



# Indiana University Health

Indianapolis, IN 46202

Standard Operating Procedure Manual (SOP) – Transfusion Medicine

## Antibody Work-up Form

### IUH AHC Blood Bank Indianapolis Testing

Form #: BBT F004.04

Manual: Testing

Original Effective: 01/29/20

Revised Date: 3/24/20

(Attach Cerner Accession Label Here)

Patient Name: \_\_\_\_\_

MRN: \_\_\_\_\_

DOB: | \_\_\_\_\_

#### PATIENT'S HISTORY:

Check here if the PATIENT HISTORY

is documented on the *Antibody Work Up Submission Form*. No additional documentation is needed for the PATIENT HISTORY or COMMUNICATION sections of this form.

Previous Transfusion:  Yes  No  Unknown\*

Cerner Review: Last Transfusion at IU Health:  No/None,  Yes, Date: \_\_\_\_\_

Call Floor/Clinic: Transfusion Elsewhere?:  No or NA,  Yes, Date: \_\_\_\_\_

If transfused elsewhere, Other Transfusing Facility/Date: \_\_\_\_\_

Previous Antibodies?  No/None,  Yes, List: \_\_\_\_\_

Date of Last ABID: \_\_\_\_\_ Clinical Diagnosis: \_\_\_\_\_

For Female Patients:  NA for male patients or Woman >55 years old

Women ≤ 55: Currently pregnant:  Yes  No Prior Pregnancies:  Yes  No  Unknown\* Date of Last RhIG dose \_\_\_\_\_  NA

**\*If UNKNOWN Transfusion History or Prior Pregnancy:**

Document communication for follow-up

\_\_\_\_\_  
RN (First and Last Name)

\_\_\_\_\_  
Contact Phone #

**COMMUNICATION:** Called/Reported Critical Value to Patient's RN or MD?  Yes,  No, history of antibody,  NA  
Critical Value (PRV) entered in Cerner (Result Comment)?  Yes  No Call, history of antibody,  NA

**PATIENT PHENOTYPE**  No Phenotype Testing Required,  Submit to BA Testing  Historical Phenotype Available

For serologic phenotype testing: *Patient transfused in the last 90 days?*  No, Ag test as needed  Yes, cell separation before testing

Serologic Phenotype Testing	C	E	c	e	K	k	Fy <sup>a</sup>	Fy <sup>b</sup>	Jk <sup>a</sup>	Jk <sup>b</sup>	M	N	S	s		<b>DAT Testing, 0-4+, NT</b>
<b>Results</b> <b>0-4+, mf</b>																Tube Anti-IgG DAT
<b>Lot Number of Antisera And Expiration</b>																Tube Anti-C3bd DAT: Required if IgG is positive
MTS IgG DAT																
QC Valid? Y/N																IgG DAT Control - Required if IgG and C3bd are both positive

#### Titer Results:

Panel Lot# \_\_\_\_\_  
Exp. : \_\_\_\_\_ Cell# \_\_\_\_\_  
(Use Homozygous Cell)

Manual  Vision

Antibody Titered	1	2	4	8	16	32	64	128	256	512	1024

TITRATION: Interpretation \_\_\_\_\_

#### Interpretation and Cerner Entry

Testing Tech Initials	Patient's ABO/RH	Patient's Antibody(ies) or Reactivity Detected

Second Tech Check (initial when complete): PPI check/ Are Comments acceptable? ORV check/ Results entered? \_\_\_\_\_

#### MANAGEMENT REVIEW:

Reviewed By/Date: \_\_\_\_\_ / \_\_\_\_\_ CoPath Case # \_\_\_\_\_



**Transfusion Complications Flow Sheet**

(Attach Cerner Accession Label Here)

Patient Name:  
MRN:  
DOB:

Co-Path Case #: \_\_\_\_\_

Tech: \_\_\_\_\_ Date: \_\_\_\_\_

Check here the type of investigation

Acute, during transfusion or within 24 hours of transfusion

Delayed, > 24 hours to 28 days since transfusion.

1. PRODUCT (circle product): LPC Plasma LAPL CRYO OTHER:

**Record DONOR ID # (DIN #)** (sticker if available) : \_\_\_\_\_

2. CLERICAL CHECK:  All data matches

When data does not match – List discrepancies: \_\_\_\_\_

3. ATTACHED IV SOLUTION:  NONE  0.9%NaCl  Other: \_\_\_\_\_

4. PATIENT'S PLASMA / SERUM EXAM:

Post Sample 1 = Hemolysis Present:  No  Yes

(if Yes, request second post sample and confirm with RN there was no difficulty encountered in phlebotomy)

Difficulty in phlebotomy:  No  Yes

Pre Sample = Hemolysis Present:  No  Yes

Post Sample 2 = Hemolysis Present:  No  Yes

Samples taken to Chemistry lab?

Time/Date: \_\_\_\_\_  
(see below Note for criteria)

Note: When visible hemolysis is present **only** in the Post sample(s), send Pre and both Post samples to laboratory for plasma free hemoglobin testing and request post transfusion urinalysis

5. TESTING: Perform ABO-Rh, IAT and DAT on first Post sample using same method of original testing & record in table. Repeat ABORh on donor segment. Perform IS and AHG crossmatch regardless of IAT result (pos or neg). Repeat antigen typing of unit if indicated, record in additional testing area (Section 7 on back).

**NOTE: Pre sample testing is only necessary when there is a Type and Screen discrepancy or Post DAT is Positive**

SAMPLE	Anti-A	Anti-B	Anti-D	A <sub>1</sub> Cell	B Cell	ABO Rh Interp.	Antibody Screen 0-4+			ABY SCR Interp.	DAT IgG/C3bd	DAT Interp.	XM IS/AHG	XM Interpretation
	0-4+	0-4+	0-4+	0-4+	0-4+		I	II	III		0-4+	Pos/Neg	0-4+	(or) Incompatible
POST (first)											IgG C3bd	IgG C3bd		
Donor #: _____													IS Post AHG Post	IS Post AHG Post
PRE (see note)*											IgG C3bd	IgG C3bd	IS Pre AHG Post	IS Pre AHG Pre

6. TEMPERATURE ELEVATION: **at least 2°C or 3.6°F**, send blood product to Microbiology for Gram Stain/Culture. Date/Time sample sent to Mirco \_\_\_\_\_

**SEE BACK for ADDITIONAL INSTRUCTIONS**



**Transfusion Complications Flow Sheet**

7. Notify the Blood Bank physician immediately for any of the following:
- a. Fatalities or sentinel events.
  - b. Blood administration errors or significant clerical errors.
  - c. Cases of severe respiratory distress or suspected TRALI.
  - d. Any of the following symptoms:
    - i. Temperature elevation of at least 2°C or 3.6°F
    - ii. Dyspnea / Shortness of Breath
    - iii. Wheezing
    - iv. Hypoxemia
    - v. Hypotension
    - vi. Suspected Hemoglobinuria/hemolysis (Post transfusion urinalysis is required)

Post transfusion urinalysis ordered  No  Yes  
 If No, call ward to order a post transfusion urinalysis

\_\_\_\_\_ MD notified at \_\_\_\_\_  
 (Blood Bank physician) Date and time / TECH initials

Document Resolution and read back to Blood Bank physician:

\_\_\_\_\_

Date and time / TECH initials

8. Additional testing Requested by Blood Bank Physician:

Reviewed By: \_\_\_\_\_  
 BB Management Date



Indiana University Health

Indianapolis, IN

Standard Operating Procedure Manual (SOP) –

Transfusion Medicine

Form #:

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BBQC-F003.07

Quality Control

Daily Reagent QC: RHBB

Test Date: \_\_\_\_\_

QC Reagent Rack	Lot #/Expiration
Immucor COR QC	
Antisera	
Immucor COR QC Cells	
Immucor Monoclonal Ctrl	
Immucor Panoscreen	
MTS Screen Cells	
MTS Diluent 2	
MTS IgG Card	
Anti-C3b,d	
Complement Control Cells	
Negative Control	
Appearance ✓ and Open Date/initials on all reagents	Tech: _____

Current Lot Number	All Reagent Racks		Rack of Second Lot: _____	Rack of Second Lot: _____
	Lot #/Expiration	Second Lot #/Expiration		
Anti-A				
Anti-B				
Anti-D (series 4)				
A1 Cells				
B Cells				
LISS				
IgG-AHG				
Coombs Check Cells				
Saline				
All lot numbers were visually verified	Tech: _____	Tech: _____	Tech: _____	Tech: _____
Appearance ✓ and Open Date/initials on all reagents	Tech: _____	Tech: _____	Tech: _____	Tech: _____

Peer Review \_\_\_\_\_

Sup Review: \_\_\_\_\_

Date: \_\_\_\_\_



**Daily Reagent QC: RHBB**

Lot	Anti-A	Anti-B	Anti-D	OK?	Tech
Current	A <sub>1</sub>			Y	
	B				
	COR QC			N	
2nd Lot	A <sub>1</sub>			Y	
	B				
	COR QC			N	
2nd Lot	A <sub>1</sub>			Y	
	B				
	COR QC			N	

EXPECTED RESULTS	Anti-A	Anti-B	Anti-D
A <sub>1</sub>	3-4+		0
B		3-4+	
COR QC			3-4+

  

EXPECTED RESULTS	IS	37 LISS	AHG	Gel Igg
I	0	0-3+	1-3+	3-4+
II	0	0-3+	1-3+	3-4+
III	0	0-3+	1-3+	3-4+
Neg	0	0	0✓	0

Immunor Tube	IS	37 LISS	AHG	OK?	Ortho Gel		Anti-C3b,d Pos	Anti-C3b,d Neg	OK?	Tech
					IgG	OK?				
Cell #										
I + corQC				Y N		Y N			Y	
II + corQC				Y N		Y N				
III + corQC				Y N		Y N				
Neg + I, II or III				Y N		Y N				

EXPECTED RESULTS	Anti-C3b,d Pos (C3 control cell)	Anti-C3b,d Neg (Panoscreen cell)
	1-3+	0✓

MONDAY Maintenance	Result	OK?	Tech
Ultra CW fill (36.5-40.3 mL)		Y N	
Weekly Ultracw System Flushing and Clean (BBQC JA015.00, step 3.3)			
Auto & DD RBC Visual Inspection			
ID-MTS Dil2 Cleaning			
Eyewash Flush	Document	On	Applicable Form

Is it Monday, the scheduled BB Maintenance Day?  
 Yes ( ) No ( ) Tech initials \_\_\_\_\_  
 If No, leave Monday Maintenance blank.  
 If Yes, complete Monday Maintenance below.

DAILY:	Result	OK?	Tech
Bench Incubator # 39 (36-38°C)		Y N	
Bench Incubator # 40 (36-38°C)		Y N	
Bench Incubator # 41 (36-38°C)		Y N	
MTS Tech (1022-1042)		Y N	
MTS Timers (10/15/15)		Y N	
MTS Temp: Green light?		Y N	
Ultra CW Wipe and Empty Waste			

DAILY:	Result	Result	Both Scales OK?	Tech
Scale QC	Scale #1/ HT3000	Scale #2/ 11111-02		
20g			Y	
50g			N	
100g				

DAILY:	Tech
Daily Bench / Equipment Decontamination Performed	

DAILY:	Result	Result	Both Scales OK?	Tech
Daily Waterbath Temp.				Okay
Waterbath 6 (30-37°C)			Y N	
Waterbath 7 (30-37°C)			Y N	

Peer and Supp Review:  
 See page 1 of 2



Standard Operating Procedure Manual (SOP) – Transfusion Medicine

**Transfusion Complication:**

**Delayed Serologic Transfusion Reaction Investigation**

(Attach Cerner Accession Label Here)

Patient Name:  
MRN:  
DOB: |

Co-Path Case #: \_\_\_\_\_

Tech: \_\_\_\_\_ Date: \_\_\_\_\_

1. **Delayed Serologic Transfusion Reaction Criteria** – Check all which apply to the current testing results

Choose	Change of results of current IAT or DAT compared to last IAT or DAT testing
	New alloantibody identified since the last IAT testing in the serum/plasma or eluate
	Newly positive tube IgG DAT

2. **Was the patient transfused in the last 28 days?**

No  Yes

- If No, then stop and attach this form with the Antibody Identification Work Up.
- If Yes, go to step 3.

3. **LPC PRODUCT Transfused:** Indicate all the units transfused between the current IAT and previous IAT

- Attach a print out of the transfusion history from Cerner PPI for the last 28 days.
- Evaluate if the patient has received red cells at another facility.  NA  No  Yes

These will not be tested **List Below** or provide print out from the other facility of units transfused.

Units transfused at a different facility:

Empty box for listing units transfused at a different facility.

4. **PATIENT'S PLASMA / SERUM EXAM:**

Post Sample = Hemolysis Present:  No  Yes

= Icterus Present  No  Yes

Pre Sample, if available = Hemolysis Present:  No  Yes  Not Available

= Icterus Present  No  Yes  Not Available

5. **TESTING**

a. Post Transfusion Testing - ABO-Rh, IAT and DAT are attached as part of the ABID.

b. Pre Transfusion Testing available in Cerner - attach a print out of the ABO/Rh and IAT results for last 28 days

c. Obtain the segments from units transfused at IUH in the last 28 days:

- Document testing of segment with the **Miscellaneous Testing Form (BBQC – F062), Donor Unit Antigen Typing Worksheet or with analyzer print outs.**
  - Repeat ABO/Rh, red cell (front typing) only
  - Perform IS and AHG crossmatch with the Post-transfusion sample.
  - Repeat antigen typing of unit, if indicated
  - If the segment cannot be recovered, document this on the Miscellaneous Testing Form or Cerner Print out.

Reviewed By: \_\_\_\_\_  
BB Management Date



Daily Reagent QC: University and Methodist

QC Reagent Rack	Lot #/Expiration	
Immucor COR QC Antisera		
Immucor COR QC Cells		
Immucor Monoclonal Ctrl		
Immucor Panoscreen		
MTS Screen Cells		
MTS Card		
MTS Diluent 2		
Negative Control	Date Prep:	Date Exp:
Appearance ✓ and Open date/ initials on all reagents	Tech:	

Test Date: \_\_\_\_\_

Circle One: **University** or **Methodist**

Immucor Reagent	Reagent Rack
	Current Lot #/Expiration
Anti-A	
Anti-B	
Anti-D (series 4)	
A1 cells	
B cells	
LISS	
IgG-AHG	
Coombs Check Cells	
Saline	
All lot numbers were visually verified	Tech:
Appearance ✓ and Open Date/initials on all reagents	Tech:

Immucor Tube					Ortho Gel		Tech
Cell #	IS	37°C LISS	AHG	OK?	IgG	OK?	
I + corQC							
II + corQC				Y		Y	
III + corQC				N		N	
Neg + I, II or III							

EXPECTED RESULTS	IS	37°C LISS	AHG	Gel IgG
I/II/III	0	0-3+	1-3+	3-4+
Neg	0	0	0✓	0

		Anti-A	Anti-B	Anti-D	OK?	Tech
Reagent Rack	A <sub>1</sub>				Y N	
	B					
	COR QC					

Required Maintenance Tasks	Result	OK?	Tech
Bench Incubator # _____ (36-38°C)		Y N	
MTS Tach (1022-1042)		Y N	
MTS Timers (10/15/15)		Y N	
MTS Temp: Green light?		Y N	
Daily Bench and Equipment Decontamination Performed			
CW-2 fill (41-45 mL) (Monday)		Y N N/A	
ID-MTS Diluent Dispenser Cleaning	Monday	Y N N/A	
Waterbath # _____ (30-37°C)		Y N	

EXPECTED RESULTS	Anti-A	Anti-B	Anti-D
A <sub>1</sub>	3-4+		0
B		3-4+	
COR QC			3-4+

Peer Review: \_\_\_\_\_

Sup Review/Date: \_\_\_\_\_

**Maintenance Reminder: Document on the applicable Form**  
**MON—Eyewash Flush      WED— Clean Waterbath**