

Alzheimer's Disease Family Based Study (AD-FBS)

in collaboration with

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

Biofluids Collection Training Slides



National Centralized Repository for
Alzheimer's Disease and Related Dementias

Contact Information

- Questions?

Please contact NCRAD Coordinators at:

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

Training Overview:

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

Specimen Collection Schedule

| Draw Order | Sample Collected | Collection Tube | Visit Collected (CI & CN) |
|------------|---|--|--|
| 1 | Whole Blood (for PBMC isolation) | 2 x Sodium Heparin (Green-Top) Blood Collection tube (10 ml) | All |
| 2 | Whole Blood (for plasma & buffy coat isolation <u>or</u> for DNA isolation) | 2 x EDTA (Lavender-Top) Blood Collection Tube (10 ml) | All |
| 3 | Whole Blood (for Genetic Testing) | 1 x EDTA (Lavender-Top) Blood Collection Tube (3 ml) | <i>Genetic Testing is now done primarily through Invitae. This kit should only be ordered and used for rare cases that are approved by FBS study management.</i> |
| 4 | Whole Blood (for RNA isolation) | 1 x PAXgene™ Blood Collection Tube (2.5 ml) | All |

Kit Request Module

<https://redcap.uits.iu.edu/surveys/?s=Je4P26ijtv>



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Kit Request Module

- Kits and individual supplies are available to order:
 - Blood Kit A: Plasma/Buffy Coat, PBMC, RNA
 - Blood Kit B: DNA, PBMC, RNA
 - Blood Kit C: PCM Trials
 - Blood Kit D: Genetic Testing Kit
 - *Genetic Testing is now done primarily through Invitae. This kit should only be ordered and used for rare cases that are approved by FBS study management.*
 - Saliva Kit
 - Frozen Shipping Supply Kit
 - Any individual supplies needed

NCRAD Kit Request Module

NCRAD



National Centralized Repository for
Alzheimer's Disease and Related Dementias

NIA-AD FBS Kit Request System

Due to ongoing supply limitations, we ask that you please only order as many kits and extra supplies that you will be able to use in the next 30 days. Doing so allows us to fulfill as many kit requests as possible without depleting stock for other kit requests in our queue. If we are not able to fulfill any part of your request due to supplies being out of stock, we will reach out about those individually.

IMPORTANT: To better track sample shipments, and to harmonize processes across all sites, we are asking all AD-FBS sites to use UPS ShipExec™ to send samples to NCRAD.

Use ShipExec™ to generate airbills to return samples to NCRAD

If you have any questions or need to set up a ShipExec™ account, please reach out to agericks@iu.edu

Please enter your email address here to receive a confirmation email after completing the survey:

* must provide value

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.**



NCRAD 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

| | |
|--|---|
| Study Site <small>* must provide value</small> | 4 - Columbia University |
| Columbia University Gelany Castro 622 W 168th Street PH 19th Floor Room 320 New York, NY 10032 Phone: 212-305-5909 gc2965@cumc.columbia.edu | |
| Is the contact name above correct? <small>* must provide value</small> | <input checked="" type="radio"/> Yes <input type="radio"/> No reset |
| Is the shipping address above correct? <small>* must provide value</small> | <input checked="" type="radio"/> Yes <input type="radio"/> No reset |
| Is the e-mail address above correct? <small>* must provide value</small> | <input type="radio"/> Yes <input checked="" type="radio"/> No reset |
| New E-mail Address <small>* must provide value</small> | update@example.edu |

NCRAD Kit Request Module

1. If any information needs updated, select “no.”
2. Enter the correct information in the box that appears.

Columbia University

Gelany Castro
622 W 168th Street
PH 19th Floor Room 320
New York, NY 10032
Phone: 212-305-5909
gc2965@cumc.columbia.edu

Is the contact name above correct? Yes No [reset](#)
* must provide value

New Contact Name
* must provide value

Is the shipping address above correct? Yes No [reset](#)
* must provide value

New Shipping Address
* must provide value [Expand](#)

Is the e-mail address above correct? Yes No [reset](#)
* must provide value

New E-mail Address
* must provide value

NCRAD Kit Request Module

1. Indicate the quantity needed of each kit

Total Number of Blood Kit A: PBMC, Plasma / Buffy Coat, and RNA Kits (11002) requested:

Each Kit Contains:

- 2 EDTA (Purple-Top) Tubes 10ml - CT001
- 1 15ml Conical Tube - CV004
- 20 Micronic tubes - 2ml PURPLE cap - CV042
- 2 Micronic tubes - 2ml GREY cap - CV043
- 1 Micronic tube - 2ml BLUE cap - CV041
- 2 Disposable transfer pipette (1ml) - CV002
- 1 Cryobox 48-Slot Rack - CV051
- 1 Biohazard Bag w/ absorbent sheet - SH015
- 1 Large resealable bag - ST002
- 1 small label bag 4"x6" - ST010
- 2 PMBC Sodium Heparin (Green-Top) Tubes 10ml - CT008
- 1 PAXgene™ Blood Collection Tube (2.5 ml)

Ambient Mailer Components:

- 1 Ambient Mailer Kit (SH008):
 - 1 Biohazard Bag w/ 6 absorbent sleeves
 - 1 Refrigerant Pack
 - 1 Ambient Shipper w/Insulated Cooler
 - 1 List of Contents Card
 - 1 UN3373 Category B Sticker
- 1 Shipping Pouch (SH058)
- 1 UPS Laboratory Pak (SH053)

Labels:

- 5 Collection Tube Labels (2 x plasma, 2 x PBMC, & 1 x RNA) - LB003
- 23 Micronic Tube Labels - LB014 (21 x PLASMA & 2 x BUFFY COAT)
- 3 Kit Number Labels - LB003
- 6 Site and ID Labels - LB003

NCRAD Kit Request Module

1. Indicate the quantity needed of each kit

Total Number of Blood Kit B: PBMC, DNA, and RNA Kits (11003)

Requested:

Each kit contains:

- 2 EDTA (Purple-Top) tubes 10ml - CT001
- 2 PBMC Sodium Heparin (Green-Top) tubes 10ml - CT008
- 1 PAXgene™ Blood Collection Tube
- 1 Resealable bag - ST002

Ambient Mailer Components:

- 1 UPS Laboratory Pak - SH053
- 1 Shipping Pouch - SH058
- 1 Ambient Mailer Kit (SH008):
 - 1 Biohazard Bag w/ absorbent sheet
 - 1 Refrigerant Pack
 - 1 Ambient Shipper w/Insulated Cooler
 - 1 List of Contents Card
 - 1 UN3373 Category B Sticker

Labels:

- 5 Site and ID labels - LB003
- 5 Collection Tube Labels - LB003 (2 x PLASMA, 2 x PBMC, & 1 x RNA)
- 2 Kit Number Labels - LB003

NCRAD Kit Request Module

1. Indicate the quantity needed of each kit

| | |
|--|----------------------|
| <p>Total Number of Saliva Kits (10712) requested:</p> <p><u>Each Kit Contains:</u> 1: Oragene Saliva Collection Kit - CT010 1: Small Saliva Biohazard Bag with Absorbent sheet - SH013 1: Resealable Bag - ST002 1: Exempt Human Specimen Label - LB007 1: Shipping envelope - ST007 1: Pre-paid Return UPS sticker label</p> <p><u>Labels:</u> 2: Kit number labels - LB003 1: Label for handwritten Site ID, Family ID, and Individual ID - LB003</p> | <input type="text"/> |
| <p>Total Number of Blood Kit D: Genetic Testing Kits (10869) requested:</p> <p><u>Each Kit Contains:</u> 1 - EDTA (Lavender-Top) Blood Collection Tube (3 ml) - CT021 1 - Bubble wrap tube sleeve - SH032 1 - Resealable bag - ST002 1 - Kit bag label - LB006</p> <p><u>Labels:</u> 1 - Label for handwritten Site ID, Family ID, and Individual ID - LB003 2 - Pre-printed labels with kit number - LB003 1 - Pre-printed Collection Tube label for whole blood - LB003</p> | <input type="text"/> |
| <p>Total number of Frozen Shipping Supply Kits (10713) requested:</p> <p><u>Each Kit Contains:</u> 1 Frozen Shipper (Small frozen shipper/Sm brain box) - SH005 1 Dry Ice Label - LB016 1 UN3373 Label - LB008</p> | <input type="text"/> |

NCRAD Kit Request Module

1. At the bottom, indicate which visit the kit(s) will be used for.

Please indicate which visits the kits will be used for:
(Example: You ordered 3 kits; 1 x Visit 1, 2 x Visit 3)

Expand

NCRAD Kit Request Module

1. Indicate if you need extra UPS shipping supplies.
2. Indicate if you need to replace any expired items.
3. The module automatically calculates the date in 3 weeks. This is when you can expect your kit to ship by.
4. Click Submit.

Do you need extra UPS Supplies? Yes No
(Please note: UPS supplies are included in each kit. Only select "yes" if you need extra supplies) reset

Extra supplies include: shipping pouch, UPS ClinPak
* must provide value

Do you need any replacement supplies for expired items? Yes No reset

Our standard shipping time for all orders is 3 weeks.

We can ship this kit request by: 09-02-2024

If you need any supplies in this order prior to 09-02-2024, you must contact the NCRAD coordinator for this study: agericks@iu.edu.

After Placing Your Order

- After clicking “submit” you should receive an email confirming that NCRAD received your request.
- The IU staff will notify you if there are any issues or questions.
- You will be notified when the supplies are shipped out to your site.

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://redcap.uits.iu.edu/surveys/?s=Je4P26ijtv>
- Allow a minimum of **3 weeks** for your order to be processed and delivered.

Kit Types



National Centralized Repository for
Alzheimer's Disease and Related Dementias

Kit Types

| Kit Type | Used When... |
|--|--|
| Blood Kit A: PBMC, Plasma/Buffy Coat, & RNA | The participant <u>CAN</u> come into the site in person for blood collection. |
| Blood Kit B: PBMC, DNA, & RNA | The participant <u>canNOT</u> come into the site in person for blood collection and processing, and a remote phlebotomist (PCM Trials) is NOT being used. |
| Blood Kit D: Genetic Testing Kit | The youngest affected individual in a qualifying family. <i>Genetic Testing is now done primarily through Invitae. This kit should only be ordered and used for rare cases that are approved by FBS study management.</i> |
| Saliva Kit | Blood collection is not possible. |

Kit A: PBMC, Plasma/Buffy Coat, & RNA

| Draw Order | Sample Collected | Collection Tube | Site Processing | Sample Shipped | Shipment Tube | Shipment Temperature |
|------------|---|---|------------------------------------|---------------------|---|----------------------|
| 1 | Whole Blood (for PBMC isolation) | 2 x Sodium Heparin (GreenTop) Blood Collection tube (10 ml) | N/A | Whole Blood | 2 x Sodium Heparin (GreenTop) Blood Collection tube (10 ml) | Ambient |
| 2 | Whole Blood (for plasma & buffy coat isolation) | 2 x EDTA (Lavender-Top) Blood Collection Tube (10 ml) | Isolation of plasma and buffy coat | Plasma & Buffy Coat | Up to 21 x 2mL purple top cryovials with plasma <i>AND</i> Up to 2 x 2mL grey top cryovials with buffy coat | Frozen |
| 3 | Whole Blood (for RNA isolation) | 1 x PAXgene™ Blood Collection Tube (2.5 ml) | N/A | Whole Blood | 1 x PAXgene™ Blood Collection Tube (2.5 ml) | Ambient |

Kit B: PBMC, DNA, & RNA

| Draw Order | Sample Collected | Collection Tube | Site Processing | Sample Shipped | Shipment Tube | Shipment Temperature |
|------------|-------------------------------------|---|-----------------|----------------|---|----------------------|
| 1 | Whole Blood (for PBMC isolation) | 2 x Sodium Heparin (GreenTop) Blood Collection tube (10 ml) | N/A | Whole Blood | 2 x Sodium Heparin (GreenTop) Blood Collection tube (10 ml) | Ambient |
| 2 | Whole Blood (for DNA isolation) | 2 x EDTA (Lavender-Top) Blood Collection Tube (10 ml) | N/A | Whole Blood | 2 x EDTA (Lavender-Top) Blood Collection Tube (10 ml) | Ambient |
| 3 | Whole Blood (for RNA isolation) | 1 x PAXgene™ Blood Collection Tube (2.5 ml) | N/A | Whole Blood | 1 x PAXgene™ Blood Collection Tube (2.5 ml) | Ambient |

Kit D: Genetic Testing Kit

| Draw Order | Sample Collected | Collection Tube | Site Processing | Sample Shipped | Shipment Tube | Shipment Temperature |
|---|-----------------------------------|--|-----------------|----------------|--|----------------------|
| Immediately following the 2 x 10mL EDTA tubes | Whole Blood (for Genetic Testing) | 1 x EDTA (Lavender-Top) Blood Collection Tube (3 ml) | N/A | Whole Blood | 1 x EDTA (Lavender-Top) Blood Collection Tube (3 ml) | Frozen |

Genetic Testing is now done primarily through Invitae. This kit should only be ordered and used for rare cases that are approved by FBS study management.

Saliva Kit

| Draw Order | Sample Collected | Collection Tube | Site Processing | Sample Shipped | Shipment Tube | Shipment Temperature |
|------------|------------------|---------------------|-----------------|----------------|---------------------|----------------------|
| N/A | Saliva | Oragene Saliva Tube | N/A | Saliva | Oragene Saliva Tube | Ambient |

Specimen Labels

NCRAD



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Label Type Summary

1. Kit Number Label

2. Site ID, Family ID, and Individual ID
Label

3. Collection Tube Label

4. Cryovial Label



Differ by specimen type

Kit Number Labels



Provided by NCRAD in the kits

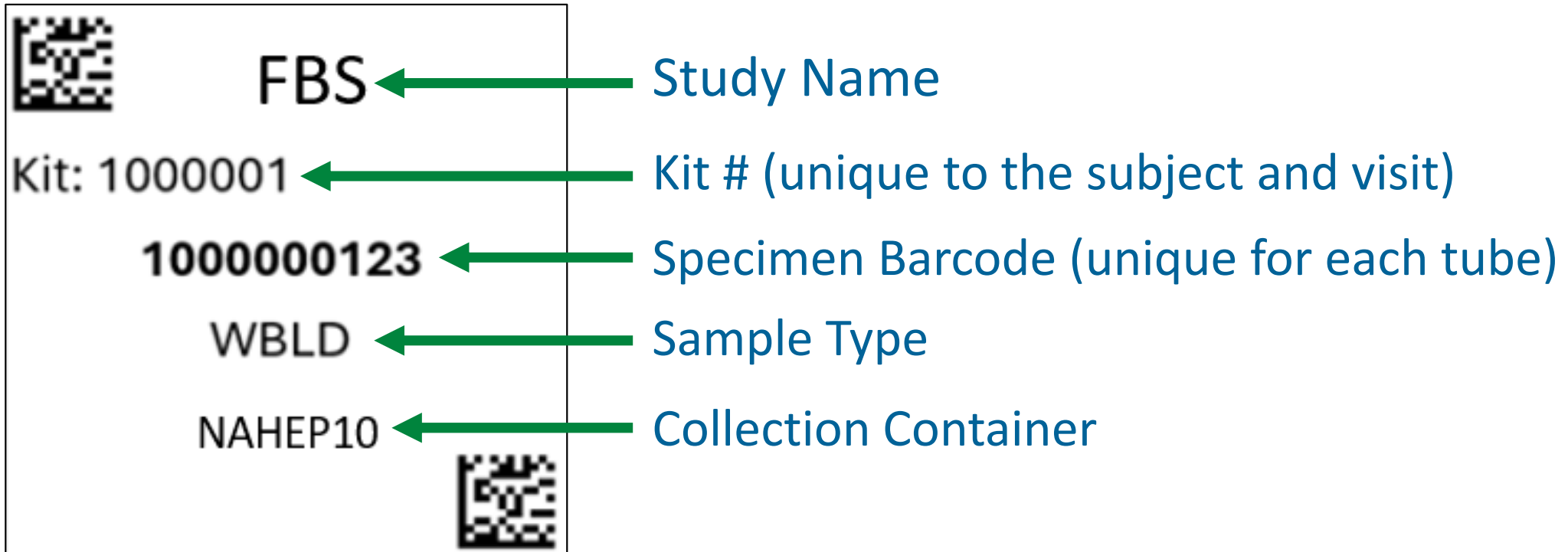
- Used to track patient samples and provide quality assurance
- Tie together all specimens collected from one participant at one visit.
- Will be placed on the following locations:
 1. Biological Sample and Shipment Notification Form
 2. Outside cryobox that houses aliquot tubes during storage and shipment

Site, Family, and Individual ID Label

| |
|--------------|
| Site: |
| Fam: |
| Ind: |

- Participants will be identified by their site, Family, and Individual ID
- Sites will be responsible for handwriting this onto the provided labels
 - Must use fine point permanent marker
 - Each site will receive 4 markers in initial kit supply
- Place one label on each blood collection tube.

Collection Tube Labels








The diagram shows a rectangular label with a QR code in the top-left corner and another in the bottom-right corner. The label contains the following text from top to bottom: "FBS", "Kit: 1000001", "1000000123", "WBLD", and "NAHEP10". Green arrows point from each text field to a corresponding label on the right. The labels are: "Study Name" for "FBS", "Kit # (unique to the subject and visit)" for "Kit: 1000001", "Specimen Barcode (unique for each tube)" for "1000000123", "Sample Type" for "WBLD", and "Collection Container" for "NAHEP10".

| Field | Description |
|--------------|---|
| FBS | Study Name |
| Kit: 1000001 | Kit # (unique to the subject and visit) |
| 1000000123 | Specimen Barcode (unique for each tube) |
| WBLD | Sample Type |
| NAHEP10 | Collection Container |

Place one label on each blood collection tube.

Collection Tube Labels

| | | | |
|--|---|---|--|
|  FBS Kit: 1000001 1000000123 WBLD NAHEP10  |  FBS Kit: 1000001 1000000123 WBLD EDTA10  |  FBS Kit: 1000001 1000000123 WBLD EDTA3  |  FBS Kit: 1000001 1000000123 WBLD RNAPXT10  |
|--|---|---|--|

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

Specimen Labels: Blood Collection Tubes

- Each collection tube will contain two labels: the Collection Tube Label and the Site ID, Family ID, and Individual ID Label. Be sure to place labels in the same configuration consistently among tubes.
- The Collection Tube label should be placed at the top of the tube, with the left-hand barcode label near the cap of the tube.
- The handwritten Site ID/Family ID/Individual ID Labels near the bottom of the tube.
- All PBMC, EDTA, and PAXGene™ collection tubes will have two labels:
 - Label 1: Collection Tube Label
 - Label 2: Site, Family, and Individual ID Label

Label 1:

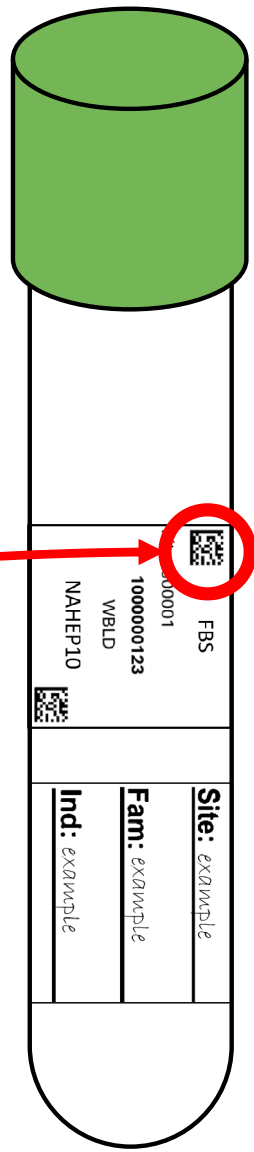
| | |
|---|---|
|  | FBS |
| Kit: 1000001 | |
| 1000000123 | |
| WBLD | |
| Collection Container |  |

Label 2:

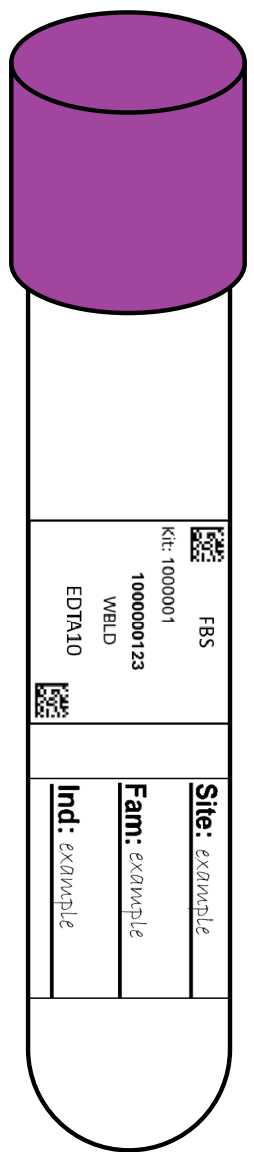
| |
|--------------|
| Site: |
| |
| Fam: |
| |
| Ind: |
| |

Specimen Labels: Blood Collection Tubes

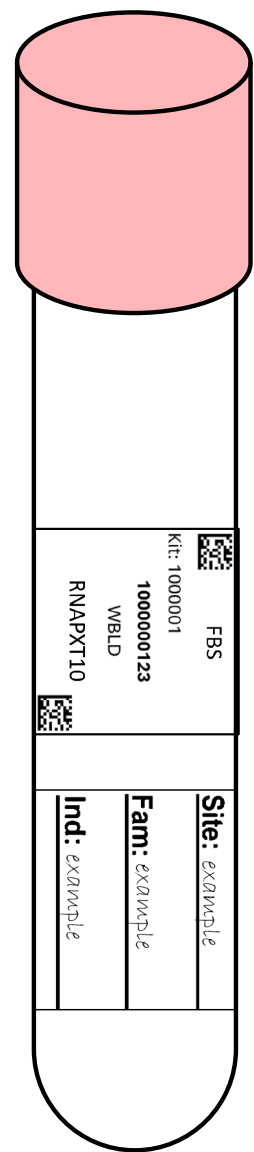
Please ensure the left-hand barcode is near the cap



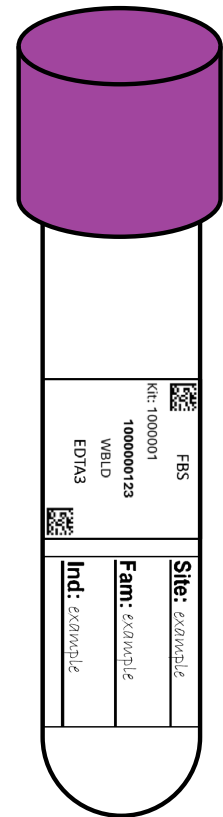
2 x 10mL Sodium Heparin (NaHep) PBMC Tubes



2 x 10mL EDTA Lavender-Top Tubes



1 x 10mL RNA PAXGene Tube

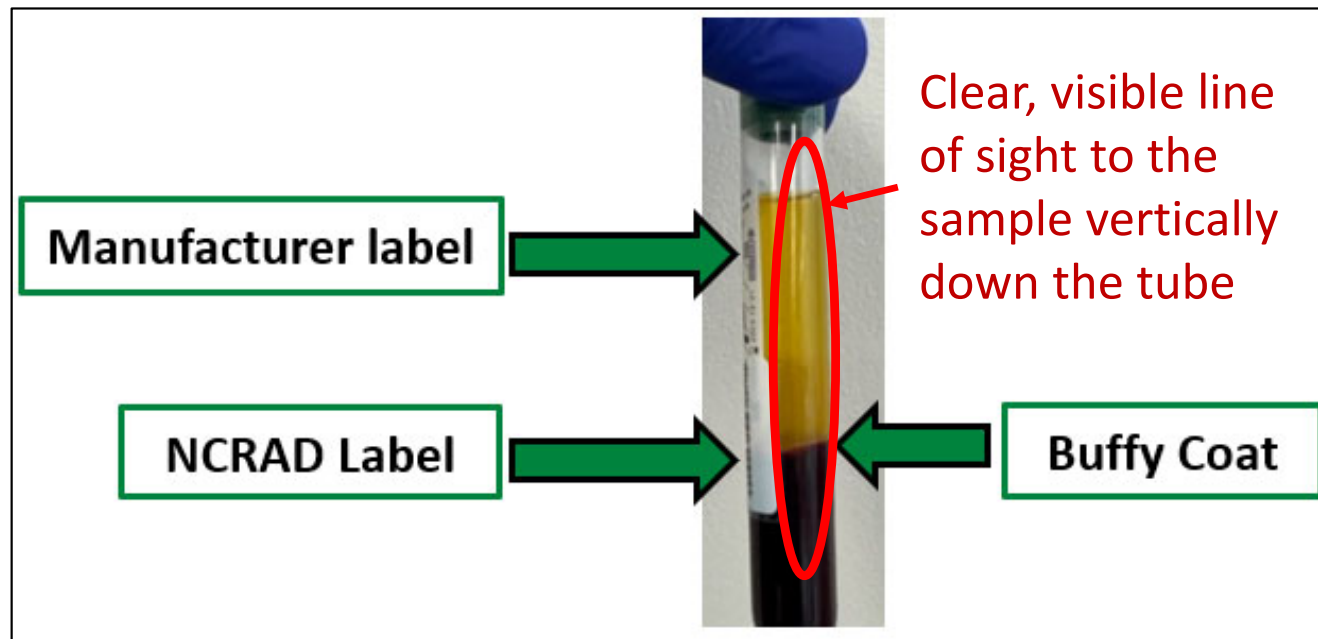


*1 x 3mL EDTA Lavender-Top Tube

**Genetic Testing is now done primarily through Invitae. This tube should only be ordered and used for rare cases that are approved by FBS study management.*

Specimen Labels: PBMC Collection Tubes

For Sodium Heparin tubes, please align the Collection Tube Label and Site ID/Family ID/Individual ID Label with the manufacturer's label on the tube so that the buffy coat is visible to the NCRAD laboratory staff during processing.



Cryovial Tube Labels

FBS
1000001
PLA

FBS
1000001
BUF

- Place one Cryovial Label on each blood aliquot cryovial. Note: these are only applicable to Blood Kits A & C.
 - *Remember Blood Kit C is for PCM Trials only.*
- Specimen type is indicated on the label.
 - PLA = Plasma
 - BUF = Buffy Coat

Specimen Labels: Labeling Guidelines

- Place Collection Tube and Aliquot Labels on ALL collection tubes and cryovials BEFORE sample collection. This should help to ensure the label properly adheres to the tube before exposure to moisture or different temperatures.
- Using a fine point permanent marker, fill-in and place the Site ID/Family ID/Individual ID Labels on the Collection Tubes BEFORE sample collection. These labels are placed on collection tubes in addition to the Collection Tube Label.
- The Collection Tube Labels contain two 2D barcodes. Place the left-hand barcode toward the tube cap.
- Place label horizontally on the tube (wrapped around sideways if the tube is upright).
- Take a moment to ensure the label is completely adhered to each tube. It may be helpful to roll the tube between your fingers after applying the label.

Labeling Breakdown by Kit Type



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Kit A: PBMC, Plasma/Buffy Coat, & RNA Labels

Kit Number Labels

Kit Number



300001

- 1 x placed on the Sample Form
- 1 x placed on the outside of the cryobox that houses aliquot tubes during storage and shipment
- 3 x extra (*dispose if not used*)

Cryovial Labels

FBS
1000001
PLA

- 20 x Micronic tubes - 2ml PURPLE cap
- 1 x Micronic tube - 2ml BLUE cap

FBS
1000001
BUF

- 2 x Micronic tubes - 2ml GREY cap

Site ID, Family ID, and Individual ID Labels

Site:

Fam:

Ind:

- 2 x EDTA (Lavender-Top) Blood Collection Tube (10 ml)
- 2 x PBMC Sodium Heparin (Green-Top) Tubes 10ml
- 1 x RNA PAXgene™ (Red-Top) Tubes 2.5 ml
- 1 x extra

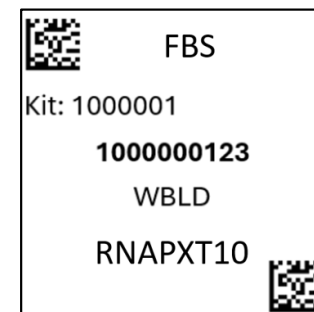
Collection Tube Labels



- 2 x EDTA (Lavender-Top) Blood Collection Tube (10 ml)



- 2 x PBMC Sodium Heparin (Green-Top) Tubes 10ml



- 1 x RNA PAXgene™ (Red-Top) Tubes 2.5 ml

Kit B: PBMC, DNA, & RNA Labels

Kit Number Labels

Kit Number



300001

- 1 x placed on the Sample Form
- 4 x extra (*dispose if not used*)

Site ID, Family ID, and Individual ID Labels

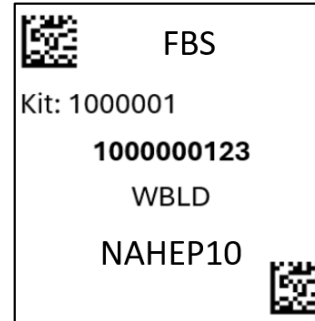
Site:

Fam:

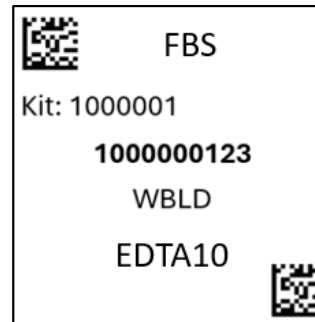
Ind:

- 2 x EDTA (Lavender-Top) Blood Collection Tube (10 ml)
- 2 x PBMC Sodium Heparin (Green-Top) Tubes 10ml
- 1 x RNA PAXgeneTM (Red-Top) Tubes 2.5 ml
- 1 x extra

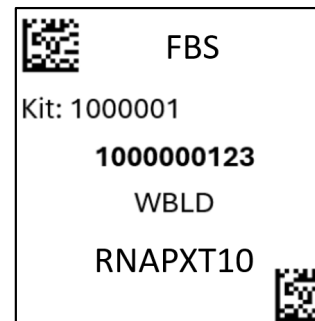
Collection Tube Labels



- 2 x PBMC Sodium Heparin (Green-Top) Tubes 10ml



- 2 x EDTA (Lavender-Top) Blood Collection Tube (10 ml)



- 1 x RNA PAXgeneTM (Red-Top) Tubes 2.5 ml

Kit D: Genetic Testing Labels

Genetic Testing is now done primarily through Invitae. This kit should only be ordered and used for rare cases that are approved by FBS study management.

Kit Number Labels

Kit Number



300001

- 1 placed on the Sample Form
- 1 placed on the outside of the cryobox that houses aliquot tubes during storage and shipment

Collection Tube Labels



- 1 x EDTA (Lavender-Top) Blood Collection Tube for Genetic Testing (3 ml)

Site ID, Family ID, and Individual ID Labels

Site:

Fam:

Ind:

- 1 x EDTA (Lavender-Top) Blood Collection Tube for Genetic Testing (3 ml)

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

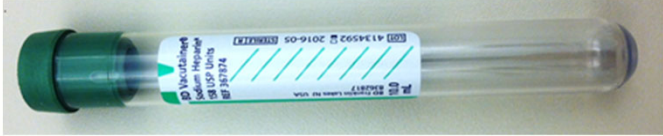



Processing/Storage Equipment

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

Blood Draw Order

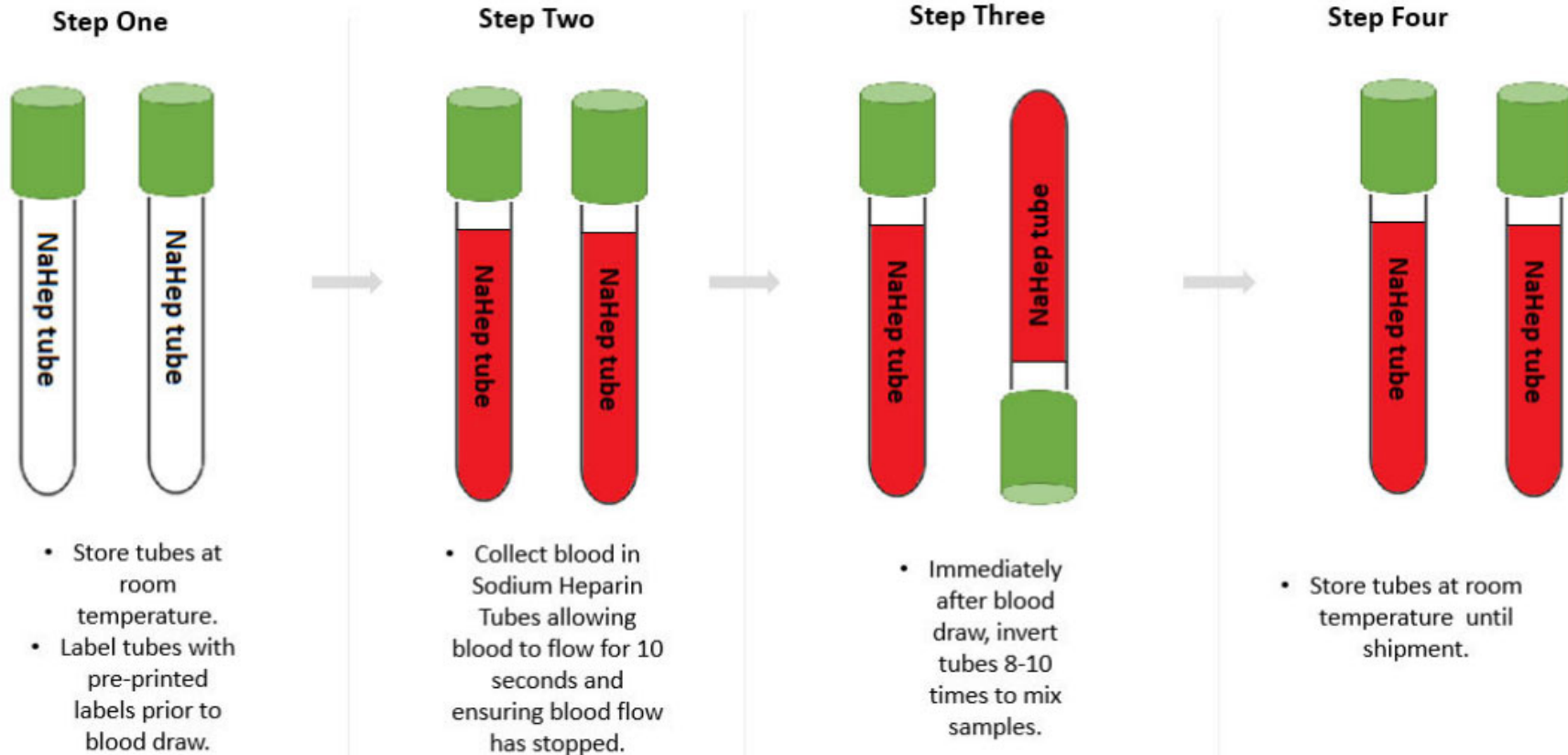
1. Sodium Heparin (Green-Top) Blood Collection Tube (10 ml) x 2
2. EDTA (Lavender-Top) Blood Collection Tube (10 ml) for DNA and Plasma x 2
3. EDTA (Lavender-Top) Blood Collection Tube (3 ml) for CLIA lab testing ****only select participants****
 - *Genetic Testing is now done primarily through Invitae. This kit should only be ordered and used for rare cases that are approved by FBS study management.*
4. PAXgene™ Blood Collection Tube (2.5 ml) for RNA

Sample Collection - Blood

| Tube Type | Number of Tubes Drawn | Tube Image |
|---|-----------------------|---|
| 1. Sodium Heparin (Green-Top) Blood Collection Tube (10 ml) for PBMC | X2 |  |
| 2. EDTA (Lavender-Top) Blood Collection Tube (10 ml) for Plasma & Buffy Coat | X2 |  |
| 3. EDTA (Lavender-Top) Blood Collection Tube (6ml) for CLIA lab testing *only select participants* | X1 |  |
| 4. PAXgene™ Blood Collection Tube (2.5 ml) for RNA | X1 |  |

**Genetic Testing is now done primarily through Invitae. This kit should only be ordered and used for rare cases that are approved by FBS study management.*

PBMC Preparation (10ml Sodium Heparin Tube x 2)

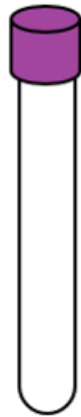


Ship ambient same day as blood draw

Please be sure to compare the labels on each tube and cryovials to the Biological Sample Form included with each kit

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

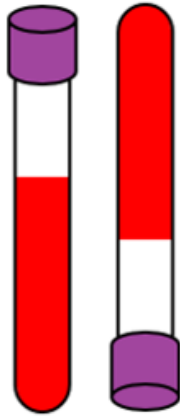
Plasma & Buffy Coat Preparation (EDTA Tube x 2)



- Store tubes at room temp
- Each tube should be labeled with Collection Tube and Site and PTID labels.



- Collect Blood into each EDTA tube, allowing blood to flow for 10 seconds and ensuring blood flow has stopped



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



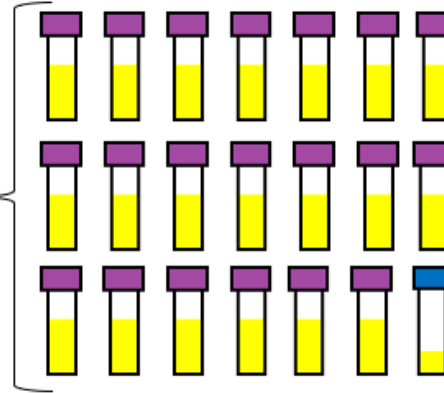
- If collecting Plasma and Buffy Coat, continue. If you are collecting Whole Blood for DNA isolation, skip ahead to the packaging section.



- Centrifuge samples at 2000 x g for 10 minutes at 4°C. Samples will separate after centrifugation.



- Pool all plasma from the 2 EDTA tubes into a 15 ml conical and invert gently 3 times to mix the plasma



- Label purple-capped cryovials with "PLASMA" labels.
- Aliquot 0.5 ml of plasma into each cryovial.
- If residual aliquot is created, document specimen number and volume on Sample Form
- Store plasma aliquots upright at -80°C until shipment to NCRAD



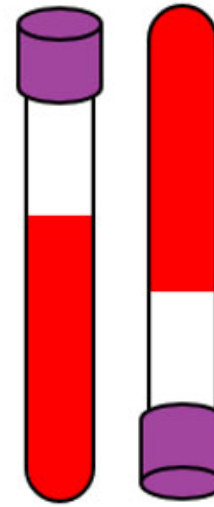
- Label gray-capped cryovials with "BUFFY COAT" labels.
- using a clean transfer pipette, collect the buffy coat (may have some residual plasma and RBCs included)
- Transfer the buffy coat from each EDTA tube into its own cryovial
- Store buffy coat aliquots upright at -80°C until shipment to NCRAD

Spin, aliquot, and freeze all plasma and buffy cot aliquots within 2 hours of collection

Please be sure to compare the labels on each tube and cryovials to the Biological Sample Form included with each kit

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

DNA Preparation (EDTA Tube x 2)



- Store tubes at room temp
- Each tube should be labeled with Collection Tube and Site and PTID labels.

- Collect Blood into each EDTA tube, allowing blood to flow for 10 seconds and ensuring blood flow has stopped

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

****Please be sure to compare the labels on each tube and cryovials to the Biological Sample Form included with each kit****

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

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

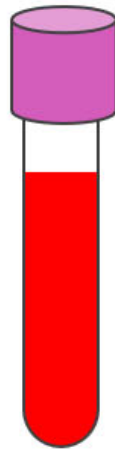


Step 1



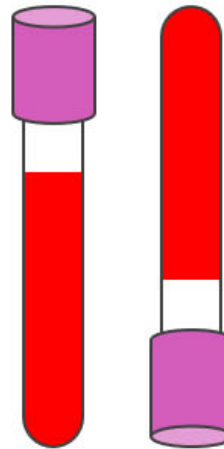
- Store tubes at room temperature.
- Labels tubes with pre-printed subject labels prior to blood draw.

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



- Store whole blood at -80°C until shipment.



****Please be sure to compare the labels on the tube to the Biological Sample Form included with each kit****

Important Note: Ensure tube is not expired prior to collection and processing of samples.

Genetic Testing is now done primarily through Invitae. This kit should only be ordered and used for rare cases that are approved by FBS study management.

RNA Preparation (2.5ml PAXgene™ Tube x 1)



Step One



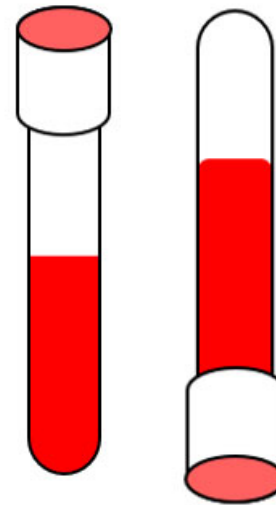
- Store tube at room temperature.
- Label tube with pre-printed labels prior to blood draw.

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 tube 8-10 times to mix sample.

Step Four



- Store tube at room temperature until shipment.

Ship ambient same day as blood draw

Please be sure to compare the labels on the tube to the Biological Sample Form included with each kit

Important Note: Ensure tube is not expired prior to collection and processing of samples.

Sample Shipping



NCRAD

NCRAD



Ambient Sample Shipping

- **Ship Monday-Thursday Only**
 - PBMC, Whole Blood (for DNA isolation), and RNA
 - Ship samples same day as collection

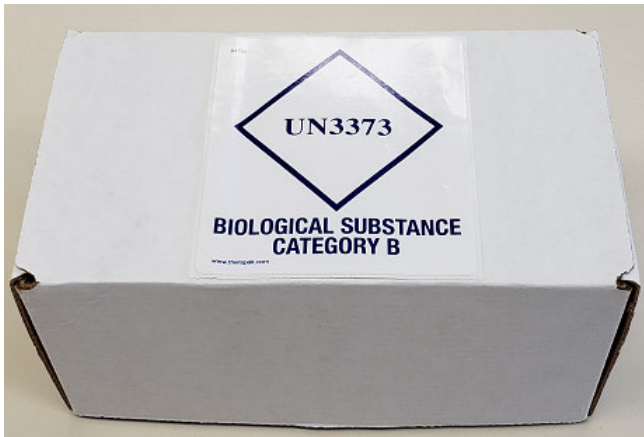
Ambient Sample Shipping

| Sample Type | Tube Type | Kit Type |
|---------------------------------------|---|---|
| Whole blood for PBMC isolation | 2 x Sodium Heparin (GreenTop) Blood Collection tube (10 ml) | Kit B: PBMC, DNA, & RNA AND Kit A & C: PBMC, Plasma/Buffy Coat, & RNA |
| Whole blood for DNA isolation | 2 x EDTA (Lavender-Top) Blood Collection Tube (10 ml) | Kit B: PBMC, DNA, & RNA |
| Whole blood for RNA isolation | 1 x PAXgene™ Blood Collection Tube (2.5 ml) | Kit B: PBMC, DNA, & RNA AND Kit A & C: PBMC, Plasma/Buffy Coat, & RNA |

Ambient Sample Shipping



- Place refrigerant pack in the freezer 24 hours prior to shipment.
- Place filled and labeled Sodium Heparin, EDTA, and PAXgene™ 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.



Frozen Sample Shipping

• Ship Monday-Wednesday Only

- Plasma and Buffy Coat

- Hold packaged samples in a -80°C freezer until pickup.

- Batch Samples together

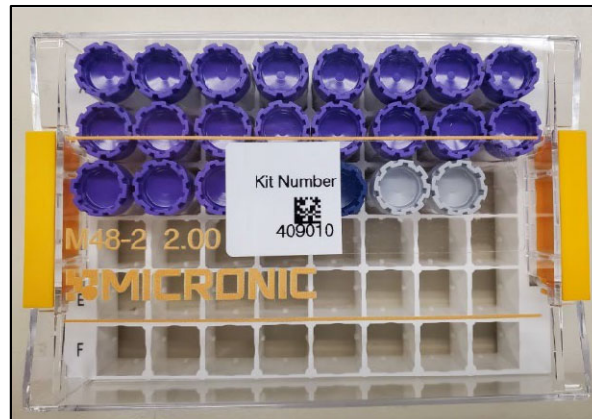
- 5 Cryoboxes

- Batch shipping should be performed every 3 months or as a full shipment of specimens accumulates, whichever is sooner.

Frozen Sample Shipping

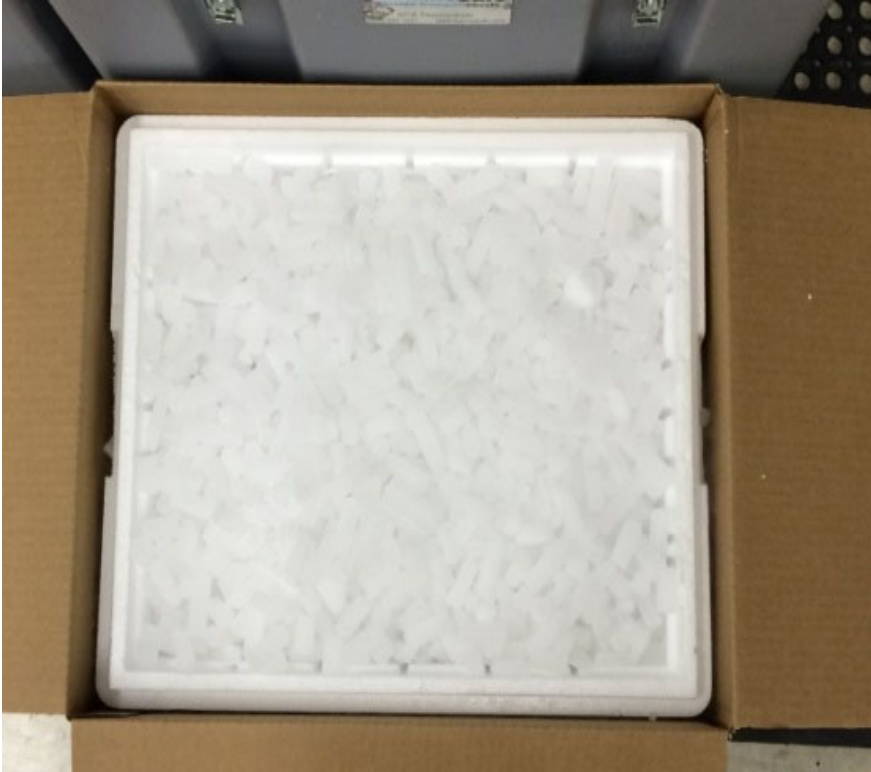
| Sample Type | Tube Type | Kit Type |
|---------------------------------|--|---|
| Plasma & Buffy Coat | Up to 20 x 2mL purple top cryovials with plasma AND Up to 2 x 2mL grey top cryovials with buffy coat | Blood Kit A & C: PBMC, Plasma/Buffy Coat, & RNA |
| Whole blood for Genetic Testing | 1 x EDTA (Lavender-Top) Blood Collection Tube (3 ml) <i>Genetic Testing is now done primarily through Invitae. This kit should only be ordered and used for rare cases that are approved by FBS study management.</i> | Blood Kit D: Genetic Testing Kit |

Frozen Shipping - Cryoboxes



Place frozen EDTA (3ml) tube (when applicable) in bubble wrap tube sleeves.

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!



Shipping Frozen & Ambient Samples

- *Send Biological Sample and Shipment Notification Form to IU [ahead of shipment](#)*
 - *[Email: alzstudy@iu.edu](mailto:alzstudy@iu.edu) or*
 - *[Fax: 317-321-2003](tel:317-321-2003)*

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.

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**

| | |
|---|---|
| <p>DGI Training Center 800-338-2291 DGItraining.com Provides IATA Certified Air Seminars and online courses</p> | <p>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</p> |
| <p>Saf-T Pak Inc. www.saftpak.com Provides dangerous goods training via CD or on-site instruction for North America and Europe</p> | <p>Aiconsult Email: Airconsult@wanadoo.fr www.airconsult-bf.com</p> |
| <p>Bureau of Dangerous Goods LTD., TIANJIN Addr.: No.3 Yingshui road, Nankai district, Tianjin China Tel: 022-23495890 83326960 83326854 / Fax: 022-83326959 Email: cadmin@bdg-china.com.cn www.bdg-china.com.cn</p> | |

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>

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.
- This means you will need to print a copy of the completed Sample Form, so you have to include in both shipments, if using Blood Kit A or C.
- Email: alzstudy@iu.edu
- Fax: 317-321-2003

Biological Sample and Shipment Notification Form - Blood Kit A and C: PBMC, Plasma/Buffy Coat, and RNA

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

| Sample Type | Collection Tube Type | Shipment |
|---|---|--|
| Whole blood for PBMC isolation | 2 x Sodium Heparin (Green-Top) Blood Collection Tube (10ml) | Room Temperature Must be shipped and received within 24 hours of collection |
| Whole blood for isolation of plasma & buffy coat (for DNA extraction) | 2 x EDTA (Lavender-Top) Blood Collection Tube (10ml) | Dry Ice |
| Whole blood for RNA isolation | 1 x PAXgene™ Blood Collection Tube (2.5 ml) | Room Temperature Must be shipped and received within 24 hours of collection |

| To: Kelley Faber | Email: alzstudy@iu.edu | Phone: 1-800-526-2839 | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---------------------------------------|--|--|--|---|----------|----------------------------------|---------------------------------------|------------------------------|-------------------------------|-------------------------------|--|---|-------|---|----------|---|-------|--|-------|-----------------------|----------|--|-------|-----------------------|----------|
| General Information: UPS Tracking # (ambient): _____ UPS Tracking # (frozen): _____ Site Coordinator: _____ Date: _____ Phone: _____ Email: _____ | | Kit Barcode _____ _____ _____ | | | | | | | | | | | | | | | | | | | | | | | | |
| Study: AD Family-Based Study Site ID: _____ Family ID: _____ Individual ID: _____ Sex: M F Year of Birth: _____ Visit (please circle one): 1 2 3 4 5 6 7 8 9 10 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blood Collection: Date Drawn: _____ [MM/DD/YYYY] Time of Draw: _____ [HH:MM] Date Subject Last Ate: _____ [MM/DD/YYYY] Time Subject Last Ate: _____ [HH:MM] Original Volume Drawn (2 x NaHep Green-Top): #1: _____ (mL) #2: _____ (mL) Total volume of blood drawn into a 1 x 2.5mL PAXgene RNA tube: _____ (mL) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blood Processing: <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;">Plasma & Buffy Coat (Lavender-top) Tube (2x10ml)</th> </tr> <tr> <td>Original Volume Drawn (2 x Lavender-Top):</td> <td style="text-align: right;">_____ mL</td> </tr> <tr> <td>Time spin started: _____ [HH:MM]</td> <td>Duration of centrifuge: _____ Minutes</td> </tr> <tr> <td>Temp of centrifuge: _____ °C</td> <td>Rate of centrifuge: _____ x g</td> </tr> <tr> <td>Time aliquoted: _____ [HH:MM]</td> <td></td> </tr> <tr> <td>Number of 0.5ml plasma aliquots created (lavender cap, up to 20):</td> <td style="text-align: right;">_____</td> </tr> <tr> <td>If applicable, volume of residual plasma aliquot (less than 0.5ml in blue cap):</td> <td style="text-align: right;">_____ mL</td> </tr> <tr> <td>If applicable, specimen number of residual plasma aliquot (last four digits):</td> <td style="text-align: right;">_____</td> </tr> <tr> <td>Buffy Coat #1 last four digits of specimen number:</td> <td style="text-align: right;">_____</td> </tr> <tr> <td>Buffy Coat #1 volume:</td> <td style="text-align: right;">_____ mL</td> </tr> <tr> <td>Buffy Coat #2 last four digits of specimen number:</td> <td style="text-align: right;">_____</td> </tr> <tr> <td>Buffy Coat #2 volume:</td> <td style="text-align: right;">_____ mL</td> </tr> </table> | | | Plasma & Buffy Coat (Lavender-top) Tube (2x10ml) | | Original Volume Drawn (2 x Lavender-Top): | _____ mL | Time spin started: _____ [HH:MM] | Duration of centrifuge: _____ Minutes | Temp of centrifuge: _____ °C | Rate of centrifuge: _____ x g | Time aliquoted: _____ [HH:MM] | | Number of 0.5ml plasma aliquots created (lavender cap, up to 20): | _____ | If applicable, volume of residual plasma aliquot (less than 0.5ml in blue cap): | _____ mL | If applicable, specimen number of residual plasma aliquot (last four digits): | _____ | Buffy Coat #1 last four digits of specimen number: | _____ | Buffy Coat #1 volume: | _____ mL | Buffy Coat #2 last four digits of specimen number: | _____ | Buffy Coat #2 volume: | _____ mL |
| Plasma & Buffy Coat (Lavender-top) Tube (2x10ml) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Original Volume Drawn (2 x Lavender-Top): | _____ mL | | | | | | | | | | | | | | | | | | | | | | | | | |
| Time spin started: _____ [HH:MM] | Duration of centrifuge: _____ Minutes | | | | | | | | | | | | | | | | | | | | | | | | | |
| Temp of centrifuge: _____ °C | Rate of centrifuge: _____ x g | | | | | | | | | | | | | | | | | | | | | | | | | |
| Time aliquoted: _____ [HH:MM] | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of 0.5ml plasma aliquots created (lavender cap, up to 20): | _____ | | | | | | | | | | | | | | | | | | | | | | | | | |
| If applicable, volume of residual plasma aliquot (less than 0.5ml in blue cap): | _____ mL | | | | | | | | | | | | | | | | | | | | | | | | | |
| If applicable, specimen number of residual plasma aliquot (last four digits): | _____ | | | | | | | | | | | | | | | | | | | | | | | | | |
| Buffy Coat #1 last four digits of specimen number: | _____ | | | | | | | | | | | | | | | | | | | | | | | | | |
| Buffy Coat #1 volume: | _____ mL | | | | | | | | | | | | | | | | | | | | | | | | | |
| Buffy Coat #2 last four digits of specimen number: | _____ | | | | | | | | | | | | | | | | | | | | | | | | | |
| Buffy Coat #2 volume: | _____ mL | | | | | | | | | | | | | | | | | | | | | | | | | |
| Notes: _____ _____ | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **If collected by contracted mobile phlebotomist: complete at time of blood collection Blood collection completed by: _____ (name) Company: _____ Contact phone: _____ | | | | | | | | | | | | | | | | | | | | | | | | | | |

Biological Sample and Shipment Notification Form - Blood Kit B: PBMC, DNA, and RNA

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

| Sample Type | Tube Type | Shipment |
|--------------------------------|--|--|
| Whole blood for PBMC isolation | 2x Sodium Heparin (Green-Top) Blood Collection Tube (10ml) | Room Temperature Must be shipped and received within 24 hours of collection |
| Whole blood for DNA extraction | 2 x EDTA (Lavender-Top) Blood Collection Tube (10ml) | Room Temperature Must be shipped and received within 24 hours of collection |
| Whole blood for RNA isolation | 1 x PAXgene TM Blood Collection Tube (2.5ml) | Room Temperature Must be shipped and received within 24 hours of collection |

| | | | | | | | | | | | | |
|---|-----------------------------|-----------------------|--------------------------------|-----------------------------|--|---------------|--|---------------|---|------------|---|------------|
| To: Kelley Faber | Email: alzstudy@iu.edu | Phone: 1-800-526-2839 | | | | | | | | | | |
| General Information: UPS Tracking #: _____ Site Coordinator: _____ Date: _____ Phone: _____ Email: _____ | | Kit Barcode | | | | | | | | | | |
| Study: AD Family-Based Study Site ID: _____ Family ID: _____ Individual ID: _____ Sex: M F Year of Birth: _____ Visit (please circle one): 1 2 3 4 5 6 7 8 9 10 | | | | | | | | | | | | |
| Blood Collection: <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Date Drawn: _____ [MM/DD/YYYY]</td> <td>Time of Draw: _____ [HH:MM]</td> </tr> <tr> <td>Original Volume Drawn (2 x NaHep Green-Top):</td> <td>#1 _____ (mL)</td> </tr> <tr> <td>Original Volume Drawn (2 x NaHep Green-Top):</td> <td>#2 _____ (mL)</td> </tr> <tr> <td>Original Volume Drawn (2 x Lavender-Top):</td> <td>_____ (mL)</td> </tr> <tr> <td>Original Volume Drawn (1 x PAXgeneTM Tube):</td> <td>_____ (mL)</td> </tr> </table> | | | Date Drawn: _____ [MM/DD/YYYY] | Time of Draw: _____ [HH:MM] | Original Volume Drawn (2 x NaHep Green-Top): | #1 _____ (mL) | Original Volume Drawn (2 x NaHep Green-Top): | #2 _____ (mL) | Original Volume Drawn (2 x Lavender-Top): | _____ (mL) | Original Volume Drawn (1 x PAXgene TM Tube): | _____ (mL) |
| Date Drawn: _____ [MM/DD/YYYY] | Time of Draw: _____ [HH:MM] | | | | | | | | | | | |
| Original Volume Drawn (2 x NaHep Green-Top): | #1 _____ (mL) | | | | | | | | | | | |
| Original Volume Drawn (2 x NaHep Green-Top): | #2 _____ (mL) | | | | | | | | | | | |
| Original Volume Drawn (2 x Lavender-Top): | _____ (mL) | | | | | | | | | | | |
| Original Volume Drawn (1 x PAXgene TM Tube): | _____ (mL) | | | | | | | | | | | |
| Notes: _____ _____ | | | | | | | | | | | | |
| **If collected by contracted mobile phlebotomist: complete at time of blood collection Blood collection completed by: _____ (name) Company: _____ Contact phone: _____ | | | | | | | | | | | | |

Biological Sample and Shipment Notification Form - Blood Kit D: Genetic Testing

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

| Sample Type | Number of Tubes | Tube Type | Shipment |
|---------------------------------|-----------------|---|------------------|
| Whole blood for Genetic Testing | 1 | EDTA (Lavender-Top) Blood Collection Tube (3ml) | Frozen (Dry Ice) |

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

General Information:

UPS Tracking #: _____

Site Coordinator: _____ Date: _____

Phone: _____ Email: _____

Kit Barcode

Study: AD Family-Based Study

Site ID: _____ Family ID: _____ Individual ID: _____

Sex: M F

Year of Birth: _____

Visit (please circle one): 1 2 3 4 5 6 7 8 9 10

Blood Collection:

Date Drawn: _____ [MM/DD/YYYY] Time of Draw: _____ [HH:MM]

Original Volume Drawn (1 x Lavender-Top): _____ (mL)

Notes:

***If collected by contracted mobile phlebotomist: complete at time of blood collection*

Blood collection completed by: _____ (name)

Company: _____

Contact phone: _____

Genetic Testing is now done primarily through Invitae. This kit should only be ordered and used for rare cases that are approved by FBS study management.

Biological Sample and Shipment Notification Form - Saliva

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

| Sample Type | Number of Tubes | Tube Type | Shipment |
|-------------|-----------------|------------------------|----------|
| Saliva | 1 | Saliva Collection Tube | Ambient |

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

General Information:

UPS Tracking #: _____

Site Coordinator: _____ Date: _____

Phone: _____ Email: _____

Kit Barcode

Study: AD Family-Based Study

Site ID: _____ Family ID: _____ Individual ID: _____

Sex: M F GUID: _____

Year of Birth: _____

Visit (please circle one): 1 2 3 4 5 6 7 8 9 10

Saliva Collection:

1. Date Drawn: _____ [MM/DD/YYYY]

2. Time of Draw: _____ [HH:MM]

3. Date Subject Last Ate: _____ [MM/DD/YYYY]

4. Time Subject Last Ate: _____ [HH:MM]

INTERNAL NCRAD USE ONLY

Complete Saliva Volume: _____ mL

Notes:

NCRAD Website

Helpful Pages

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

| HOLIDAY CLOSURES | |
|-----------------------------------|-----------------------------|
| DATE | HOLIDAY |
| January 1 | New Year's Day |
| 3 rd Monday in January | Martin Luther King, Jr Day |
| 4 th Monday in May | Memorial Day |
| June 19 | Juneteenth (observed) |
| July 4 | Independence Day (observed) |

- <https://ncrad.iu.edu/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 courier delay and by shipping Monday through Wednesday there should be enough time to receive the samples before the weekend

FBS Active Study Page



National Centralized Repository for
Alzheimer's Disease and Related Dementias

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COORDINATE STUDIES

[Home](#) / [Coordinate Studies](#) / [NIA AD FBS](#)

NIA-AD FBS ACTIVE STUDY PAGE

Welcome NIA-AD FBS Study staff, coordinators, and PI's.

This section encompasses study specific tools for your reference. If you have any questions, comments, or new ideas please contact NCRAD by [email](#) or phone **1-800-526-2839** or **317-278-8413**.

General questions about the study, not related to the specimens should be directed to [Dolly Reyes \(dr2290@cumc.columbia.edu\)](#).

NIA-LOAD

- LEADS
- 4RTNI-2
- 90+ Study
- ABC-DS
- ACAD
- ACE
- ACT
- ADCFB
- ADNI-3,4
- AGMP
- ALLFTD

Study Resources

KIT REQUEST MODULE

BIOLOGICAL SAMPLE AND SHIPMENT NOTIFICATION FORMS

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