LEADS
Longitudinal Early-Onset Alzheimer's Disease Study

Longitudinal Early-onset Alzheimer's Disease Study

in collaboration with

The National Centralized Repository for Alzheimer's Disease and Related Dementias (NCRAD)

Biofluids Collection Training Slides

NCRAD
National Centralized Repository for Alzheimer's Disease and Related Dementias

Contact Information

- Questions?

  Please contact NCRAD Coordinators at:

  - Phone: 1-800-526-2839 or 317-274-7546
  - E-mail: alzstudy@iu.edu or agericks@iu.edu
  - Website: www.ncrad.org

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Training Overview:

- Specimen Collection Schedule
- Kit Request Module
- Specimen Labels
- Handling/Processing Study Specimens
- Sample Shipping
- NCRAD Website
- Questions?

Biofluids Collection Schedule Overview

	CI Baseline	CN Baseline	CI Month 12	CN Month 12*	CI Month 24	CN Month 24	CI Month 36	CI Month 48 /Annual visit
Serum	X	X	X	X	X	X	X	X
Plasma	X	X	X	X	X	X	X	X
DNA	X	X	X	X	X	X	X	X
Whole blood for CLIA lab testing	X							
Whole blood for long read sequencing	X	X	Collected only once over the entire course of a participant's participation in the LEADS Study. May be collected at longitudinal visits if not collected at Baseline					
RNA	X	X	X	X	X	X	X	X
PBMC	X	X	X	X	X	X	X	X
CSF	X	X	X		X	X	X	

**CN M12 CSF may be collected if CSF was not collected at Baseline.*

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Biofluids Collection Schedule for CI Participants:

Sample Type	Tube Type	Number of Tubes Supplied in Kit	Aliquot Volume	Tubes to NCRAD	Ship
Whole blood for isolation of serum	Plain Red-Top Serum Blood Collection Tube (10 ml)	1	N/A	N/A	N/A
	SERUM: 2.0 ml cryovials with red cap (residual volume placed in 2.0 ml cryovial with blue cap)	4	1.5 ml serum aliquot per 2.0 ml cryovial (red cap)	Up to 4	Frozen
Whole blood for isolation of plasma & buffy coat (for DNA extraction)	EDTA (Lavender-Top) Blood Collection Tube (10 ml)	3	N/A	N/A	N/A
	PLASMA: 2.0 ml cryovials with lavender cap (residual volume placed in 2.0 ml cryovial with blue cap)	10	1.5 ml plasma aliquot per 2.0 ml cryovial (lavender cap)	Up to 10	Frozen
	BUFFY COAT: 2.0 ml cryovial	3	1 ml buffy coat aliquot per 2.0 ml cryovial (clear cap)	3	Frozen
Whole blood for testing at the CLIA laboratory (*collected at BASELINE ONLY)	EDTA (Lavender-Top) Blood Collection tube (6ml)	1	N/A	1	Frozen
Whole blood for long read sequencing (*collected only once)	EDTA (Lavender-Top) Blood Collection tube (3ml)	1	1 ml whole blood aliquot per 2.0 ml cryovial (green cap)	3	Frozen
Whole blood for RNA extraction	PAXgene™ Blood Collection Tube (2.5 ml)	1	N/A	1	Frozen
Whole blood for PBMC	Sodium Heparin (Green-Top) Blood Collection tube (10 ml)	2	N/A	2	Ambient
CSF Collection (*not collected at 48-Month/Annual visit)	Sterile Container	Conical tubes, 15 cryovial tubes (13 orange cap, 1 blue cap, 1 yellow cap)	1.5 ml CSF aliquots per 2.0 ml cryovial (orange cap); residual volume placed in 2.0 ml cryovial with blue cap; 1-2 ml for local lab placed in 2.0 ml cryovial with yellow cap.	Up to 14	Frozen

Biofluids Collection Schedule for CN Participants:

Sample Type	Tube Type	Number of Tubes Supplied in Kit	Aliquot Volume	Tubes to NCRAD	Ship
Whole blood for isolation of serum	Plain Red-Top Serum Blood Collection Tube (10 ml)	1	N/A	N/A	N/A
	SERUM: 2.0 ml cryovials with red cap (residual volume placed in 2.0 ml cryovial with blue cap)	4	1.5 ml serum aliquot per 2.0 ml cryovial (red cap)	Up to 4	Frozen
Whole blood for isolation of plasma & buffy coat (for DNA extraction)	EDTA (Lavender-Top) Blood Collection Tube (10 ml)	3	N/A	N/A	N/A
	PLASMA: 2.0 ml cryovials with lavender cap (residual volume placed in 2.0 ml cryovial with blue cap)	10	1.5 ml plasma aliquot per 2.0 ml cryovial (lavender cap)	Up to 10	Frozen
	BUFFY COAT: 2.0 ml cryovial	3	1 ml buffy coat aliquot per 2.0 ml cryovial (clear cap)	3	Frozen
Whole blood for long read sequencing (*collected only once)	EDTA (Lavender-Top) Blood Collection tube (3ml)	1	1 ml whole blood aliquot per 2.0 ml cryovial (green cap)	3	Frozen
Whole blood for RNA extraction	PAXgene™ Blood Collection Tube (2.5 ml)	1	N/A	1	Frozen
Whole blood for PBMC	Sodium Heparin (Green-Top) Blood Collection tube (10 ml)	2	N/A	2	Ambient
CSF Collection (*collected at BL and M24, may be collected at M12 if CSF was not collected at BL)	Sterile Containers (cryovial with yellow cap)	Conical tubes, 15 cryovial tubes (13 orange cap, 1 blue cap, 1 yellow cap)	1.5 ml CSF aliquots per 2.0 ml cryovial (orange cap); residual volume placed in 2.0 ml cryovial with blue cap; 1-2 ml for local lab placed in 2.0 ml cryovial with yellow cap.	Up to 14	Frozen

Kit Request Module

http://kits.iu.edu/leads

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Alzheimer's Disease and Related Dementias

Kit Request Module

- An initial stock of kits will be delivered prior to the designated site-specific start date.
- Kits and individual supplies are available to order:
  - Blood Kit: CI Baseline (BL)
  - Blood Kit: CI Month 12 – Month 72
  - Blood Kit: CN Baseline – Month 72
  - Blood Kit: Long Read Sequencing (LRS)
  - Blood Kit: Supplemental (rarely needed)
  - CSF Kit: CI BL – M72 & CN BL – M72
  - CSF Kit: Supplemental (rarely needed)
  - LP Kit: 22G
  - LP Kit: 24G
  - Shipping Kit: Frozen Shipping
  - Shipping Kit: Ambient Blood
  - Shipping Kit: CSF (rarely needed)

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Blood Kit: CI Baseline (BL)

Kit comes with the supplies necessary for the collection and processing of:

- Whole blood for isolation of serum
- Whole blood for isolation of plasma and buffy coat
- Whole blood for CLIA genetic testing
- Whole blood for isolation of RNA
- Whole blood for isolation of PBMC

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Blood Kit: CI M12 – M70 & CN BL – M70

Kit comes with the supplies necessary for the collection and processing of:

- Whole blood for isolation of serum
- Whole blood for isolation of plasma and buffy coat
- Whole blood for isolation of RNA
- Whole blood for isolation of PBMC

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Blood Kit: Long Read Sequencing (LRS)

Kit comes with the supplies necessary for the collection and processing of:

- Whole blood for Long Read Sequencing

CSF Kit: CI BL – M70 & CN BL – M70

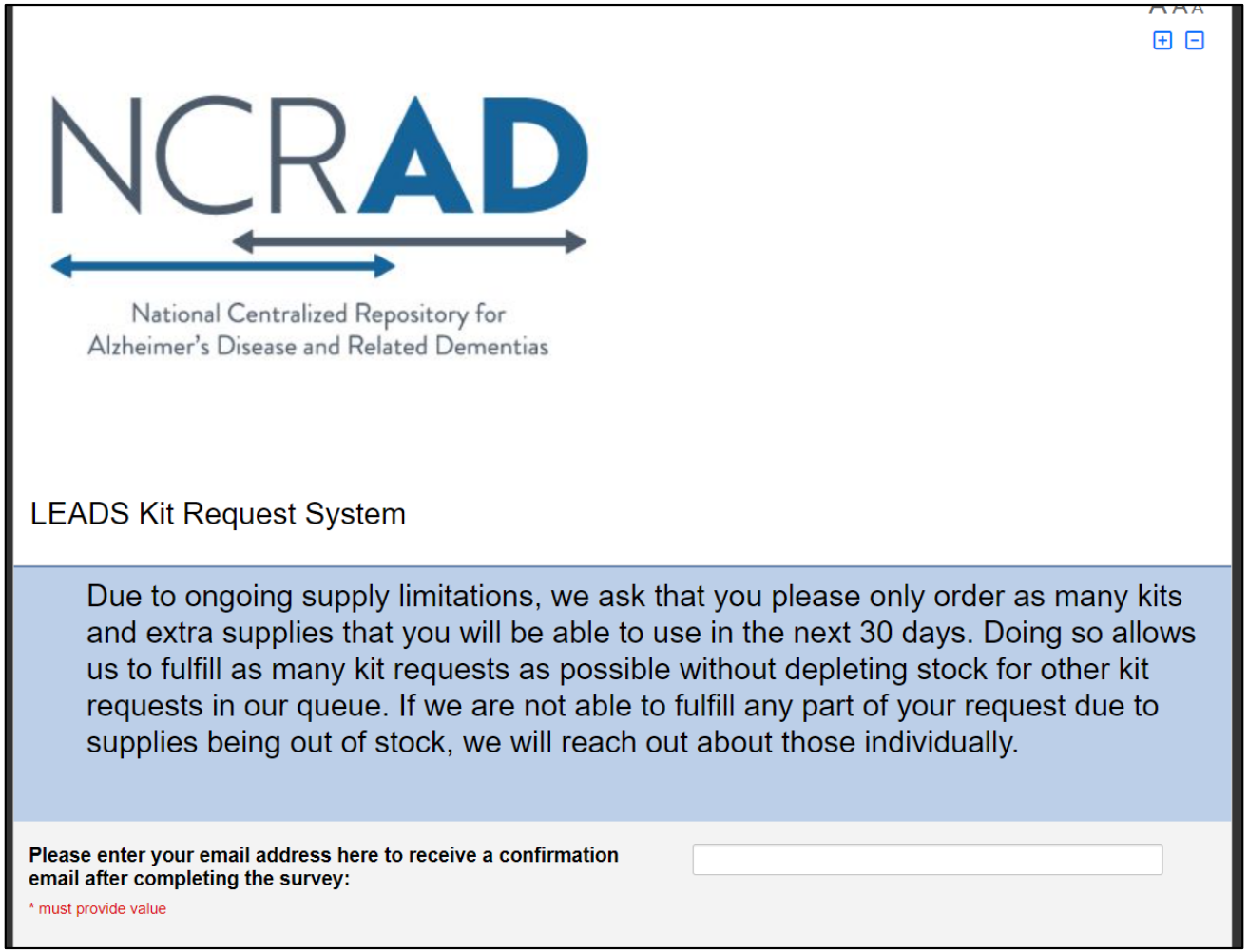
Kit comes with the supplies necessary for the collection and processing of:

- Cerebral Spinal Fluid (CSF)

NCRAD Kit Request Module

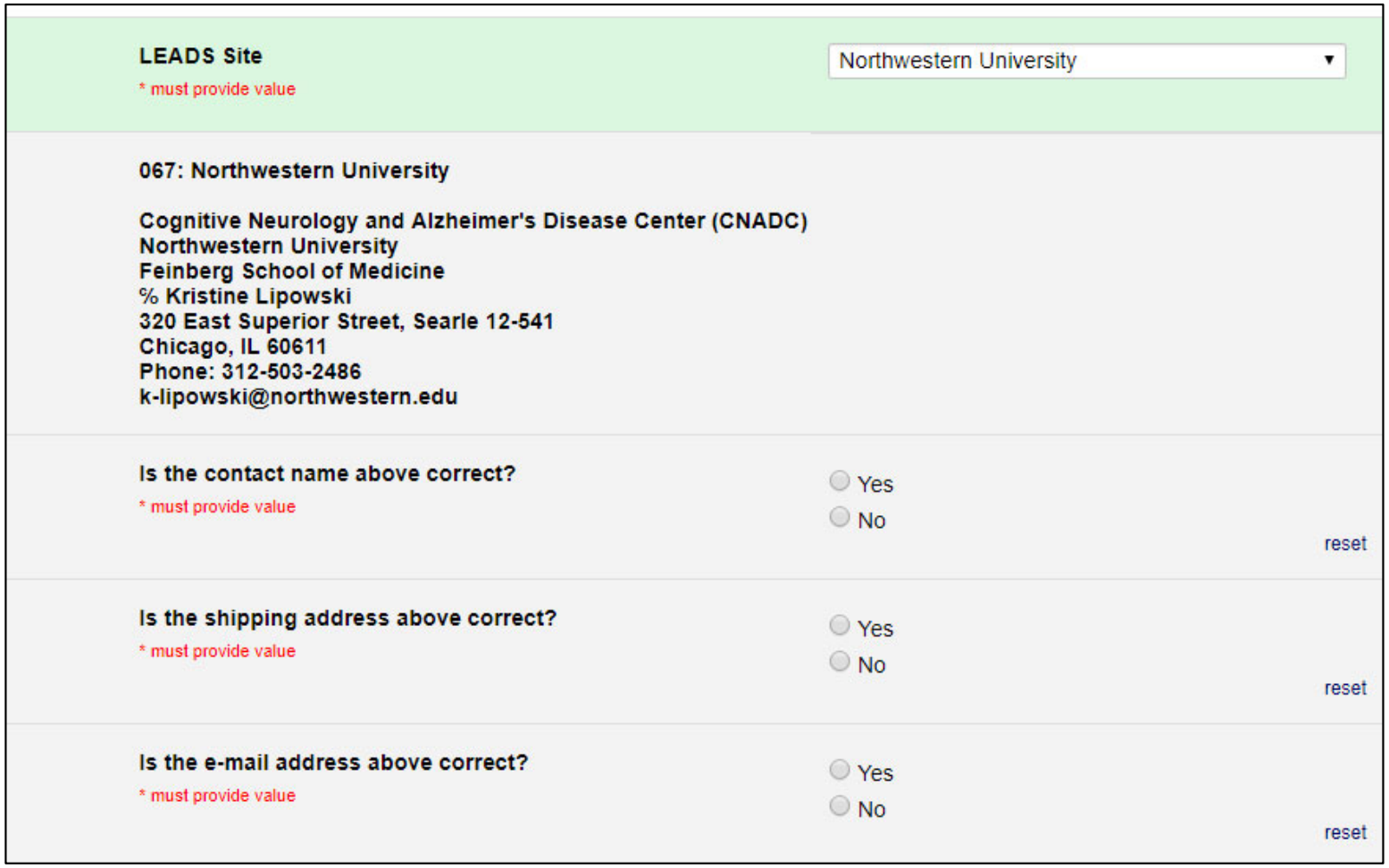
1. **Reminder: only order kits/supplies that will be used within 30 days of receipt.**

1. **Enter your email address – this is how you will receive updates about your order.**



Kit Request Module

1. Choose your site from the drop down list.
2. The coordinator name and contact information will appear.
3. Verify that this information is accurate, correct if necessary.



CI Baseline Blood-Based Kit Qty	1
CI M12 Blood-Based Kit Qty	
CI M24 Blood-Based Kit Qty	
CI M36 Blood-Based Kit Qty	
CI M48 Blood-Based Kit Qty	
CI M60 Blood-Based Kit Qty	
CN Baseline Blood-Based Kit Qty	
CN M12 Blood-Based Kit Qty	
CN M24 Blood-Based Kit Qty	
Long Read Sequencing Blood-Based Kit Qty	
LEADS Blood Supplemental Supply Kit Qty (usually need 1 at start-up)	
LEADS Large Frozen Blood Shipping Supply Kit Qty (will fit samples from 5 subjects)	
LEADS Small Frozen Blood Shipping Supply Kit Qty (will fit samples from 2 subjects)	
LEADS Ambient Shipping Supply Kit Qty (need 1 per subject)	
LEADS 22G LP Kit Qty	
LEADS 24G LP Kit Qty	
LEADS CSF Kit Qty (please provide arm and visit for each CSF kit in the "Comments" section)	
LEADS CSF Supplemental Supply Kit Qty (usually need 1 at start-up)	
LEADS CSF Shipping Supply Kit Qty (only needed when planning on shipping CSF separate from blood - rarely needed)	

Study Visit Kits

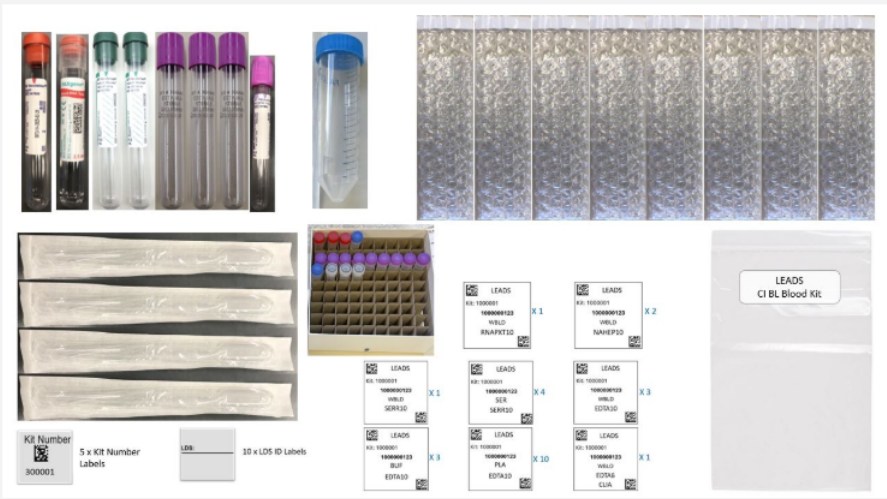
- Indicate the quantity needed of each kit
- Once selected, kit components of the chosen kit will appear at the bottom of the screen (Pictured)

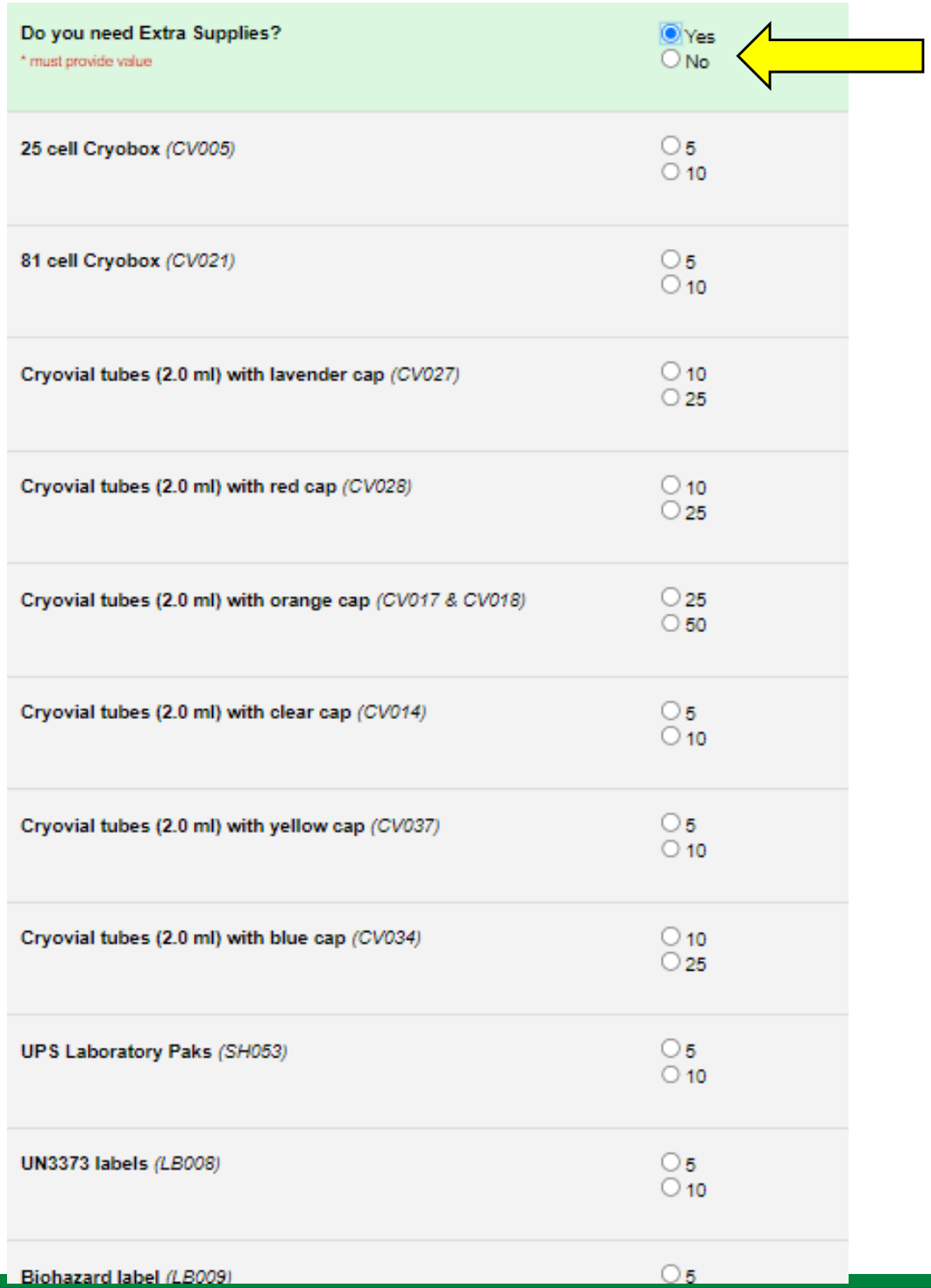
Each **CI** (EOAD) **Baseline** Blood-Based Kit Contains:

Finale IU Site: 11194

Finale All Other Sites: 11188

- 1 PAXgene™ Blood Collection Tube (2.5 ml) - CT004
- 1 Plain Red Top Serum (Red-Top) Blood Collection Tube (10 ml) - CT006
- 2 Sodium Heparin (Green-Top) Blood Collection Tube (10 ml) - CT008
- 3 EDTA (Lavender-Top) Blood Collection Tube (10 ml) - CT001
- 1 EDTA (Lavender-Top) Blood Collection Tube (6 ml) - CT003
- 9 Cryovial tube (2.0 ml) with LAVENDAR cap - CV027
- 3 Cryovial tube (2.0 ml) with RED cap - CV028
- 2 Cryovial tube (2.0 ml) with BLUE cap - CV034
- 3 Cryovial tube (2.0 ml) with CLEAR cap - CV014
- 4 Disposable graduated transfer pipette (3 ml) - CV015
- 1 50ml conical (Unwrapped) - CV0198
- 7 Bubble wrap tube sleeve - SH032 (Note to sites: Reuse 3 for frozen blood tubes for shipping)
- 1 81-cell cryobox - CV021
- 1 Resealable bag - ST002
- Labels:
  - 25 Pre-printed Collection and Aliquot Tube Label (1 x WBLD SERR10, 4 x SER SERR10, 3 x WBLD EDTA10, 3 x BUF EDTA10, 10 x PLA EDTA10, 1 x WBLD EDTA6, 1 x WBLD RNAPXT10, & 2 x WBLD NAHEP10) - LB003
  - 5 Pre-printed Kit Number Label - LB003
  - 10 Labels for handwritten Site and LEADS ID - LB003





Study Visit Kits

1. Indicate if you need extra individual supplies. Selecting “yes” will cause a list of supplies to appear, and you can select which item(s) you need.

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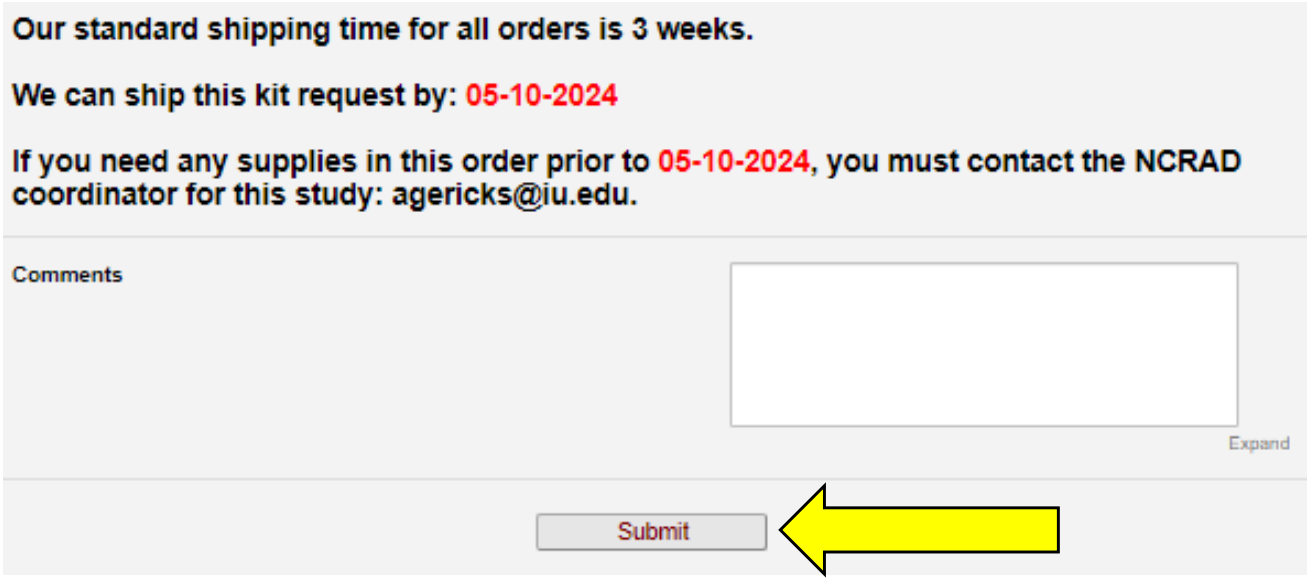
Study Visit Kits



1. The module automatically calculates the date in 3 weeks. This is when you can expect your kit to ship by.

2. Click Submit.

Hints When Ordering Kits…

- For a visit where you will draw CSF, you will need an LP tray in addition to CSF kit.
- You will need 1 ambient shipping kit per blood kit.
- You will need 1 frozen shipping kit per every 4-5 subjects.
- Upon site start up, you should order 1 CSF Supplemental and Blood Supplemental kit.

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NCRAD Kit Request Module: When It Must be Used

- Each site will be responsible for ordering kits (labels included) and maintaining supplies on site for scheduled participants.
- To order, sites will use the Indiana University online kit ordering module: https://kits.iu.edu/leads
- Allow a minimum of **3 weeks** for your order to be processed and delivered.

Specimen Labels

National Centralized Repository for
Alzheimer's Disease and Related Dementias

Label Type Summary

1. Kit Number Labels

2. Site and LEADS ID Labels

3. Collection and Aliquot Tube Labels
   - Differ by specimen type

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Kit Number Labels

Provided by NCRAD in the kits

- Used to track patient samples and provide quality assurance
- Will be placed on the following locations:
  1. Sample and Shipment Notification Form: Blood & CSF (where applicable)
     - CSF samples will have a different kit number than the blood collection specimens
  2. Outside cryobox that houses aliquot tubes during storage and shipment
  3. Outside of the biohazard bag that houses collection tubes during ambient shipment
- Kits will include extra kit labels that should be thrown away if not used

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Site and LEADS ID Label

- Subjects will be identified by their site ID and LEADS ID
- The LEADS ID may only be available shortly before the visit
- Sites will be responsible for handwriting this onto the provided labels
  - Must use fine point permanent marker

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Site and LEADS ID Label Cont.

- Write information on label prior to adhering to tube
- Label will be placed on all collection tubes:
  - PAXgene™ Blood Collection Tube (2.5ml) for RNA
  - Plain Red Top Serum Blood Collection Tube (10ml) for Serum
  - Sodium Heparin (Green-Top) Blood Collection Tube (10ml) x 2
  - EDTA (Lavender-Top) Blood Collection Tube (10ml) for DNA and Plasma x 3
  - EDTA (Lavender-Top) Blood Collection Tube (6 ml) for CLIA lab testing ***CI Baseline ONLY***
  - EDTA (Lavender-Top) Blood Collection Tube (3ml) for LRS***collected only once***
- Kits will include extra label

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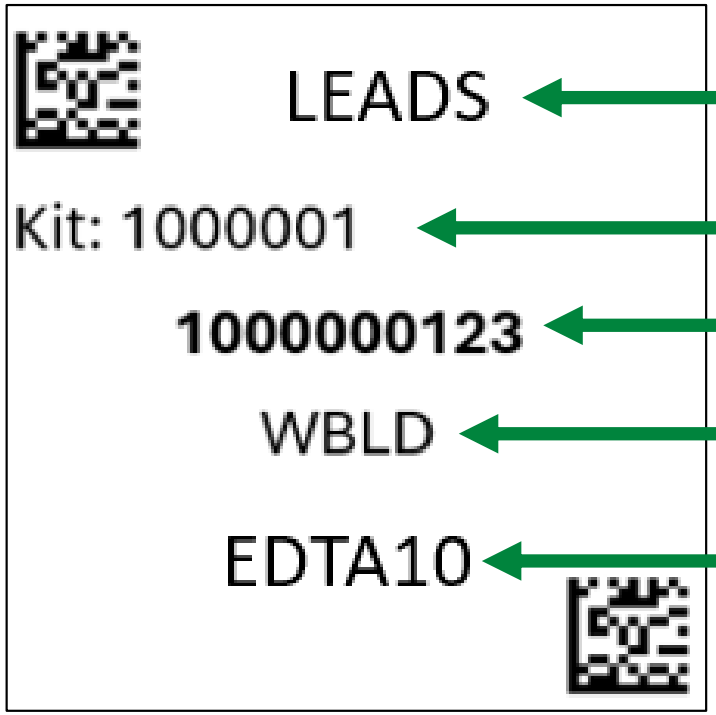
Collection and Aliquot Tube Labels



Study Name

Kit # (unique to the subject and visit)

Specimen Barcode (unique for each tube)

Sample Type

Collection Container

Labels to be placed on ALL collection and aliquot tubes

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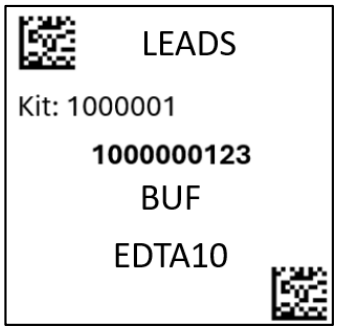
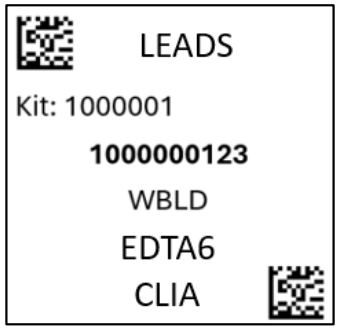
Collection and Aliquot Tube Labels





Every combination of Sample Type and Collection Tube that you may encounter

Look to the **Sample Type** & **Collection Tube** lines to determine what tube / cryovial the label should be placed on

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Specimen Type & Collection Tube Guide

SPECIMEN TYPE ABBREVIATIONS		
WBLD	-	Whole Blood
SER	-	Serum
PLA	-	Plasma
BUF	-	Buffy Coat
CSF	-	Cerebrospinal Fluid

COLLECTION TUBE ABBREVIATIONS	
SERR10	10mL Serum Red-Top Tube
EDTA10	10mL EDTA Lavender-Top Tube
EDTA6	6mL EDTA Lavender-Top Tube
EDDTA3	3mL EDTA Lavender-Top Tube
RNAPXT10	10mL RNA PAXGene™ Tube
NAHEP10	10mL Sodium Heparin (NaHep) PBMC Tube
STERCNT	Sterile Container (for CSF)

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Specimen Labels: Blood Collection Tubes

- All Serum, EDTA, and PAXGene™ collection tubes will have two labels:
  - Label 1: Collection Tube Label
  - Label 2: LEADS ID Label

Label 1:

LEADS

Kit: 1000001

1000000123

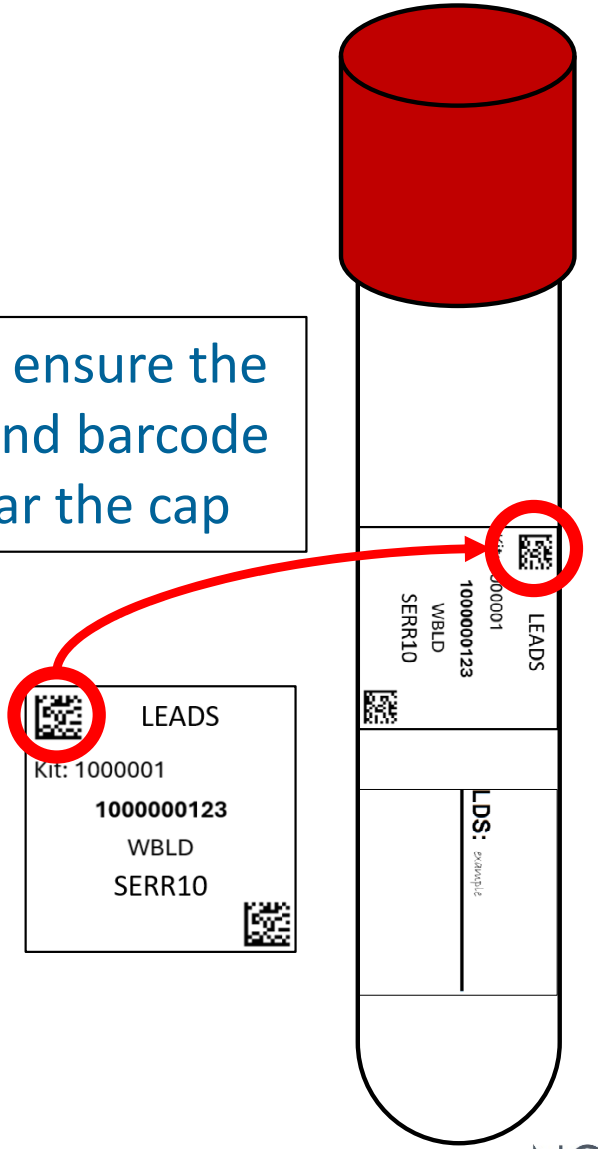
Sample Type

Collection Container

Label 2:

LDS:

Please ensure the left-hand barcode is near the cap



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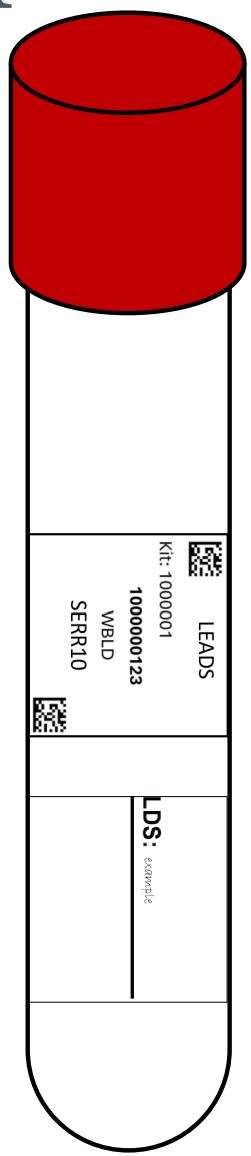
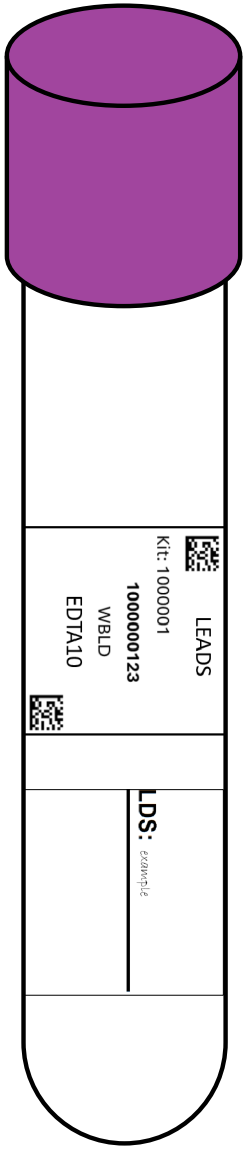
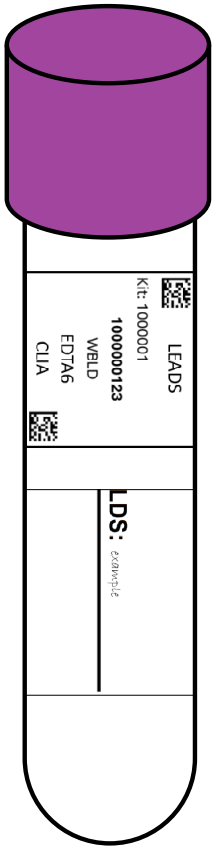
Specimen Labels: Blood Collection Tubes



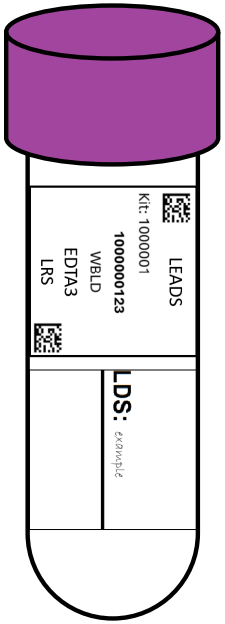
1 x 10mL Serum Red-Top Tube



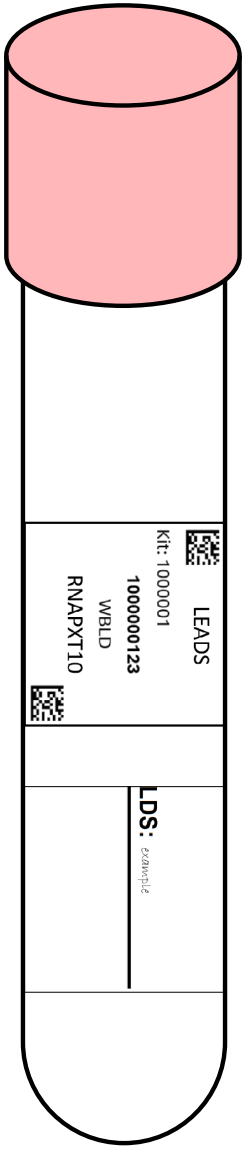
3x 10mL EDTA Lavender-Top Tubes



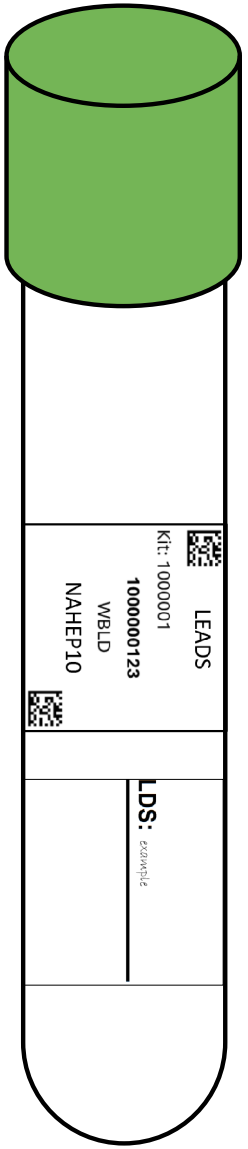
1 x 6mL EDTA Lavender-Top Tube



1x 3mL EDTA Lavender-Top Tube



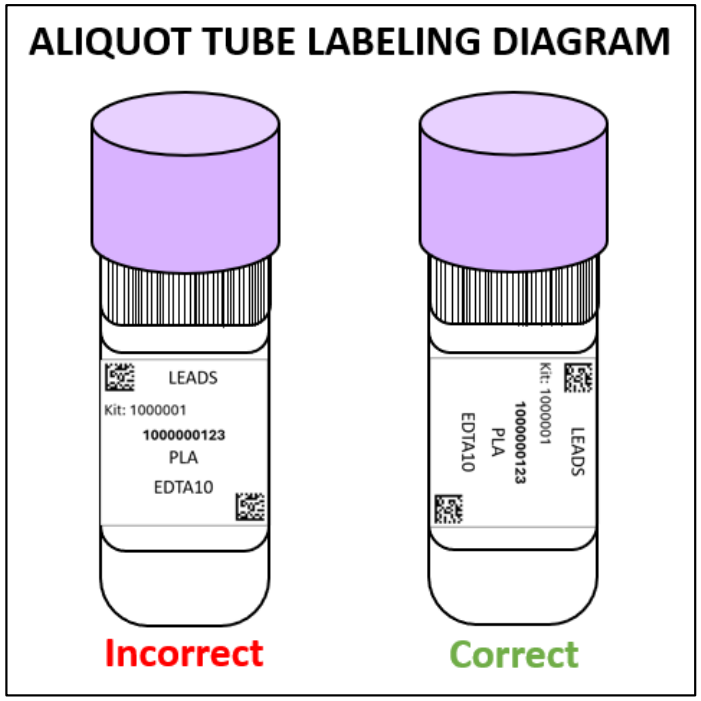
1 x 10mL RNA PAXGene Tube



2 x 10mL Sodium Heparin (NaHep) PBMC Tubes

Specimen Labels: Aliquot Tubes

Cap Color	Sample Type
Red Cap	Serum
Lavender Cap	Plasma
Clear Cap	Buffy Coat
Green Cap	Whole blood
Blue Cap	Residual (plasma, serum, whole blood or CSF)
Orange Cap	CSF
Yellow Cap	CSF for local lab



- **Aliquot Tubes: 2ml cryovials**
  - Serum, Plasma, Buffy Coat, Whole Blood, and CSF
- **Collection and Aliquot tube label only**
- **Place left-hand barcode near cap**

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Labeling Biologic Samples

Please…

- Label all collection and aliquot tubes *before* cooling, collecting, processing or freezing samples.
- Label only *1* subject's tubes at a time to avoid mix-ups.
- Wrap the label around the tube *horizontally*. Label position is important for *all* tube types.
- Make sure the label is completely adhered by rolling between your fingers.

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Handling/ Processing Study Specimens

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Site Required Equipment

Blood Collection/Safety Equipment

1. Personal Protective Equipment (PPE)
   - Lab Coat, Safety Glasses
2. Tourniquet
3. Alcohol Prep Pad
4. Gauze Pad
5. Butterfly Needles
6. Bandage
7. Sharps Bin and Lid

Processing/Storage Equipment

1. Centrifuge capable of ≥2000 rcf with refrigeration to 4^{o}C
2. -80^{o}C Freezer
3. Wet Ice Bucket

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Blood Draw Order

Important Note

In order to ensure the highest quality samples are collected, processed, and stored, it is essential to follow the specific collection, processing, and shipment procedures detailed in the following pages. Collection of biomarkers and CSF should be collected after a minimum 6-hour fast, preferably in the morning. Please read the following instructions first before collecting any specimens. Have all your supplies and equipment out and prepared prior to drawing blood. Please note that the centrifuge may take 30 minutes to cool, so please plan accordingly. Draw blood in the following order:

1. **Plain Red Top Serum Blood Collection Tube (10 ml) for Serum**
2. **EDTA (Lavender-Top) Blood Collection Tube (10 ml) for DNA and Plasma x 3**
3. **EDTA (Lavender-Top) Blood Collection Tube (6 ml) for CLIA lab testing **CI Baseline ONLY****
4. **EDTA (Lavender-Top) Blood Collection Tube (3 ml) for LRS **only collected once per participant****
5. **PAXgene™ Blood Collection Tube (2.5 ml) for RNA**
6. **Sodium Heparin (Green-Top) Blood Collection Tube (10 ml) x 2**

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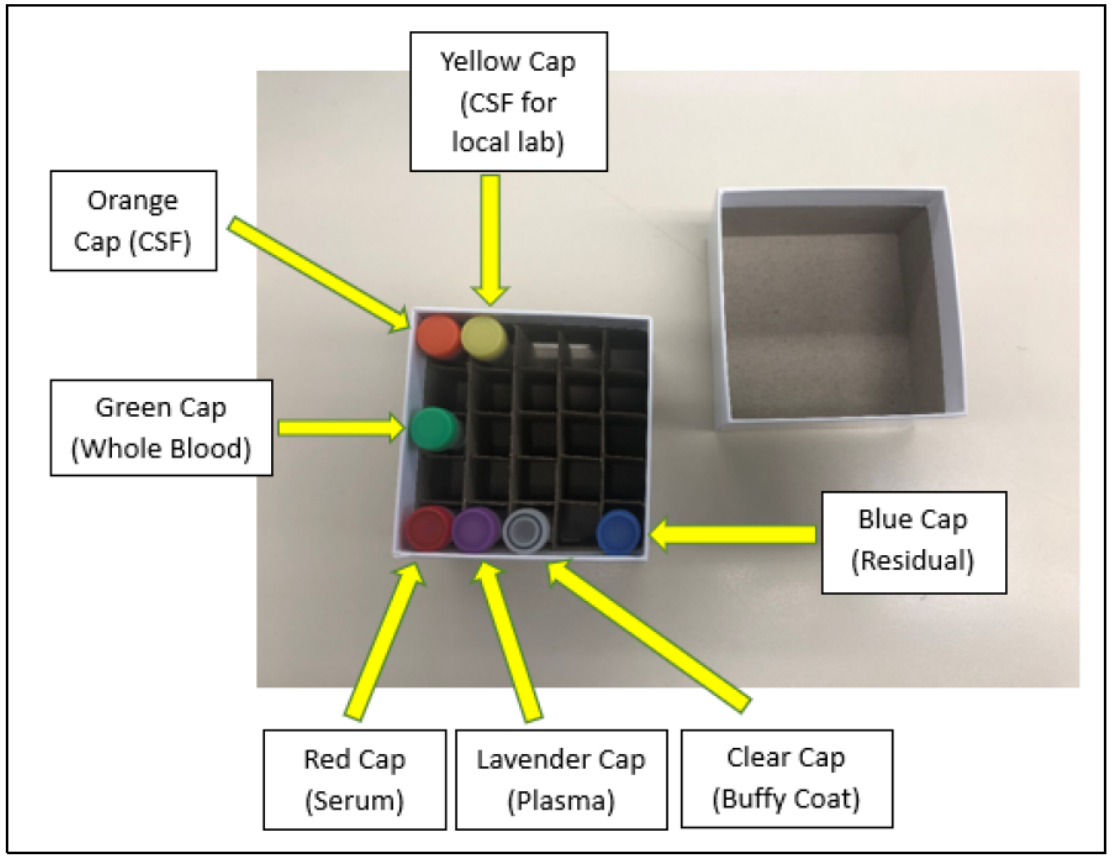
Sample Collection - Blood

Tube Type	Number of Tubes Drawn	Tube Image
1. Plain Red-Top Serum Blood Collection Tube (10 ml) for Serum	x1	
2. EDTA (Lavender-Top) Blood Collection Tube (10 ml) for Plasma	X3	
3. EDTA (Lavender-Top) Blood Collection Tube (6ml) for CLIA lab testing **CI Baseline ONLY**	x1	
4. EDTA (Lavender-Top) Blood Collection Tube (3ml) for LRS **only collected once per participant**	X1	
1. PAXgene™ Blood Collection Tube (2.5 ml) for RNA	x1	
3. Sodium Heparin (Green-Top) Blood Collection Tube (10 ml) for PBMC	x2	

Aliquot Cap Colors

Cap Color	Sample Type
Red Cap	Serum
Lavender Cap	Plasma
Clear Cap	Buffy Coat
Green Cap	Whole Blood (LRS)
Blue Cap	Residual
Orange Cap	CSF
Yellow Cap	CSF for local lab



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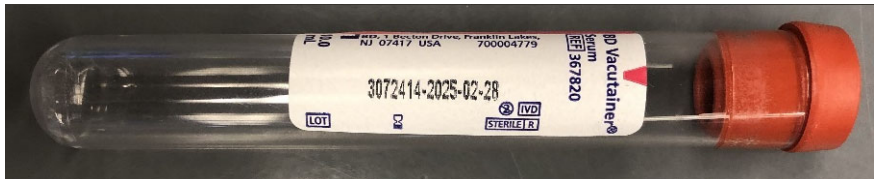
Serum Preparation (10ml Red Top Tube)

Prior to blood draw, label all tubes:

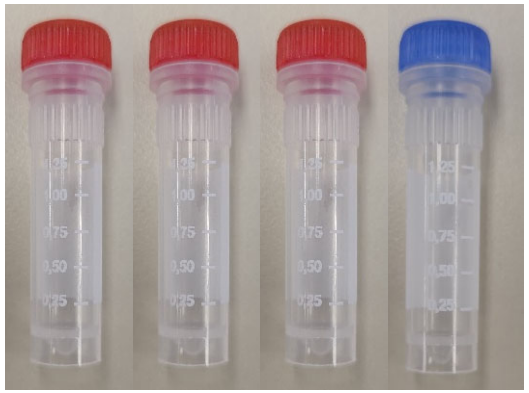
1 x 10mL Serum Tube



Label with: LDS:_____ &

LEADS
Kit: 1000001
1000000123
WBLD ← WBLD
SERR10 ← SERR10

3 x 2ml Red Cap Cryovials & 1 x 2ml Blue Cap Cryovial

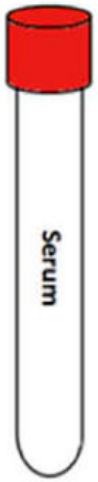


Label with:

LEADS
Kit: 1000001
1000000123
SER ← SER
SERR10 ← SERR10

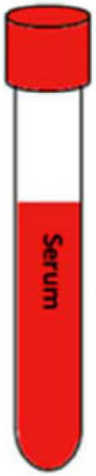
Serum Preparation (10ml Red Top Tube)

Step One



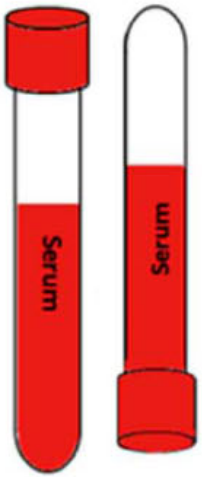
- Store tubes at room temperature.
- Label tubes and cryovials with pre-printed subject labels prior to blood draw.

Step Two



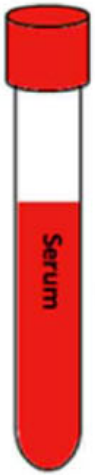
- Collect blood in Serum Tube allowing blood to flow for 10 seconds and ensuring blood flow has stopped.

Step Three



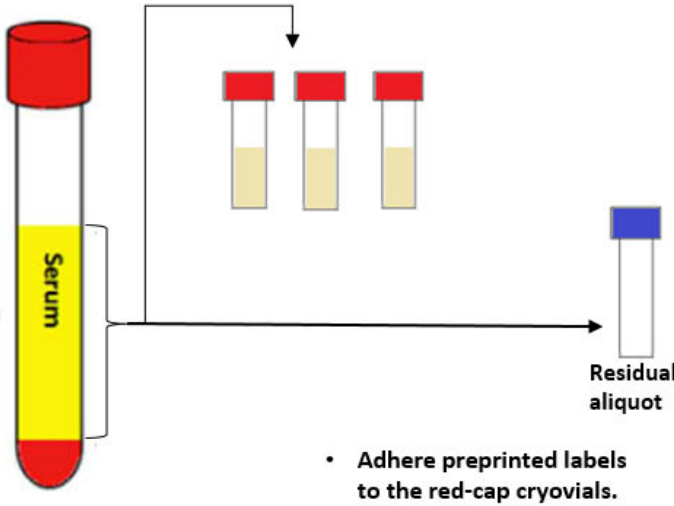
- Immediately after blood draw, invert tube 5 times to mix samples.

Step Four



- Allow blood to clot for 30 minutes.
- Within 60 minutes of blood draw, centrifuge samples at 2000 x g for 10 minutes at 4°C.

Step Five

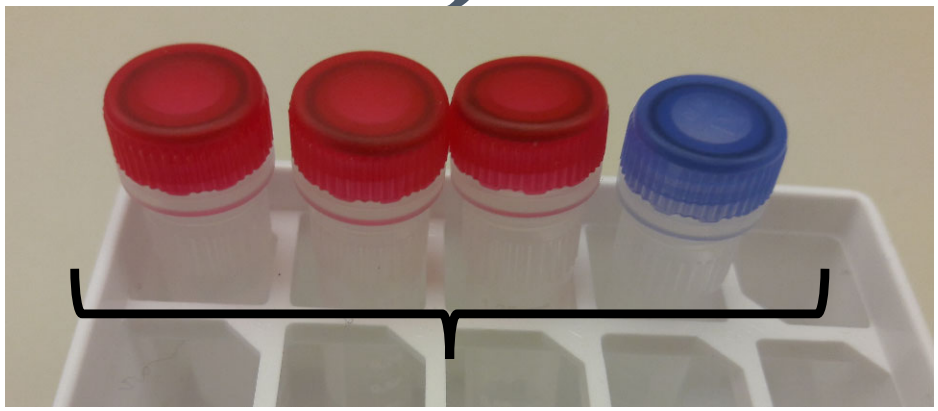


- Must be spun, aliquoted, and stored in -80°C freezer within 2 hours of collection.
- Adhere preprinted labels to the red-cap cryovials.
- Aliquot 1.5 ml into each cryovial tube.
- If a residual aliquot is created, document specimen number and volume on Sample Notification Form.
- Store serum aliquots at -80°C until shipment.

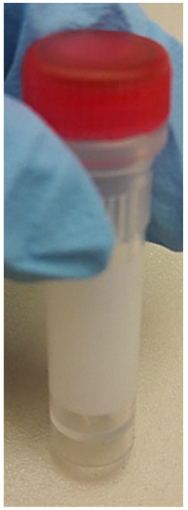
Plain Red-Top Serum Tube (Serum Collection)

Serum

RBC, WBC & Platelet Clot



Serum Aliquots (up to 4 possible)



Close up view of 2.0 ml cryovial

NCRAD

Plasma and Buffy Coat Preparation (10ml Lavender-Top Tube x 3)

Prior to blood draw, label all tubes:

3 x 10mL EDTA Tubes

Label with: LDS:_____ &

LEADS
Kit: 1000001
1000000123
WBLD ← WBLD
EDTA10 ← EDTA**10**

9 x 2ml Purple Cap Cryovials & 1 x 2ml Blue Cap Cryovial

Label with:

LEADS
Kit: 1000001
1000000123
PLA ← PLA
EDTA10 ← EDTA10

3 x 2ml Clear Cap Cryovials

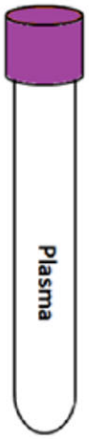
Label with:

LEADS
Kit: 1000001
1000000123
BUF
EDTA10

BUF
EDTA10

Plasma and Buffy Coat Preparation (10ml Lavender-Top Tube x 3)

Step One

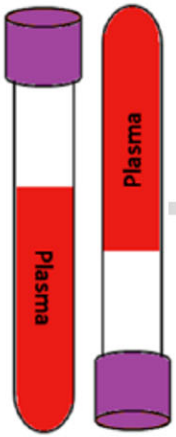


- Store tubes at room temperature.
- Label tubes with preprinted labels prior to blood draw.

Step Two

- Collect blood in EDTA Tubes allowing blood to flow for 10 seconds and ensuring blood flow has stopped.

Step Three

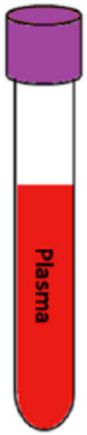


- Immediately after blood draw, invert tubes 8-10 times to mix samples.

Step Four

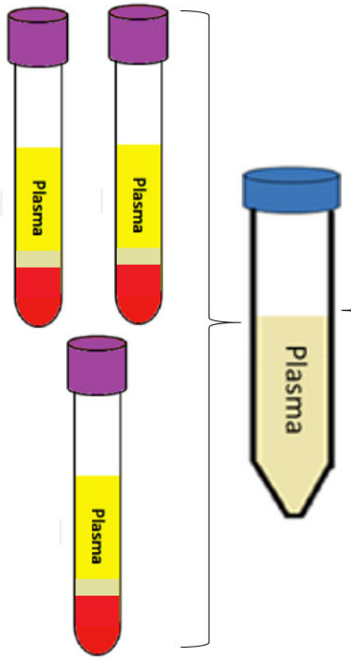
- Place thoroughly mixed tubes on wet ice until centrifugation begins.

Step Five



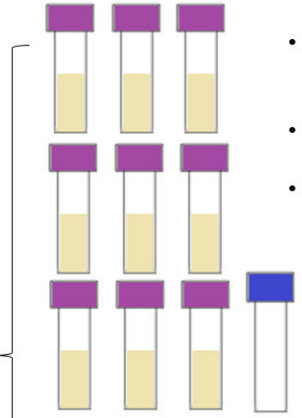
- Preferably within 30 minutes, centrifuge samples at 2000 x g at 4°C for 10 minutes.
- Samples need to be spun, aliquoted, and in the freezer within 2 hours from the time of collection.

Step Six



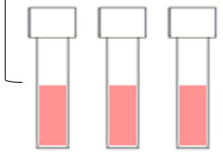
- Pool all plasma from the 3 EDTA tubes into a 50ml conical tube and invert gently 3 times to mix the plasma.

Step Seven



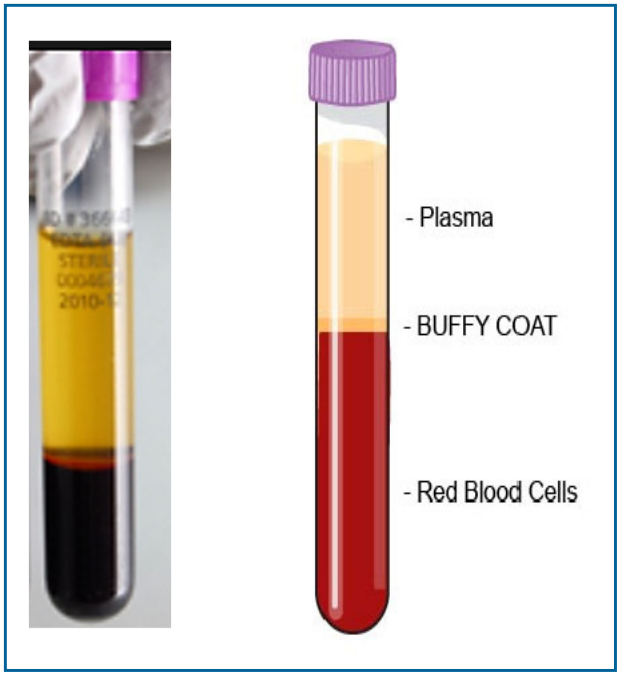
- Adhere preprinted labels to the lavender cap cryovials.
- Aliquot 1.5 ml into each cryovial tube.
- If a residual aliquot is created, document specimen number and volume on Sample Notification Form. Store plasma aliquots at -80°C until shipment.

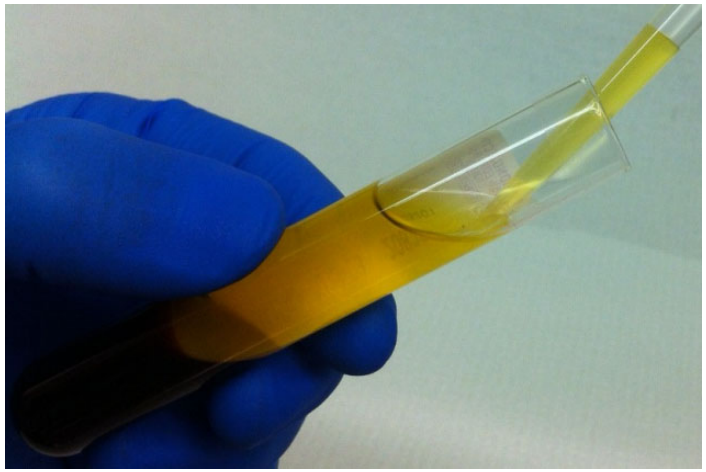
Step Eight



- Adhere preprinted labels to the clear cap cryovials.
- Using a clean pipette tip, collect the buffy coats (may have residual plasma and some RBCs included).
- Transfer the buffy coats into the cryovial tubes.
- Store buffy coat aliquots at -80°C until shipment.

EDTA Tube (Plasma Collection)

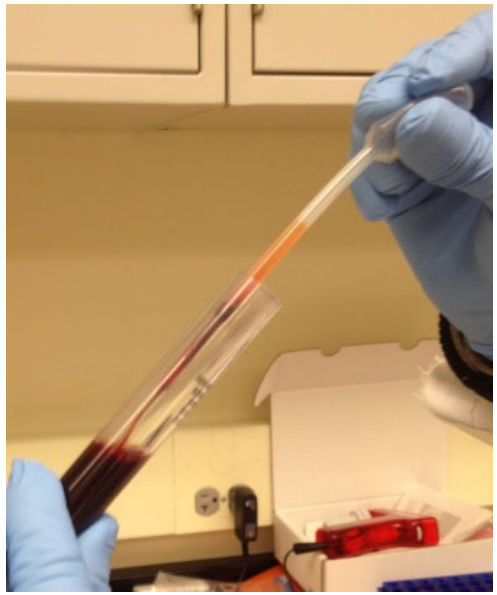




Plasma Aliquots (10 possible)

EDTA Tube (Buffy Coat Collection)

Buffy Coat layer (mixed with RBCs)



Buffy Coat Aliquot (Please use CLEAR CAP cryovial)

Important Note: Buffy Coat aliquots will be distinguished from the plasma aliquots through a clear cap.

Whole Blood Preparation (6 mL Lavender-Top Tube)

Prior to blood draw, label all tubes:

1 x 6mL EDTA Tube

Label with:

LDS:_____

&

LEADS
Kit: 1000001
1000000123
WBLD ← WBLD
EDTA6 ← EDTA**6**
CLIA

Whole Blood Preparation (6 mL Lavender-Top Tube)

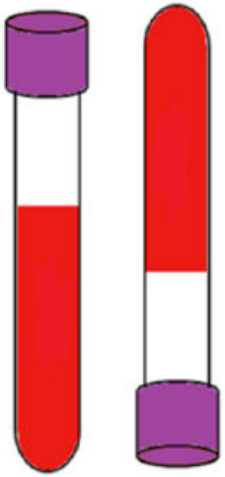
Step One

- Store tubes at room temperature.
- Label tubes with pre-printed subject labels prior to blood draw.

Step Two

- Collect blood in tube allowing blood to flow for 10 seconds and ensuring blood flow has stopped.

Step Three



- Immediately after blood draw, invert tube 3 times to mix sample.

Step Four

- Immediately after inversion, freeze the sample in an -80°C freezer until ready to ship.

CI Subjects at Baseline Only

NCRAD

Whole Blood Collection (1 x 3ml EDTA Purple Top Tube)

Prior to blood draw, label all tubes:

1 x 3mL EDTA Tube

Label with: LDS:_____ &

LEADS
Kit: 1000001
1000000123
WBLD ← WBLD
EDTA3 ← EDTA**3**
LRS

You will receive 4 labels with "WBLD" "EDTA3" and "LRS" on them. Of these 4 labels, use the label with the smallest specimen number for the 3mL EDTA tube

Labels will have an additional line to indicate they are for LRS

3 x 2ml Green Cap Cryovials & 1 x 2ml Blue Cap Cryovial

Label with:

LEADS
Kit: 1000001
1000000124
WBLD ← WBLD
EDTA3 ← EDTA**3**
LRS

Whole Blood Collection (1 x 3ml EDTA Purple Top Tube)

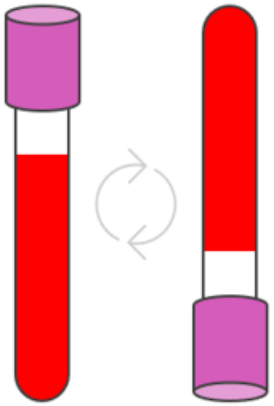
Step 1

- Store tubes at room temperature.
- Labels tubes with pre-printed subject labels prior to blood draw.

Step 2

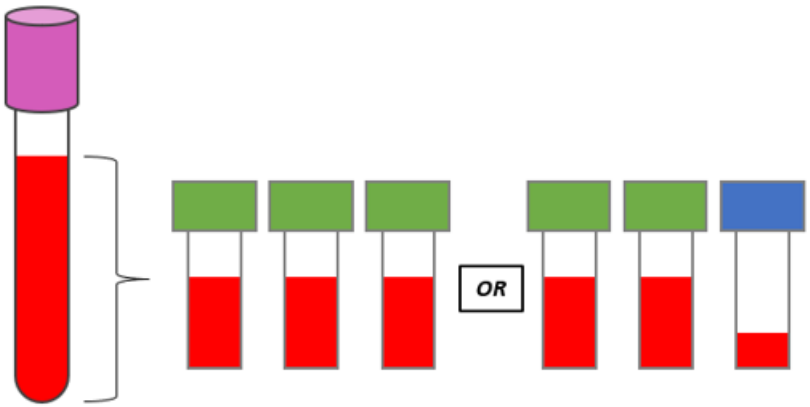
- Collect blood in EDTA Tube allowing blood to flow for 10 seconds and ensuring blood flow has stopped.

Step 3



- Immediately after blood draw, invert tube 8-10 times to mix samples.

Step 4



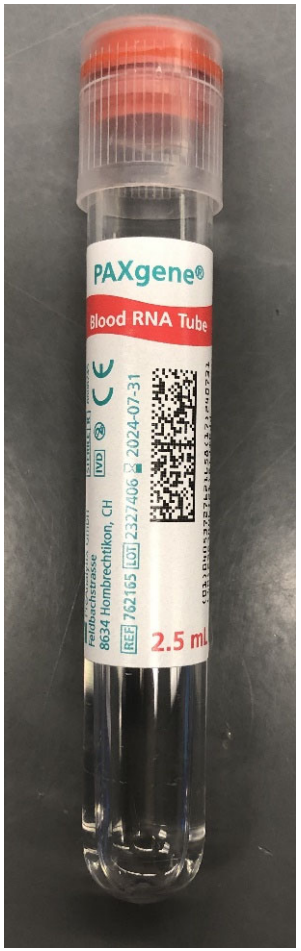
- Adhere preprinted labels to the green cap cryovials.
- Aliquot 1 ml into each cryovial tube.
- If a residual aliquot is created, document specimen number and volume on Sample Notification Form.
- Store whole blood aliquots at -80°C until shipment.

Important Note: Ensure all tubes are not expired prior to collection and processing of samples.

RNA Preparation (2.5ml PAXgene™ Tube)

Prior to blood draw, label all tubes:

1 x RNA PAXGene™ Tube



Label with:

LDS:_____

&

LEADS
Kit: 1000001
1000000123
WBLD
RNAPXT10

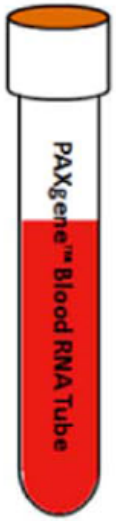
WBLD
RNAPXT10

RNA Preparation (2.5ml PAXgene™ Tube)

Step One

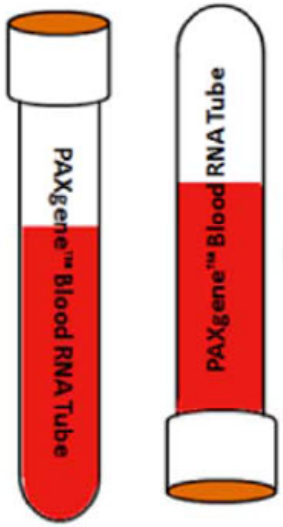
- Store tubes at room temperature.
- Label tubes with pre-printed labels prior to blood draw.

Step Two



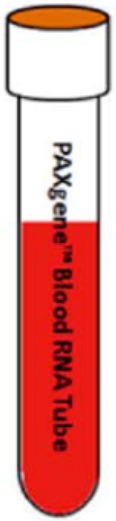
- Collect blood in PAXgene™ tube allowing blood to flow for 10 seconds and ensuring blood flow has stopped.

Step Three



- Immediately after blood draw, invert tubes 8-10 times to mix samples.

Step Four



- Store tubes at -80°C in a wire rack until shipment.

PBMC Preparation (10ml Sodium Heparin Tube) x 2

Prior to blood draw, label all tubes:

2 x 10mL Sodium Heparin (NaHep) PBMC Tubes

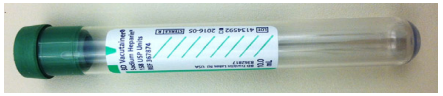
Label with:

LDS:_____

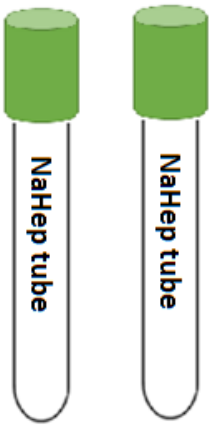
&

LEADS
Kit: 1000001
1000000123
WBLD ← WBLD
NAHEP10 ← NAHEP10

PBMC Preparation (10ml Sodium Heparin Tube) x 2

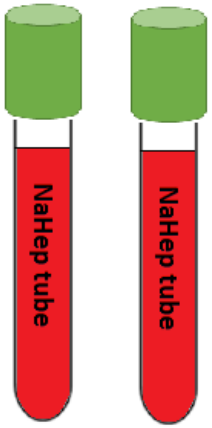


Step One



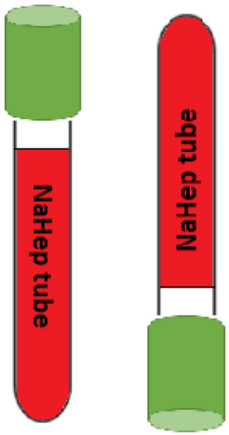
- Store tubes at room temperature.
- Label tubes with pre-printed labels prior to blood draw.

Step Two



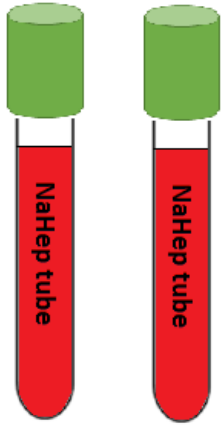
- Collect blood in Sodium Heparin Tubes allowing blood to flow for 10 seconds and ensuring blood flow has stopped.

Step Three



- Immediately after blood draw, invert tubes 8-10 times to mix samples.

Step Four



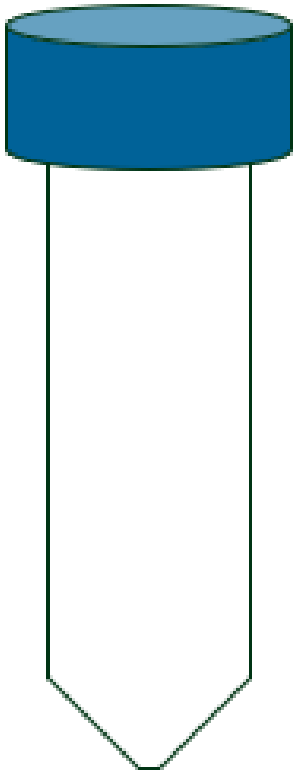
- Store tubes at room temperature until shipment.
- Ship ambient same day as blood draw

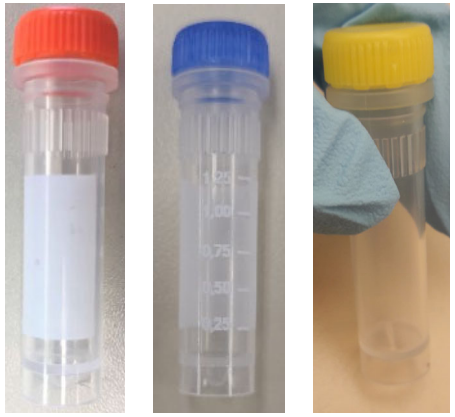
CSF Collection and Processing

NCRAD

Important Note

CSF samples should be collected in the morning before breakfast and after an overnight fast. Collection of biomarker fluids and CSF should be collected after a minimum 6-hour fast. Only water is permitted until blood draws and the lumbar puncture are completed. Please remember to record "Last time eaten" on CSF Biological Sample and Shipment Notification Form.

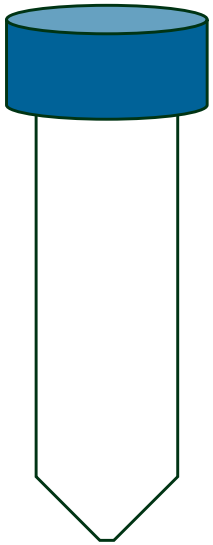




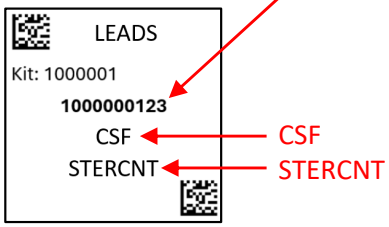
CSF

Prior to blood draw, label all tubes:

1 x 50ml Sterile Container

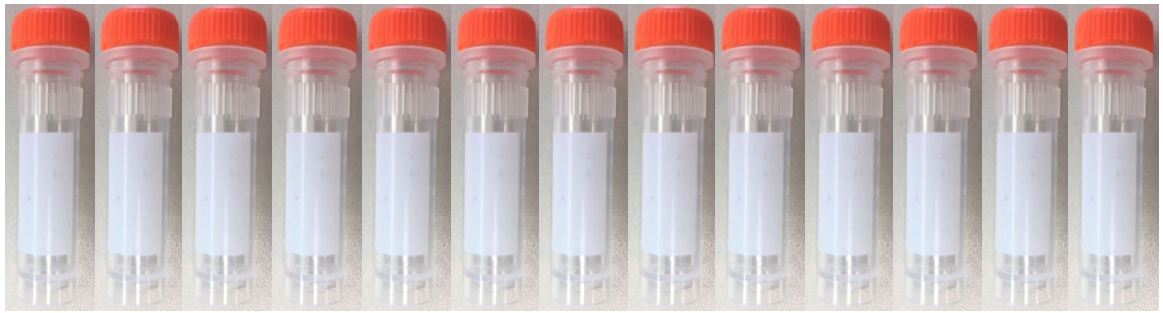


Label with: LDS:_____ &

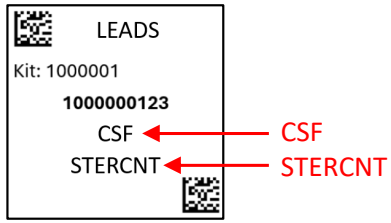


You will receive 15 labels with "CSF" and "STERCNT" on them. Of these 15 labels, use the label with the smallest specimen number for the 50ml conical.

13 x 2ml Orange Cap Cryovials & 1 x 2ml Blue Cap Cryovial



Label with:



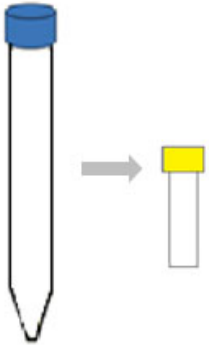
*NCRAD does not provide a label for the yellow cap cryovial for CSF for your local lab.

CSF Preparation (15-20 ml total)

Step One

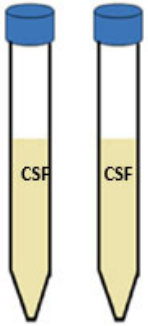
- Label tubes with pre-printed subject labels prior to collection.
- Pre-chill all cryovials on wet ice.

Step Two



- Collect initial 1-2ml (if bloody, collect CSF until cleared of blood) into 15 ml conical tube.
- If not bloody, transfer 1-2 ml into the yellow-cap cryovial.
- Send to local lab for testing.

Step Three

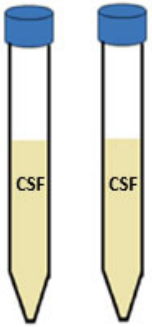


- Collect 15-20 ml total, including the 1-2 ml sent to the local lab.
- Collect sample into 2 15 ml conical tubes.

Step Four

- Place samples upright on wet ice until centrifugation begins.

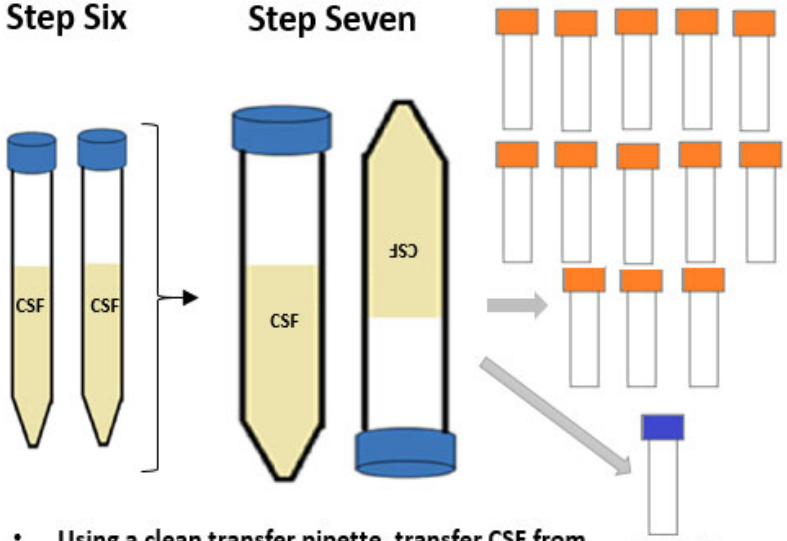
Step Five



- Preferably within 15 minutes of collection, centrifuge samples at 4°C at 2000 x g for 10 minutes.

Step Six

Step Seven



- Using a clean transfer pipette, transfer CSF from both 15 ml conical tubes into a 50 ml conical tube, leaving the debris in the bottom.
- Gently invert the 50 ml conical tube 3-4 times to mix the sample.
- Aliquot 1.5 ml into the orange-cap cryovials.
- If a residual aliquot is created, aliquot into blue-cap cryovial. Document specimen number and volume on CSF Sample Notification Form.
- Within 2 hours of CSF collection, samples need to be spun, aliquoted and in the freezer. Store at -80°C until shipment. Record time of freezing on CSF Sample Notification Form.

Sample Shipping

Sample Shipment Summary

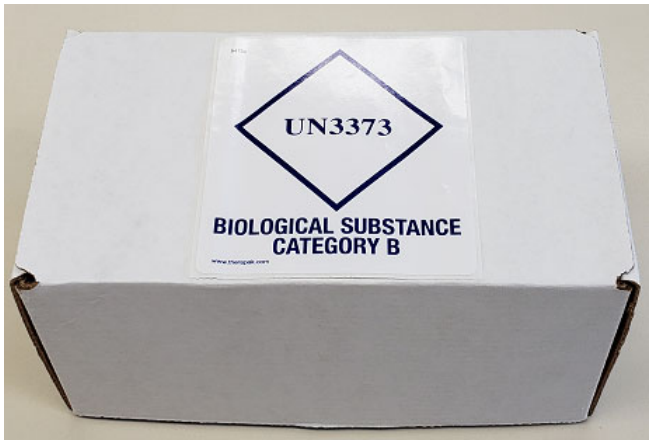
Sample Type	Processing/ Aliquoting	Tubes to NCRAD	Ship	Days to Ship
Whole blood for RNA extraction	N/A	1	Frozen	Monday-Wednesday
Whole blood (Plain Red-Top Serum Tube) for isolation of serum	1.5 ml serum aliquots per 2.0 ml cryovial (red cap) ; residual volume placed in 2.0 ml cryovial with blue cap	Up to 4	Frozen	Monday-Wednesday
Whole blood for PBMC	N/A	2	Ambient/ same day	Monday - Thursday
Whole blood (Lavender-Top EDTA) for isolation of plasma & buffy coat (for DNA extraction)	1.5 ml plasma aliquots per 2.0 ml cryovial (lavender cap) ; residual volume placed in 2.0 ml cryovial with blue cap	Up to 10	Frozen	Monday-Wednesday
	1 ml buffy coat aliquot per 2.0 ml cryovial (clear cap)	3	Frozen	Monday-Wednesday
Whole blood (Lavender-Top EDTA) for CLIA lab testing	N/A	1	Frozen	Monday-Wednesday
CSF Collection	1.5 ml CSF aliquots per 2.0 ml cryovial (orange cap); residual volume placed in 2.0 ml cryovial with blue cap; 1-2 ml for local lab placed in 2.0 ml cryovial with yellow cap.	Up to 14	Frozen	Monday-Wednesday

Ambient Sample

- Sodium Heparin/PBMC
- Only Monday-Thursday collection and same day shipping. Plan ahead to schedule UPS.
- Samples must be received at IU one day after collection.
- Do NOT draw or ship ambient samples on Friday
- Include copy of Biological Sample Shipment and Notification Form

NCRAD

Ambient Sample Shipping



- **Place refrigerant pack in the freezer 24 hours prior to shipment.**
- Place filled and labeled Sodium Heparin tubes within the slots in the absorbent pad and place in biohazard bag.
- Place the kit number label on biohazard bag.
- Place the refrigerant pack into the cooler on top of the filled biohazard bag. Place lid on cooler.
- Place the cooler in the small IATA Shipping Box.
- Place an extra copy of the “Biological Sample and Shipment Notification Form” within the shipping box along with a list of contents form.
- Close shipping box and ensure labeled with UN3373 label.
- Place box within a provided UPS ClinPak, seal, and place UPS label on outside of package.

NCRAD

Frozen Sample Shipping

- **Ship Monday-Wednesday Only**
  - RNA, Serum, Plasma, Buffy Coat, CSF, Whole Blood for CLIA*, and Whole Blood for LRS* (*when applicable)
- Hold packaged samples in a -80°C freezer until pickup.
- Batch Samples together
  - 5 Cryoboxes
  - **Batch shipping should be performed every 3 months or as a full shipment of specimens accumulates, whichever is sooner.**

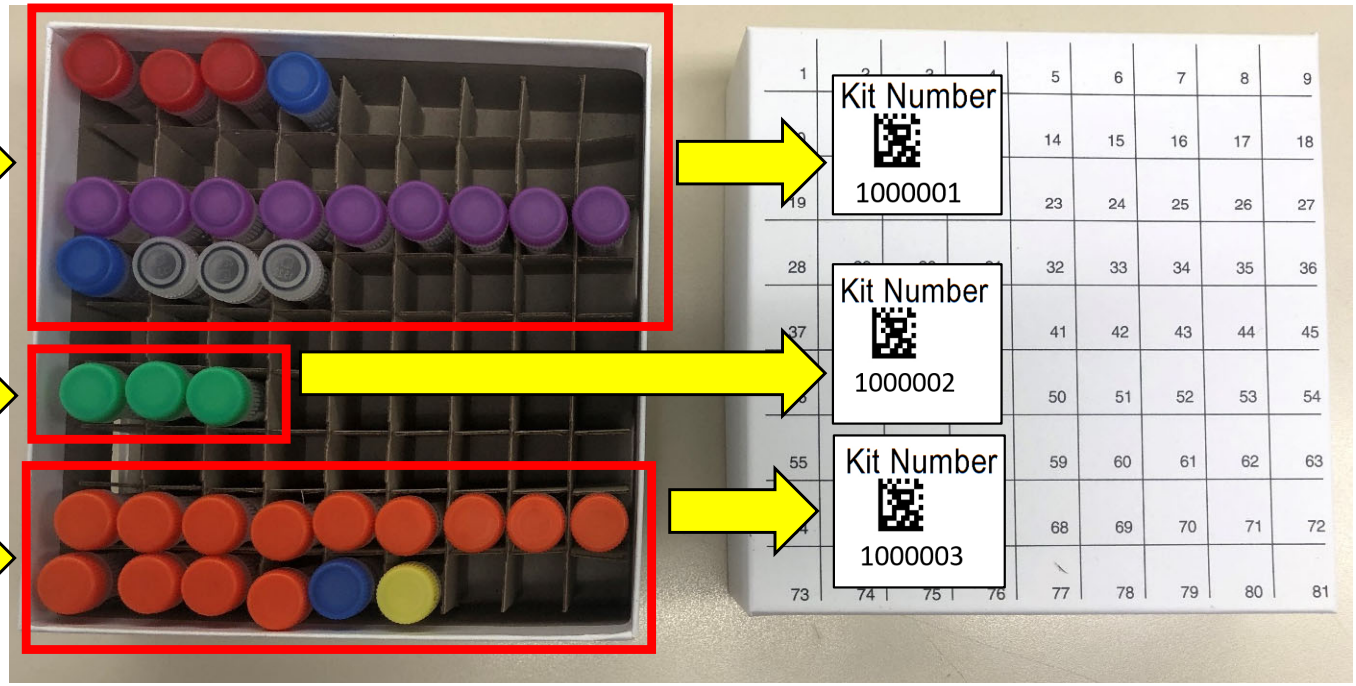
NCRAD

Frozen Shipping - Cryoboxes

Aliquots from a regular Blood Kit

Aliquots from a LRS Blood Kit

Aliquots from a CSF Kit



A cryobox may have up to three kit number labels on its lid, depending on what samples were collected during the participant's visit.

This is an example of a cryobox with 3 kit number labels, one for each: regular blood kit, LRS blood kit, and CSF kit

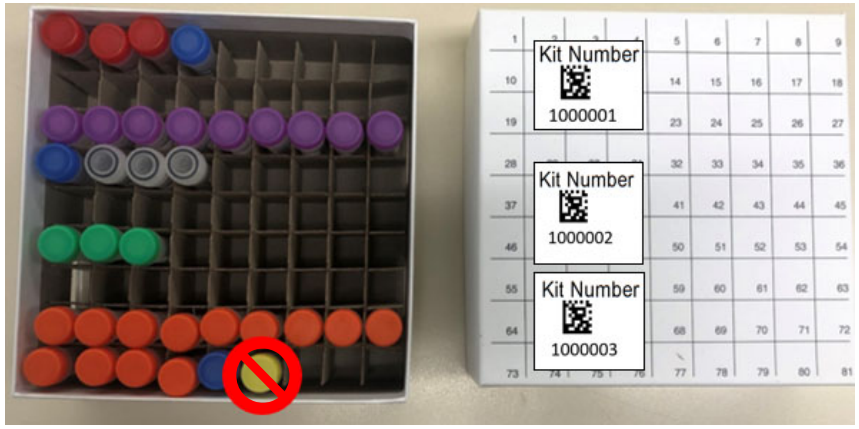
NCRAD

Frozen Shipping - Cryoboxes

Aliquots from a regular Blood Kit

Please note that the yellow-cap cryovial of CSF should NOT be sent back to NCRAD. If used, you should provide it to your local lab.

Frozen Shipping - Cryoboxes



Place frozen RNA (and frozen EDTA (6ml & 3ml) tubes, when applicable) in bubble wrap tube sleeves.

Place cryobox and frozen tubes in one Biohazard Bag.

NCRAD

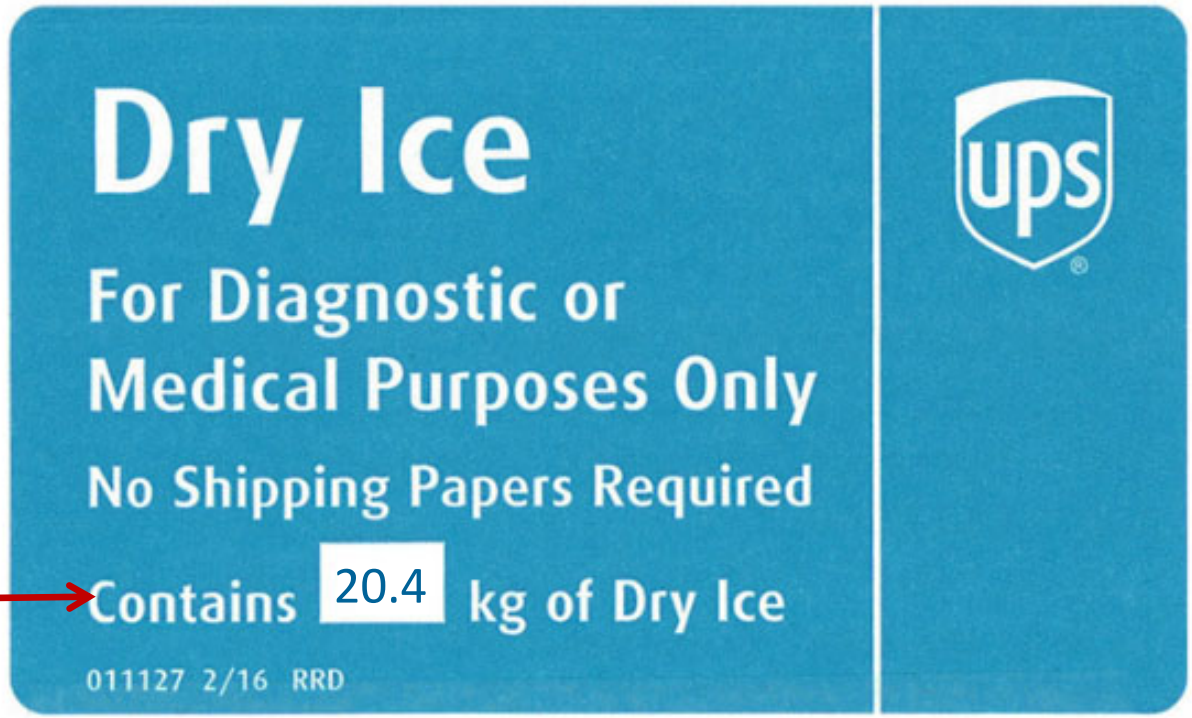
Frozen Shipping – Dry Ice Requirements

- Fully cover the cryoboxes with about 2 inches of dry ice in the provided shipper.
- Each Styrofoam shipper must contain about 45 lbs (20 kg) of dry ice.

Frozen Shipping – Dry Ice Requirements

Dry Ice label should not be covered with other stickers and must be completed or the shipping carrier will reject/return your package!

Net weight of dry ice in **kg**



Shipping Frozen Samples

- Schedule UPS
- *Send Biological Sample and Shipment Notification Form to IU* ***ahead of shipment***
  - ***Email: alzstudy@iu.edu*** or
  - ***Fax: 317-321-2003***

NCRAD

Shipping Regulations and Training

PLEASE NOTE:

- All study personnel responsible for shipping should be certified in biospecimen shipping.
- It is the responsibility of each site to ensure that the appropriate training has been provided and conducted in regards to IATA shipping.

Please see following slides for resources.

NCRAD

Federal Regulations/Training

- Sites are responsible for ensuring proper training is obtained.
- Current federal and international regulations require anyone directly involved with the shipment of potentially infectious materials and other regulated biological materials (including biological specimens and cultures) **be properly trained on pertinent shipping requirements.**
  - **International Air Transport Association (IATA) Training**

DGI Training Center 800-338-2291 DGItraining.com Provides IATA Certified Air Seminars and online courses	IATA Training Schools North America 1(514)390-6726 Europe, Africa & Middle East 41 (22) 799 2751 Asia, Australia & the Pacific 65 239 7232 www.iata.org Training schools located in 30 countries
Saf-T Pak Inc. www.saftpak.com Provides dangerous goods training via CD or on-site instruction for North America and Europe	Aiconsult Email: Airconsult@wanadoo.fr www.airconsult-bf.com
Bureau of Dangerous Goods LTD., TIANJIN Addr.: No.3 Yingshui road, Nankai district, Tianjin China Tel: 022-23495890 83326960 83326854 / Fax: 022-83326959 Email: cdmin@bdg-china.com.cn www.bdg-china.com.cn	

NCRAD

UN3373 Biological Substance, Category B Training

- Biological Substance, Category B are specimens being transported for “investigational purposes”
- Recommend: investigator sites document training of category B/dangerous goods
- We recommend establishing a record of your staff’s training and date of instruction
- The training records must be made available upon request by the appropriate national authority
  - Additional information from the Department of Transportation (DOT) can be found on their website http://hazmat.dot.gov

NCRAD

Biological Sample and Shipment Notification Forms

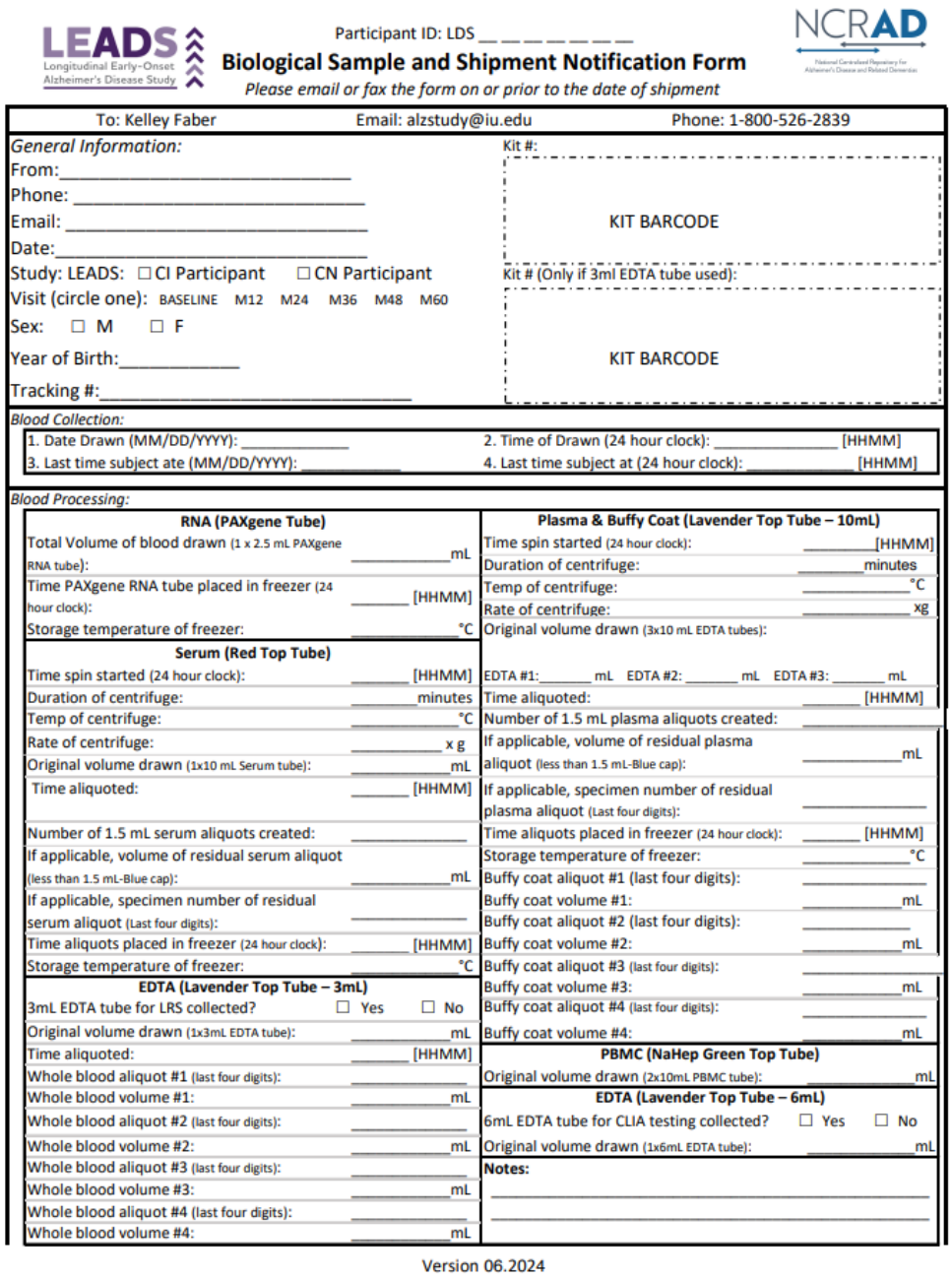
- A copy of the sample form *must* be emailed or faxed to NCRAD prior to the date of sample arrival.
- Please include sample forms in all shipments of frozen and ambient samples.
- Email: alzstudy@iu.edu
- Fax: 317-321-2003

NCRAD

Biological Sample Notification Form- Blood

Send by E-mail or Fax prior to shipment and include a copy in each shipment.

You will need to scan and print a second hard copy so that you can include the sample form in both the ambient and frozen shipments.



LEADS Longitudinal Early-Onset Alzheimer's Disease Study

Participant ID: LDS _ _ _ _ _ _ _ _

Biological Sample and Shipment Notification Form

Please email or fax the form on or prior to the date of shipment

NCRAD National Centralized Repository for Alzheimer's Disease and Related Dementias

To: Kelley Faber | Email: alzstudy@iu.edu | Phone: 1-800-526-2839

General Information:

From:_____

Phone: _____

Email: _____

Date:_____

Study: LEADS: ☐ CI Participant ☐ CN Participant

Visit (circle one): BASELINE M12 M24 M36 M48 M60

Sex: ☐ M ☐ F

Year of Birth:_____

Tracking #:_____

Kit #:

KIT BARCODE

Kit # (Only if 3ml EDTA tube used):

KIT BARCODE

Blood Collection:

1. Date Drawn (MM/DD/YYYY): _____
2. Time of Drawn (24 hour clock): _____ [HHMM]
3. Last time subject ate (MM/DD/YYYY): _____
4. Last time subject at (24 hour clock): _____ [HHMM]

Blood Processing:

RNA (PAXgene Tube)

- Total Volume of blood drawn (1 x 2.5 mL PAXgene RNA tube): _____ mL
- Time PAXgene RNA tube placed in freezer (24 hour clock): _____ [HHMM]
- Storage temperature of freezer: _____ °C

Serum (Red Top Tube)

- Time spin started (24 hour clock): _____ [HHMM]
- Duration of centrifuge: _____ minutes
- Temp of centrifuge: _____ °C
- Rate of centrifuge: _____ x g
- Original volume drawn (1x10 mL Serum tube): _____ mL
- Time aliquoted: _____ [HHMM]
- Number of 1.5 mL serum aliquots created: _____
- If applicable, volume of residual serum aliquot (less than 1.5 mL-Blue cap): _____ mL
- If applicable, specimen number of residual serum aliquot (Last four digits): _____
- Time aliquots placed in freezer (24 hour clock): _____ [HHMM]
- Storage temperature of freezer: _____ °C

EDTA (Lavender Top Tube – 3mL)

- 3mL EDTA tube for LRS collected? ☐ Yes ☐ No
- Original volume drawn (1x3mL EDTA tube): _____ mL
- Time aliquoted: _____ [HHMM]
- Whole blood aliquot #1 (last four digits): _____
- Whole blood volume #1: _____ mL
- Whole blood aliquot #2 (last four digits): _____
- Whole blood volume #2: _____ mL
- Whole blood aliquot #3 (last four digits): _____
- Whole blood volume #3: _____ mL
- Whole blood aliquot #4 (last four digits): _____
- Whole blood volume #4: _____ mL

Plasma & Buffy Coat (Lavender Top Tube – 10mL)

- Time spin started (24 hour clock): _____ [HHMM]
- Duration of centrifuge: _____ minutes
- Temp of centrifuge: _____ °C
- Rate of centrifuge: _____ xg
- Original volume drawn (3x10 mL EDTA tubes):

EDTA #1:_____ mL EDTA #2: _____ mL EDTA #3: _____ mL

- Time aliquoted: _____ [HHMM]
- Number of 1.5 mL plasma aliquots created: _____
- If applicable, volume of residual plasma aliquot (less than 1.5 mL-Blue cap): _____ mL
- If applicable, specimen number of residual plasma aliquot (Last four digits): _____
- Time aliquots placed in freezer (24 hour clock): _____ [HHMM]
- Storage temperature of freezer: _____ °C
- Buffy coat aliquot #1 (last four digits): _____
- Buffy coat volume #1: _____ mL
- Buffy coat aliquot #2 (last four digits): _____
- Buffy coat volume #2: _____ mL
- Buffy coat aliquot #3 (last four digits): _____
- Buffy coat volume #3: _____ mL
- Buffy coat aliquot #4 (last four digits): _____
- Buffy coat volume #4: _____ mL

PBMC (NaHep Green Top Tube)

- Original volume drawn (2x10mL PBMC tube): _____ mL

EDTA (Lavender Top Tube – 6mL)

- 6mL EDTA tube for CLIA testing collected? ☐ Yes ☐ No
- Original volume drawn (1x6mL EDTA tube): _____ mL

Notes:

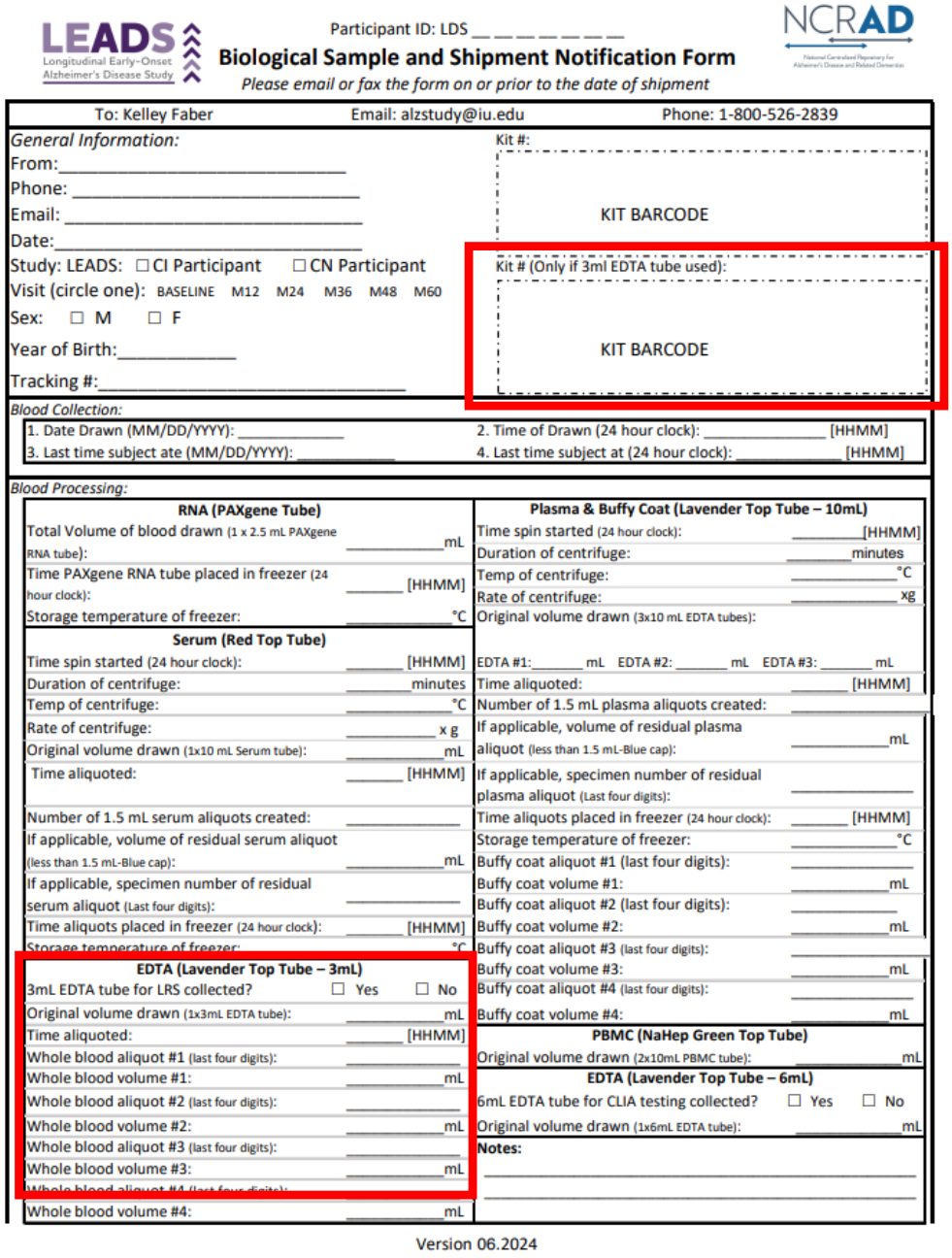
_____

_____

Version 06.2024

Biological Sample Notification Form- Blood

There should be a second Kit Number Label placed on the form if a 3mL EDTA tube was collected and aliquoted for LRS



LEADS Longitudinal Early-Onset Alzheimer's Disease Study

Participant ID: LDS _ _ _ _ _ _ _

Biological Sample and Shipment Notification Form

Please email or fax the form on or prior to the date of shipment

NCRAD National Centralized Repository for Alzheimer's Disease and Related Dementias

To: Kelley Faber | Email: alzstudy@iu.edu | Phone: 1-800-526-2839

General Information:

From:_____

Phone: _____

Email: _____

Date:_____

Study: LEADS: ☐ CI Participant ☐ CN Participant

Visit (circle one): BASELINE M12 M24 M36 M48 M60

Sex: ☐ M ☐ F

Year of Birth:_____

Tracking #:_____

Kit #:

KIT BARCODE

Kit # (Only if 3ml EDTA tube used):

KIT BARCODE

Blood Collection:

1. Date Drawn (MM/DD/YYYY): _____
2. Time of Drawn (24 hour clock): _____ [HHMM]
3. Last time subject ate (MM/DD/YYYY): _____
4. Last time subject at (24 hour clock): _____ [HHMM]

Blood Processing:

RNA (PAXgene Tube)

Total Volume of blood drawn (1 x 2.5 mL PAXgene RNA tube): _____ mL

Time PAXgene RNA tube placed in freezer (24 hour clock): _____ [HHMM]

Storage temperature of freezer: _____ °C

Serum (Red Top Tube)

Time spin started (24 hour clock): _____ [HHMM]

Duration of centrifuge: _____ minutes

Temp of centrifuge: _____ °C

Rate of centrifuge: _____ x g

Original volume drawn (1x10 mL Serum tube): _____ mL

Time aliquoted: _____ [HHMM]

Number of 1.5 mL serum aliquots created: _____

If applicable, volume of residual serum aliquot (less than 1.5 mL-Blue cap): _____ mL

If applicable, specimen number of residual serum aliquot (Last four digits): _____

Time aliquots placed in freezer (24 hour clock): _____ [HHMM]

Storage temperature of freezer: _____ °C

EDTA (Lavender Top Tube – 3mL)

3mL EDTA tube for LRS collected? ☐ Yes ☐ No

Original volume drawn (1x3mL EDTA tube): _____ mL

Time aliquoted: _____ [HHMM]

Whole blood aliquot #1 (last four digits): _____

Whole blood volume #1: _____ mL

Whole blood aliquot #2 (last four digits): _____

Whole blood volume #2: _____ mL

Whole blood aliquot #3 (last four digits): _____

Whole blood volume #3: _____ mL

Whole blood aliquot #4 (last four digits): _____

Whole blood volume #4: _____ mL

Plasma & Buffy Coat (Lavender Top Tube – 10mL)

Time spin started (24 hour clock): _____ [HHMM]

Duration of centrifuge: _____ minutes

Temp of centrifuge: _____ °C

Rate of centrifuge: _____ xg

Original volume drawn (3x10 mL EDTA tubes):

EDTA #1:_____ mL EDTA #2: _____ mL EDTA #3: _____ mL

Time aliquoted: _____ [HHMM]

Number of 1.5 mL plasma aliquots created: _____

If applicable, volume of residual plasma aliquot (less than 1.5 mL-Blue cap): _____ mL

If applicable, specimen number of residual plasma aliquot (Last four digits): _____

Time aliquots placed in freezer (24 hour clock): _____ [HHMM]

Storage temperature of freezer: _____ °C

Buffy coat aliquot #1 (last four digits): _____

Buffy coat volume #1: _____ mL

Buffy coat aliquot #2 (last four digits): _____

Buffy coat volume #2: _____ mL

Buffy coat aliquot #3 (last four digits): _____

Buffy coat volume #3: _____ mL

Buffy coat aliquot #4 (last four digits): _____

Buffy coat volume #4: _____ mL

PBMC (NaHep Green Top Tube)

Original volume drawn (2x10mL PBMC tube): _____ mL

EDTA (Lavender Top Tube – 6mL)

6mL EDTA tube for CLIA testing collected? ☐ Yes ☐ No

Original volume drawn (1x6mL EDTA tube): _____ mL

Notes:

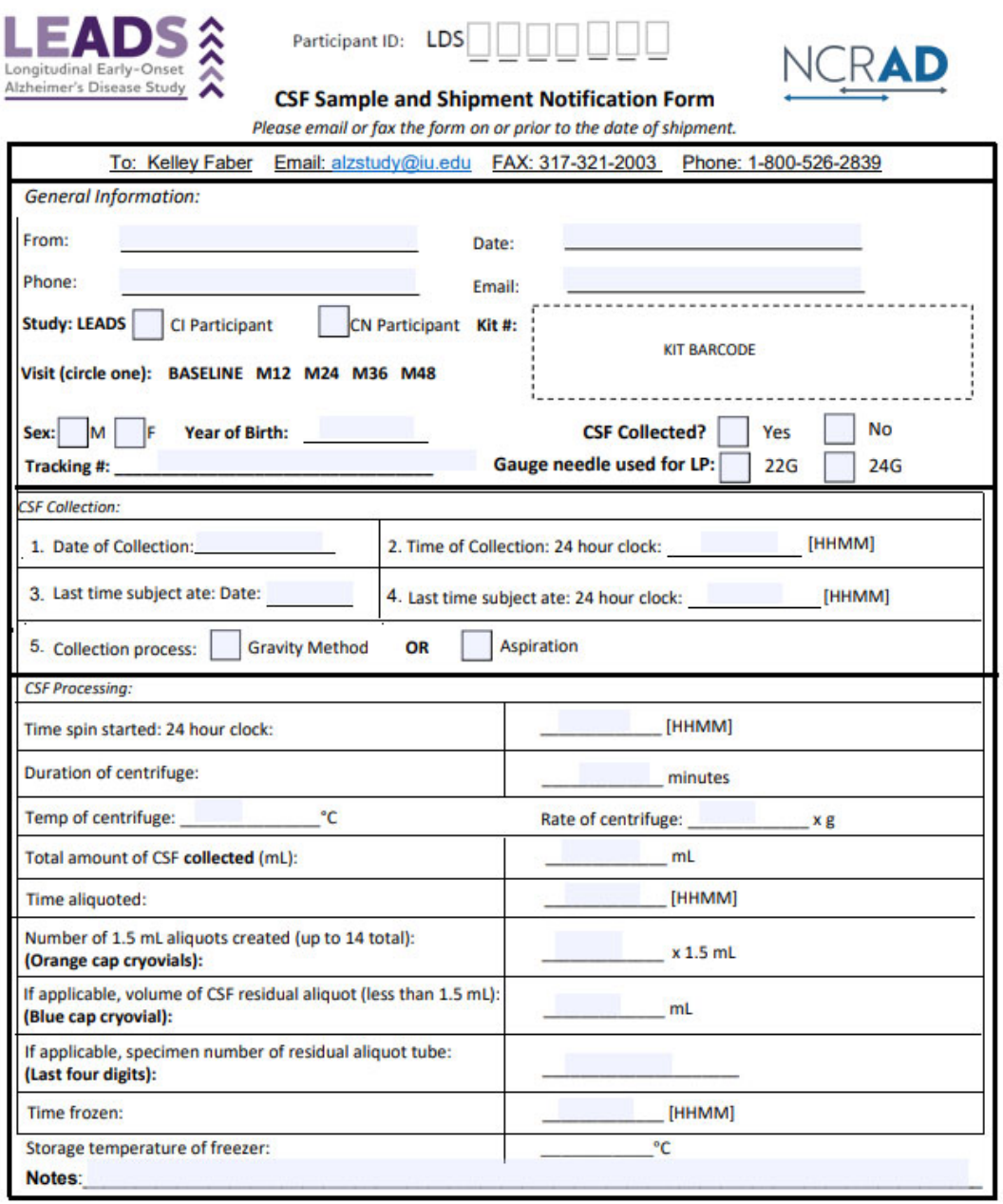
_____

_____

Version 06.2024

Biological Sample Notification Form – CSF

Send by E-mail or Fax prior to shipment and include a copy in each shipment



LEADS Longitudinal Early-Onset Alzheimer's Disease Study

Participant ID: LDS_____

NCRAD

CSF Sample and Shipment Notification Form

Please email or fax the form on or prior to the date of shipment.

To: Kelley Faber Email: alzstudy@iu.edu FAX: 317-321-2003 Phone: 1-800-526-2839

General Information:

From: _____ Date: _____

Phone: _____ Email: _____

Study: LEADS ☐ CI Participant ☐ CN Participant **Kit #:** KIT BARCODE

Visit (circle one): BASELINE M12 M24 M36 M48

Sex: ☐ M ☐ F **Year of Birth:** _____ **CSF Collected?** ☐ Yes ☐ No

Tracking #: _____ **Gauge needle used for LP:** ☐ 22G ☐ 24G

CSF Collection:

1. Date of Collection: _____	2. Time of Collection: 24 hour clock: _____ [HHMM]
3. Last time subject ate: Date: _____	4. Last time subject ate: 24 hour clock: _____ [HHMM]
5. Collection process: ☐ Gravity Method **OR** ☐ Aspiration	

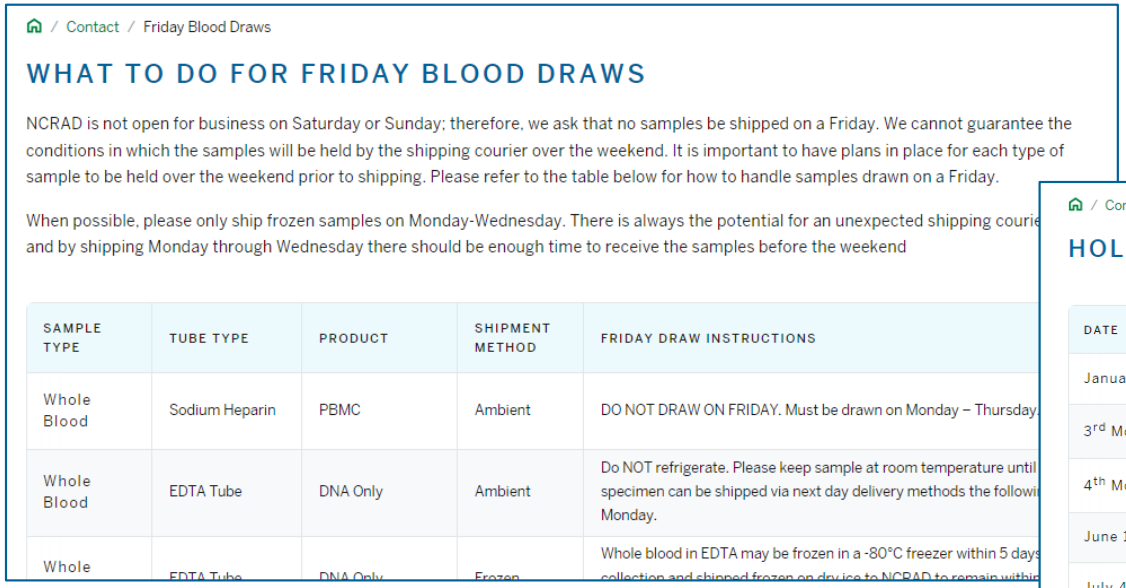
CSF Processing:

Time spin started: 24 hour clock:	_____ [HHMM]
Duration of centrifuge:	_____ minutes
Temp of centrifuge: _____ °C	Rate of centrifuge: _____ x g
Total amount of CSF **collected** (mL):	_____ mL
Time aliquoted:	_____ [HHMM]
Number of 1.5 mL aliquots created (up to 14 total): **(Orange cap cryovials):**	_____ x 1.5 mL
If applicable, volume of CSF residual aliquot (less than 1.5 mL): **(Blue cap cryovial):**	_____ mL
If applicable, specimen number of residual aliquot tube: **(Last four digits):**	_____
Time frozen:	_____ [HHMM]
Storage temperature of freezer:	_____ °C

Notes: _____

NCRAD Website
Helpful Pages

- https://ncrad.iu.edu/contact/holiday-closures
  https://ncrad.iu.edu/contact/friday-blood-draws



/ Contact / Friday Blood Draws

WHAT TO DO FOR FRIDAY BLOOD DRAWS

NCRAD is not open for business on Saturday or Sunday; therefore, we ask that no samples be shipped on a Friday. We cannot guarantee the conditions in which the samples will be held by the shipping courier over the weekend. It is important to have plans in place for each type of sample to be held over the weekend prior to shipping. Please refer to the table below for how to handle samples drawn on a Friday.

When possible, please only ship frozen samples on Monday-Wednesday. There is always the potential for an unexpected shipping courie and by shipping Monday through Wednesday there should be enough time to receive the samples before the weekend

SAMPLE TYPE	TUBE TYPE	PRODUCT	SHIPMENT METHOD	FRIDAY DRAW INSTRUCTIONS
Whole Blood	Sodium Heparin	PBMC	Ambient	DO NOT DRAW ON FRIDAY. Must be drawn on Monday – Thursday.
Whole Blood	EDTA Tube	DNA Only	Ambient	Do NOT refrigerate. Please keep sample at room temperature until specimen can be shipped via next day delivery methods the followi Monday.
Whole	EDTA Tube	DNA Only	Frozen	Whole blood in EDTA may be frozen in a -80°C freezer within 5 days collection and shipped frozen on dry ice to NCRAD to remain within

/ Contact / Holiday Closures

HOLIDAY CLOSURES

DATE	HOLIDAY
January 1	New Year's Day
3rd Monday in January	Martin Luther King, Jr Day
4th Monday in May	Memorial Day
June 19	Juneteenth (observed)
July 4	Independence Day (observed)
1st Monday in September	Labor Day
4th Thursday in November	Thanksgiving
4th Friday in November	Friday after Thanksgiving
December 25	Christmas

LEADS Active Study Page

NCRAD
National Centralized Repository for Alzheimer's Disease and Related Dementias

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ABOUT | BANK SAMPLES | ACCESS SAMPLES | BIOMARKER ANALYSIS | COORDINATE STUDIES | GENETICS & FAMILIES | CONTACT

COORDINATE STUDIES

- LEADS
- NIA-AD FBS
- NAPS2
- PATH
- APOE
- 4RTNI-2
- 90+ Study
- ABC-DS
- ACAD
- ACE
- ACT
- ADCFB
- ADNI-3,4
- AGMP
- ALLFTD
- BBBSR
- BenfoTeam
- BEYONDD
- CADASIL
- CLARiTI

Coordinate Studies / LEADS

LEADS ACTIVE STUDY PAGE

Welcome LEADS Study staff, coordinators, and PI's.

This section encompasses study specific tools and videos for your reference. If you have any questions, comments, or new ideas please contact NCRAD by **email** or phone **1-800-526-2839** or directly at **317-278-8413**.

LEADS Longitudinal Early-Onset Alzheimer's Disease Study

CI (COGNITIVELY IMPAIRED) PARTICIPANTS

	BASELINE	M12	M24	M36	M48
RNA	✓	✓	✓	✓	✓
Serum	✓	✓	✓	✓	✓
Plasma	✓	✓	✓	✓	✓
DNA	✓	✓	✓	✓	✓
PBMC	✓	✓	✓	✓	✓
EDTA for CLIA testing**	✓				
CSF	✓	✓	✓	✓	

**Please note that this EDTA tube is used for the purpose of confirmation testing and is only drawn during the Baseline visit for CI participants.

NCRAD

Contact Information

- Questions?

  Please contact NCRAD Coordinators at:

  - Phone: 1-800-526-2839 or 317-278-1133
  - E-mail: alzstudy@iu.edu or agericks@iu.edu
  - Website: www.ncrad.org

NCRAD