Beaumont

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	Technologist Lead
Area:	Laboratory-Hematology
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Applicability:	Royal Oak

Tracking and Manual Coagulation Results Entry-RO

Document Type: Guideline

I. PURPOSE AND OBJECTIVE:

The purpose of this document is to define a clear process that staff can use to track coagulation specimens and for manual coagulation result entry.

II. ACRONYMS:

- A. Activated partial thromboplastin time (aPTT)
- B. D-Dimer HS 500 (DD)
- C. Fibrinogen (QFA)
- D. Laboratory Information System (LIS)
- E. Platelet Function Analysis (PFA)
- F. Prothrombin Time (PT)
- G. Thrombin Time (TT)

III. PROCEDURE:

A. Tracking Samples:

- 1. Tracking should be located in your toolbar at the top of your screen.
 - a. Click to enter into the tracking page. You will notice that Tracking Microbiology is the default.
 - b. Click the (1) magnifying glass and (2) select "Received in Coagulation-80", (3) and click Accept.
 - c. Type in a comment of "Number of tubes received whole blood or frozen." Verify collection time is within acceptable range according to LTD and add comment "Time OK."
 - d. Then click on Lookup and enter your specimen ID number. Enter on keyboard to pull up the sample.

Tracking - Tracking	Hematology Remove - P Lookup D Inguiry B Results	🎯 Microbiology 🔧 GYN Cytology	🛓 Non GYN Cytology 🔣 Hematology	Surgical Path/Histology
Case:	Specimen: 20RO-294CG0014	Batch/Packing List:		
	Ente	r containers to track		



20RO-294C	60014		
20RO-294C	G0014		
	00011		
Beakerepic, H	emob (MRN 9102778)	Blood, Blood, V	/enous
M, 90 yrs, 1/2/1930 Location: 8 NORTH EA:	5T RO, 8603/04, 8603P	Collected Today 1:2 Container: 1 Lt Blue	1 PM by Collector, Unknown Offic NaCt
L Specimen Trac	king		
@ 20RO-294CG001	4.1 Lt Blue NaCt - PSACT	6.1.3	
01:56 PM	Tracked	Received in Coagulation -80 Received 1 WB, in time	User Test, Lab Tech
01:34 PM	Tracked	Received in Hematology	Test, Lab Tech
01:22 PM	Requisition Accepted		Test, Lab Tech
01:21 PM	Received	Received into RYO LABORATORY	Test, Lab Tech
01:21 PM	Collection Updated	Date/Time: 10/20/2020 1:21 PM EDT, Collector: Collector, Unknown Offic	e Test, Lab Tech
01:21 PM	Order Sent To Instrument	Tests Protein S Activity	Test, Lab Tech

B. Manual Result Entry:

1. STart4

- a. See Attachment A for resulting PT, aPTT, QFA, TT, and DD
- b. Select test from the specimen hierarchy. Click Edit and input the results.
- c. Add an external comment that this was "Performed by alternate method" (note that it is added in a white field) and an internal comment that there was "No clot" (note that it is added to a yellow field).

_										
Res	Component	Value	Units		Δ	L	IE	R	Ref. Range	Method
1	aPTT	>125.0	Seconds	★			\diamond		25.0-38.0	RYO ACL TOP 1
	Instrument Errors: Data Error, H	ndividual Results	Error							
	Comment:									
	Heparin Therapeutic Range:									
	* Acute Coronary Syndrome: 5	0 - 75 secon	ds							
	 * Other Cardiac Indications: 	56-81 secon	ds							
	* Venous Thromboembolism: 56	-81 seconds.								
Resul	lt comments:									
Perfo	ormed by alternate method									

- d. Before we Final Verify; call critical result if an EC patient.
- e. Click on the Comm Log and document the following as shown below: "No answer on first attempt at _____." "Notified employee ID# 128569."
- f. Accept and Final Verify your results.

E E Specimens	Specimen Tracking
- I Fibrinogen - V Fibrinogen - ✓ Protime INR	20RO-294CG0016 Beakerepic, Hemob (MRN 9102778) M, 90 yrs, 1/2/1930 Location: 8 NORTH EAST RO, 8603/04, 8603P
	 Flags, Holds, & FYIs Customer Service Critical result requires follow-up on

Tracking and Manual Coagulation Results Entry-RO. Retrieved 11/17/2021. Official copy at http://beaumontroyaloak.policystat.com/policy/9727397/. Copyright © 2021 Royal Oak

	Contact	Phone/Fax
Phone (Outg	oing)	02:46 PM 🥒 10/20/202
Contact:	Blenc, Ann Marie, MD 🔎 Other	
	Authorizing Submitter PCP Patient	
Phone:	248-551-8025 Other Other Other	
Topic:	Critical Result 🔎 Critical Other	
Outcome:	Communicated No Answer Left Message	
全 💸 🔍	😋 🔁 🕈 🛛 Insert SmartText 🖷 🗧	> ≪ ₩ 100% -
The followi aPTT: >12	ng critical results were read back and acknowle 5.0 Seconds Critical High (Ref. Range: 25.0-38	:dged. .0)
Notified en	pioyee ID# 128569.	
Lab Con	nments 🕀 🍄 🗢 🖉 🖓 🖓 🕇 Insert Sma	artText 🔚 🗢 🗢 🧞 🛼 🛛 100% 👻
No answe	r on first-attempt 2:30 PM	
		✓ Accept × (
tor Screeindicated F	n: PT, aPTT, or both:	
	dit so that you are able to add test	(s)/ answer Path Review questions.
i. Click E		
i. Click E ii. Enter r	esults for an inhibitor screen aPTT	, PT, add TT.
i. Click E ii. Enter r iii. Start b	esults for an inhibitor screen aPTT,	, PT, add TT.
i. Click E ii. Enter r iii. Start b below:	results for an inhibitor screen aPTT, y plugging in the following informat	, PT, add TT.
i. Click E ii. Enter r iii. Start b below: Royal Oak	Pathologist Name:	, PT, add TT. ion from the INHIBITOR SCREEN WORKSHEE
i. Click E ii. Enter r iii. Start b below: Royal Oak	Pathologist Name: Pathologist Name: Original Schultz Original Anno Cable to ded teor Pathologist Name: Dr. Smith Original Anno Cable to ded teor Pathologist Name: Original Anno Cable to ded teor Original Anno Cable to ded teor Pathologist Name: Original Anno Cable to ded teor Original Anno Cable to ded teor Pathologist Name: Original Anno Cable to ded teor Pathologist Name: Pathologist Name:	ion from the INHIBITOR SCREEN WORKSHEE
i. Click E ii. Enter r iii. Start b below: Royal Oak	Pathologist Name: Pathologist N	, PT, add TT. ion from the INHIBITOR SCREEN WORKSHEE HIBITOR SCREEN WORKSHEET iginal PT: 11.0 Original PTT: 58.6 IN R = 0.9 PT ≤ 15 and PTT ≤ 39:verify as "not indicated"
i. Click E ii. Enter r iii. Start b below: Royal Oak	Pathologist Name: Pathologist Name: PLACE BARCODE LABEL HERE	, PT, add TT. ion from the INHIBITOR SCREEN WORKSHEE HIBITOR SCREEN WORKSHEET iginal PT: 11.0 Original PTT: 58.6 IN R = 0.9 PT ≤ 15 and PTT ≤ 39:verify as "not indicated" PT > 15 and PTT > 39:
i. Click E ii. Enter r ii. Start b below: Royal Oak	Pathologist Name: Pathologist Name: PLACE BARCODE LABEL HERE IN Che Run	, PT, add TT. ion from the INHIBITOR SCREEN WORKSHEE HIBITOR SCREEN WORKSHEET iginal PT: 11.0 Original PTT: 58.6 1NR = 0.9 PT ≤ 15 and PTT ≤ 39 :verify as "not indicated" PT > 15 and PTT > 39: ck for heparin, LMWH, DTI (win 24 hrs) and/or warfarin (win 2 wks). thrombin time and follow rules in the box below.
i. Click E ii. Enter r ii. Start b below: Royal Oak	Pathologist Name: Pathologist Name: PLACE BARCODE LABEL HERE hibitor screen is indicated for aPTT	, PT, add TT. ion from the INHIBITOR SCREEN WORKSHEE HIBITOR SCREEN WORKSHEET iginal PT: 11.0 Original PTT: 58.6 INR = 0.9 PT ≤ 15 and PTT ≤ 39:verify as "not indicated" PT > 15 and PTT > 39: ck for heparin, LMWH, DTI (win 24 hrs) and/or warfarin (w/in 2 wks). thrombin time and follow rules in the box below.

- b. Mixing Study for Abnormal PTT? : Yes
- c. **PNP performed? :
- d. Path Review: Yes
- e. **Path Review Interpretation:
- f. **Reviewed by (Pathologist)

**NOTE: Leave these lines blank so the pathologist can edit. If an inhibitor screen was not indicated, we would be inputting a comment for these (example to follow).

	Collected 10 CH CV
🖋 Edit 📙 Save 👃 Next 🔌 Clear Changes 🛛 🖻 Repeat 🗸 🕮 M	iethod 🕸 Mnemonic 🏢 Keys 🔄 Add Documents 🗸 🕂 Inhibitor Screen- PT [1] 🕂 Inhibitor Screen- PTT [2] 🕂 Hemosil aPTT [3] 🕈 PNP [4] 🕂 Thrombin Time
(# Rslt) Component	Value (F5 to edit)
1 Protime	11.0
2 INR	0.9
3 aPTT	58.6
4 Mixing Study for Abnormal PT?	No
5 Mixing Study for Abnormal PTT?	Yes
6 PNP Performed?	No
7 Path Review	Yes
8 Path Review Interpretation	
9 Reviewed By (Pathologist)	

v. So that the answers to "Mixing Study for Abnormal PT?" and "Mixing Study for Abnormal PTT?" go to the chart, we must check the boxes in the chart column. See below. Notice how the lines change from being yellow to being white because the results will be sent to the chart.

(# Rslt) Component	Value	A	D	L	R	Units	Ref. Range	Method	C C	har
1 Protime	11.0	ø	2			Seconds	9.2-13.5	MANUAL METHOD	3	V
2 INR	0.9	Ś	2 🔺					MANUAL METHOD	31	₹
3 aPTT	58.6	^				Seconds	25.0-38.0	MANUAL METHOD	27	7
4 Mixing Study for Abnormal PT?	No							MANUAL METHOL	3	V
5 Mixing Study for Abnormal PTT?	Yes							MANUAL METHOD	27	2

- vi. Prelim Verify the Inhibitor Anticoagulant Screen Portion and move on to adding the other parts.
- vii. If Thrombin Time is needed, click the button to add Thrombin Time. Click the button to add on the Inhibitor screen- PTT [2]. Both will show in your specimen hierarchy.



will be released to the chart, and input a comment for all three Pathologist fields.

- ii. This must be done because if we do nothing with these three lines we will not be able to final verify the report.
- iii. The comments that we input will be for record keeping and will not go to the chart. Leave the PNP field blank. It is yellow and will not be sent to the chart.

🖉 Edit 📮 Save 🖡 Next 🌜 Clear Changes 🔀 Repeat + 🛤 Method 场 Mnemonic 🧮 Keys 🔛 Add Documents + 🕇 Inhibitor Screen-PT [1] 🕇 Inhibitor Screen-PT [2] 🕇 Hemosil aPTT [

	(# Rslt) Component	Value		A	DL	R	Units	Ref. Range	Method	C Chart
1	Protime	11.0	<	1			Seconds	9.2-13.5	MANUAL METHO	(<u>)</u> 🖸
2	INR	1.0	<	1					MANUAL METHO	(E) 🔽
3	aPTT	29.0	<	1			Seconds	25.0-38.0	MANUAL METHO	(E) 🔽
4	Mixing Study for Abnormal PT?	No							MANUAL METHO	(<u>)</u>
5	Mixing Study for Abnormal PTT?	No							MANUAL METHO	(<u>)</u>
6	PNP Performed?								MANUAL METHO	
7	Path Review							(none)	MANUAL METHO	(E) 🔽
8	Path Review Interpretation								MANUAL METHO	(E) 🗆
9	Reviewed By (Pathologist)								MANUAL METHO	

iv. Click the comment sheet in the C column on the "Path Review" line. In the dialog area type ".cg" and the choices will appear. Select "Inhibitor screen not indicated" by double clicking on that choice.



- v. Hit enter to move yourself to the next line and start typing ".cg" again. This time, select "Patient receiving Coumadin" and double click. **Click Accept.**
- vi. For the last two comment fields on the "Path Review Interpretation" and "Reviewed By (Pathologist)" lines click on the comment sheet and simply put a space in the dialog box and click Accept. Now all three comment sheets have lines on them.



viii. In the white comment field at the bottom enter who was communicated with to confirm patient is on Coumadin. "Patient on Coumadin, verified by RN/Physician #."

ix. Select Verify, but before you confirm final, review the results and ensure that the "Pathologist Review Interpretation" and "Reviewed By" fields do not end up on the report. If they will display on the report, click Go Back, Edit and uncheck the boxes under the Chart column for these two rows. Then Verify and Confirm Final if everything looks correct.

Inhibitor Anticoagulant Screen

Test Name	Result	Ref. Range	Units	Lab
Protime	11.0	9.2-13.5	Seconds	BLRYO
INR 2.0 to 3.0 Routine Oral Anticoagulant The 2.5 to 3.5 Oral Anticoagulant Therapy for o Mechanical Heart Valves:	1.0 rapy certain types of			BLRYO
For more detailed information, see Be	aumont Pharmacy websit	te.		
APTT Heparin Therapeutic Range: * Acute Coronary Syndrome: 50 - 75 seco * Other Cardiac Indications: 56-81 second * Venous Thromboembolism: 56-81 secon	29.0 nds s ds.	25.0-38.0	Seconds	BLRYO
Mixing Study for Abnormal PT?	No			BLRYO
Mixing Study for Abnormal PTT?	No			BLRYO
Path Review Inhibitor screen not indicated.				BLRYO

Specimen 21RO-117CG0232. Results verified at 4/27/2021 1201.

3. **Platelet Aggregation:** Every platelet aggregation has a PFA and needs a pathologist interpretation. Notice that there are two separate specimen ID numbers created for each order.

				-								
Received	Р	MPI	ID	Name	Test	MRN	м	R	A	н	+	:
10/21 0751		100040397,	20RO-294CG0006	Beakerepi	Platelet Function Analysis	9102729						^
10/21 0751		100040389,	20RO-294CG0005	Beakerepi	Platelet Aggregation	9102729						

- a. Using the Outstanding List or Result Entry click Edit.
 NOTE: If using the Outstanding list you must make sure that you select the correct list by clicking views and choosing the correct department list.
- b. Using the following aggregation results, input all "MA" results into the appropriate field and **Save** your work. The **pathologist will review the results and verify themselves**.
- c. Answer "Yes" sent for Path review



4. **PFA**: Pull up the specimen ID order for the PFA separately. Use Result Entry or the Outstanding List to do this.Then click Edit. Enter the results into the appropriate fields.

78

Yes

0

Δ

 \checkmark

t.

%

%

60-100

60-100

(none)

13 ARACHIDONIC ACID 500 MCG/ML MAX

14 ARACHIDONIC ACID 500 MCG/ML RATE

15 Sent for Path Review?

17 Reviewed By

16 Pathologist Interpretation

MANUAL METHOL

MANUAL METHOL

MANUAL METHONA

~

MANUAL METHO

ID#: SCCCCCC Test Type: C SAMPLE A: ID#: SCCCCCC Test Type: C SAMPLE B:	00 011agen/E 94 SEC 95 011agen/A 84 SEC	PI PI <th>← E 20 Be F, 6' Loci Trai</th> <th>Summary CONTACTS Summary Pyrs, 6/7/1951 ation: 7 NORTH EAS' CONTACTS ning Submitter Physical t - E Method ★D M Value 84 94</th> <th>G0004 eme (MRN 9102) T RO, 7609/10, 7609 sicians nemonic EKeys Add 1</th>	← E 20 Be F, 6' Loci Trai	Summary CONTACTS Summary Pyrs, 6/7/1951 ation: 7 NORTH EAS' CONTACTS ning Submitter Physical t - E Method ★D M Value 84 94	G0004 eme (MRN 9102) T RO, 7609/10, 7609 sicians nemonic EKeys Add 1
a Click "\/erify" ar	d "Confirm Fin	al"			
Platelet Aggree Platelet Function A Test Name	gation nalysis (Final resul	t) Result	Ref. Range	Units	Lab
Platelet Aggree Platelet Function A Test Name PFA Collagen-ADP PFA Collagen-EPI	gation nalysis (Final resul	t) Result 84 94	Ref. Range 0 - 106 0 - 160	Units Seconds Seconds	Lab BLRYO BLRYO
Platelet Aggree Platelet Function A Test Name PFA Collagen-ADF PFA Collagen-EPI Comments:	gation nalysis (Final resul	t) Result 84 94	Ref. Range 0 - 106 0 - 160	Units Seconds Seconds	Lab BLRYO BLRYO
Platelet Aggree Platelet Function A Test Name PFA Collagen-ADF PFA Collagen-EPI Comments: PFA Interpretation: Platelet defects: VWD: Aspirin:	coll-ADP Increased Near normal	t) Result 84 94 Coll-Epi Increased Increased Increased	Ref. Range 0 - 106 0 - 160	Units Seconds Seconds	Lab BLRYO BLRYO
Platelet Aggrey Platelet Function A Test Name PFA Collagen-ADF PFA Collagen-ADF PFA Collagen-EPI Comments: PFA Interpretation: Platelet defects: VWD: Aspirin: Results may be affe Aids in interpreting A normal PFA-100 i anti-platelet drugs. I aggregation studiess Platelet aggregation	Coll-ADP Increased Increased Near normal cted by low hemato PFA results: result does not comp f there is substantivy for further evaluatio studies can be arra	t) Result 84 94 Coll-Epi Increased Increased Increased Crit (<35) or decreased platelet count (< Detely exclude platelet dysfunction, as it bleeding history or further clinical susp n. inged by calling the Appointment Center	Ref. Range 0 - 106 0 - 160 150,000). Iacks sensitivi icion of a blee (800)328-854	Units Seconds Seconds ity to some cong iding disorder, co	Lab BLRYO BLRYO
Platelet Aggrey Platelet Function A Test Name PFA Collagen-ADF PFA Collagen-EPI Comments: PFA Interpretation: Platelet defects: VWD: Aspirin: Results may be affe Aids in interpreting A normal PFA-100 of anti-platelet drugs. I aggregation studies Platelet aggregation	Coll-ADP Increased Increased Near normal cted by low hemato PFA results: esult does not comp f there is substantive for further evaluatio studies can be arra	t) Result 84 94 Coll-Epi Increased Increased Increased Crit (<35) or decreased platelet count (< blocketly exclude platelet dysfunction, as it bleeding history or further clinical susp in. inged by calling the Appointment Center verified at 10/20/2020 1154.	Ref. Range 0 - 106 0 - 160 150,000). lacks sensitivi icion of a blee (800)328-854	Units Seconds Seconds ity to some cong eding disorder, co	Lab BLRYO BLRYO

- NOTE: If using the Outstanding list you must make sure that you select the correct list by clicking views and choosing the correct department list.
- b. If Hexagonal Phase Phospholipid, #1 w/buffer < X seconds click verify and "Confirm Final".
 Results will not be reported only the canned message with Negative Screen.



c. Click in the Value box and click on the magnifying glass to enter the result:

Search:		Q	1
Title		Number	1
<10		12	1
>10 but <40		13	1
>40		14	1
			1
			1
			1
			1
			1
			1
			1
			1
			1
			1
			1
			1
			1
			1
3 categories leaded			1
o categories loaded.			1
	✓ Accept	X <u>C</u> ancel	1
	·		1

CC Providers:

Abnormal Results: Fibrin Split Products (A)

Results Key: L- LOW, H- HIGH, A- ABNORMAL, LL- CRITICAL LOW, HH- CRITICAL HIGH, AA- CRITICAL

Fibrin Split Products (In process)

Test Name	Result		Ref. Range	Units	Lab
Fibrin Split Products	>40	(A)	<10	mcg/mL	BLRYO
Specimen 21RO-147CG0128. Results ve	rified at 5/27/2021 0739).			

- 7. Fibrin Stabilizing Factor (FSF):
 - a. Scan the specimen ID for the FSP into the Outstanding List or Result Entry.

b. Click Edit.

	- Summary						
└─ I Fibrin Stabilizing Factor	21RO-147CG0327						Instrument ID: 1071941
	Xxx, Ro Lab Demo (MR	N 9999937)	*	Blood, Blood,	Venous		
	F, 43 dys, 4/14/2021 RQ524507 submitted by Training Ph	ysician Group		Collected Today 2 Container: 1 Lt Blue	:44 PM by Collector, Unknown Of e NaCt	ffice	
	A Previous Values						
	Component Fibrin Stabilizing Factor	5/27/2021 7:31 AM Absent	5/2/2021 11:36 AM Present		4/15/2021 11:31 AM Present	4/15/2021 11:29 AM Present	
	🚔 Contacts						
	Training Physician Group 123 Beaumont Place Detroit Michigan 48201		248-555-5555 Work 248-555-5556 Fax	Patients Contacts Personal		248-597-28	322 Home

c. Click in the Value box and click on the magnifying glass to enter the result:

© Category S	elect	_ D X	
Search:		0	
Title		Number	
Absent Present		10 20	
2 categories loaded.			
	✓ <u>A</u> ccept	X Cancel	
Click "Accept"			
Click "Verify" and "Confirm Final"			

Fibrin Stabilizing Factor (In process)

Test Name	Result		Ref. Range Units	Lab	
Fibrin Stabilizing Factor	Absent	(A)	Present	BLRYO	
Specimen 21RO-147CG0127, Results verified at 5/27/2021 0743.					

Attachments

No Attachments

Approval Signatures

Step Description	Approver	Date
	Ann Marie Blenc: System Med Dir, Hematopath	6/24/2021
Coagulation Medical Director Designee	Marc Smith: System Med Dir, Coagulation	6/4/2021
Policy and Forms Steering Committee Approval (if needed)	Gail Juleff: Project Mgr Policy	5/28/2021
Policy and Forms Steering Committee Approval (if needed)	Tamara Sabih: Medical Technologist Lead	5/27/2021
System Manager	Rebecca Bacarella: Mgr Laboratory	5/27/2021
	Tamara Sabih: Medical Technologist Lead	5/27/2021

Applicability

Royal Oak

