ungloved hand.
7. Placentas are stored in a two zip lock specimen bags and a gray bag. Open one bag at a time and set to the side by the order that was removed. Open the gray bag with caution so blood does not spill. Roll out the sides of the bag and to use as the work station. Since the placenta is very bloody, working in the bag will minimize blood contaminating other surfaces in the procedure room.

8. Make sure you turn the placenta to confirm the maternal interface (see Fig. 3). The baby's interface (see Fig. 4) is smooth and has the umbilical cord attached whereas, the mother's side has a rough texture.



Fig. 3



Fig. 4

9. Position the placenta so that the maternal side is facing up. Measure 2 cm from the umbilical cord insertion site to use as the collection site. This can be determined by locating the cord on the baby's side and visualizing the indentation created on the maternal side from the umbilical cord.

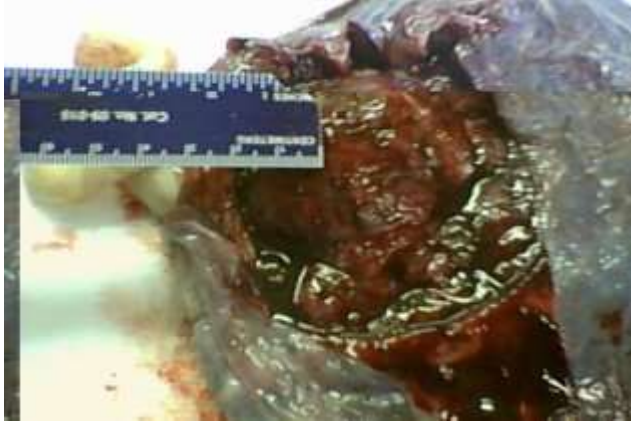


Fig. 5

10. Examine the 2 cm area surrounding the umbilical cord insertion site and determine a good spot for collection. The ideal collection area is thick with limited connective tissue (white filamentous striations in the tissue) and limited blood vessel involvement. Cut through the top layer and excise 12 pieces about the size of a dime from the maternal side. Collect 3 pieces each from the 12 o'clock position, the 3 o'clock position, the 6 o'clock position and the 9 o'clock position. If the collection area is greater than the 2 cm, be sure to make note on the medical chart information sheet.
11. Place the placenta samples on two gauze pads and blot them with another two gauze pads.



Fig. 6

12. Collect the unfixed placenta samples: cut large pieces from various sections of the placenta; place them on the gauze pad and blot with another gauze pad; fill the blue top tube with the placenta.

13. Place the samples on a plastic weigh container from the pathology lab and weigh it.
Note: Make sure to zero the scale with the plastic container before the sample is added to it.



Fig. 7



Fig. 8

14. Pick up the samples with the forceps and place into the 50 ml corning with RNAlater.
Cap tightly then invert twice to mix samples with solution and then place the corning in the collection bag ensuring that all the placenta samples are submerged in the RNAlater solution.



Fig. 9

15. Change your gloves and/or wipe your hands with the antibacterial wipes when they become blood-soiled.
16. Close and tie the gray specimen bag, and replace it in the 2 plastic specimen bags in their original order. Be sure to remove as much air from the bags as possible so they lay flat and ensure the Ziploc is firmly sealed.



Fig.10

17. Clean the tweezers and scissor with the sanitizer wipes until no blood or tissue can be visualized in the teeth of the forceps. Care should be taken when cleaning the scissors at the pivot point since blood and tissue can be present. When both are free from blood and tissue place into the collection bag.
18. Wrap all used gauze and wipes in the chuck and dispose in the hazard waste disposal bin located in the room. Remove one glove to open the door while keeping the other hand gloved to carry the placenta bag.
19. Place the pre-printed slip on the placenta bag completed by circling the corresponding staff name, the date and time sample was collected, add the MRN number, the amount in grams of sample collected. If it is pathology bound sample make sure to have a pathologist in service to initial the slip.
20. Return the placenta bag to the location from which it was retrieved, which could be the bin, mini refrigerator or pathology lab.

Placenta Storage:

1. Attach the unfixed placenta ID label to the blue top tube.

2. Both the fixed and unfixed placentas are delivered to the laboratory in the morning and afternoon.
3. The unfixed placenta is immediately snap frozen in liquid nitrogen and then stored in the -80 freezer. The fixed placenta is placed in the refrigerator.



Fig.11