

PEAC CENTRAL LABORATORY

SAMPLING MANUAL

FINAL REVISED VERSION (9.0)

TABLE OF CONTENTS

	Page No.
1. PEAC CENTRAL LABORATORY - CONTACT NUMBERS.....	3
2. IMPORTANT INFORMATION.....	4
3. TO RE-ORDER SUPPLIES.....	5
4. TISSUE COLLECTION AND PREPARATION.....	6
FRESH TISSUE	
FORMALIN-FIXED TISSUE	
RNA LATER TISSUE	
5. BLOOD COLLECTION AND PREPARATION.....	7
6. URINE COLLECTION AND PREPARATION.....	8
7. SUMMARY: SPECIMENS TO RETURN TO CENTRAL LAB.....	9
8. SPECIAL PROCEDURES	
SPECIMEN TUBE BARCODE LABELS.....	10
SPECIMEN TUBE LABELLING.....	11
PACKING LISTS & RETURNS SHEETS.....	12
CONVERSION OF RCF (G) TO RPM.....	13
9. PACKAGING AND SHIPMENT	
PACKAGING & TRANSPORT.....	14
SHIPMENT OF AMBIENT SAMPLES.....	15
SHIPMENT OF DEEP FROZEN SAMPLES.....	16
10. COMPLETING THE AIRWAY BILL.....	17
11. PEAC SAMPLE LOG SHEETS	
DAILY.....	18
MONTHLY.....	19
12. PEAC BIOBANK SAMPLE TRACKER (Website Tutorial).....	20

PEAC CENTRAL LABORATORY – CONTACT NUMBERS

Monday – Friday, 9:00am – 5:00pm

COUNTRY	TELEPHONE NUMBERS
UNITED KINGDOM	+44 (0) 207 882 2111

E-MAIL	FAX
t.kamalati@qmul.ac.uk	+44 (0) 207 882 6104

CENTRAL LABORATORY – SPECIMENS TO BE RETURNED TO:
<p>PEAC Central Laboratory Centre for Experimental Medicine & Rheumatology 2nd Floor, Sir John Vane Science Centre William Harvey Research Institute Barts & The London School of Medicine & Dentistry Charterhouse Square, London. EC1M 6BQ. UK.</p>

TO RE-ORDER PEAC CLINICAL PACKS/SUPPLIES

CONTACT DETAILS

Rita Jones: Tel: +44 (0) 207 882 8194 or email: m.r.jones@qmul.ac.uk

Becki Hands: Tel: +44 (0) 207 882 8195 or email: r.e.hands@qmul.ac.uk

IMPORTANT INFORMATION

LIMITED TISSUE AVAILABILITY

Ideally 6 pieces of tissue per preparation (frozen block, RNA & formalin) are desired for processing and subsequent archiving. However this may not always be achievable and where only a minimum amount of tissue can be retrieved priority should be given to RNALater and formalin preparations. If this situation should arise please could you process 2 RNALater samples (instead of 3) and put the rest for formalin fixation. In addition, it would be desirable to have at least 1 frozen block preparation as well.

THE PRIORITY FOR BIOPSY PROCESSING IS: FORMALIN > RNA LATER > CRYOHISTOLOGY

PEAC SAMPLE LOG SHEETS (Daily/Monthly)

Sample log sheets are supplied at the back of the manual. Please log the following information:

PEAC CENTRE (4°C/-80°C Freezer)

PEAC ID: centre PEAC patient ID number

DATE: day/month/year of sample collected

TIME: time of sample collections (24hour clock)

LOCATION: where samples are stored before shipment

NAME: printed name of person responsible for sample processing & storage

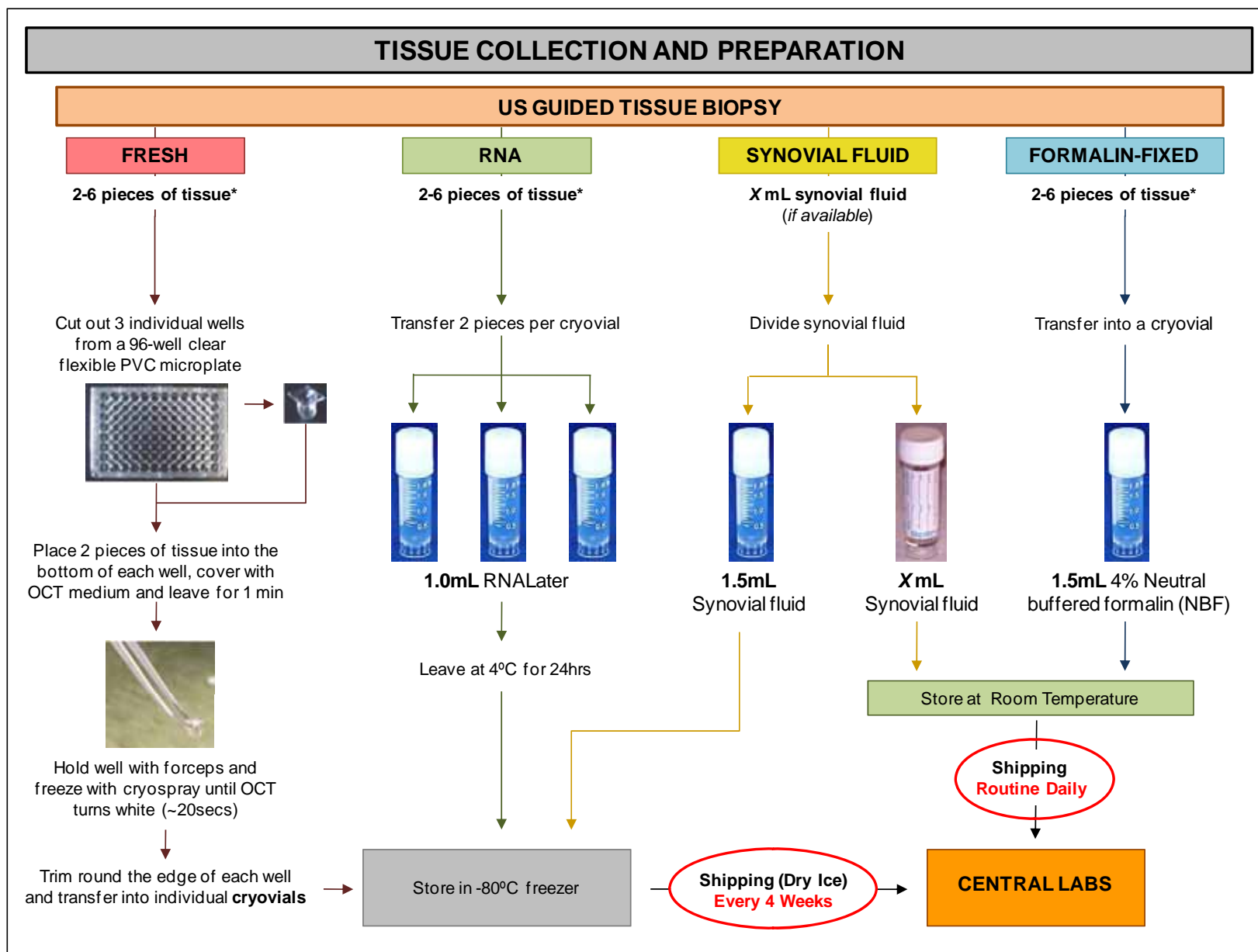
SIGNATURE: signature of person responsible for sample processing & storage

SHIPPED TO EMR

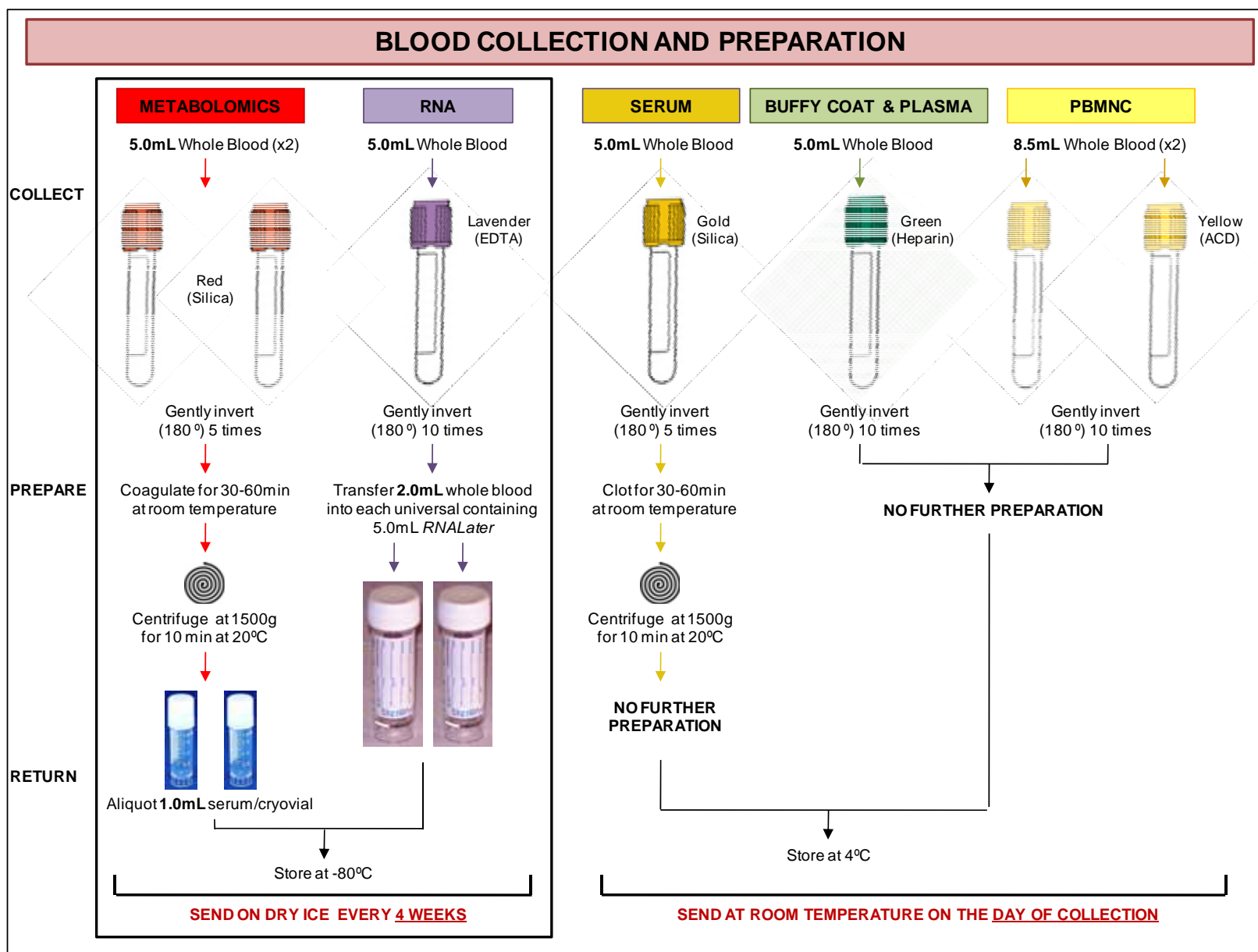
DATE: date of sample shipment to the PEAC Central Laboratory

NAME: printed name of person responsible for sample processing & storage

SIGNATURE: signature of person responsible for shipping samples



*If only minimum tissue can be retrieved please prioritise RNA and formalin preparations (See Important Information section). If possible process 1 frozen block.



URINE COLLECTION AND PREPARATION

COLLECT:



Collect **20mL** Urine in a COLLECTION CUP

PREPARE:

Transfer freshly voided
midstream urine into a screw
cap universals.

Aliquot **10mL** urine/universal



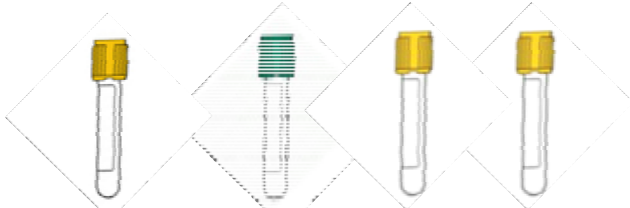
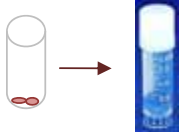







RETURN:

-80°C STORAGE

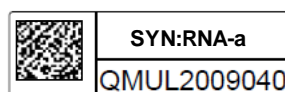
SEND ON DRY ICE EVERY 4 WEEKS

SUMMARY: SPECIMENS TO RETURN TO CENTRAL LABS

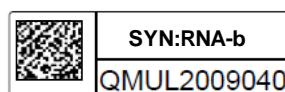
SHIPPING	PROCESSED SAMPLES
<p>DAILY 4 C/Room Temp.</p>	<div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">  Synovial Fluid (XmL) </div> <div style="text-align: center;">  Tissue in 1.5mL 4% NBF cryovial (x1) </div> <div style="text-align: center;">  Serum Buffy Coat & Plasma PBMNC (x2) <div style="background-color: #f8d7da; padding: 2px; border: 1px solid #f5c6cb;">SEND IN VARIOUS VACUTAINERS</div> </div> </div>
<p>EVERY 4 WEEKS Dry Ice</p>	<div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">  Frozen Blocks in cryovial (up to 3) </div> <div style="text-align: center;">  RNALater (1.0mL) cryovial (up to 3) </div> <div style="text-align: center;">  Synovial Fluid (1.5mL per cryovial) </div> <div style="text-align: center;">  Frozen Serum (x2) (1.0mL per cryovial) </div> <div style="text-align: center;">  Whole Blood in RNALater (x2) </div> <div style="text-align: center;">  Urine (x2) 10mL per universal </div> </div>

SPECIAL PROCEDURES

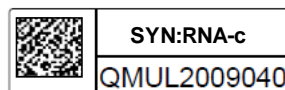
SPECIMEN TUBE BARCODE LABELS (QMUL sample labels shown as an example)



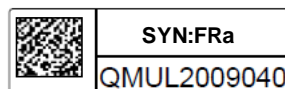
Synovium tissue in RNA-Later



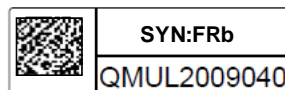
Synovium tissue in RNA-Later



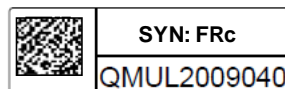
Synovium tissue in RNA-Later



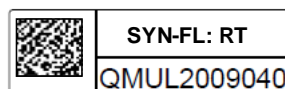
Synovium tissue – frozen block



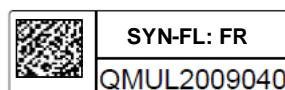
Synovium tissue – frozen block



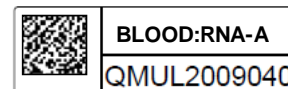
Synovium tissue – frozen block



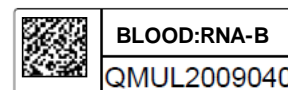
Synovial fluid – ambient



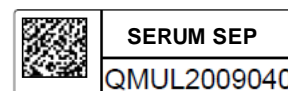
Synovial fluid – frozen



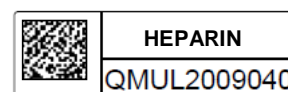
Whole blood in RNA-Later



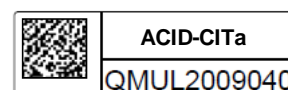
Whole blood in RNA-Later



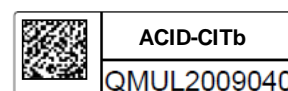
Blood - Serum separator (Gold)



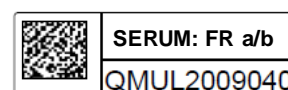
Blood – Buffy coat & Plasma (Green)



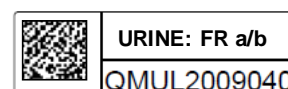
Blood – PBMNC (Yellow)



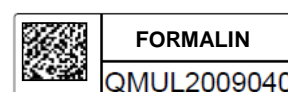
Blood – PBMNC (Yellow)



Serum (Metabolomics) – frozen



Urine – frozen

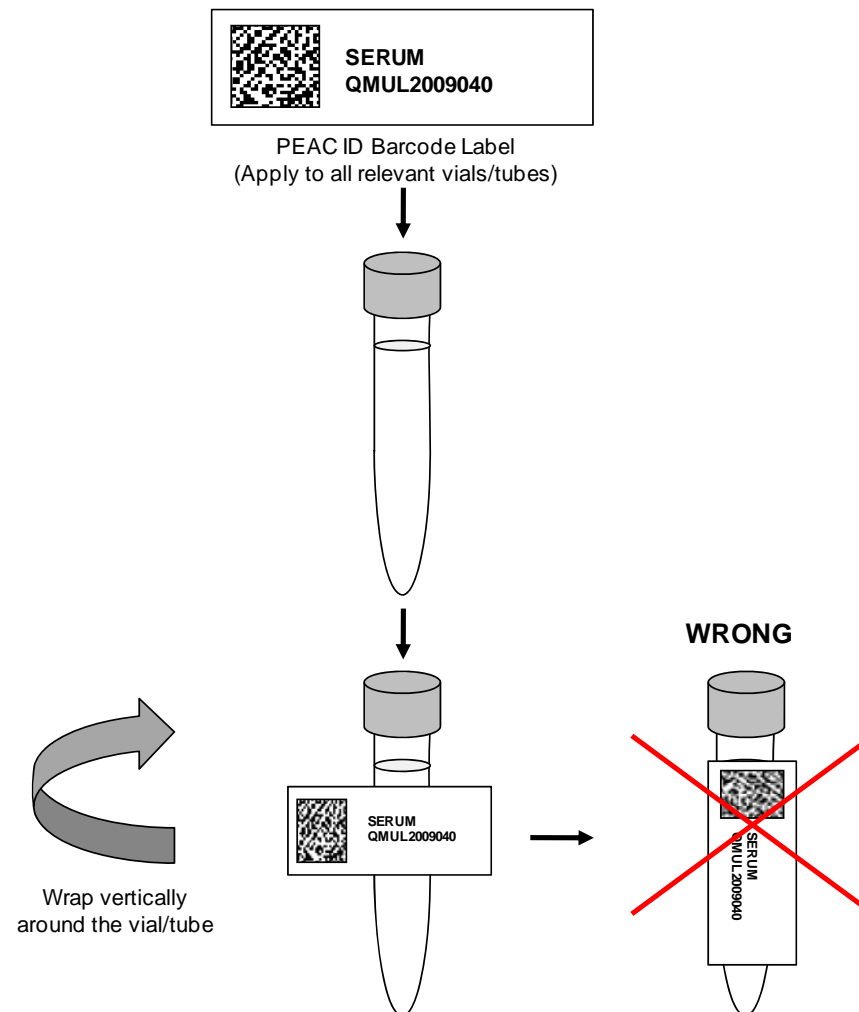


Synovium tissue in 4% NBF

SPECIAL PROCEDURES

SPECIMEN TUBE LABELLING (QMUL sample labels shown as an example)

1. Select the required barcode label(s).
2. Label the tubes to be returned to the central laboratory and confirm that subject identification and other required information is correct.
3. When applying the labels, place the label in the vertical position. Do not wrap the label around the tube horizontally.
4. Do not adhere the label on the cap of the tube. Do not cover any essential written information with the label.
5. Adhere the label to the tube as shown:



SPECIAL PROCEDURES

PACKING LIST & RETURNS SHEETS

A packing list is supplied with each clinical kit listing all items required for sampling.

PEAC CENTRES PACKING LIST

Item	No.	
EDTA-coated tubes X mL (Lavender)	x1	<input type="checkbox"/>
SST tubes X mL (Gold)	x1	<input type="checkbox"/>
ACD tubes X mL (Yellow)	x2	<input type="checkbox"/>
Heparin-coated tubes X mL (Green)	x1	<input type="checkbox"/>
Silica-coated tubes X mL (Red)	x1	<input type="checkbox"/>
Cryovials 2.0mL (+ 1xNBF return bag)	x9	<input type="checkbox"/>
Universals (30mL)	x5	<input type="checkbox"/>
Butterfly	x1	<input type="checkbox"/>
Steriwipes	x2	<input type="checkbox"/>
Vacuholder	x1	<input type="checkbox"/>
Transfer pipettes	x4	<input type="checkbox"/>
Transport/Returns bag (+ absorbant sheet)	x1	<input type="checkbox"/>
Additional returns bag	x1	<input type="checkbox"/>
PVC clear microplate (6 wells)	x1	<input type="checkbox"/>
Sample return sheet - Daily	x1	<input type="checkbox"/>
Sample returns sheet - Monthly	x1	<input type="checkbox"/>

All the supplies needed for specimen collection, storage and transport to the central laboratory are provided by EMR, CHSQ, London, UK. EC1M 6BQ. Use exclusively this material.

The specimen collection supplies are arranged in kits to facilitate specimen collection **per patient**.

Sample returns sheets are also supplied. Samples should be checked off the lists and the lists returned with the patient samples on the appropriate delivery

PEAC Sample Returns (Daily) Ambient

All tubes to be returned to the central laboratory
on a **daily** basis from PEAC Centres (per patient)

Patient PEAC ID:

Item	No.	
SST tubes X mL (Gold)	x1	<input type="checkbox"/>
ACD tubes X mL (Yellow)	x2	<input type="checkbox"/>
Heparin-coated tubes X mL (Green)	x1	<input type="checkbox"/>
Cryovials - Tissue in 4% NBF	x1	<input type="checkbox"/>
Universals (Syn.Fluid)	x1	<input type="checkbox"/>

Return check list with **daily** samples (per patient)

PEAC Sample Returns (Monthly) Dry Ice

All tubes to be returned to the central laboratory
on a **monthly** basis from PEAC Centres (per patient)

Patient PEAC ID:

Item	No.	
Cryovials - Frozen Blocks	x3	<input type="checkbox"/>
Cryovials - Tissue in RNA Later	x3	<input type="checkbox"/>
Cryovials - Synovial Fluid	x1	<input type="checkbox"/>
Cryovials - Serum	x1	<input type="checkbox"/>
Universals (20mL Urine/Blood)	x3	<input type="checkbox"/>

Return check list with **monthly** samples (per patient)

SPECIAL PROCEDURES

CONVERSION OF RELATIVE CENTRIFUGAL FORCE (RCFg) TO REVOLUTIONS PER MINUTE (RPM) BASED ON CENTRIFUGE ROTOR RADIUS

Fixed bucket centrifuge

Consult the manufacturer's instructions that were received with the fixed bucket centrifuge or that are available on the manufacturer's website to determine how the RPM or speed settings of the centrifuge are related to the RCF(g) produced during centrifugation.

Swinging bucket centrifuge

Use the following formula to determine the centrifuge RPM for the 1600 RCF(g) that is recommended:

$$\text{RCF(g)} = 0.00001118 \times r \times N^2$$

$$N = \text{square root of } [\text{RCF(g)} / (0.00001118 \times r)]$$

RCF(g) = Relative Centrifugal Force (g)

r = Rotating radius in centimetres (radius distance in cm that is measured from the bottom of the swing bucket in the horizontal position to the centre of the rotor)

N = Rotating speed in revolutions per minute (RPM)

Centrifuge RPMs required given rotor length and the RCF(g) required								
Rotor radius		RCF (g)						
In mm ↓	In cm ↓	1000 RCF(g)	1200 RCF(g)	1400 RCF(g)	1500 RCF(g)	1600RCF(g)	1800 RCF(g)	2000 RCF(g)
		RPMs ↓ -->						
100	10	3000	3280	3540	3670	3790	4020	4230
120	12	2740	3000	3240	3350	3460	3670	3870
140	14	2530	2770	3000	3100	3200	3400	3580
160	16	2370	2600	2800	2900	3000	3180	3350
180	18	2230	2450	2640	2740	2820	3000	3160
200	20	2120	2320	2510	2600	2680	2840	3000
220	22	2020	2210	2390	2470	2560	2710	2860
240	24	1940	2120	2290	2370	2450	2600	2740
260	26	1860	2040	2200	2280	2350	2490	2630
280	28	1790	1960	2120	2190	2270	2400	2530
300	30	1730	1900	2050	2120	2190	2320	2450
350	35	1600	1760	1900	1960	2030	2150	2270
400	40	1500	1640	1770	1840	1900	2010	2120
450	45	1410	1550	1670	1730	1790	1900	2000
500	50	1340	1470	1590	1640	1700	1800	1900

Version 1 - March 2009

PACKAGING AND TRANSPORT

DANGEROUS GOODS

The shipment of “dangerous” goods (such as certain chemicals) is subject to local, national and international laws and regulations (or individual airline requirements).

The person(s) preparing the “dangerous goods” for shipping is/are responsible for ensuring that the package, when shipped, meets the requirements of all applicable laws (including any training requirements).

The technical information presented in this manual is not intended to be, and should not be considered as, regulatory training in the handling of “dangerous goods”. Any questions you may have about requirements for shipping dangerous goods should be directed to appropriate consultants, counsel, or your appropriate regulatory authorities.

Diagnostic specimens that are transported by air must be packaged according to IATA Packing Instruction 650. For a complete description of all requirements to prepare and transport safely a consignment of diagnostic specimens, please consult the current year’s Dangerous Goods Regulations (DGR) published each year by the International Air transport Association (IATA).

- The packaging must be marked “UN3373 BIOLOGICAL SUBSTANCE, CATEGORY B”.

IATA Note: *Diagnostic specimens shipped in carbon dioxide, solid (dry ice), or liquid nitrogen must comply with the provisions of the DGR applicable to those substances in addition to the requirements of Packing Instruction 650.*

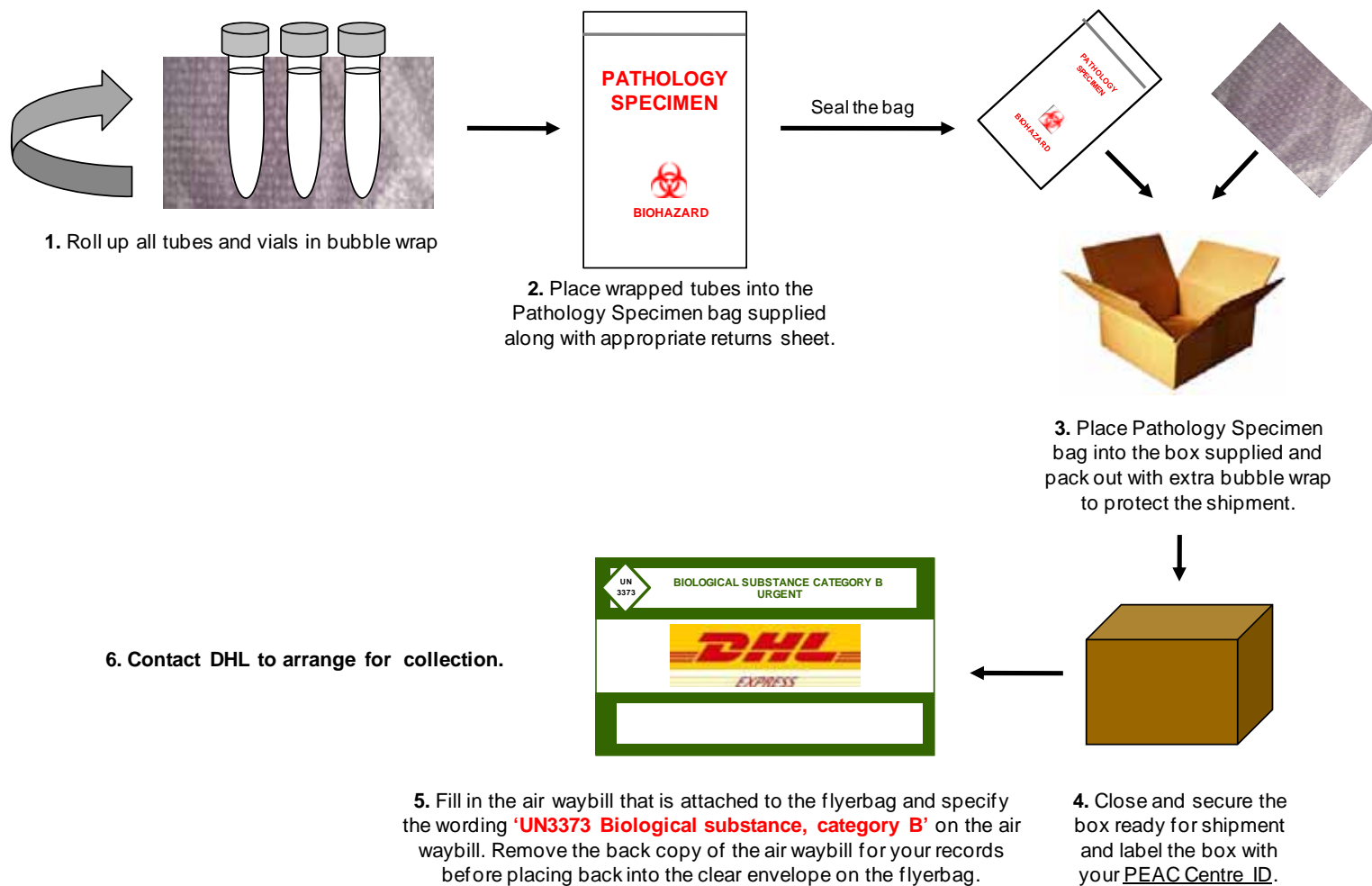
It is imperative that sites follow the Packing Instruction 650 to ship their specimens, as failure to do so may result in a package being denied for transport and/or the shipper being fined.

SPECIFIC COURIER (All Centres)

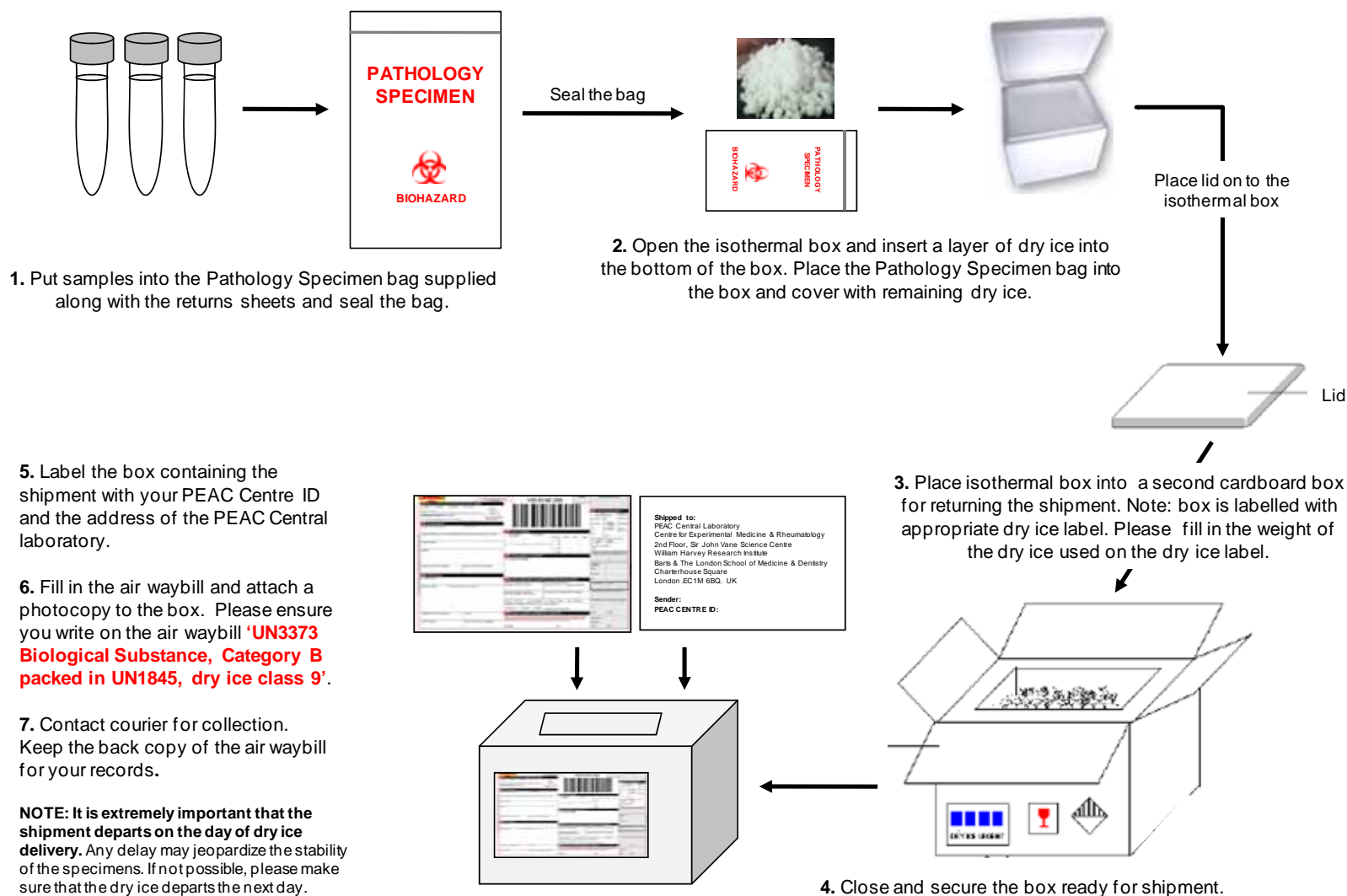
Ambient Sample Shipment: DHL

Deep frozen Sample Shipment: DHL

SHIPMENT - AMBIENT SAMPLES



SHIPMENT - DEEP FROZEN SAMPLES (DRY ICE)



COMPLETING THE AIR WAYBILL (DHL)

- Ensure you select an appropriate air waybill for your shipment(s).
- Fill out the relevant sections of the transport document including the number of boxes shipped and total weight.
- Ensure the document is signed and dated.
- Keep the back copy of the air waybill so you have a record number should we need to trace the package.
- When shipping several packages, prepare as indicated, make a copy of the transport document and attach a copy of the document to each package. Ship individually. Do not tape together.

1 Payer account number and insurance details. Please choose the method of payment. For transport charges to be paid by the receiver or third party, specify the payer's account number. If this is not specified, the invoice will be sent automatically to the sender. To insure your shipment, please specify the value of your shipment.

2 Shipper's account number. If you have an account number, please enter it here. If you do not have an account number, please leave this field blank.

3 Shipper's contact person name.

4 Shipper's reference. Enter any reference number that might help you to identify the shipment in the future. Please note that the first TWELVE characters of the sender's reference will appear on your invoice.

5 Shipper's company name.

6 Shipper's address.

7 Shipper's postal code.

8 Shipper's telephone number, fax number or email address.

9 Receiver's company name.

10 Receiver's full address. Please note that DHL will not deliver to post boxes.

11 Receiver's postal code.

12 Receiver's contact person name.

13 Receiver's telephone number, fax number or email address.

14 Shipper's authorisation and signature. The sender must sign and date the Air Waybill, thereby confirming that the stated details correspond to the contents of the shipment, and accepting DHL's terms and conditions as shown.

15 Shipment details. Enter the total number of pieces, the total weight rounded up to the nearest half kilo and the dimensions of your shipment in cm (length, width & height).

16 Full description of the contents. Give a full description of the items being shipped. The information provided must be accurate. If there is insufficient space, the Proforma or Commercial Invoice must give full details. The description of the contents on the Air Waybill should then state "Refer to Invoice".

17 For non-document shipments only. Enter the declared value of the shipment's contents.

18 Product and Services. Indicate the required product and service by marking the appropriate boxes.

19 Air Waybill number.

STEP 1 Ensure that your shipment is packed and secured.

STEP 2 Fill in the Air Waybill.

STEP 3 Ensure all accompanying documents (e.g. Proforma Invoice) are attached.

STEP 4 Call a DHL Service Centre for pick-up or drop off.

Version 1 - March 2009

