**PURPOSE:**

To define specimen acceptability for use in the University of Washington Medical Center- Transfusion Services Laboratory and how to maintain records of specimen and order receipt within the laboratory.

**PRINCIPLE & CLINICAL SIGNIFICANCE:**

Specimen collection is a critical step in the pre-transfusion process and errors in labeling of samples can lead to misidentification and fatal hemolytic transfusion reactions

**POLICIES:**

* All specimens must be accurately labeled to ensure patient safety and prevent errors in patient diagnosis and treatment secondary to misidentified specimens.  The UWMC TSL will not accept mislabeled or unlabeled specimens. **CRITICAL**: Specimen may not be relabeled, information corrected or sample returned to the nursing unit. If a sample can not be recollected, contact the TSL MD on-call for written approval to accept and perform testing. Mislabeled specimens include:
  + Specimens that are not labeled
  + Specimens that are not labeled with two identifiers
  + Specimens labeled with a patient name or medical record number different from that on the accompanying requisition
  + Specimens drawn or removed from the correct patient but labeled with the wrong patient identification (patient hospital number, full patient name or date of birth)
  + Specimens labeled with more than one label and conflicting patient identification
  + Specimens with labels and requisitions that match but have been drawn or removed from a different patient (wrong blood in tube)
  + Specimens labeled with appropriate identifiers but accompanied by requisitions with paitent identifiers from two or more patients, even if one set of identifiers on the requisitons matches the identifiers on the specimen
* Specimen containers must be labeled in the presence of the patient at the time of collection
* Patient identification must be legible on the specimen container
* **SPECIMENS** must be labeled with the following:
  + Patient’s first and last name as it appears on the armband and in Sunquest
  + Patient’s Medical Record Number (MRN)
  + Date and time of collection - The year is not required. Samples will not be rejected if the year is discrepant.
  + Phlebotomist and verifier’s signature - Nursing policy at UWMC and SCCA require the signature of the a second licensed clinician who is verifying identification of the patient and specimen labeling in addition to the signature of the phlebotomist (see UWMC APOP Policies 65-3 and 65-4)
  + Indelible ink
* **REQUISTIONS** must include the following:
  + Patient’s first and last name as it appears on the armband and in Sunquest
  + Patient’s Medical Record Number (MRN)
  + Phlebotomist and verifier’s signature - Nursing policy at UWMC and SCCA require the signature of a second licensed clinician who is verifying identification of the patient and specimen labeling in addition to the signature of the phlebotomist (see UWMC APOP Policies 65-3 and 65-4)
  + Date of collection – Requisitions print with the date on the form. The phlebotomist or verifier does not need to write the date on the form and the time of collection is not required.
* Samples for compatibility testing batteries are valid for three days from the date of collection unless a TSCREX extension (up to 30 days) is approved based on documentation that the patient has not been transfused or pregnant in the last three months.
* Orders for non-red cell components are valid for only 24 hours
* **Inpatient and Outpatient test orders** and **inpatient product orders** placed in ORCA are interfaced with Sunquest and received in SQ General Laboratory function. These include all patient care areas except the emergency room, operating rooms, clinics using EPIC, and any orders on manual forms
* **SCCA Outpatient product orders** are not available to receive in SQ General Laboratory function. Create a product order as per the table

**SPECIMEN REQUIREMENTS:**

* 1-6 mL of blood in an appropriately labeled Pink (EDTA), Lavender (EDTA) or Red Top (no additive) Tube. Samples must be received within 24 hours of collection and tested within three days of collection. Samples may be stored in the laboratory at 2-6°C if testing is not performed immediately.

**REAGENTS/SUPPLIES/EQUIPMENT:**

|  |  |  |
| --- | --- | --- |
| **Reagents:** | **Supplies:** | **Equipment:** |
| * NA | * Accession Labels * Completed Test Requisition | * LIS * Bar-code reader * Time stamper |

**QUALITY CONTROL:**

NA

**INSTRUCTIONS:**

[**Specimen Receipt and Acceptabilty**](#SpecimenAcceptability)

[**Receiving All ORCA/Sunquest Interfaced Orders**](#InterfacedOrders)

[**Receiving Non-Interfaced Platelets, Cryoprecipitate or Plasma Orders**](#NonInterfacedPlatelet)

[**Receiving Non-Interfaced RBC and Granulocyte Orders (MLS staff only)**](#NonInterfacedRBCOrders)

[**Labeling and Routing Specimens and Test Requisitions**](#Labeling)

[**Processing Blood Product Orders**](#ProcessingBloodProductOrders)

[**Specimen Rejection**](#SpecimenRejection)

[**Appendix A: TSL Sunquest Test/Battery Order Codes**](#TestingCodes)

**[Appendix B: TSL Sunquest Product/Processing Order Codes](#ProductCodes)**

**Specimen Receipt and Acceptability**

|  |  |
| --- | --- |
| **STEP** | **ACTION** |
| 1 | Time stamp the requisition sent with the specimen |
| 2 | Confirm specimen is   * Collected in the correct container * Labeled with the following   + Patient first and last name   + Medical Record Number (MRN)   + Date and time of collection (Circled Date of service printed on the label is acceptable as the collection date – year is not required and should not be rejected if discrepant)   + 2 signatures (phlebotomist and verifier) |
| 3 | Verify requisition has 2 signatures (phlebotomist and verifier) |
| 4 | Verify the following information matches **EXACTLY** on the specimen, requisition and in Sunquest:   * Patient first and last name (middle name/initial or generational title is not required, but must not be discrepant) * Patient MRN |
|  | |  |  | | --- | --- | | **If** | **Then** | | No discrepancies | Go to the next section | | Discrepancies | * Contact clinical care staff to clarify information * Go to section [Specimen Rejection](#SpecimenRejection)   **CRITICAL:** Specimen may not be relabeled, information corrected or sample returned to the nursing unit | |

**Receiving All ORCA/Sunquest Interfaced Orders**

| **STEP** | **ACTION** |
| --- | --- |
| 1 | Perform a patient history check per SOP *Patient History Check* |
| 2 | Select “General Laboratory’ function in Sunquest |
| 3 | Click on ‘Orders’ and select <Orders Receipt//Modify> (Order Access box will open) |
| 4 | Enter/Scan the MRN from the specimen  Click <Get Patient> and select the correct patient if the ‘Patient Select’ box appears |
| 5 | Click <Display Orders> and highlight the appropriate order |
| 6 | Update and/or enter the following information in the ‘General Information’ box   * Collection Date and Time  |  |  | | --- | --- | | **If receiving** | **Then** | | Test Order | Update if necessary to the collection date and time on the specimen | | Product Order | Enter “U” in the time field |  * Received Date and Time (Type T for today, <TAB> to accept default of now) * Click <SAVE> |
| 7 | * Update the container type, if necessary * Add any additional samples if collected * Click <Route> |
| 8 | Click <SAVE> when Result Entry Box appears.     |  |  | | --- | --- | | **If receiving** | **Then** | | Test Order | Update if necessary to the collection date and time on the specimen | | TRBC or TGRAN | * A popup box will the following will appear: “Could Not Route: No order codes were routable (result at request, Bill only, etc)” * Click <OK> | | TFFP, TPLT, TCRY, TNRBC | Click <OK> |   **NOTE:** Notify Specimen Processsing (SPS) if non TSL order was received |
| 9 | Accession (ACC#) and containers labels (CID#) will print   |  |  | | --- | --- | | **If receiving** | **Then** | | Test Order | Go to section [*Labeling and Routing Specimens and Requisitions*](#Labeling) | | Product Order | Go to section [*Processing Blood Product Orders*](#ProcessingBloodProductOrders) | |

**Receiving Non-Interfaced Platelets, Cryoprecipitate or Plasma Orders**

| **STEP** | | **ACTION** |
| --- | --- | --- |
| 1 | Time stamp the requisition. | | |
| 2 | | Perform a patient history check to determine if an ABO/Rh performed in-house is on file (refer to SOP *Patient History Check)* and if there is a current product order   | **If** | **Then** | | --- | --- | | Yes | Go to next step | | No | Check for a current BBHOLD specimen on file   |  |  | | --- | --- | | **If BBHOLD specimen is** | **Then** | | Available | * Note BBHOLD Collection Date/Time * Open Order Entry (OE) in Sunquest * Find patient by MRN * Select correct “Event” (account#) * Enter Collection Date/Time of BBHOLD * Go to Step 6 | | Not Available | * Notify clinical care staff to order an ABO/Rh test * Go to next step | | |
| 3 | | Check for a valid component order   |  |  | | --- | --- | | **If a valid order is** | **Then** | | Available | Refer to MLS to update # of units ordered in BOP to reflect the new order and allocate component, if necessary for remote sites and special needs | | Not available | Go to next step | |
| 4 | | Open (OE) in Sunquest |
| 5 | | Look up the patient by the MRN |
| 6 | | Select the correct “Event” (account #) |
| 7 | | Enter ‘Order Time’ in the Collection Time field |
| 8 | | Enter ‘Receive Date/Time’ from time stamp on the requisition |
| 9 | | Enter any additional info provided. (Physician 6 digit #, Comments) |
| 10 | | Enter Diagnosis Code   |  |  | | --- | --- | | **If patient is** | **Then the diagnosis code is** | | Outpatient or ER | * Required * Enter code from requisition | | Inpatient | * Not required * Enter NDX if no diagnosis is provided | |
| 11 | | * Order the appropriate test using the SQ code (e.g. enter ABRH if ordering ABO/Rh – refer to [Appendix A](#TestingCodes) and [Appendix B](#ProductCodes)) * Enter <S> in the modifier filed if order is STAT * Click <SAVE> |
| 12 | | * Tab through Container type * Click <Route> |
| 13 | | * Accept the default physician instructions NONE * Enter units ordered (%UO) in the Result Entry box   Click <SAVE> |

**Receiving Non-Interfaced RBC and Granulocyte Orders (MLS staff only)**

|  |  |
| --- | --- |
| **STEP** | **ACTION** |
| 1 | Perform a patient history check to determine if the patient has the following on file (refer to SOP *Patient History Check)*   * 2 ABO/Rh tests for separately drawn specimens * Current type and screen  |  |  | | --- | --- | | **If** | **Then** | | Yes | * Update # of units ordered in BOP to reflect the new order * Allocate RBC if necessary for remote sites and special needs * File requisition | | No | |  |  | | --- | --- | | **If** | **Then** | | Testing is ordered and receipt of specimen pending | * Hold order until specimen arrives * Update # of units ordered in BOP after interfaced order is received | | BBHOLD sample is available | * Note BBHOLD Collection Date/Time * Go to step 2 | | None of the above | * Notify Clinical Staff to order Type & Screen or ABO/Rh confirmation and draw a specimen | | |
| 2 | Go to Order Entry (OE) in Sunquest and scan/enter patient MRN in the Lookup by field |
| 3 | Select the correct “Event” (account #) |
| 4 | Enter Collection Date/Time of BBHOLD |
| 5 | Enter Receive Date/Time from time stamp |
| 6 | Enter any additional info provided. (Physician 6 digit #, Comments) |
| 7 | Enter Diagnosis Code   |  |  | | --- | --- | | **If patient is** | **Then the diagnosis code is** | | Outpatient or ER | * Required * Enter code from requisition | | Inpatient | * Not required * Enter NDX if no diagnosis is provided | |
| 8 | Order a TSCR.   * Enter <S> in the modifier filed if order is STAT * Click <SAVE> |
| 9 | * Update the container type, if necessary * Click <Route> |
| 10 | * Return past physicians instructions (%PI) to default to NONE. * Enter units ordered (%UO) in the Result Entry box. * Click <SAVE> |

**Processing Blood Product Orders**

|  |  |
| --- | --- |
| **STEP** | **ACTION** |
| 1 | Perform a history check (refer to SOP *Patient History Check)* to including the order requisition to ensure order and patient requirements are met   |  |  | | --- | --- | | **If** | **Then** | | No discrepancies are found between the requisition and patient history | Process the order | | Discrepancies | * Clarify with UWMC BB MD on call. * Update the BAD file as necessary to ensure the patient’s SQ record includes any attributes and special requirements | |
| 2 | |  |  | | --- | --- | | **If order is for the following** | **Then** | | TRBC  TGRAN | Add the number of units ordered to the %UO field in the TSCR or TXM   |  |  | | --- | --- | | **If required testing is** | **Then** | | Required | Route to the appropriate testing bench | | Complete | Route to the crossmatching bench | | | TFFP  TPLT  TCRY  TNRBC | |  |  | | --- | --- | | **If required testing is** | **Then** | | Required | Route to the appropriate testing bench | | Complete | Route to the allocation bench | | |

**Labeling and Routing Specimens and Test Requisitions**

| **STEP** | **ACTION** |
| --- | --- |
| 1 | Verify information on the ACC# and CID# labels match the specimen and requisition and adhere the labels as follows   |  |  | | --- | --- | | **If** | **Then** | | Requisition | Attach the ACC# label | | Specimen | * Initial the CID# label as verification the information matches * Adhere the label lengthwise in a manner to leave the name and MRN on the original label visible * Adhere additional CID# labels in a manner allowing the original CID#, name and MRN to remain visible. | |
| 2 | Check samples for clots prior to centrifugation   |  |  | | --- | --- | | **If clots are** | **Then** | | Detected | Mark across the top of the cap with a Sharpie to indicate that the sample must be tested manually | | Not detected | Go to next step | |
| 3 | Centrifuge specimen and check for the following:   |  |  | | --- | --- | | **If** | **Then** | | Low Volume | MLS to assess for recollection   |  |  | | --- | --- | | **If** | **Then** | | Acceptable | Go to next step | | Not Acceptable (QNS) | Go to section ‘[Specimen Rejection](#SpecimenRejection)’, the specimen is unacceptable for testing | | | Visual Hemolysis | Route the sample to the manual testing bench to prevent delays in testing due to interferrrence with Tango test interpretation. | | Moderate to Gross Lipemia | | Contamination with I.V. Fluids | Go to section ‘[Specimen Rejection’](#SpecimenRejection), the specimen is unacceptable for testing | |
| 4 | Route samples and requisition to the appropriate testing or processing area |

**Specimen Rejection**

|  |  |  |
| --- | --- | --- |
| **STEP** | | **ACTION** |
| 1 | | Notify the patient’s nurse of the rejection and the need for re-draw and document the following on the order request:   * Name person notified * Summary of the conversation * Date & Time of notification * Tech ID |
| 2 | | Fill out a QI form |
| 3 | |  |  | | --- | --- | | **If the order is** | **Then** | | Not received in Sunquest | Cancel the order following the instruction in SOP *Sunquest: Canceling Orders and Correcting Results* | | Received in Sunquest | Give requisition and sample to a MLS and ask them to cancel the order following SOP *Sunquest: Canceling Orders and Correcting Results* | | |
| 4 | Attach the following to the QI form   * Requisition * Photocopy of the label if the specimen is rejected due to an unacceptable label issue | |
| 5 | Place the specimen in the unacceptable specimen bin | |

**CALIBRATION:**

NA

**PROCEDURE NOTES AND LIMITATIONS:**

NA

**REFERENCES:**

* Labeling Requirements for Specimens and Handling of Mislabeled Specimens, Laboratory Medicine Policy 65-4
* Policy 85-29 UW Medical Center Administrative Policies and Procedures, Use of Two Patient Identifiers.
* Gen03 Rev04 SCCA, Drawing Blood Specimens for Compatibility Testing
* Technical Manual. Bethesda, MD: AABB Press, current edition
* Standards for Blood Banks and Transfusion Services. Bethesda, MD: AABB Press, current edition

**RELATED DOCUMENTS:**

FORM QI Report

SOP Patient History Check (HXCK)

SOP Canceling Orders and Correcting Results in Sunquest

|  |  |  |  |
| --- | --- | --- | --- |
| **UWMC SOP Approval:** | | | |
|  |  |  |  |
| **UWMC CLIA Medical Director** |  |  |  |
|  | Mark H. Wener, MD | Date |  |
|  |  |  |  |
| **Transfusion Service Manager** |  | Date |  |
|  | Nina Sen |  |  |
|  |  |  |  |
| **Compliance Analyst** |  | Date |  |
|  | Christine Clark |  |  |
| **Transfusion Service**  **Medical Director** |  | Date |  |
|  | Monica Pagano, MD |  |  |
|  |  |  |  |
| **UWMC Biennial Review:** | |  |  |
|  |  |  |  |
|  |  | Date |  |
|  |  |  |  |
|  |  | Date |  |
|  |  |  |  |

REVISION HISTORY:

4/21/17: Updating the SOP to include the following changes:

* The year of collection is not required on specimens and will not be rejected if discrepant
* Written date and time of collection on the requisitons is not required of the phlebotomist and the specimen will not be rejected if discrepant

8/14/18: Revised for implementation of interfaced inpatient product orders.

**APPENDICES:**

**Appendix A: TSL Sunquest Test/Battery Order Codes**

| **Sunquest**  **Order**  **Code** | **Test Name** | **Sunquest**  **Credit**  **Code** | **Test Name** |
| --- | --- | --- | --- |
| ABI | Antibody Identification | ABICR | Antibody ID, CREDIT |
| ABR | Blood Type | ABRCR |  |
| ABID2 | Additional Ab Panel(s) (BILL) | NA | NA |
| ABPATH | Antibody ID Consult | NA | NA |
| **ABRH** | Blood Type | ABRCR | ABO/Rh(D), CREDIT |
| **ABRH2** | Blood Type Confirmation | NA | NA |
| **ABSCR** | Antibody Screen | ASCR | Antibody Screen, CREDIT |
| **ABTA** | Antibody Titer RBC Anti-A | TTRCR | Antibody Titer, CREDIT |
| **ABTB** | Antibody Titer RBC Anti-B | TTRCR | Antibody Titer, CREDIT |
| **ABTIGG** | Ab Titer RBC IgG or Allo Ab | TTRCR | Antibody Titer, CREDIT |
| ACON | Auto Control |  |  |
| AGI | Antigen Type Patient, each | AGICR | Antigen Info (Patient), CREDIT |
| AO | Antigen Type Units, each | AOCR | Ag/Ab Info (Unit), CREDIT |
| ARC | ABO/Rh with type confirmation fields |  | No charge test |
| AS | Antibody Screen | ASCR |  |
| BATT | Original Battery Ordered | NA | NA |
| BBC | Blood Bank Comment | NA | NA |
| BBCS | Blood Bank Comment, Suppressed | NA | NA |
| BBO | Transfusion Services Testing | NA | NA |
| **BBHOLD** | Blood Bank Hold Sample | NA | NA |
| **BBRH** | Rh Only | RHCR | Rh(D) Only, CREDIT |
| BMRN | Baby’s Medical Record Number | NA | NA |
| CM | Unit Tag Comment | NA | NA |
| **CORDBT** | Cord Blood/Neonate Type/DAT | NA | NA |
| CT | Blood Component Type |  |  |
| NA | NA | CXMCR | Crossmatch (Coombs), CREDIT |
| **DAT (DBS)** | Direct Antiglobulin Test | DBSCR | DAT, Broad Spectrum, CREDIT |
| DCD | NA | DCDCR | DAT, Complement, CREDIT |
| DIG | NA | DIGCR | DAT, Anti-IgG, CREDIT |
| DU | Weak D (no billing) | Na | NA |
| EON | Emergency O negative | NA | NA |
| EU | Equivalent Units | NA | NA |
| FETB | Fetal Blood Screen | FETBCR | Fetal Bleed Screen (CREDIT) |
| ELU | Antibody Elution | ELUCR | Antibody Eluted, CREDIT |
| **ELUT** | Antibody Elution | ELUCR | Antibody Eluted, CREDIT |
| **ER** | Emergency Release | NA | NA |
| NA | NA | EXMCR | Electronic Crossmatch, CREDIT |
| NA | NA | FETBCR | Fetal Bleed Screen (CREDIT) |
| HOLDR | Blood Bank Hold Result | NA | NA |
| IDCK | Phlebotomy IDs | NA | NA |
| LOTNO | Lot Number | NA | NA |
| MMRN | Mother’s Medical Record Number | NA | NA |
| OACC | Original Accession Number | NA | NA |
| **OPINK** | Transfusion Services Testing | NA | NA |
| PFC | Percent Fetal Cells | ? | ? |
| **PREN** | Prenatal Testing | PRENCR | Prenatal Testing, CREDIT |
| PRPATH | Prenatal Consult | NA | NA |
| **RH** | Rh Type | RHCR | Rh Type, Credit |
| RHDOSE | RhIG Dose Indicated | NA | NA |
| **RHEV** | Rh Immune Globulin Evaluation | RHEVCR | RhIG Evaluation (CREDIT) |
| RHEL | RhIG Eligible? | NA | NA |
| **RHPHEN** | Rh Phenotype | NA | NA |
| RN | Armband Number | NA | NA |
| RPSBCR | Performing Lab | NA | NA |
| **SAPHEN** | Single Phenotype | NA | NA |
| SGN | Segment Number | NA | NA |
| ST | Status of Unit | NA | NA |
| TTR | Titer | TTRCR | Antibody Titer, CREDIT |
| TTR2 | Additional Ab Titer(s) (BILL) | TTRCR | Antibody Titer, CREDIT |
| TTRRP | Titer, previous sample | TTRCR | Antibody Titer, CREDIT |
| TXPATH | TRRX Consult | NA | NA |
| TXRINT | Biovigilance Designation | NA | NA |
| UDIV | Unit Division | NA | NA |
| UR | Unit Tag Reprint | NA | NA |
| **TRRX** | Transfusion Reaction Workup | TRRXCR | Tx Reaction Workup, CREDIT |
| **TSCR** | Type and Screen | TSCRCR | Type and Screen, CREDIT |
| **TSCREX** | Type and Screen, Extended | TSCRCR | Type and Screen, CREDIT |
| TTR2 | Additional Ab Titer(s) (BILL) | TTRCR | Antibody Titer, CREDIT |
| **TXM** | Type and Crossmatch | TXMCR | Type and Crossmatch, CREDIT |
| **XPINK** | Additional Blood Bank Sample | NA | NA |

\*Test batteries are listed in **BOLD**

**Appendix B: TSL Sunquest Product/Processing Order Codes**

| **Sunquest**  **Order**  **Code** | **Product/Product Processing Name** | **Sunquest**  **Credit**  **Code** | **Product/Product Processing Name** |
| --- | --- | --- | --- |
| AUTOP | Auto Bld Process, Unused BILL | AUTOCR | Autol Bld Collect, CREDIT |
| IRRAD | Bld Product Irradiation (BILL) | NA | NA |
| PLS00 | Fresh Frozen Plasma (BILL) | NA | NA |
| NA | NA | ADMNCR | Blood Admin Fee, CREDIT |
| PLT0L | PLTPH, LKR (BILL) | PLT01 | PLTPH, LKR (CREDIT) |
| NA | NA | PLT03 | PLTPH, LKR, IRR (CREDIT) |
| NA | NA | PLT04 | PLT, HLA, LKR (CREDIT) |
| NA | NA | PLT05 | PLTPH,LKR,IRR,CMVN (CREDIT) |
| RBCL | RBC, Leukoreduced (BILL) | RBC01 | RBC, LKR (CREDIT) |
| NA | NA | RBC05 | RBC, LKR, IRR (CREDIT) |
| NA | NA | RBC08 | Whole Blood (CREDIT) |
| RSPLT | Split RBC (BILL) | RBC09 | Blood, Split Unit (CREDIT) |
| PSPLT | Split Platelet (BILL) | RBC09 | Blood, Split Unit (CREDIT) |
| SPLIT | Split Blood Products ea (BILL) | RBC09 | Blood, Split Unit (CREDIT) |
| FPSPL | Split Plasma (BILL) | NA | NA |
| GRN00 | Granulocytes, Pher (BILL) | NA | NA |
| HLAPLT | HLA matched platelets, LR, IRR | NA | NA |
| IRRAD | Bld Product Irradiation (BILL) | NA | NA |
| NA | NA | RBC11 | RBC, Washed, LKR (CREDIT) |
| NA | NA | RBC12 | RBC, WSHD, IRR, LKR, (CREDIT) |
| NA | NA | RBC14 | RBC, DEGLYC, LKR (CREDIT) |
| NA | NA | RBC15 | RBC, DEGLYC, IRR, LKR (CREDIT) |
| CRY00 | CRYO (BILL) | NA | NA |
| **TRBC** | Transfuse Cryoprecipitate | NA | NA |
| **TCRY** | Transfuse Cryoprecipitate | NA | NA |
| **TFFP** | Transfuse Plasma | NA | NA |
| **TNRBC** | Transfuse Neonatal RBCs | NA | NA |
| **TPLT** | Transfuse Platelets | NA | NA |
| UIP | Units in CRYRTP pool | UIPCR | Units in CRYRTP pool, CREDIT |
| **XPINK** | Additional Blood Bank Sample | NA | NA |