



Biospecimen Exchange for Neurological Disorders

## The Late Effects of TBI (LETBI) – IU Site

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BIOSPECIMEN COLLECTION & PROCESSING

# Overview

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1. Specimen uniformity and quality
2. Site Equipment
3. Procedures
  - Kit Contents and Ordering
  - Sample Labelling
  - Sample Collection and Processing
  - Shipping Samples
  - Non-Conformance
4. Contact Information

# Specimen Uniformity and Quality

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GENERAL REMINDERS

# Specimen Standardization and Quality

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Most biomarkers are sensitive to *time* and *temperature*

- Standardization of processing across sites is key
- Specimens must be processed within 2 hours of collection
- Reference the *BioSEND Biomarker Specimen Collection, Processing, and Shipment Manual* as needed
- Do not replace or supplement any kit components without first receiving approval from BioSEND/NINDS

Questions? Email [biosend@iu.edu](mailto:biosend@iu.edu)

# Site Consumables and Equipment

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*Sites will need to supply the following items:*

- Gloves
- Alcohol wipes
- Butterfly needles
- Tourniquet
- Gauze pads
- Bandages
- Microcentrifuge tube rack
- Sharps bin and lid
- Crushed ice
- Pipettes and pipette tips
- Centrifuge capable of maintaining 4°C
- -80°C Freezer
- Dry ice

# Procedures

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MAINTAINING SPECIMEN UNIFORMITY AND QUALITY

# Biospecimen Collection Protocol

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Visit & Sample Type	V0	V1	V2	V3	V4
10ml EDTA	2	2	2	2	2

\*Tubes will be sent to IUGB lab and processed into plasma and buffy coat aliquots

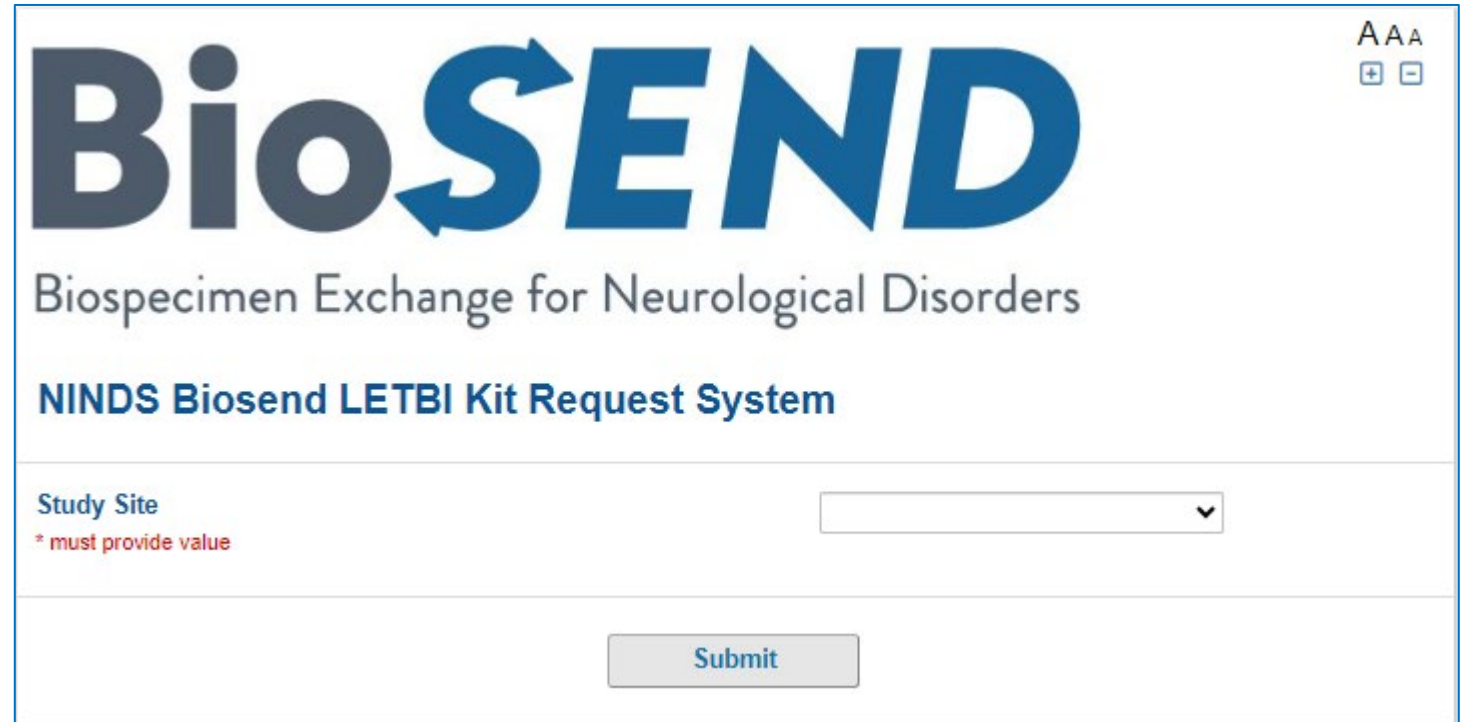
# Kit Contents and Ordering – REDCap Survey

<http://kits.iu.edu/biosend/letbi>

Order kits online through the Kit Request Module for:

- Blood kits
- Supplemental Kit
- Extra Supplies

Please provide as much notice as possible when ordering kits and/or supplies.



The screenshot shows the 'Biosend' logo in large blue letters, with 'Bio' in a standard font and 'SEND' in a bold, italicized font. Below the logo is the text 'Biospecimen Exchange for Neurological Disorders'. Underneath that is the title 'NINDS Biosend LETBI Kit Request System'. There is a section for 'Study Site' with a dropdown menu and a red asterisk indicating it is required. At the bottom right is a 'Submit' button.

**BioSEND**  
Biospecimen Exchange for Neurological Disorders  
**NINDS Biosend LETBI Kit Request System**

Study Site  ▼  
\* must provide value

**Submit**



# Kit Contents and Ordering: Confirm Site Info

LETBI Kit Request Module

<b>Study Site</b> <small>* must provide value</small>	Indiana Univers	Select your site from the drop-down list
Indiana University School of Medicine  Carolyn Dunifon Dept. of Medical & Molecular Genetics 351 West 10th Street, TK-318 Indianapolis, IN 46202-3002 (317) 274-5751 cdunifon@iu.edu		
<b>Is the contact name above correct?</b> <small>* must provide value</small>	<input type="radio"/> Yes <input checked="" type="radio"/> No	Verify contact information and update if needed
	reset	
<b>New Contact Name</b> <small>* must provide value</small>	Claire Wegel	
<b>Is the shipping address above correct?</b> <small>* must provide value</small>	<input type="radio"/> Yes <input type="radio"/> No	reset
<b>Is the e-mail address above correct?</b> <small>* must provide value</small>	<input type="radio"/> Yes <input type="radio"/> No	reset
<b>Is the phone number above correct?</b> <small>* must provide value</small>	<input type="radio"/> Yes <input type="radio"/> No	reset

# Kit Contents and Ordering: Kit Types

## LETBI Kit Request Module

- Kits are not specific to a subject or time point. After collection, sites will indicate the subject and time point to which BioSEND should link the samples.

<b>Kit Type</b> **Please allow two weeks for shipment** * must provide value	<div><input checked="" type="checkbox"/> Blood Collection Kit</div> <div><input type="checkbox"/> Supplemental Kit</div> <div><input type="checkbox"/> Extra Supplies</div> <p>Please specify in comments if you need kits before the standard two week shipment time.</p>
<b>Blood Collection Kit Quantity</b> * must provide value	<input type="text"/>
<b>Comments</b>	<div><input type="text"/></div> <div>Expand</div>

# Kit Contents and Ordering: Kit Breakdown

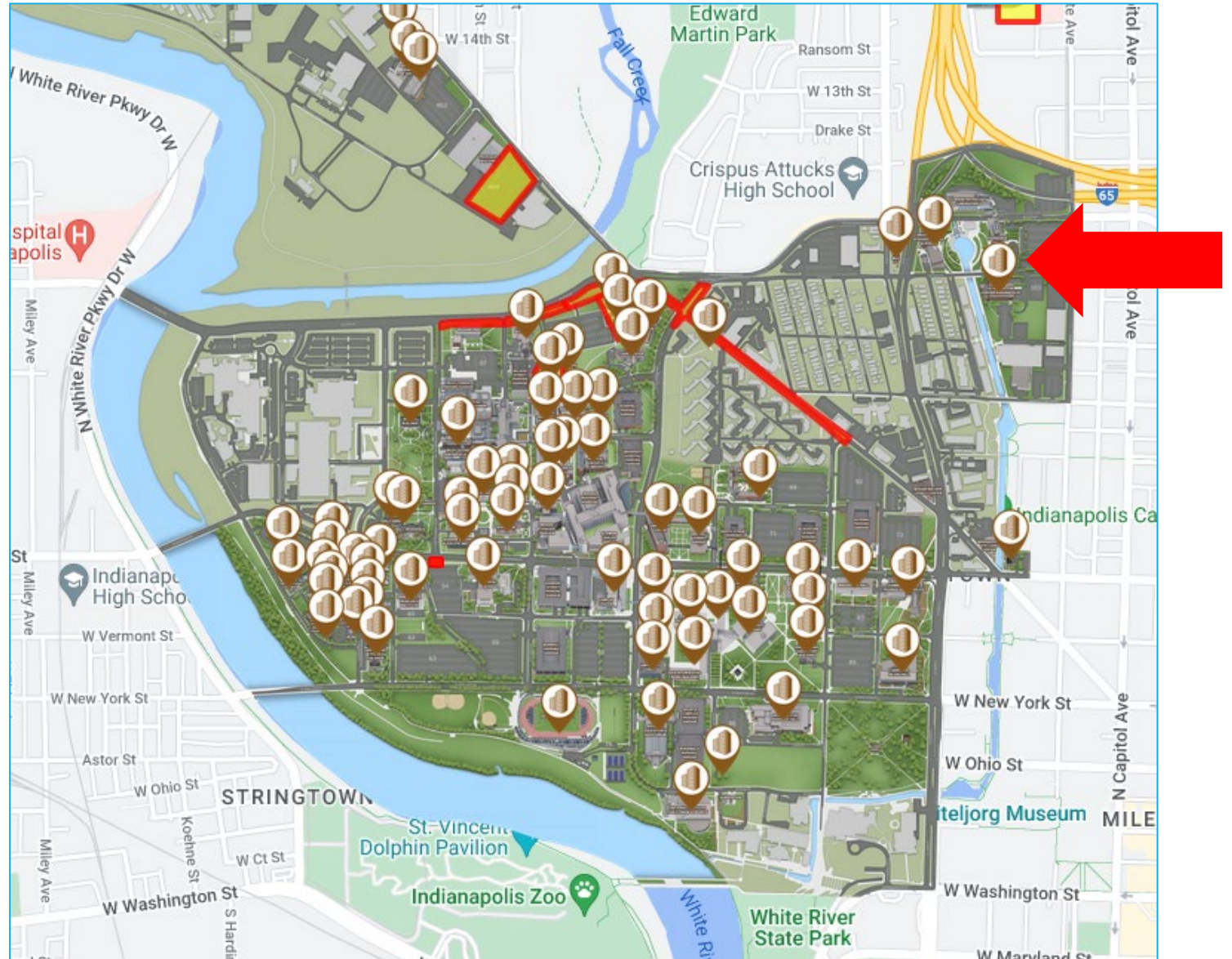
LETBI Kit Request Module

Comments	
Each Blood Collection Kit contains:	
2 - 10mL EDTA tubes, plastic	
6 - Purple cryovial, micronic (2 ml)	
2 - Grey cryovial, micronic (2 ml)	
2 - Disposable transfer pipettes (3ml)	
1 - 48-slot micronic cryovial tray	
1 - Biohazard bag with absorbent sheet	
1 - Shipping label packet (Dry Ice, Fragile, UN3373)	
1 - Air waybill envelope	
1 - Dry Ice Shipper	
1 - Specimen/Case label set--ST labels	

Kit contents of selected kit will appear at the bottom of the page

# Kit Pick-Up

- BioSEND staff will offer dates/times the kits will be ready
- Kits can be picked up at:  
IU Innovation Center (TK)  
351 West 10th Street  
Indianapolis, IN 46202-3002



# Collection Volumes

Total blood volumes

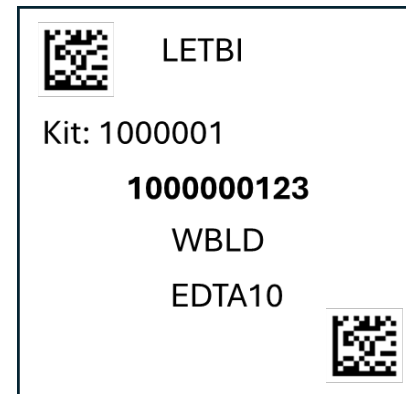
Sample Type	Amount
Whole Blood for Plasma and Buffy Coat	20 ml

# Sample Labelling: Example Labels

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## Labels are provided by Indiana University

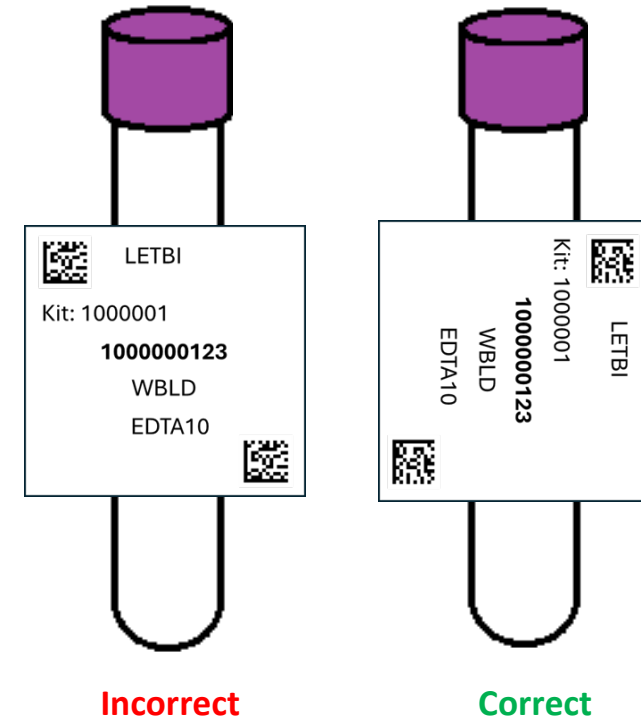
- Please check that all samples are properly labelled to ensure correct identification by IU
- If do not have enough labels to complete a visit, please contact IU *immediately*
- Labelling the tubes during processing prevents sample mix-ups



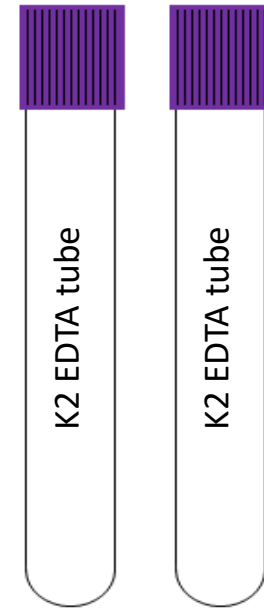
# Sample Labelling: Label Placement

Please...

- Label all collection tubes before collecting 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



# Sample Collection and Processing

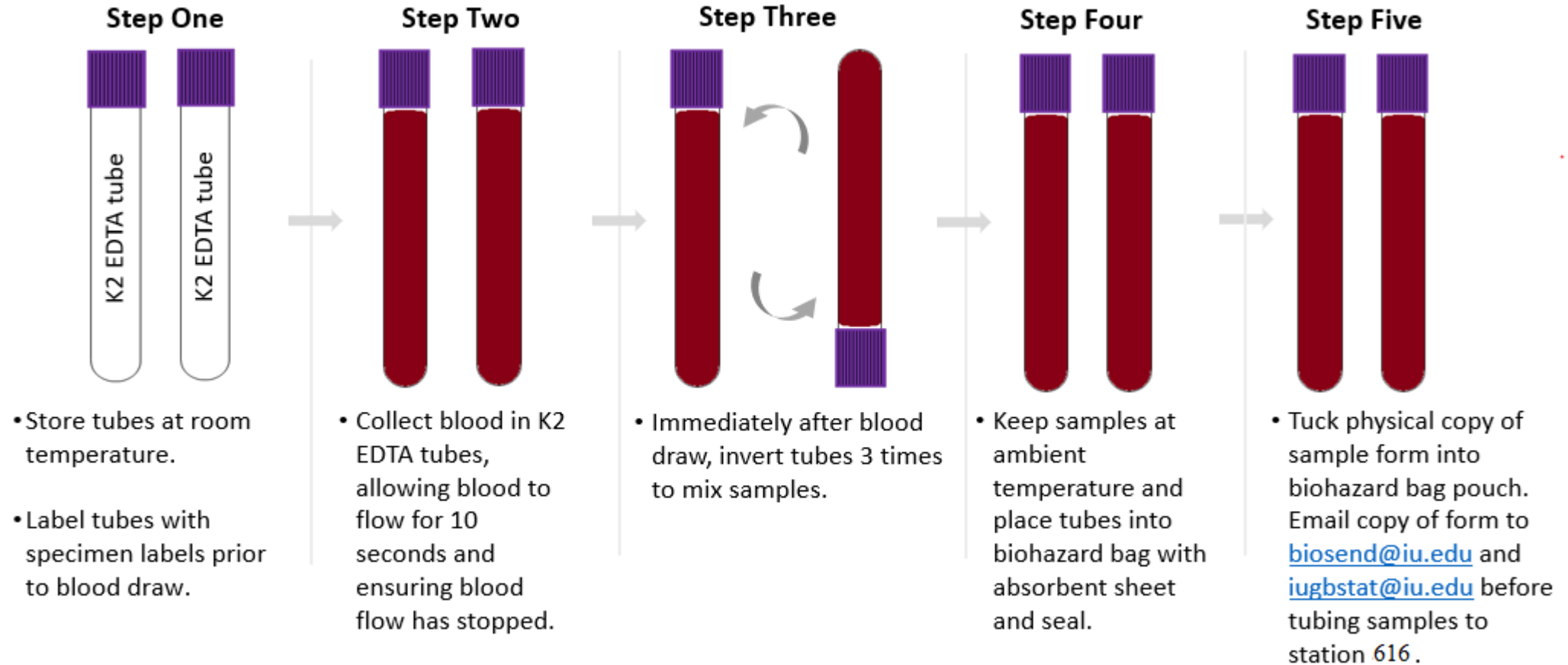


2 x 10ml EDTA  
(plastic) collection  
tubes



# Sample Collection and Processing

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# Sample Collection and Processing: Issue #1

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## Troubleshooting Blood Collection

### Issue #1: Tube with little/no vacuum

- Always check expiration date on the tube before beginning blood draw and discard expired tubes
- Store tubes at “room temperature” – extreme temperature can affect vacuum
- Keep extra vacutainer tubes from supplemental kit nearby during blood draw to replace “bad” tubes
- If this is a frequent occurrence, report tube type and lot number to IU.

# Shipping Samples: Sample Form

1. Email a copy of the form to [biosend@iu.edu](mailto:biosend@iu.edu) and [lugbstat@iu.edu](mailto:lugbstat@iu.edu) in advance of tubing the samples. Please include “RI Lab” in the subject line
2. Tube samples to Station #616; Monday-Friday from 8:30am-4pm only

## BioSEND Sample Form

Study:	<input type="text"/>		
Site Name:	<input type="text"/>	Principal Investigator:	<input type="text"/>
Coordinator:	<input type="text"/>	Telephone:	<input type="text"/>
		Email:	<input type="text"/>

Please list only ONE subject per Sample Record Summary and Shipment Notification Form

GUID:	<input type="text"/>	Kit Number	<input type="text"/>
Sex:	<input type="text"/>	Visit Type:	<input type="text"/>

**Instructions:** Samples should be tubed to station #616. Samples should be sent Monday-Friday only, between 7:00 AM - 4:00 PM. This form must be completed for shipment of all research samples. Please email a copy to [at.biosend@iu.edu](mailto:at.biosend@iu.edu) and [lugbstat@iu.edu](mailto:lugbstat@iu.edu) prior to tubing samples. A physical copy should also be included with the samples.

Date of Collection	Time of Collection	Sample Type	Number of Tubes Sent
		Whole Blood for Plasma and Buffy Coat	

Comments:

# Non-Conformance Reporting

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Most common non-conformance issues:

- Shipment notification not sent
- Sample form incomplete/inaccurate
- Low volume
- Unlabeled or mislabeled tube(s)



# BioSEND.org

On the website, you can:

- Access your study's kit request module and sample submission form
- Download the most recent version of the Manual of Procedures
- View a recording of this training
- Find information about holiday closures
- Access shipping resources

## Study Resources

### KIT REQUEST MODULE

Please follow the below link to access the Kit Request Module. This link will direct you to a REDCap database where study coordinators and staff may request kits, individual supplies, and/or labels. Please allow a total of two weeks for kit requests to be fulfilled.

[Kit Request System →](#)

### SPECIMEN COLLECTION AND PROCESSING FORM

Please use the below link to access the collection and processing form for this protocol. This form must be completed prior to shipment. We also ask that all shipments include a physical copy of the shipping manifest portion of the form.

[Specimen Collection and Processing Form →](#)

### MANUAL OF PROCEDURES

The below downloadable manual was created specifically for the DxCTEII study. Please feel free to explore the manual through the hyperlinked 'Table of Contents'. Questions concerning any part of the manual may be directed to [biosend@iu.edu](mailto:biosend@iu.edu) for further clarification.

[Manual of Procedures ↓](#)

### TRAINING SLIDES

These slides correspond to the BioSEND DxCTEII protocol training. Training is available upon request by contacting [biosend@iu.edu](mailto:biosend@iu.edu).

[Training Slides ↓](#)

### SAMPLE SHIPPING

BioSEND can receive samples Monday-Friday, excluding holidays. Frozen samples should be shipped M-W. Ambient samples may be shipped on Th.

[Generate UPS airbill or schedule pickup →](#)  
[Check holiday closures →](#)  
[What do I do for Friday blood draws →](#)

# Contacts

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## Indiana University

General Questions/Shipment Notifications:

[biosend@iu.edu](mailto:biosend@iu.edu)

317-278-6158

Request kits:

<http://kits.iu.edu/biosend/letbi>