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Purpose

To obtain and aliquot urine specimens from LCBRN subjects.

Responsibility

Personnel associated with the LCBRN Biospecimen Resource Sites are responsible for carrying out the sample collection, processing and aliquoting procedures competently and safely. Data entry into the LCBRN online database may be carried out by different personnel than those entering data onto the LCBRN Biofluid Collection Form at the time of procurement.

All personnel handling human biosamples must have training in, and adhere to, universal biohazard precautions and human subject research ethics/confidentiality principles.

Equipment/Reagents

1. 60 mL screw-cap sterile urine specimen container (Thermo Scientific Samco, Cat.# 03-006)
2. LCBRN urine collection package containing collection tube, eight sterile 1.8 mL cryovials (Thermo Scientific – NUNC, Cat.# 377267) with yellow caps (Thermo Scientific – NUNC, Cat.# 355077), duplicate strips of labels and a blank copy of the LCBRN Biofluid Collection Form
3. Protective gear (biosafety cabinet, eye/faceshield, disposable gloves, appropriate lab attire).
4. Sterile disposable polyethylene 50 mL conical tubes (BD, Cat.# **352070).**
5. Clinical centrifuge capable of delivering 1300 x g centrifugal force, with appropriate rotors and adaptors to fit the tubes.
6. Sterile disposable pipets capable of transferring 1.0 mL volumes.

Procedure

*Samples must be processed within 4 hours after collection.*

1. From the LCBRN subject enrollment package, obtain duplicate urine sample identification adhesive labels for the subject and affix one to the Biofluid Collection Form. Enter date, subject status and sample type on the form.
2. Place the duplicate label on the urine collection container.
3. Ask subject to provide a urine specimen in the 50 mL collection cup. Do not use first morning voids. If the catheter specimen of urine is to be collected from an indwelling catheter the specimen will be obtained aseptically from a sample port in the catheter tubing. The sample will not be obtained from the collection bag.
4. Record time of urine collection on Biofluid Collection Form.
5. Transport sealed container, Biofluid Collection Form, cryovials and aliquot labels to specimen processing lab. Use appropriate biohazard labeling and outer packaging.
6. Transfer up to 40 mL of urine to a sterile 50 ml conical tube.
7. Centrifuge at 1300 g for 25 minutes at ambient room temperature (range 68-82 oF, 20-28 oC).
8. Transfer 1.0 mL urine supernatant aliquots to labeled 1.8 mL cryovials (up to 8 aliquots). Do not disturb pellet during pipeting. Leave at least 0.5 ml air space in the cryovials for expansion during freezing. Observe sterile technique during transfer and discard pipets into appropriate biohazard waste container.
9. Label the cryovials with the LCBRN urine aliquot labels. **Affix the duplicate labels onto the Biofluid Collection Form.**
10. Transfer biospecimens to -80oC freezer or in vapor phase of a liquid nitrogen freezer.
11. Record time of aliquot freezing on Biofluid Collection Form.
12. Enter data from the Biofluid Collection Form into the online LCBRN database (see separate procedure). A barcode reader should be used to enter sample container identification using the duplicate labels affixed to the Biofluid Collection Form.
13. Store the Biofluid Collection Form with other subject study data paper documents in a secured location.

**Change History**

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| --- | --- | --- | --- |
| Version # | Significant change(s) | Author | Effective Date |
| 1 |  | Moskaluk | 12/1/2010 |
| 2 | Minor additions. | Moskaluk | 8/15/2011 |