




NOV 21, 2022

WORKS FOR ME

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Biospecimen Aliquotting

 In 1 collection

COMMENTS 0

DOI

dx.doi.org/10.17504/protocols.io.dm6gpwyz5lzp/v1

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ABSTRACT

This protocol explains the Standard Operating Protocol for aliquotting Bio-Specimens.

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dx.doi.org/10.17504/protocols.io.dm6gpwyz5lzp/v1

PROTOCOL CITATION

Clemens Scherzer, Bradley Hyman, Charles Jennings 2022. Biospecimen Aliquotting. **protocols.io**
<https://dx.doi.org/10.17504/protocols.io.dm6gpwyz5lzp/v1>

COLLECTIONS

 **[BIOSPECIMENS SOPs](#)**

KEYWORDS

aliquot, aliquotting, bio, specimen, biospecimen, ASAPCRN

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CREATED

Feb 18, 2021

LAST MODIFIED

Nov 21, 2022

OWNERSHIP HISTORY

Feb 18, 2021		Liz Brydon	Protocols.io
May 03, 2021		Yuliya Kuras	
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Oct 03, 2022		Daniel El Kodsi	

PROTOCOL INTEGER ID

47413

PARENT PROTOCOLS

Part of collection

[BIOSPECIMENS SOPs](#)

GUIDELINES

FREEZER STORAGE



Freezers are divided into 4 shelves, with 6 racks per shelf, and 24 boxes that can be held in each shelf. In total, 576 boxes, approximately 2,160 sample sets, can be stored in one -80°C freezer. The first three shelves are designated by visit number: Shelves A1-6 (top shelf) house samples from enrollment visits, shelves B1-6 (2nd shelf) house samples from the 1st year follow-up, and shelves C1-6 (3rd shelf) house samples from the 2nd year follow-up. Shelves D1-6 contain packed red blood cell tubes (PRBC), DNA, and RNA, extracted from blood as described in the protocols above. CSF is designated between two freezers in selected racks. Freezer storage and transactions of samples are recorded in the Freezerworks Inventory software.

MATERIALS TEXT

MATERIALS:

1. Freezer boxes (USA Scientific, Cat #9023-4981)
2. 1.5 mL low-retention microcentrifuge tubes (Fisher Scientific, Cat #02-681-320)
3. Low retention pipette tips
 - a. 1000 mL low-retention tips (Bio Plastic, Inc., Cat #3606SRS)
 - b. 200 uL low-retention tips (Molecular BioProducts, Cat #3932-05)
4. Freezerbonz labels (Fischer Scientific, Cat #22500521)

SAFETY WARNINGS



Please refer to Safety Data Sheets (SDS) for health and environmental hazards. Gain all required consent and experimental approvals before beginning any procedures.

1-2 days before aliquotting:

- 1 Order dry ice the night before, at the latest, for delivery at 9 am.
- 2 Compile list of parent aliquots according to freezer position. Group aliquots from the same rack, column and box in the freezer.
- 3 Pull parent aliquots from separate locations and pool into one or more boxes. Place in one location in the freezer.
- 4 Print labels and label tubes for sub-aliquots.
- 5 In order to save time, scan barcodes of sub-aliquots into freezerworks.
 - 5.1 Highlight parent aliquot to be sub-aliquotted.
 - 5.2 Click sub-aliquot.
 - 5.3 Type in number of sub-aliquots, volumes (current and initial), freeze thaws, and amount to be deducted from parent aliquot.
 - 5.4 Scan sub-aliquots into freezerworks.

5.5 Position sub-aliquots (position one sub-aliquot in parent aliquot's original position).

Day of aliquotting:

6 Place parent aliquots  On ice to thaw for about  02:00:00 .

7 Sub-aliquotting parent aliquots:

7.1 Pipette samples in numerical order by sub-aliquot barcode label.


7.2 Any sample left over in the parent tube should be distributed evenly amongst the subaliquots.

7.3 Extra sub-aliquots can be created if remaining amount of sample in parent tube equals or exceeds desired volume.

7.4 Do not discard parent tube. Place in tube rack and set aside for scanning.

7.5 Do not discard extra, empty sub-aliquot tubes. Place in tube rack and set aside for scanning.

8 Place one new sub-aliquot in the original position previously held by the parent aliquot.

- 9 Place remaining sub-aliquots immediately into the  -80 °C freezer in positions determined in Step 5.5.
- 10 Scan parent aliquot in “select by scanned field” function. Update parent aliquots by setting “current amount” to 0.
- 11 Scan extra, empty sub-aliquots in “select by scanned field” function. Delete aliquots entirely.
- 12 Add transactions in Freezerworks for each aliquot given to a collaborator outlining:
 - 12.1 Date of aliquotting.
 - 12.2 Type of transaction (i.e. “imparting of specimens”).
 - 12.3 A note that describes to whom the aliquot is for, the volume, and type of aliquot.
 - 12.4 (see “Adding transactions” protocol for additional information.)