



BC Generations Project Urine Processing Protocol

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1.0 PURPOSE

The BC Generations Project is collecting a random spot urine sample from participants. Urine samples will be used for measuring a variety of biomarkers (e.g. proteins). As we can't predict all biomarkers that will be tested in the next 25 years optimal processing, storing and documenting the sample history is of highest importance. These samples are obtained during the participant's visit to an assessment centre or to a community laboratory.

2.0 MATERIALS, EQUIPMENT AND FORMS

Officially received Urine samples	Biological Safety Cabinet Class II type A2
Lab gown & gloves (nitrile)	Ice bucket
Sterile transfer pipette	Nunc cryovials with green cap inserts
Biohazard waste bag	Labelled Storage boxes with 9x9 inserts
Coolbox™	Dry ice

Cryovial racks	Computer with access to the Laboratory Information Management System
Urine Waste Container	Presept™ Tablets
Urine Cup Disinfecting Containe	70% ethanol

3.0 URINE SAMPLE PROCESSING

3.1 You will receive one urine sample per subject. Samples will arrive at 4°C and can be found in the refrigerator if already received. Proceed using officially received urine samples only.

3.2 Process samples in batches of 30 samples (30 participants) or less, maintaining the order in which they were collected and starting with the oldest. Collection time can be obtained from the Laboratory requisition that accompanies the sample. Sample processing and storage will be document using the Laboratory Information Management System (LIMS).

3.3 Document the following attributes in LIMS for each urine sample: presence of turbidity, presence of hematuria, processing note.

3.4 Label each green capped cryovial with each own unique label generated by LIIMS.

3.5 Aliquot samples in the biological safety cabinet (BSC) (Class II type A2).

3.6 Keep samples cool while processing.

3.7 Aliquot each urine sample into its 3 corresponding cryovials containing a green cap.

3.7.1 Uncap the cryovials that you will be pipetting into.

3.7.2 Mix the sample either by inverting 7X (tube) or swirling (cup).

3.7.3 Using a sterile transfer pipette, transfer 1.5ml of urine to each of the 3 labelled cryovials for that subject. If there is low volume of urine the last cryovial may receive a smaller amount. *Double check to make sure the correct urine sample is being aliquot into the correct cryovial.*

3.7.4 Recap the cryovials and place in the 4°C Coolbox™.

3.8 Discard the urine sample

3.8.1 Urine transfer tubes with <4 mL can be disposed of in a red biohazard bag.

3.8.2 Urine cups are to have the contents transferred to the urine waste container containing Presept™. Disinfect for a minimum of 30 minutes prior to discarding down the sink with lots of water. The urine cup itself is to be disinfected in a second bucket containing Presept™ for a minimum of 30 minutes prior to discarding in the regular garbage.

3.9 Proceed with Section 4.0: FILLING & INVENTORY THE STORAGE BOX.

3.10 Repeat steps 3.2 to 3.8 until all samples have been processed.

3.11 Clean up the biological safety cabinet.

4.0 FILLING AND INVENTORY THE STORAGE BOX

4.1 All frozen samples will be kept on dry ice when outside the freezer.

4.2 Select either the last partially filled storage box or a new storage box and place on dry ice.

4.3 Physically transfer cryovials from the CoolBox™ to the storage box. Samples will be transferred to 3 storage boxes to be stored in 3 separate freezers. Maintain the same sample order.

4.4 Inventory the samples in LIMS.

4.5 When the storage box is full or if you are done processing transfer these samples to the -80°C freezer.

4.6 If and when samples are relocated to another freezer, including -190°C vapor phase freezer, document the move in LIMS.