

Standard operating procedure: Surgical bubble template and supply list

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Purpose: Provide a protocol for creating a surgical bubble for the c-section of SCID pigs.

Procedure:

1. Order supplies for the construction of surgical bubble
 - a. 4-mil roll of plastic
 - b. Black surgery gloves
 - c. Glove sleeves
 - d. White plastic rings
 - e. Black bands
 - f. Floor tape
 - g. Isolator gloves
 - h. Large plastic rings
 - i. Large black rubber bands
 - j. Large pipe clamps
 - k. Iron
2. Construct the surgeon's gloves and piglet reviver's gloves first.
3. Fold the small end of the glove sleeve over the white plastic ring.
4. Hold the glove sleeve over the plastic ring with two black bands, one on the top and bottom grooves on the plastic ring.
5. Place the black surgery glove inside the plastic ring with the sleeve and bands over it, then fold over the glove.
6. Put another black band in the middle groove of the plastic ring.
7. Put tape over the cuff to hold the glove and bands in place.
8. Continue this until both sets have a right and left.
9. Roll out 18 feet of the plastic to create the bubble.
10. Using Teflon, iron one end of the bubble closed on medium heat.
11. Measure 4 feet from the end that has been ironed and 6 inches from the sides to add the surgeon's gloves and the surgeon's assistant gloves. This can be traced with something that is about 6 inches in diameter.
12. Add the piglet reviver's gloves two feet away from the surgeon.
13. Another two feet from there, another set of gloves can be drawn.
14. Do this from the surgeon's assistant on the other side for a total of 6 pairs of gloves in the surgical bubble.

15. Once these have been drawn, cut the plastic out to put in the gloves.
16. Put in the gloves according to where they will be placed before putting in the plastic rings and attaching the gloves to the surgical bubble.
17. With two sets of hands, place the 6-inch plastic ring so the plastic where a hole has been cut out is on the ring.
18. Keeping the plastic in place, fold the end of the glove over the ring.
19. Add the large plastic band to keep everything in place and protect the plastic from being torn by the clamp.
20. Place the clamp over the plastic band and gently tighten until snug but not so tight that it breaks the ring.
21. Use the floor tape to tape around the clamp to keep it secure and protect the plastic from tears.
22. Repeat this until all gloves have been put in.
23. Once this is complete, the surgical bubble can be moved to the area to stock for c-section.
24. Spray all supplies entering the surgical bubble with a 1:18:1 Clidox disinfectant. This is 1 part Clidox base, 18 parts water, and 1 part Clidox activator in a regular spray bottle.
25. Supplies include a sterile transfer drum, plastic for sealing and transporting drum, sterile surgical pack, sterile towels for drying piglets, reversal drugs, needles, syringes, nasal aspirators, anti-fog solution, and umbilical clamps. The sterile drum is placed in a plastic tote so as to not tear the surgical bubble. All other supplies are placed in a sterile box to keep together.
26. Once all supplies have been added to the bubble in a sterile manner using the open end, extra plastic can be cut off and then sealed using the iron.
27. Ports are then added to each end to add the intake and outtake filters. Tubing is sprayed with Clidox, put into the plastic with a clamp, and taped up using floor tape. The inside of the port will have a plug to leave closed until the bubble is blown up.
28. The bubble is then sprayed with a 1:3:1 dilution of Clidox in an atomizer to create a disinfecting fog inside the surgical bubble.
29. The outside of the port is attached to the sterile filters. The attachment of the filters are covered with plastic to keep the inside of the filter sterile until using.
30. When ready to blow up the surgical bubble for c-section, attach the fan to the intake filter and pop the plastic covering the filter attachment.
31. Once the bubble is inflated, it is ready to use for surgery. For instructions on c-section, see SCID pig C-section SOP.

