International 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

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

NCRAD

Training Overview:

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

NCRAD

Biofluids Collection Schedule Overview

	CI Baseline	CN Baseline	CI M12	CN M12*	CI M24	CN M24	CI M36	CI M48 /Annual visit
Serum	X	X	X	X	X	X	X	X
Plasma	X	X	X	X	X	X	X	X
Buffy Coat (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 iLEADS Study. May be collected at longitudinal visits if not collected at Baseline					
RNA	X	X	X	X	X	X	X	X
PBMC ***optional***	X	X	X	X	X	X	X	X
CSF ***optional***	X	X	X		X	X	X	

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

NCRAD

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

https://redcap.uits.iu.edu/surveys/?s=DRE4RPARK3R7D8KL

NCRAD

National Centralized Repository for
Alzheimer's Disease and Related Dementias

Kit Request Module

- 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 (only needed at site start-up)
  - CSF Kit: CI BL – M72 & CN BL – M72
  - CSF Kit: Supplemental (only needed at site start-up)
  - LP Kit: 24G

NCRAD

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

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

NCRAD

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

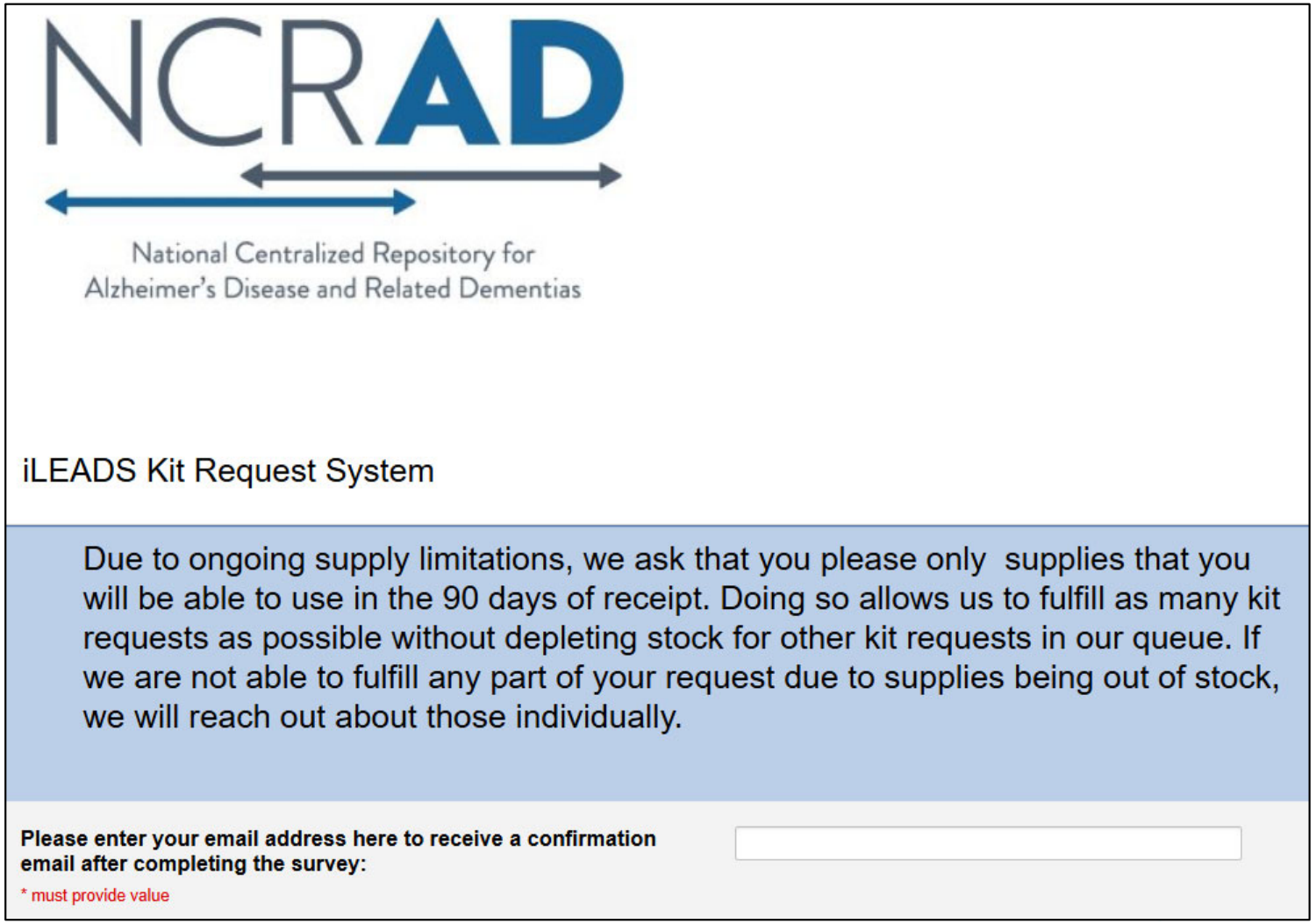
Kit comes with the supplies necessary for the collection and processing of:

- Cerebral Spinal Fluid (CSF)

NCRAD Kit Request Module

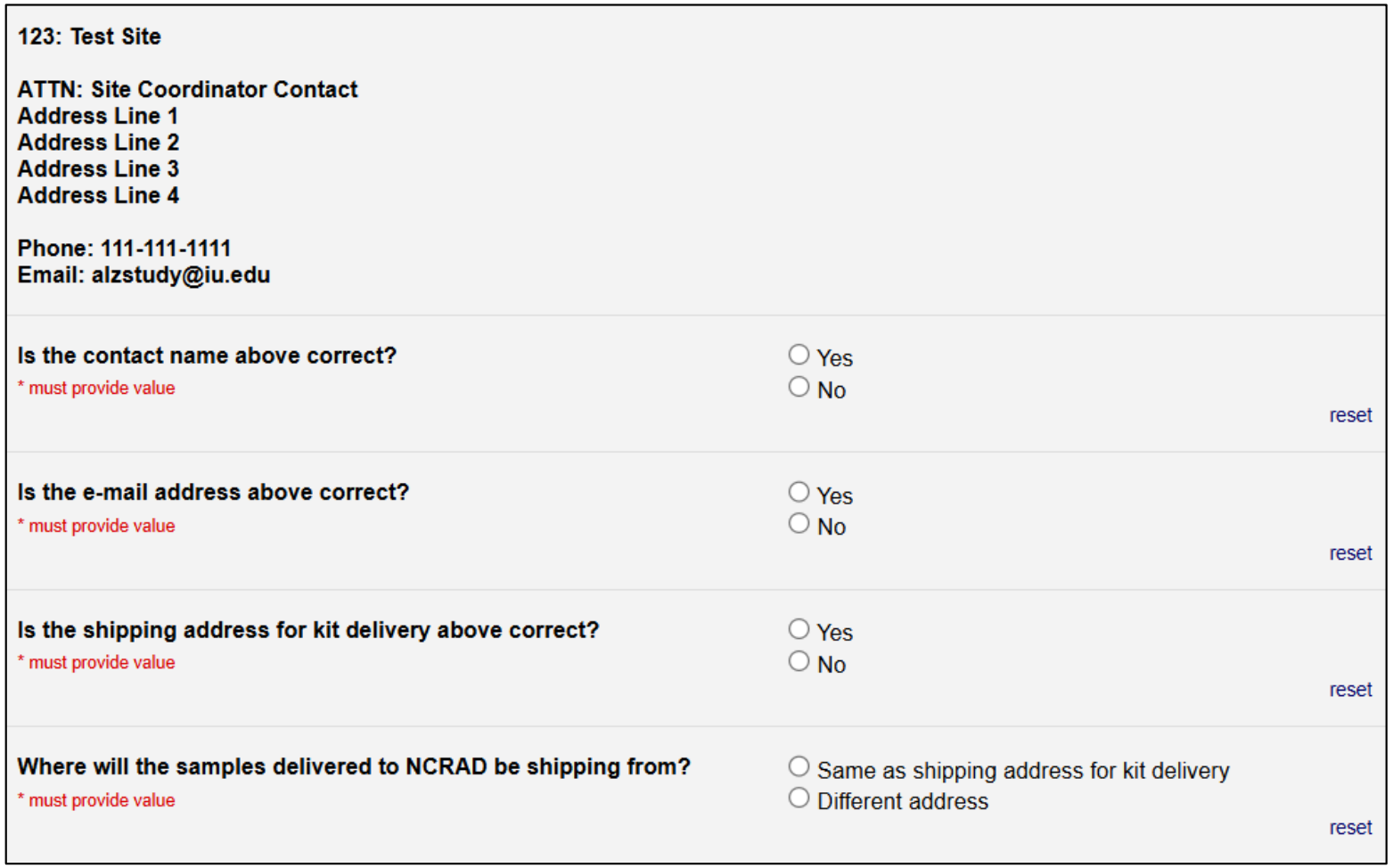
1. **Try to only order kits/supplies that will be used within 90 days of receipt.**

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.



NCRAD

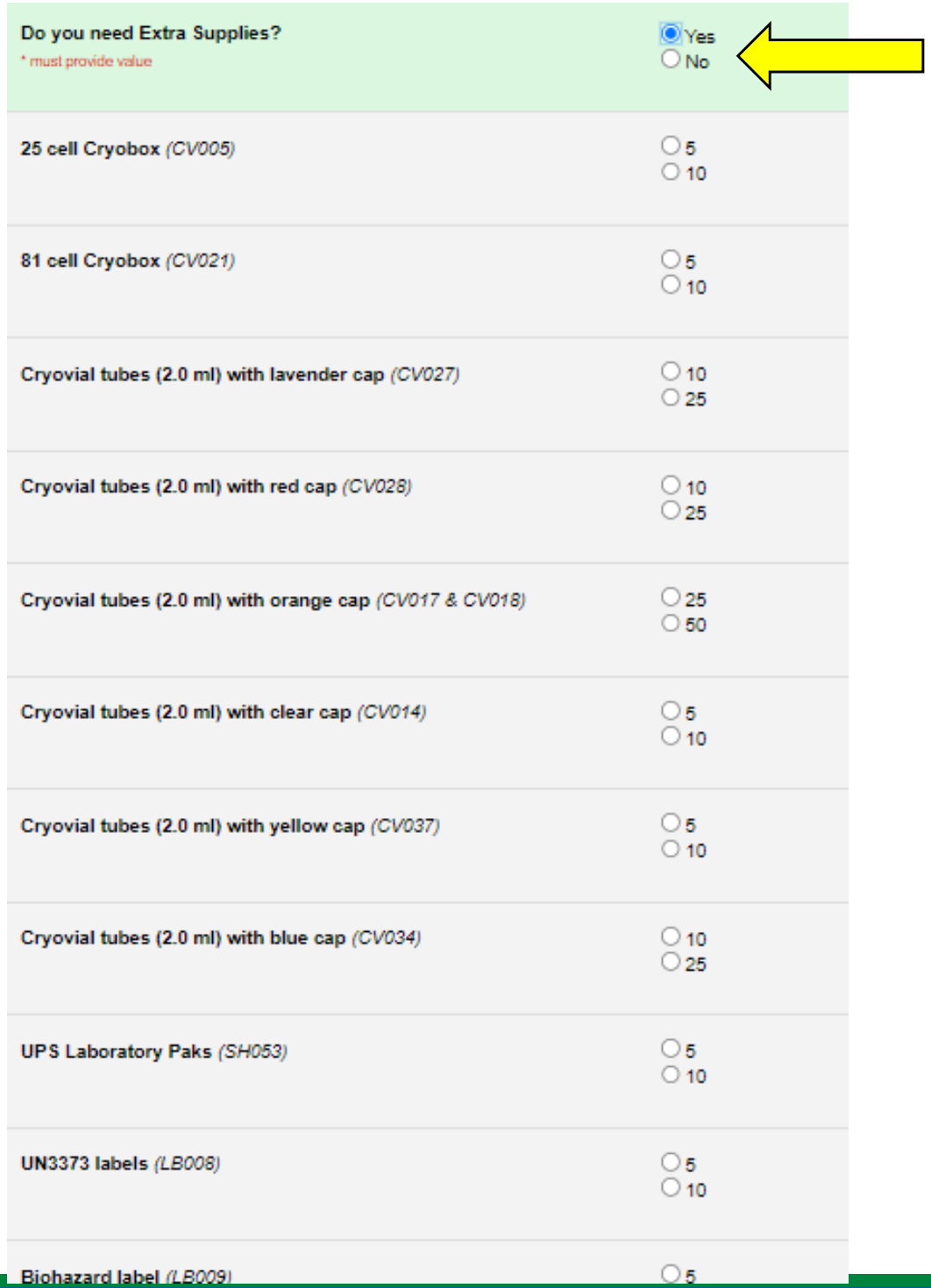
- Indicate the quantity needed of each kit
- Once selected, kit components of the chosen kit will appear at the bottom of the screen (Pictured)

CI Baseline Blood-Based Kit Qty	
CI M12-M84 Blood-Based Kit Qty	
CN Blood-Based Kit Qty (Baseline - M84)	
Long Read Sequencing Blood-Based Kit Qty	1
iLEADS CSF Kit Qty	
iLEADS International 24G LP Kit Qty	
large Plastic Biohazard bag with absorbent sheet Qty Finale code: SH025 & SH028 **Note: you will need 1 per cryobox**	
iLEADS Blood Supplemental Supply Kit Qty (usually need 1 at start-up)	
iLEADS CSF Supplemental Supply Kit Qty (usually need 1 at start-up)	

Each **Long Read Sequencing** Blood-Based Kit Contains:
Finale: 11191

- 1 Resealable Bag - ST002
- 1 EDTA (Lavender-Top) Blood Collection Tube (3 ml) - CT021
- 3 Cryovial tube (2.0 ml) with green cap - CV064
- 1 Cryovial tube (2.0 ml) with blue cap - CV034
- 1 Disposable graduated transfer pipette (3ml) - CV015
- Labels:
  - 1 Pre-printed Collection Tube Label - LB003
  - 3 Pre-printed Aliquot Tube Labels - LB003
  - 5 Pre-printed Kit Number Labels - LB003
  - 1 Labels for handwritten Site and iLEADS ID - LB003

NCRAD

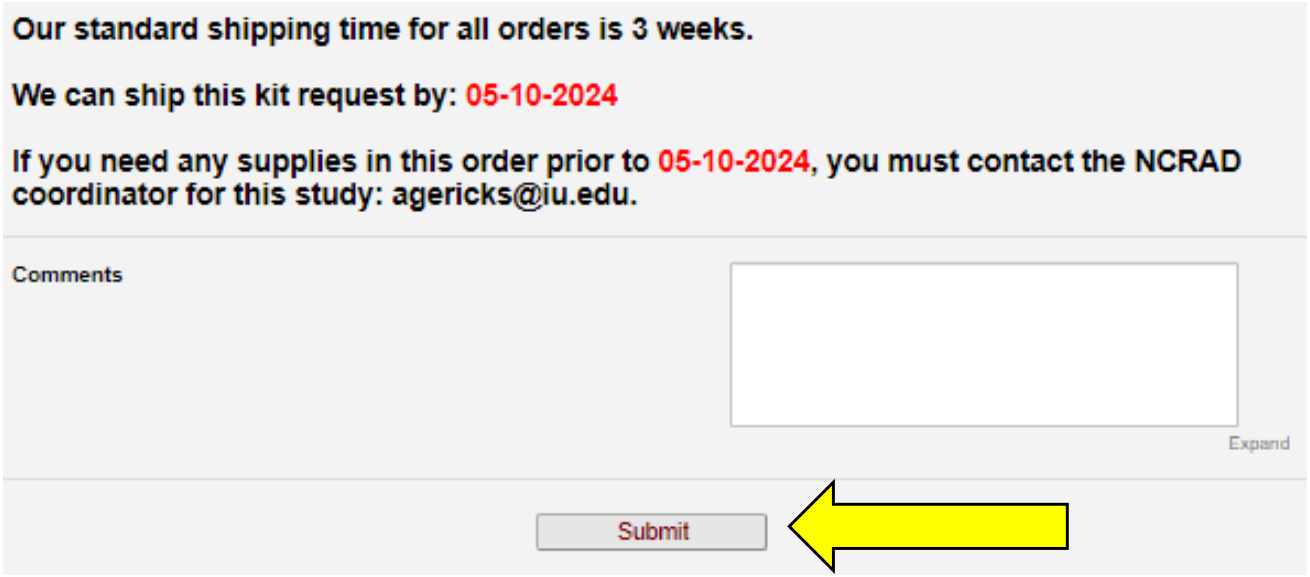


Study Visit Kits

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.

NCRAD

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. Leave any needed comments in the box provided.

3. Click Submit.

Things to Remember When Ordering Kits

- Allow a minimum of **3 weeks** for your order to be processed and delivered.
- For a visit where you will draw CSF, you will need an LP tray in addition to CSF kit.
- Upon site start up, you should order 1 CSF Supplemental and Blood Supplemental kit.
- For every cryo box of samples you have to ship back to NCRAD, you will need to order a “large plastic biohazard bag with absorbent sheet”
- 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://redcap.uits.iu.edu/surveys/?s=DRE4RPARK3R7D8KL

NCRAD

Specimen Labels

NCRAD

National Centralized Repository for
Alzheimer's Disease and Related Dementias

Label Type Summary

1. Kit Number Labels

2. iLEADS ID Labels

3. Collection Tube Labels
   - Differ by specimen type

4. Aliquot Tube Labels
   - Differ by specimen type

NCRAD

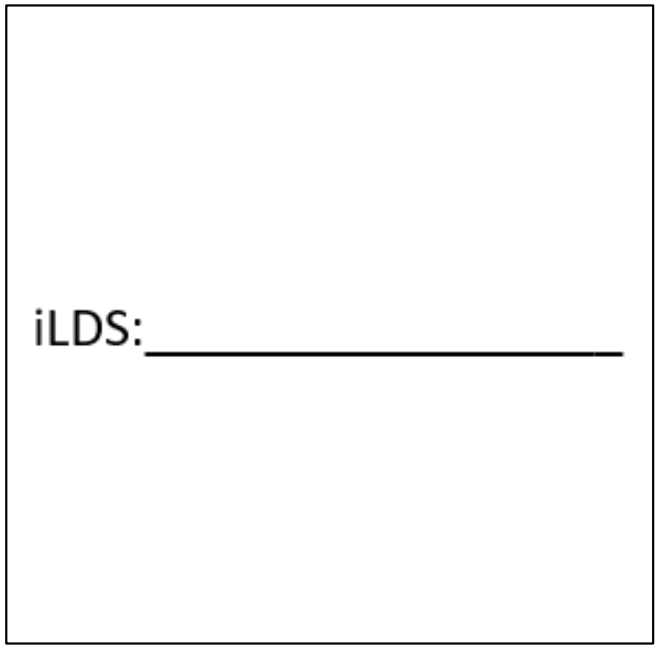
Kit Number Labels

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
- Kits will include extra kit labels that should be thrown away if not used

NCRAD

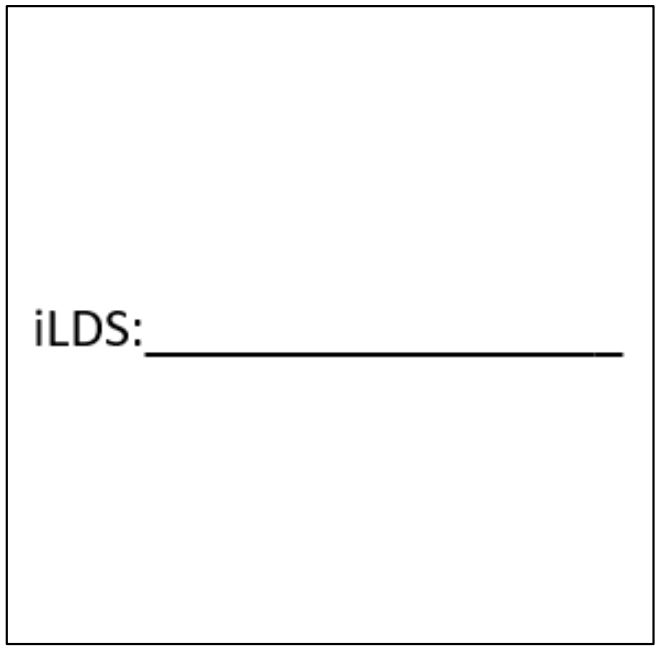
iLEADS ID Label



- Participants will be identified by their iLEADS ID
- The iLEADS 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

NCRAD

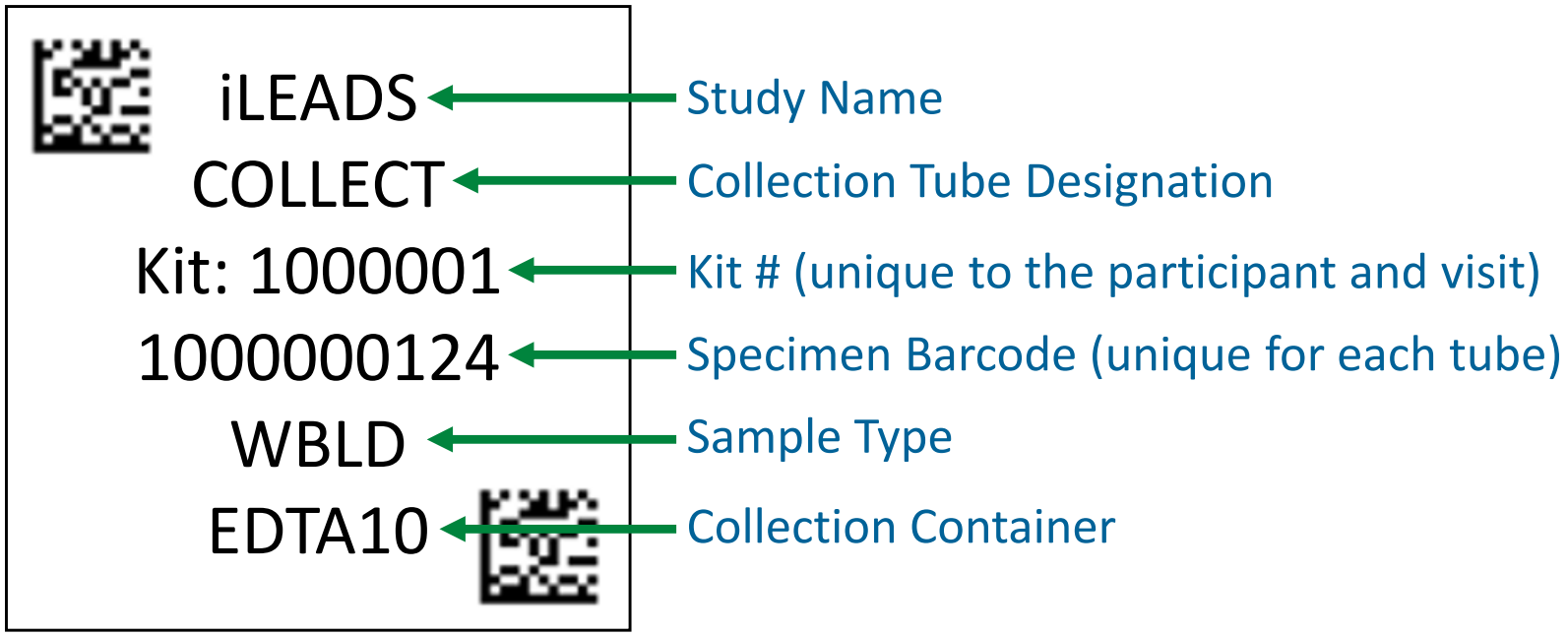
iLEADS ID Label Cont.



- 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 may include extra label

NCRAD

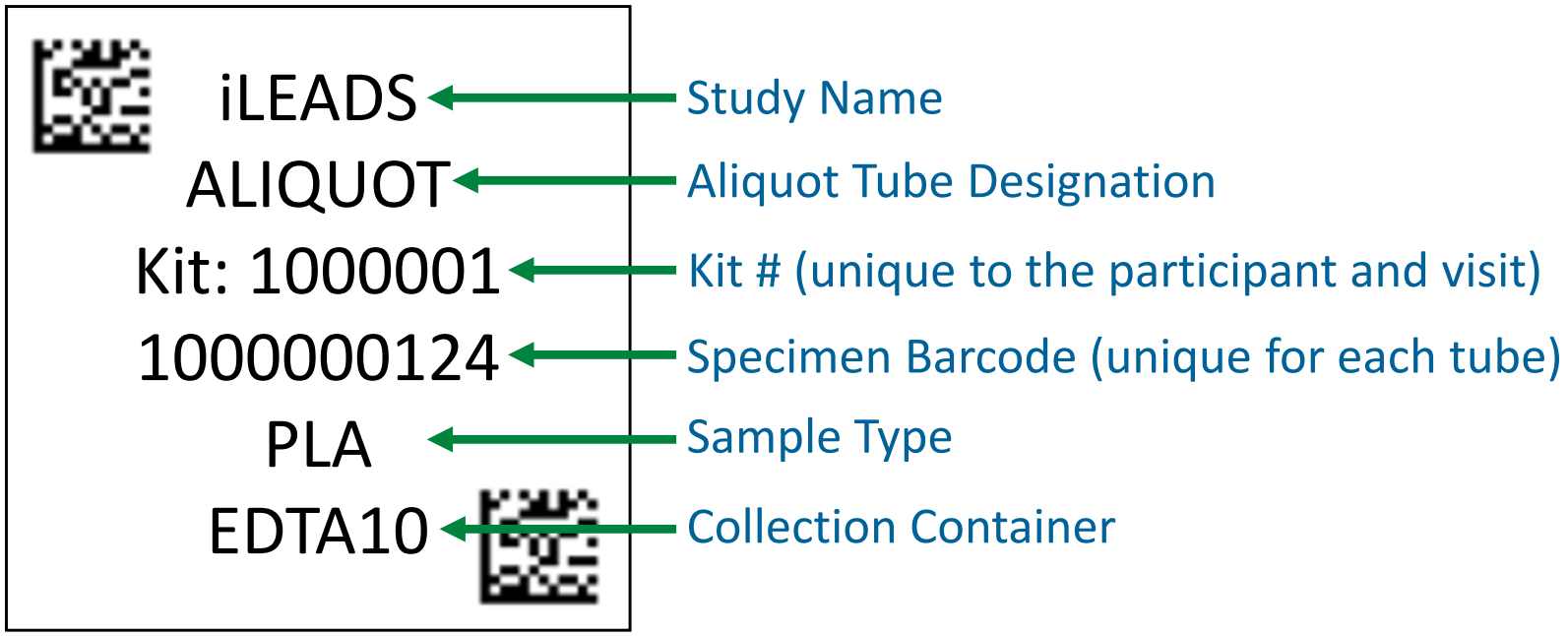
Collection Tube Labels



Labels to be placed on ALL collection tubes

NCRAD

Aliquot Tube Labels



Labels to be placed on ALL aliquot tubes

NCRAD

Collection and Aliquot Tube Labels

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

Every combination of Sample Label you may encounter

NCRAD

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)

NCRAD

Specimen Labels: Blood Collection Tubes

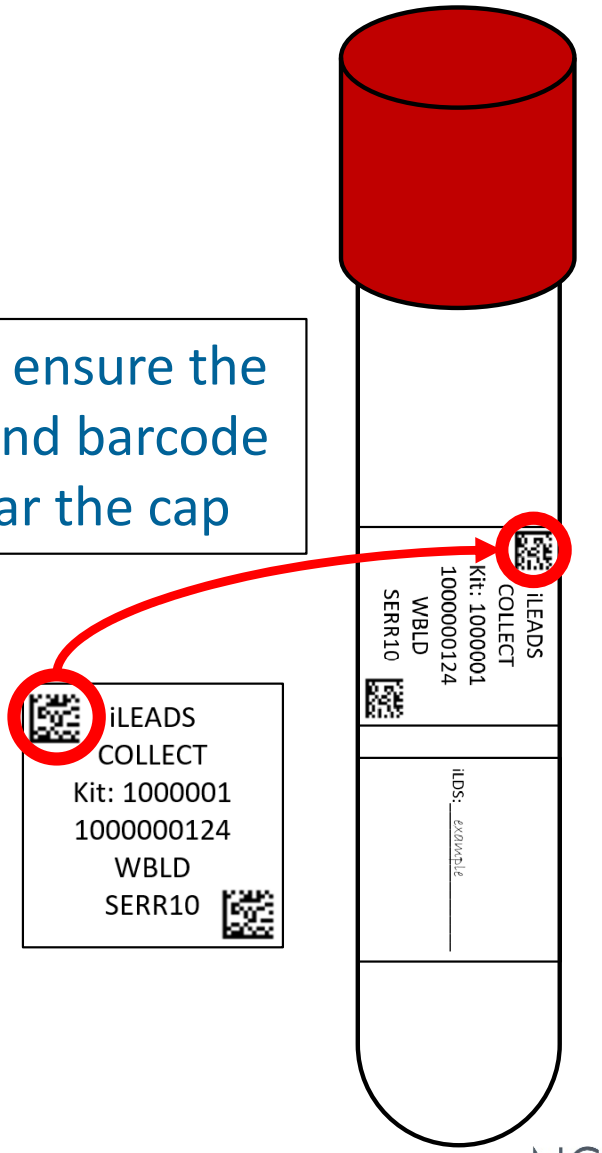
Label 1:

iLEADS
COLLECT
Kit: 1000001
1000000124
WBLD
SERR10

Label 2:

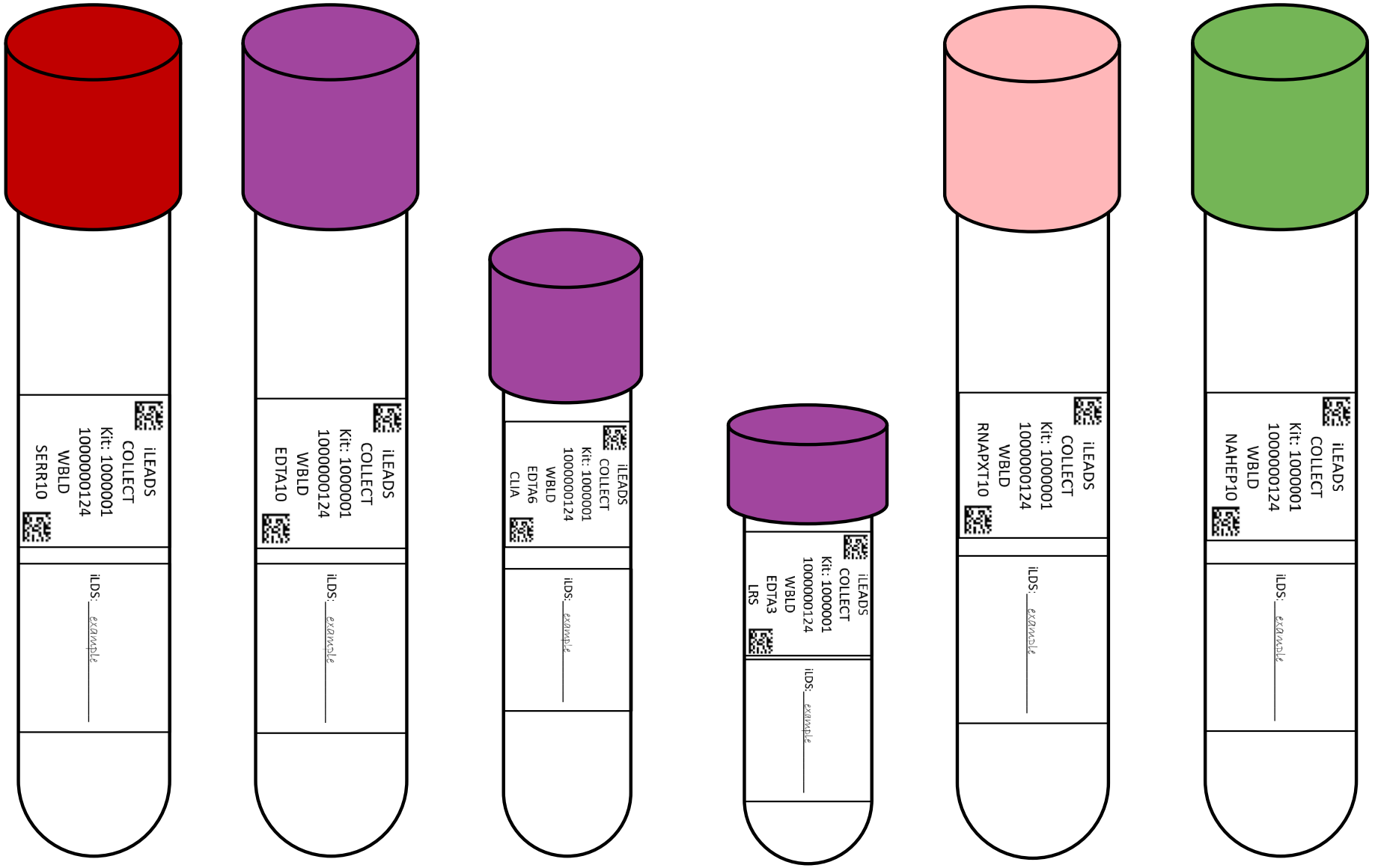
iLDS:_____

Please ensure the left-hand barcode is near the cap



NCRAD

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

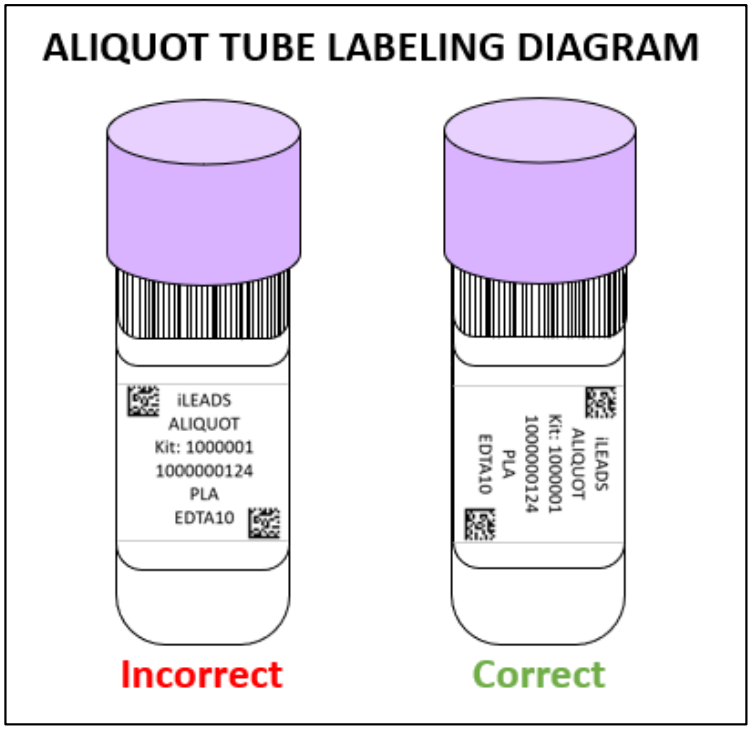
1x 3mL EDTA Lavender-Top Tube

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
- **Aliquot tube label only**
- **Place left-hand barcode near cap**

NCRAD

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.

NCRAD

Handling/ Processing Study Specimens

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

NCRAD

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 *optional***

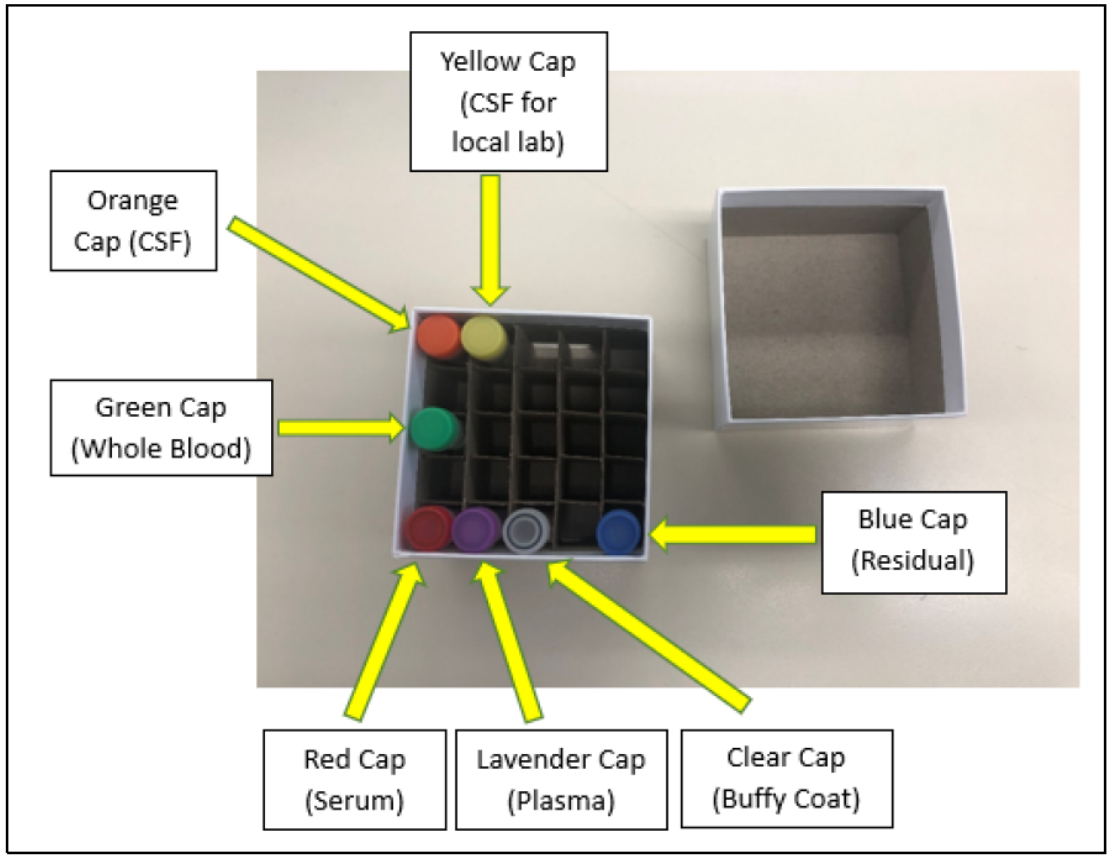
NCRAD

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 *optional*	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

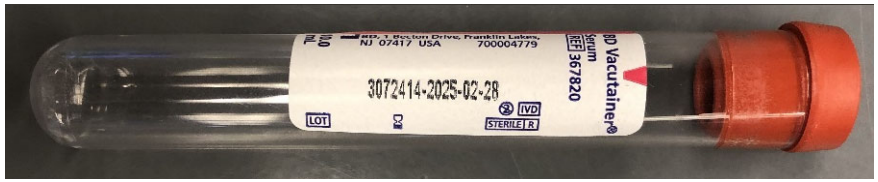


NCRAD

Serum Preparation (10ml Red Top Tube)

Prior to blood draw, label all tubes:

1 x 10mL Serum Tube



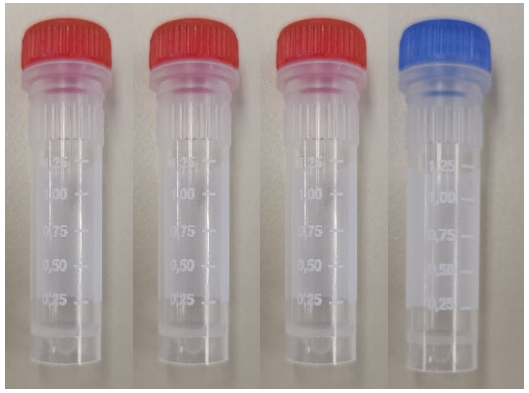
Label with:

iLDS:_____

&

iLEADS
COLLECT ← COLLECT
Kit: 1000001
1000000124
WBLD ← WBLD
SERR10 ← SERR10

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

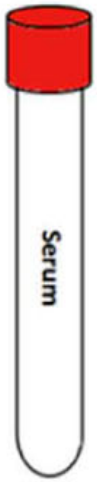


Label with:

iLEADS
ALIQUOT ← ALIQUOT
Kit: 1000001
1000000124
SER ← SER
SERR10 ← SERR10

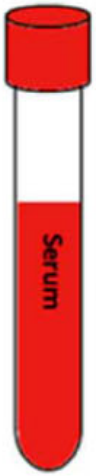
Serum Preparation (10ml Red Top Tube)

Step One



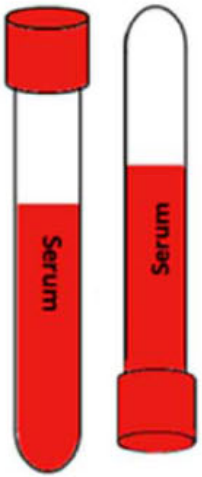
- Store tubes at room temperature.
- Label tubes and cryovials with pre-printed subject labels prior to blood draw.

Step Two



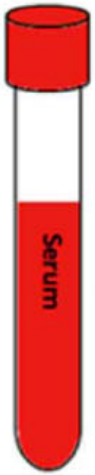
- Collect blood in Serum Tube allowing blood to flow for 10 seconds and ensuring blood flow has stopped.

Step Three



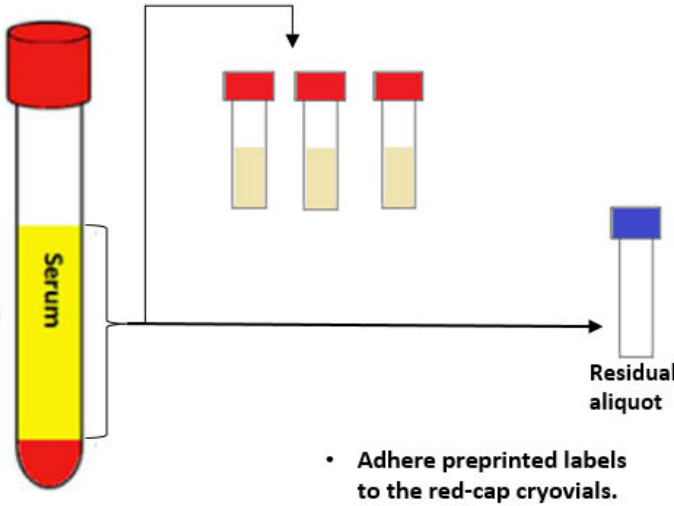
- Immediately after blood draw, invert tube 5 times to mix samples.

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

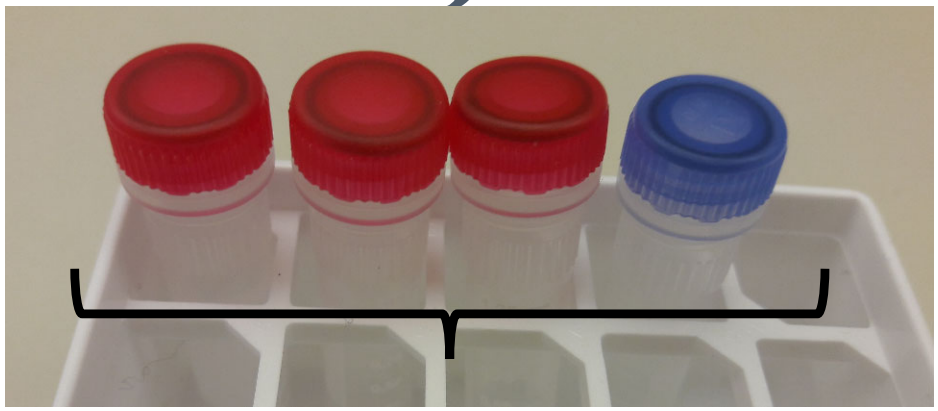


- Must be spun, aliquoted, and stored in -80°C freezer within 2 hours of collection.
- Adhere preprinted labels to the red-cap cryovials.
- Aliquot 1.5 ml into each cryovial tube.
- If a residual aliquot is created, document specimen number and volume on Sample Notification Form.
- Store serum aliquots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

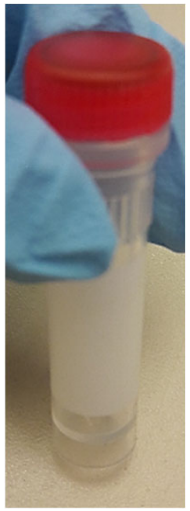
Plain Red-Top Serum Tube (Serum Collection)

Serum

RBC, WBC & Platelet Clot



Serum Aliquots (up to 4 possible)



Close up view of 2.0 ml cryovial

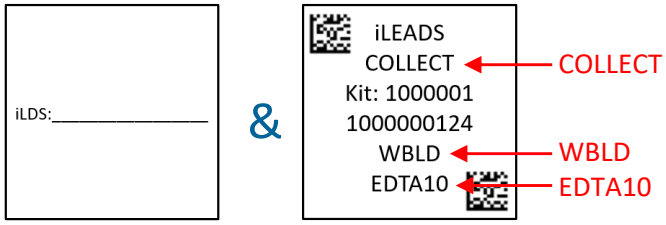
NCRAD

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

Prior to blood draw, label all tubes:

3 x 10mL EDTA Tubes

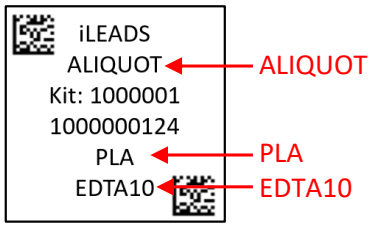
Label with:



&

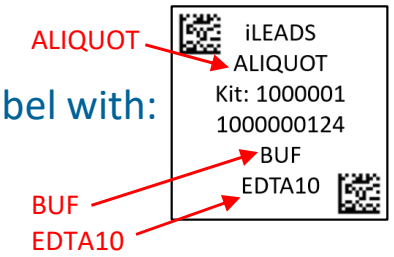
9 x 2ml Purple Cap Cryovials & 1 x 2ml Blue Cap Cryovial

Label with:



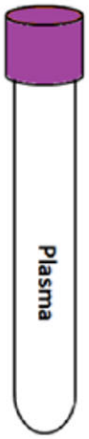
3 x 2ml Clear Cap Cryovials

Label with:



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

Step One

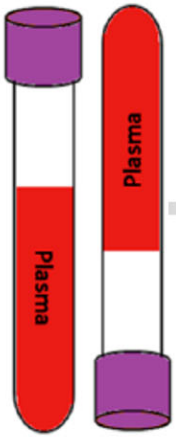


- Store tubes at room temperature.
- Label tubes with preprinted labels prior to blood draw.

Step Two

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

Step Three

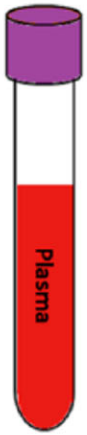


- Immediately after blood draw, invert tubes 8-10 times to mix samples.

Step Four

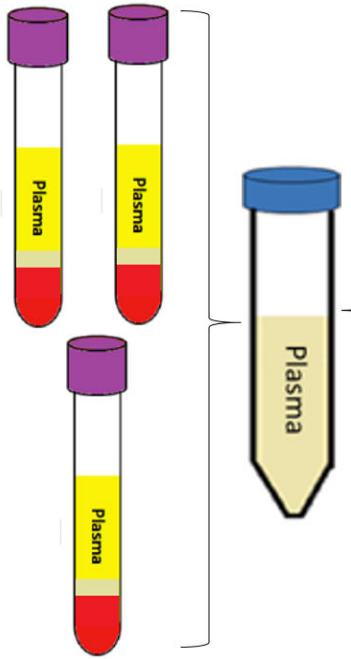
- Place thoroughly mixed tubes on wet ice until centrifugation begins.

Step Five



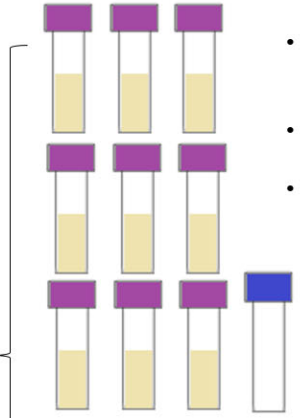
- Preferably within 30 minutes, centrifuge samples at 2000 x g at 4°C for 10 minutes.
- Samples need to be spun, aliquoted, and in the freezer within 2 hours from the time of collection.

Step Six



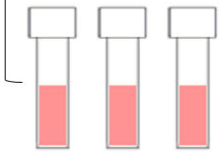
- Pool all plasma from the 3 EDTA tubes into a 50ml conical tube and invert gently 3 times to mix the plasma.

Step Seven



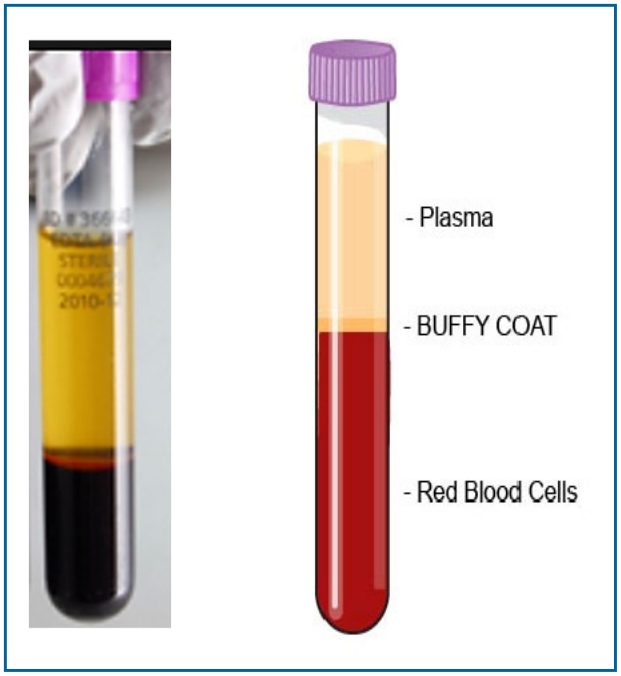
- Adhere preprinted labels to the lavender cap cryovials.
- Aliquot 1.5 ml into each cryovial tube.
- If a residual aliquot is created, document specimen number and volume on Sample Notification Form. Store plasma aliquots at -80°C until shipment.

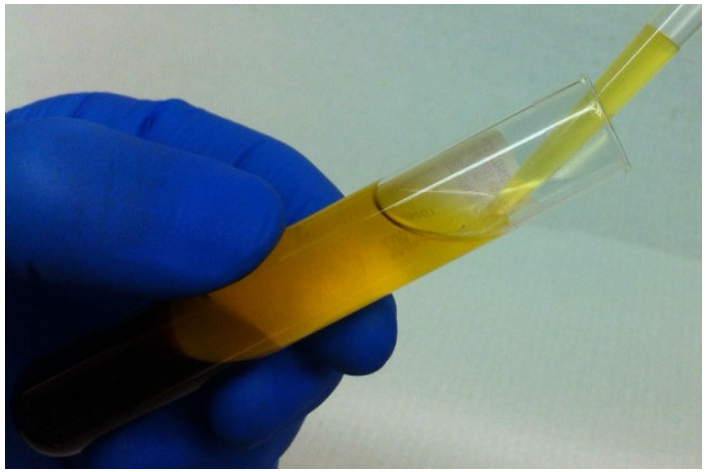
Step Eight



- 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)

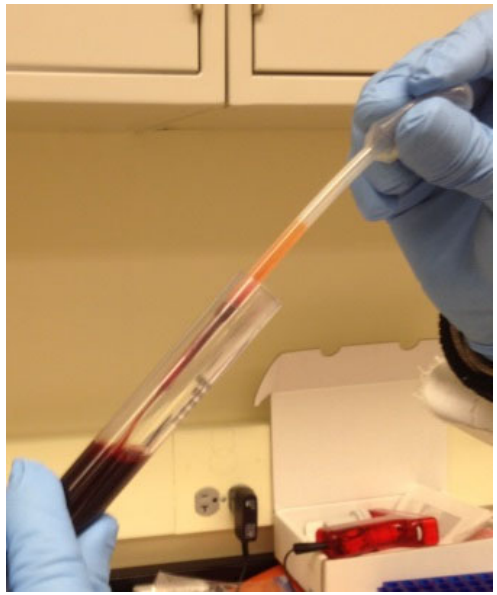




Plasma Aliquots (10 possible)

EDTA Tube (Buffy Coat Collection)

Buffy Coat layer (mixed with RBCs)



Buffy Coat Aliquot (Please use CLEAR CAP cryovial)

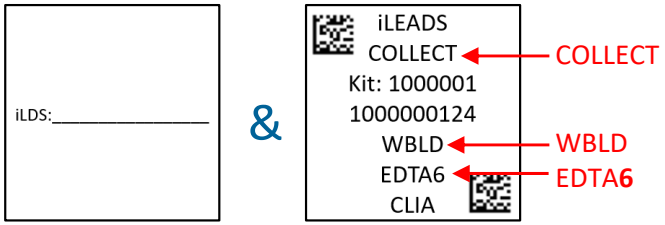
Important Note: Buffy Coat aliquots will be distinguished from the plasma aliquots through a clear cap.

Whole Blood Preparation (6 mL Lavender-Top Tube)

Prior to blood draw, label all tubes:

1 x 6mL EDTA Tube

Label with:



Whole Blood Preparation (6 mL Lavender-Top Tube)

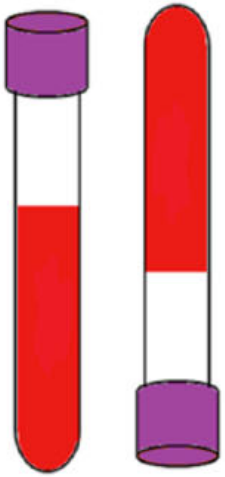
Step One

- 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:

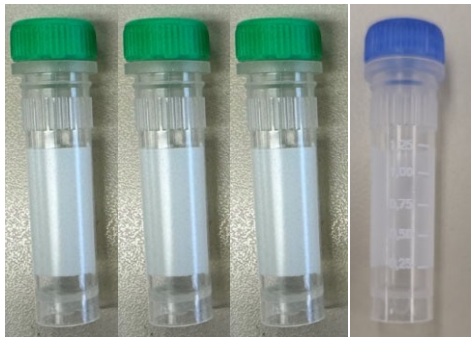
1 x 3mL EDTA Tube

Label with: iLDS:_____ &

iLEADS
COLLECT ← COLLECT
Kit: 1000001
1000000124
WBLD ← WBLD
EDTA3 ← EDTA**3**
LRS

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:

iLEADS
ALIQUOT ← ALIQUOT
Kit: 1000001
1000000124
WBLD ← WBLD
EDTA3 ← EDTA**3**
LRS

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

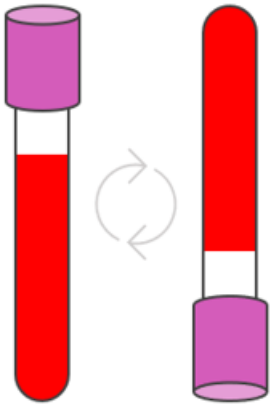
Step 1

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

Step 2

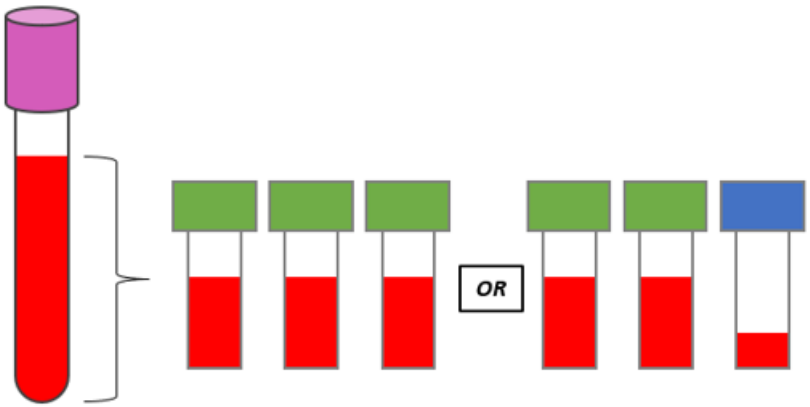
- Collect blood in EDTA Tube allowing blood to flow for 10 seconds and ensuring blood flow has stopped.

Step 3



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

Step 4



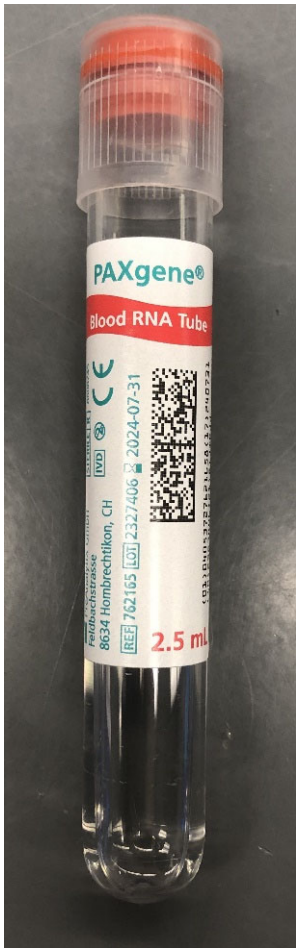
- Adhere preprinted labels to the green cap cryovials.
- Aliquot 1 ml into each cryovial tube.
- If a residual aliquot is created, document specimen number and volume on Sample Notification Form.
- Store whole blood aliquots at -80°C until shipment.

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:

iLDS:_____

&

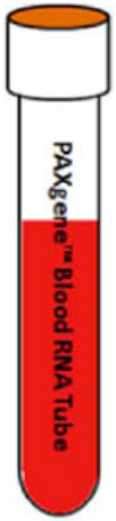
iLEADS
COLLECT ← COLLECT
Kit: 1000001
1000000124
WBLD ← WBLD
RNAPXT10 ← RNAPXT10

RNA Preparation (2.5ml PAXgene™ Tube)

Step One

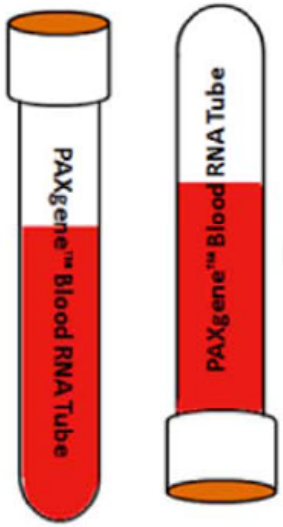
- Store tubes at room temperature.
- Label tubes with pre-printed labels prior to blood draw.

Step Two



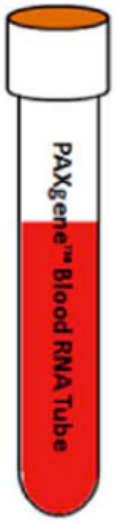
- Collect blood in PAXgene™ tube allowing blood to flow for 10 seconds and ensuring blood flow has stopped.

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

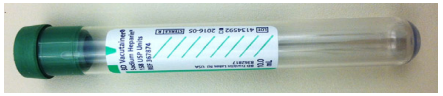
Label with:

iLDS:_____

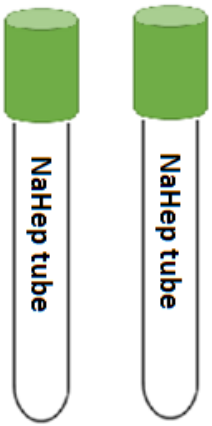
&

iLEADS
COLLECT ← COLLECT
Kit: 1000001
1000000124
WBLD ← WBLD
NAHEP10 ← NAHEP10

PBMC Preparation (10ml Sodium Heparin Tube) x 2

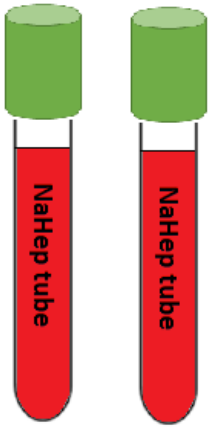


Step One



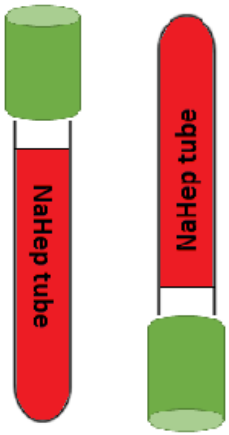
- Store tubes at room temperature.
- Label tubes with pre-printed labels prior to blood draw.

Step Two



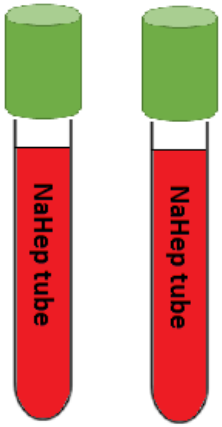
- Collect blood in Sodium Heparin Tubes allowing blood to flow for 10 seconds and ensuring blood flow has stopped.

Step Three



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

Step Four



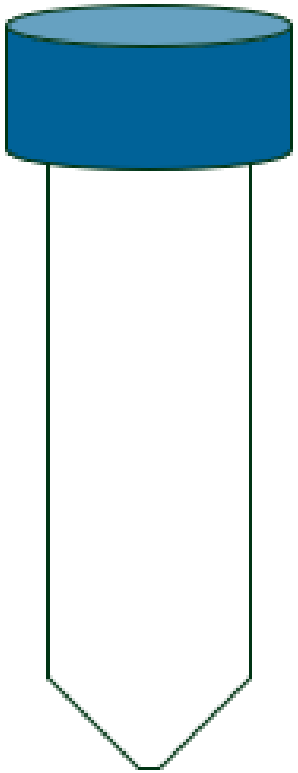
- Store tubes at room temperature until processing.
- Samples are NOT shipped to NCRAD.
- Process within 48 hours of collection.

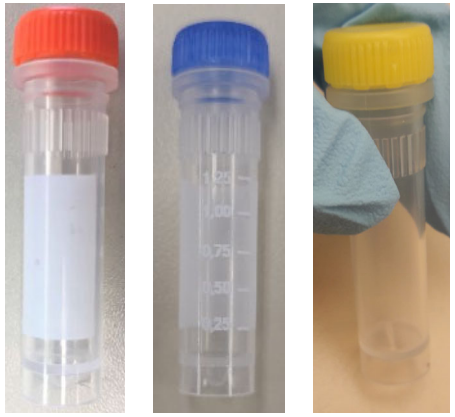
CSF Collection and Processing

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.

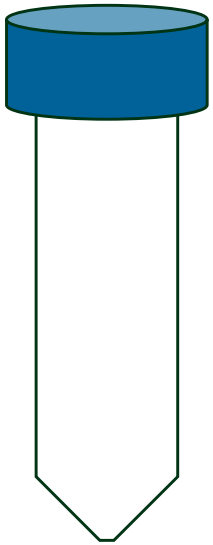




CSF

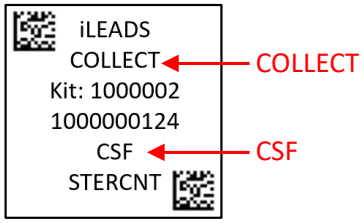
Prior to CSF draw, label all tubes:

1 x 50ml Sterile Container

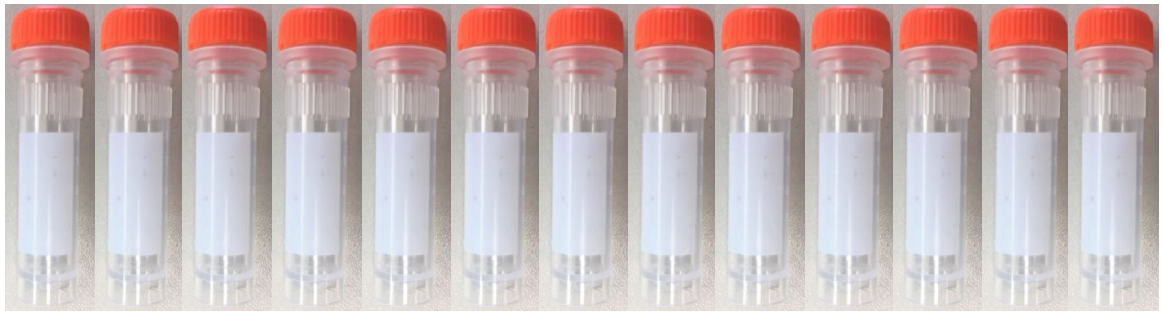


Label with:

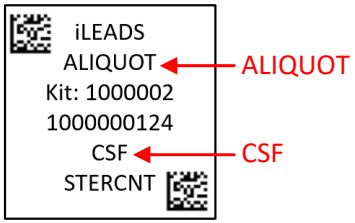
&



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



Label with:



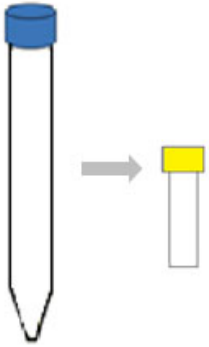
*NCRAD does not provide a label for the yellow cap cryovial for CSF for your local lab.

CSF Preparation (15-20 ml total)

Step One

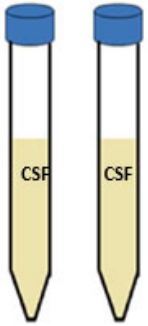
- Label tubes with pre-printed subject labels prior to collection.
- Pre-chill all cryovials on wet ice.

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

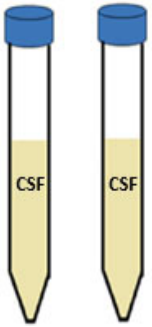


- Collect 10 - 20 ml total, including the 1-2 ml sent to the local lab.
- Collect sample into 2 15 ml conical tubes.

Step Four

- Place samples upright on wet ice until centrifugation begins.

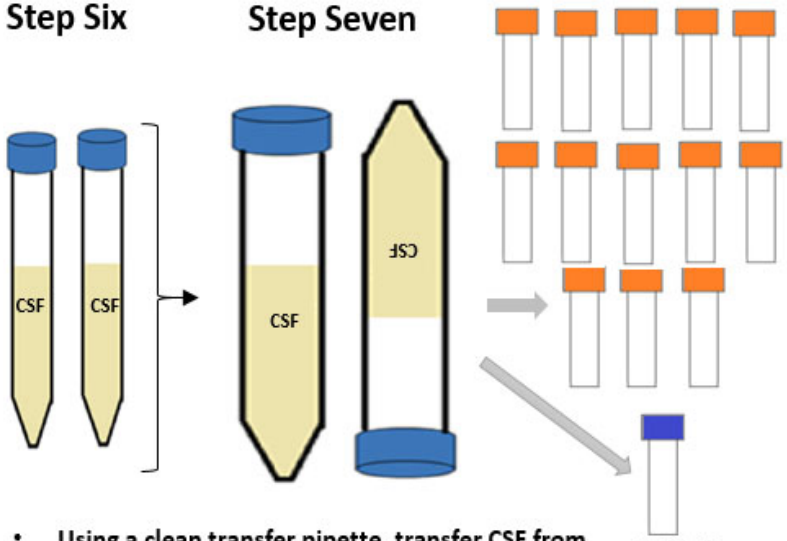
Step Five



- 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.

Previously Collected CSF

- International sites may send pre-existing CSF samples to LEADS if:
  - Collected within the 12 months prior to a participant's consent date
    and
  - Approval is received by the Genetics and Biorepository Core
    and
  - Applicable language must be included in the site's consent form.

- When this scenario arises, the site coordinator should contact NCRAD to prepare the previously collected CSF for shipment.

- The site will work with NCRAD to ensure that samples meet NCRAD requirements.

- Do not ship to NCRAD until receiving direct approval from LEADS Admin and NCRAD staff.

NCRAD

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	N/A – Kept at site if collected		
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

Frozen Sample Shipping

- Sites will ship samples back to NCRAD using the applicable courier listed below

Site	Courier	When Ready to Ship
Lund	World Courier	Contact NCRAD
Sant Pau-Barcelona	World Courier	Contact NCRAD
Fleni-Argentina	World Courier	Contact NCRAD
UCL	World Courier	Contact NCRAD
Vumc – Amsterdam	SGS	Contact SGS Directly

- You should ship back to NCRAD when you have accumulated samples from 4 participant visits, or every six months, whichever is sooner

- The most important issue for shipping is to maintain the temperature of the samples. The frozen samples must never thaw; not even the outside of the tubes should be allowed to defrost

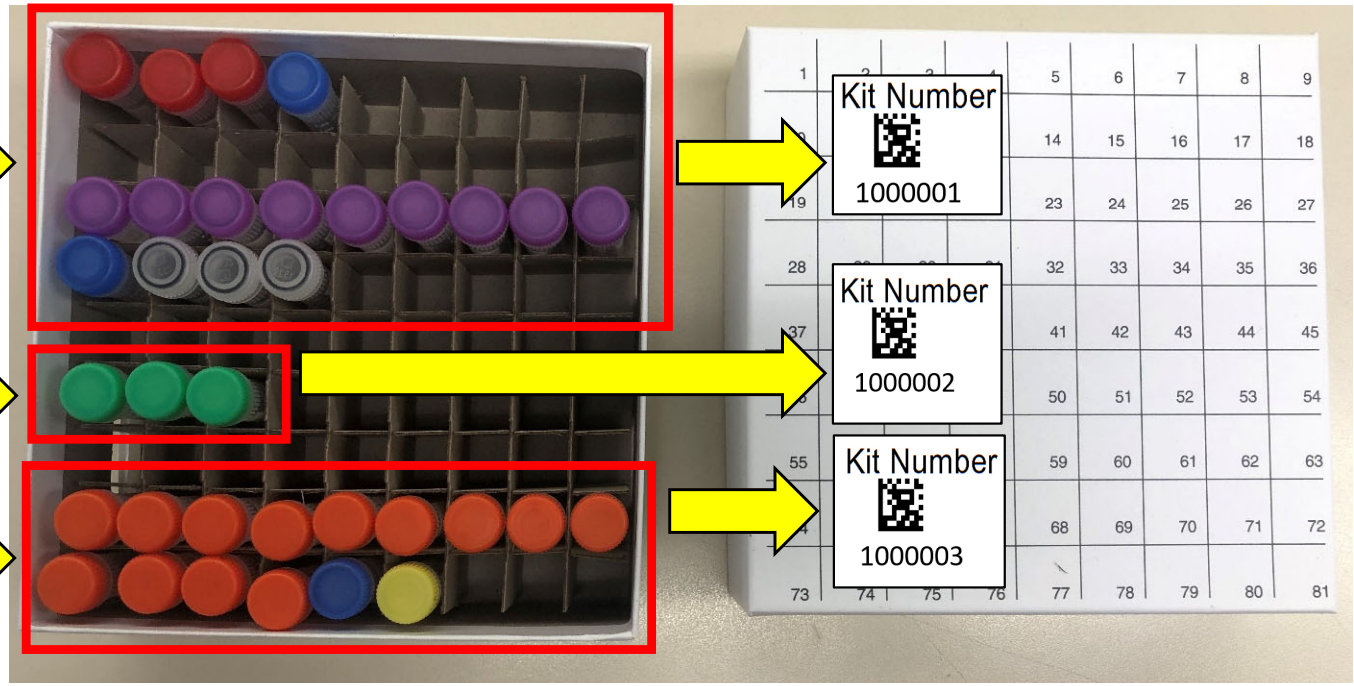
NCRAD

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

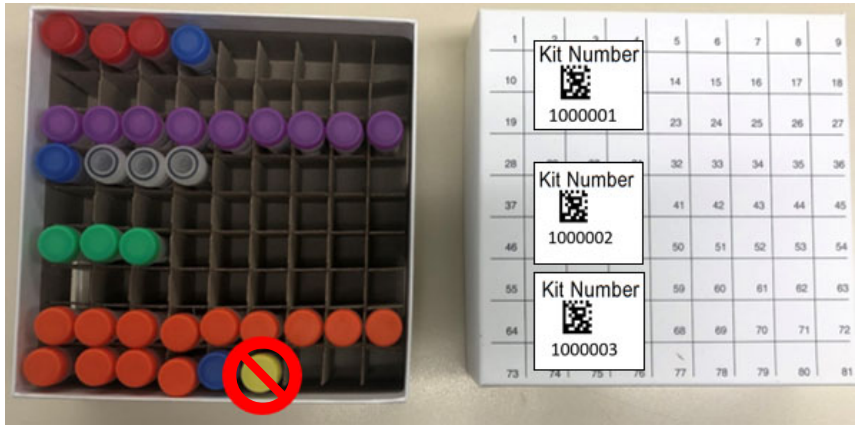
NCRAD

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

Shipping with World Courier

- When you are ready to ship samples back to NCRAD, contact the NCRAD coordinator (agericks@iu.edu). NCRAD will work with your site and World Courier to arrange a shipment. Prior to pick up, please keep samples stored in a -80°C freezer.

- There will be a waiting period between when you contact NCRAD to instigate a shipment and when the shipment occurs, which is expected to be up to 7 business days. For this reason, **you should contact NCRAD about shipment approximately two weeks before you intend to ship.**

- World Courier will arrive with all of the supplies necessary for packaging and shipping the samples. Please note that World Courier will not handle unpackaged samples. Therefore, a site coordinator will need to place the samples into the packaging provided by World Courier. It is imperative that a site coordinator is available to assist World Courier when they arrive.

NCRAD

Shipping with SGS (Amsterdam Only)

- The Amsterdam site has chosen to coordinate shipping samples back to NCRAD via SGS.
- Amsterdam should obtain all shipping supplies through SGS.
- Specimens being shipped to NCRAD should be considered as Category B UN3373 specimens and as such must be tripled packaged and compliant with IATA Packing Instructions 650. There is additional helpful information in the iLEADS Manual of Procedures.
- See the Latest Edition of the IATA Regulations for complete documentation.
- **It is the site's responsibility to ensure that all packaging, labeling, and forms are completed correctly and safely.**

NCRAD

Shipping Frozen Samples – All Sites

- *Email Biological Sample and Shipment Notification Form to IU **ahead of shipment***
  - ***Email: alzstudy@iu.edu***

NCRAD

Shipping Regulations and Training – All Sites

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 – All Sites

- 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 – All Sites

- 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

It is the responsibility of the site to ensure that all appropriate training has been obtained regarding the shipment of study specimens.

Biological Sample and Shipment Notification Forms

NCRAD

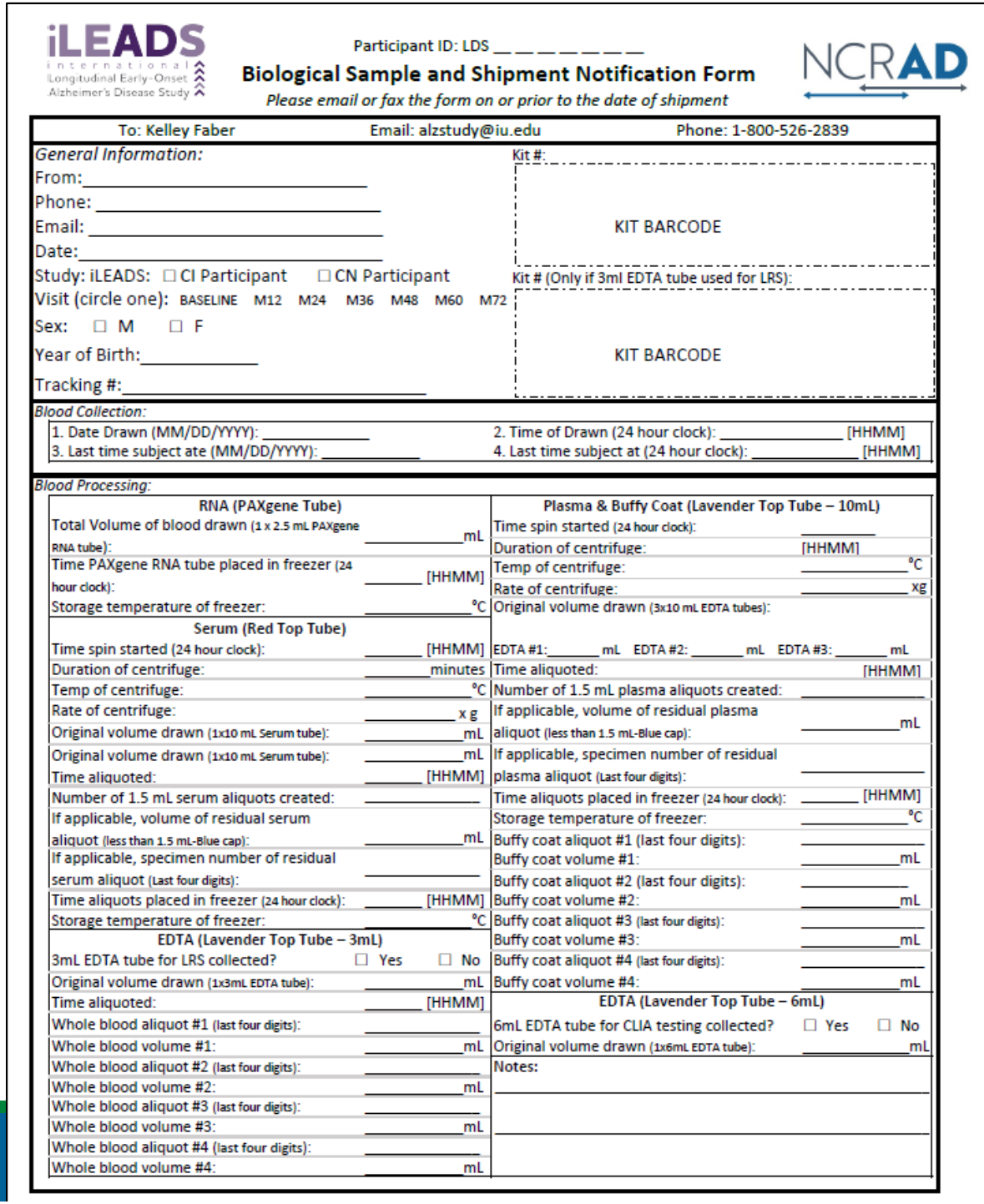
Biological Sample and Shipment Notification Forms

- A copy of the sample form *must* be emailed 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

NCRAD

Biological Sample Notification Form-Blood

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



iLEADS international 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

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

General Information:

From:_____

Phone: _____

Email: _____

Date:_____

Study: iLEADS: ☐ CI Participant ☐ CN Participant

Visit (circle one): BASELINE M12 M24 M36 M48 M60 M72

Sex: ☐ M ☐ F

Year of Birth:_____

Tracking #:_____

Kit #:

KIT BARCODE

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

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

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): _____

Duration of centrifuge: [HHMM]

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

EDTA (Lavender Top Tube – 6mL)

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

Original volume drawn (1x6mL EDTA tube): _____mL

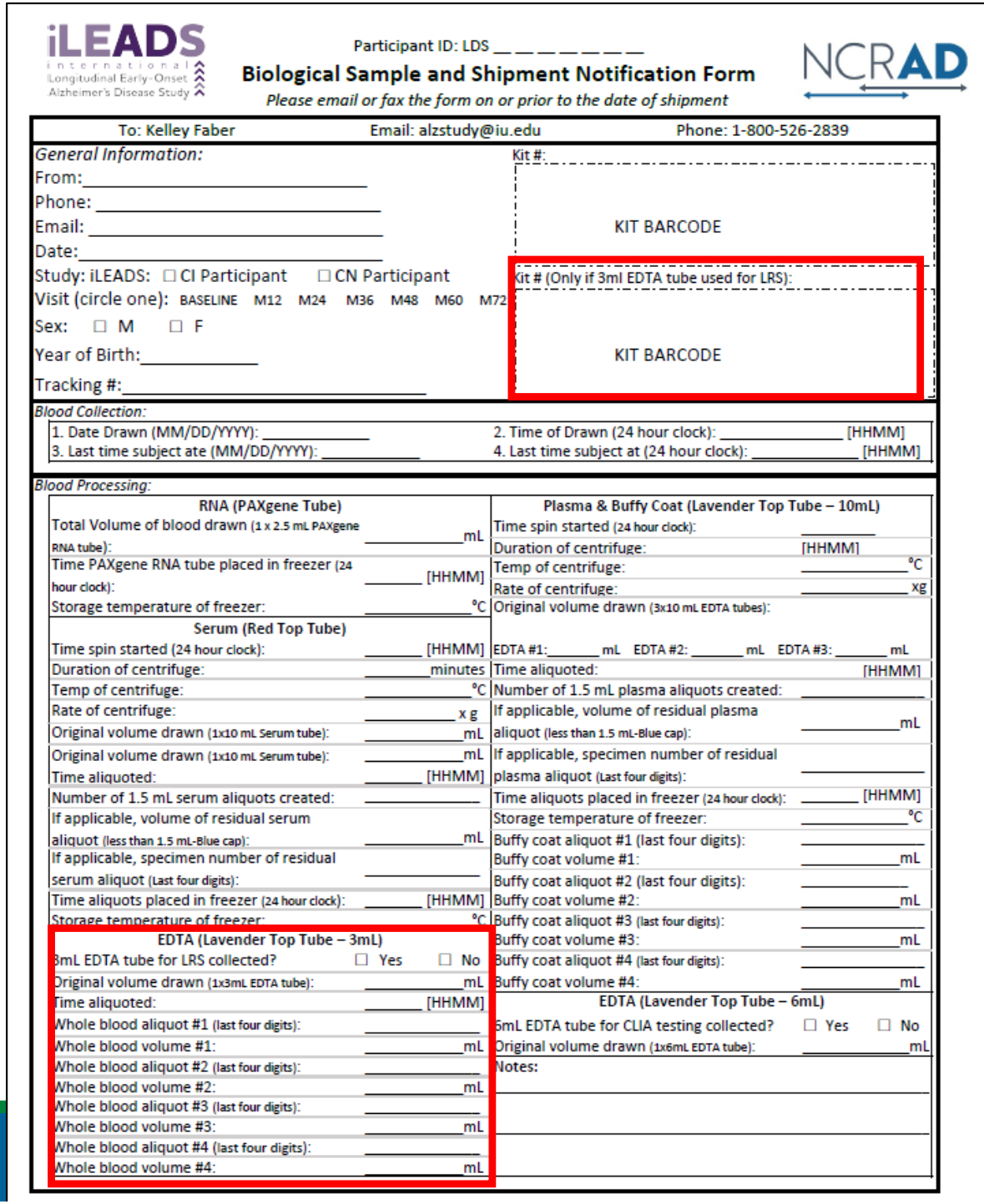
Notes:

_____

_____

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



iLEADS international 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

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

General Information:

From:_____

Phone: _____

Email: _____

Date:_____

Study: iLEADS: ☐ CI Participant ☐ CN Participant

Visit (circle one): BASELINE M12 M24 M36 M48 M60 M72

Sex: ☐ M ☐ F

Year of Birth:_____

Tracking #:_____

Kit #:

KIT BARCODE

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

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

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): _____

Duration of centrifuge: _____ [HHMM]

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

EDTA (Lavender Top Tube – 6mL)

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

Original volume drawn (1x6mL EDTA tube): _____mL

Notes:

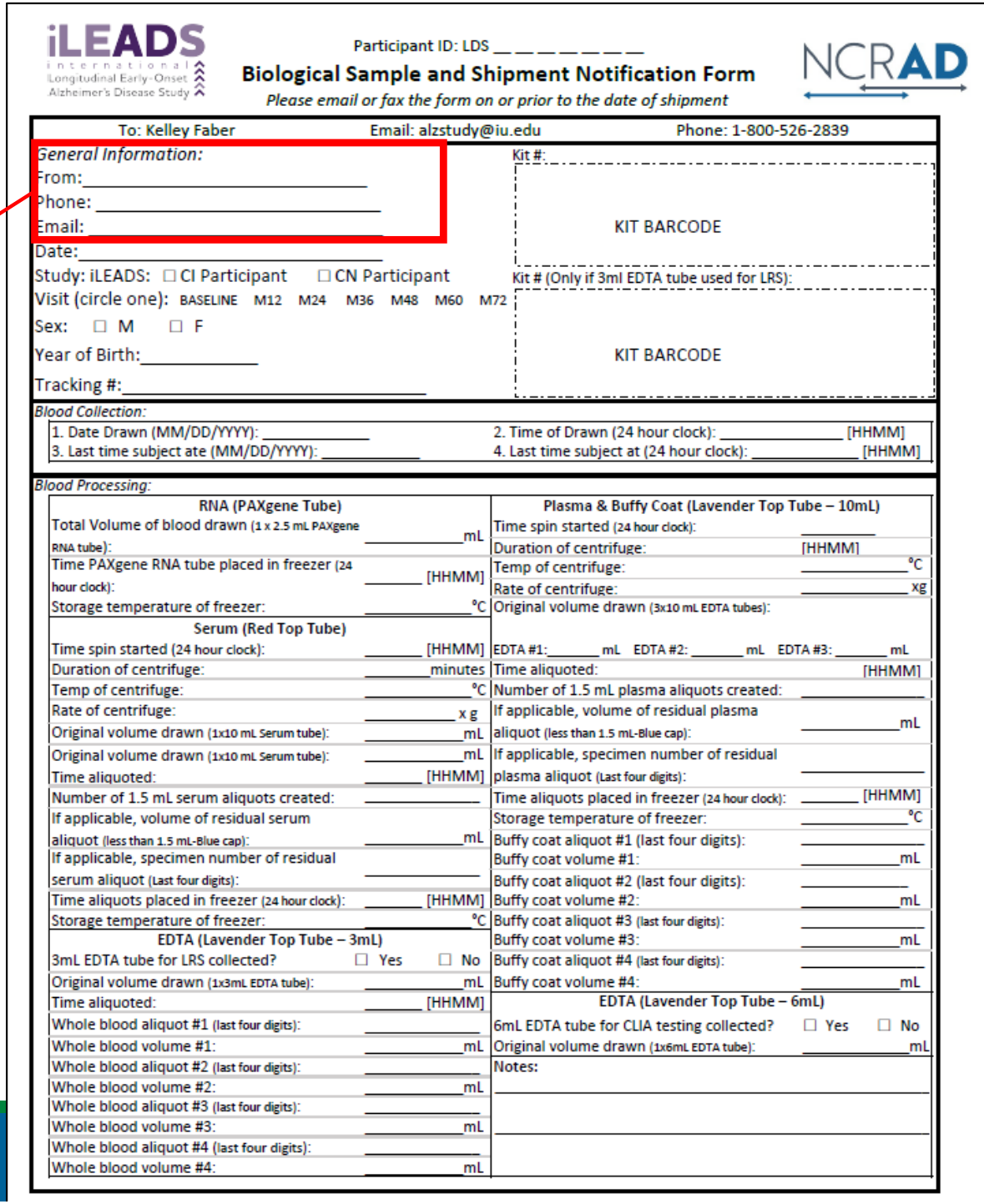
Biological Sample Notification Form-Blood

Provide this information about the site:

From: Site coordinator name

Phone: Site phone number

Email: Site email or site coordinator's email



iLEADS international 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

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

General Information:

From:_____

Phone: _____

Email: _____

Date:_____

Study: iLEADS: ☐ CI Participant ☐ CN Participant

Visit (circle one): BASELINE M12 M24 M36 M48 M60 M72

Sex: ☐ M ☐ F

Year of Birth:_____

Tracking #:_____

Kit #:

KIT BARCODE

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

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
- 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): _____
- Duration of centrifuge: [HHMM]
- 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

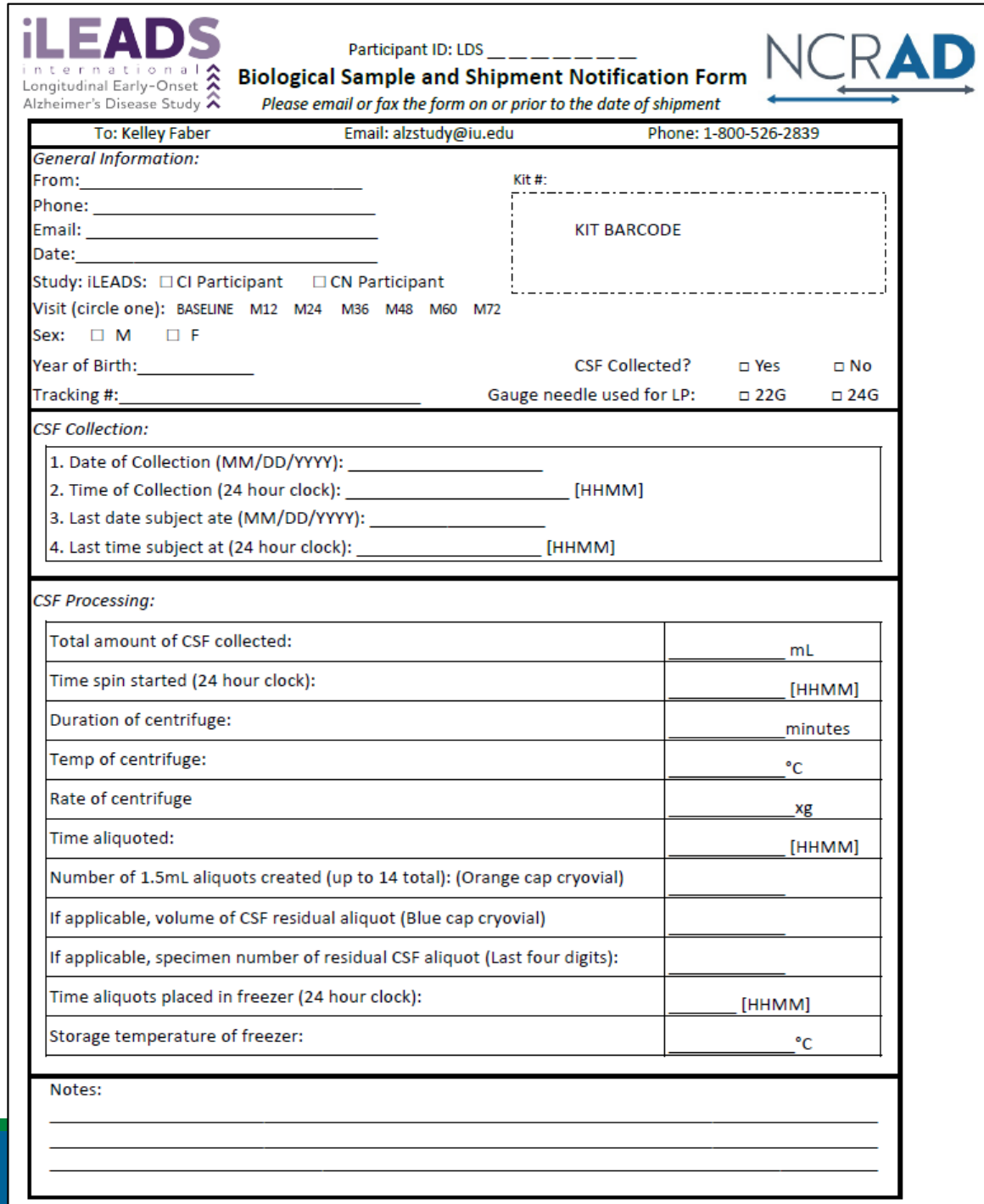
EDTA (Lavender Top Tube – 6mL)

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

Notes: _____

Biological Sample Notification Form – CSF

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



iLEADS international 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

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

General Information:

From:_____

Phone: _____

Email: _____

Date:_____

Kit #:

KIT BARCODE

Study: iLEADS: ☐ CI Participant ☐ CN Participant

Visit (circle one): BASELINE M12 M24 M36 M48 M60 M72

Sex: ☐ M ☐ F

Year of Birth:_____

CSF Collected? ☐ Yes ☐ No

Tracking #:_____

Gauge needle used for LP: ☐ 22G ☐ 24G

CSF Collection:

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

CSF Processing:

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

Notes:

_____

_____

_____

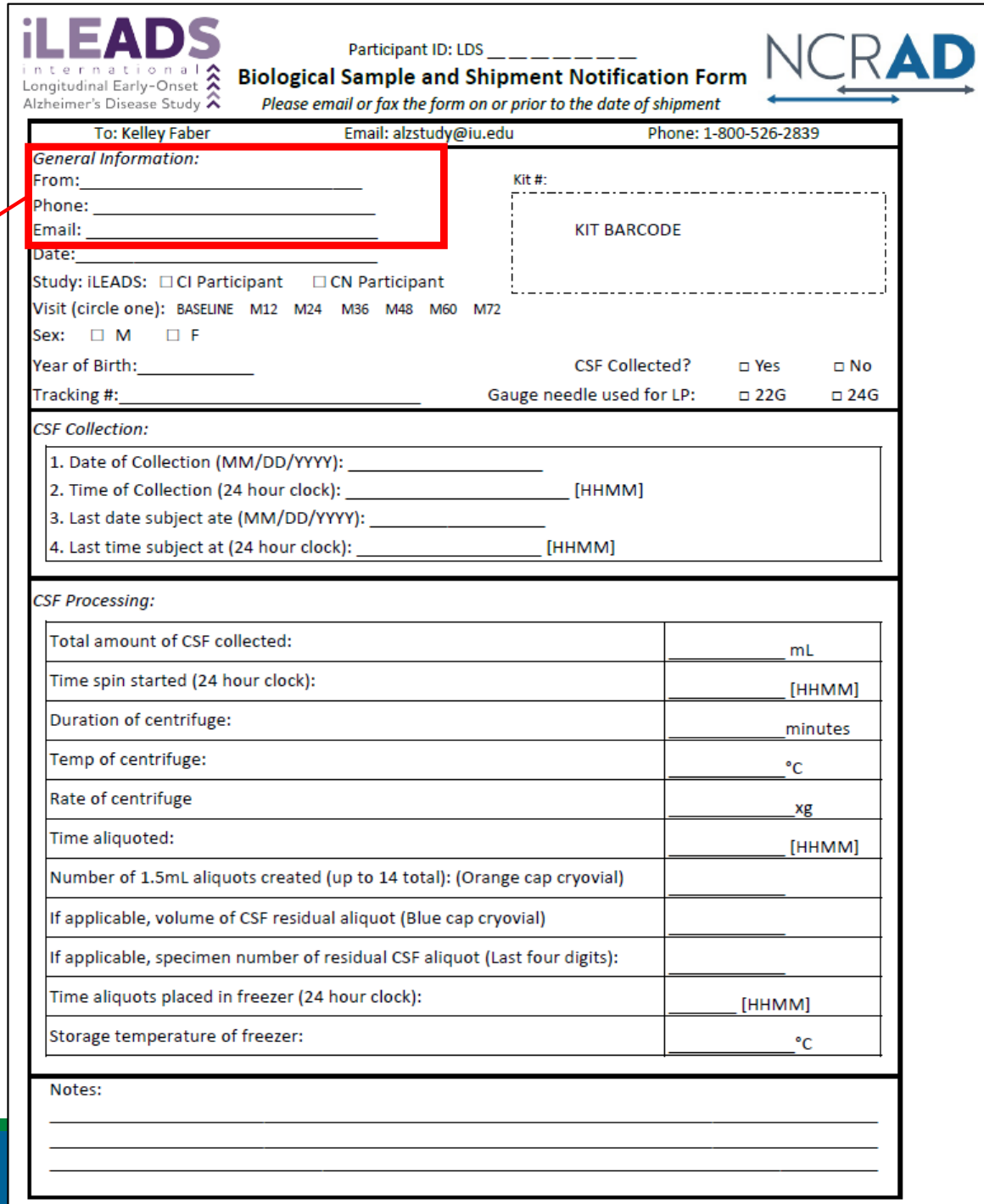
Biological Sample Notification Form – CSF

Provide this information about the site:

From: Site coordinator name

Phone: Site phone number

Email: Site email or site coordinator's email



iLEADS international 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

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

General Information:

From:_____

Phone: _____

Email: _____

Date:_____

Kit #:

KIT BARCODE

Study: iLEADS: ☐ CI Participant ☐ CN Participant

Visit (circle one): BASELINE M12 M24 M36 M48 M60 M72

Sex: ☐ M ☐ F

Year of Birth:_____

CSF Collected? ☐ Yes ☐ No

Tracking #:_____

Gauge needle used for LP: ☐ 22G ☐ 24G

CSF Collection:

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

CSF Processing:

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

Notes:

_____

_____

_____

NCRAD Website
Helpful Pages

- https://ncrad.iu.edu/contact/holiday-closures

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

iLEADS Active Study Page

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

Donate | Get Updates

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

COORDINATE STUDIES

- iLEADS
- 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

iLEADS ACTIVE STUDY PAGE

iLEADS international Longitudinal Early-Onset Alzheimer's Disease Study

WelcomeiLEADS 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**.

CI (Cognitively Impaired) Participants					
	Baseline	M12	M24	M36	M48/Annual Visit
Serum	✓	✓	✓	✓	✓
Plasma	✓	✓	✓	✓	✓
Buffy Coat (DNA)	✓	✓	✓	✓	✓
Whole Blood for CLIA lab testing	✓				
Whole Blood for Long Read Sequencing	✓	*Collected only once over the entire course of a participant's participation in the iLEADS Study. May be collected at longitudinal visits **if not** collected at Baseline*			
Whole Blood for RNA	✓	✓	✓	✓	✓
Whole Blood for PBMC **optional*	✓	✓	✓	✓	✓
CSF **optional*	✓	✓	✓	✓	

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