



Document #:	RCOGNR00003	Revision #:	8.13
Document Type:	Procedure	Effective Date:	27May2024
File Path:	APL Folder Structure / Hematology HE / 16 Special Coagulation / Edmonton / 01 General Special Coagulation Documents		

RCOGNR00003 Special Coagulation Aliquoting - EZ

1. APPLICABILITY

This document is applicable to all APL personnel that send Special Coagulation testing to the UAH Special Coagulation department.

2. PURPOSE

This document provides instruction on aliquoting samples for Special Coagulation and related testing performed at the UAH.

3. PROCEDURE

3.1. Aliquoting Chart

Test_Abbr	Test Description	Acceptable Specimen Tube Reject all other specimen types	Frozen Aliquots Plasma = citrated
AB2G	Anti-Beta-2 Glycoprotein (UAH Special Chemistry test)	<ul style="list-style-type: none"> Gold top, red top, or micro-collection SST tubes 	1 x minimum 0.5 mL serum UAH - forward to Chemistry bench for processing.
AD13	ADAMTS13 Activity	<ul style="list-style-type: none"> 3 Lt Blue Citrate 	6 x 0.5 mL plasma Plasma should be frozen within 1 hr of collection. If delayed, proceed with aliquoting. Write clearly on label: "Frozen @ hrs."
ACARD	Anti-cardiolipin Antibody (UAH Special Chemistry test)	<ul style="list-style-type: none"> Gold top, red top, or micro-collection SST tubes 	1 x minimum 0.5 mL serum UAH - forward to Chemistry bench for processing.
FVLMUT / PROM	Factor V Leiden mutation and/or Prothrombin 20210 (or Factor II) mutation (UAH Molecular Pathology test)	<ul style="list-style-type: none"> 1-4 mL mauve top tube at 4°C Must be a sterile, dedicated sample 	N/A – MUST be submitted as whole blood. Send cold. Forward to Molecular Pathology.
FII	Factor II Activity	<ul style="list-style-type: none"> 1 Lt Blue Citrate 	2 x 0.5 mL plasma per test
FVACT	Factor V Activity	<ul style="list-style-type: none"> 1 Lt Blue Citrate 	
FVIIACT	Factor VII Activity	<ul style="list-style-type: none"> 1 Lt Blue Citrate 	
FVIIIICL	Factor VIII Activity, Clot Based	<ul style="list-style-type: none"> 1 Lt Blue Citrate 	
FVIIIICHROM	Factor VIII Activity, Chromogenic	<ul style="list-style-type: none"> 1 Lt Blue Citrate 	
FVIIIINH	FVIII Inhibitor	<ul style="list-style-type: none"> 2 Lt Blue Citrate 	2 x 1.0 mL plasma
Risto	Ristocetin Cofactor Activity	<ul style="list-style-type: none"> 1 Lt Blue Citrate 	2 x 0.5 mL plasma per test
VWFAG	Von Willebrand Antigen	<ul style="list-style-type: none"> 1 Lt Blue Citrate 	

Test_Abbr	Test Description	Acceptable Specimen Tube Reject all other specimen types	Frozen Aliquots Plasma = citrated
FIXCL	Factor IX Activity, Clot Based	• 1 Lt Blue Citrate	2 x 0.5 mL plasma per test
FIXCHROM	Factor IX Activity, Chromogenic	• 1 Lt Blue Citrate	
FIXINH	Factor IX Inhibitor	• 2 Lt Blue Citrate	2 x 1.0 mL plasma
FXACT	Factor X Activity	• 1 Lt Blue Citrate	2 x 0.5 mL plasma per test
FXIACT	Factor XI Activity	• 1 Lt Blue Citrate	
FXIIACT	Factor XII Activity	• 1 Lt Blue Citrate	
FXIIIACT	Factor XIII Activity	• 3 Lt Blue Citrate	3 x 1.0 mL plasma
HIT	Heparin-Induced Thrombocytopenia	• Gold Top tube	2 x 0.5 mL serum per test – Mark “serum” on label
SRA	Serotonin Release Assay for HIT	• 2 Red Top tubes and 2 Lt Blue Citrate	**Referred out test** Refer out as per site send-out process. UAH: forward to Chemistry bench for processing.
LUPUS ANTICO	Lupus Anticoagulant	• 2 Lt Blue Citrate • Order in conjunction with APA and AB2G	2 x 1.0 mL plasma
HEPFXA	Anti-Xa Heparin Level or Low Molecular Weight Heparin or Anti-Xa Assay or Unfractionated Heparin (LMWH: Enoxaparin, Fragmin, Dalteparin)	• Lt Blue Citrate • Must be collected 4-6 hours post dose • Room Temperature	MUST be processed within 4 hours of collection. 2.x 0.5 mL plasma
AFXA	Anti-Xa Rivaroxaban Note: An Anti-Xa Heparin Level will auto-reflex - process it on site if test is available or refer an aliquot to the appropriate reference site.	• Lt Blue Citrate • Room Temperature	**Referred out test** Refer out the Anti-Xa Rivaroxaban level as per site send-out process.
ANTIXAAPIX	Anti-Xa Apixaban Note: An Anti-Xa Heparin Level will auto-reflex - process it on site if test is available or refer an aliquot to the appropriate reference site.	• Lt Blue Citrate • Room Temperature	**Referred out test** Refer out the Anti-Xa Apixaban level as per site send-out process.
INRHN / PTTHN / TTHN / FIBHN	INR/PT Heparin Neutralization / PTT Heparin Neutralization / Thrombin Time Heparin Neutralization / Fibrinogen Heparin Neutralization	• 1 Lt Blue Citrate	**If site does not process HEPZYME samples, call Hematopathologist on call for approval. If approved, send 2 x 1.0 mL aliquots of frozen plasma to UAH.
ATACT	Antithrombin Activity	• 1 Lt Blue Citrate	1 x 0.5 mL plasma
PROTC	Protein C	• 1 Lt Blue Citrate	2 x 0.5 mL plasma per test
PS FREE	Protein S Antigen Free	• 1 Lt Blue Citrate	
PT IN	PT Inhibitor Screen	• 2 Lt Blue Citrate	2 x 2.0 mL plasma
PTT IN	PTT Inhibitor Screen	• 3 Lt Blue Citrate	2 x 3.0 mL plasma
SCINR / SCPTT	Special Coag INR and PTT	• 1 Lt Blue Citrate	2 x 0.5 mL plasma

3.2. Aliquoting Instructions

Step	Detail	Information																					
1	Spin specimen: 1.1) Spin to obtain platelet poor plasma (site-specific speed and time) 1.2) If specimen received spun proceed to <i>Step 2</i> . 1.3) Aliquot and freeze sample aliquots within 4 hrs of collection.	Platelet poor plasma must have a platelet count of $<10 \times 10^9/L$. Refer to <i>HE41-300 ACL Specimens</i> for details.																					
2	Check specimen integrity: 2.1) Ensure patient name, collection date and time for all tubes are the same. 2.2) Using a plastic pipette, remove the plasma or serum from cells one tube at a time – avoid the platelet and WBC layer when removing plasma and/or clot separator when removing serum.	Note: Epic Specimen ID numbers may be different. Note: Check for a clot by rimming the red cell button with an applicator stick.																					
	<table border="1"> <thead> <tr> <th>If</th> <th>Then</th> </tr> </thead> <tbody> <tr> <td rowspan="4">Removing plasma for pooling</td> <td> <ul style="list-style-type: none"> Keep plasma in pipette. Check sample for a clot prior to adding to the pool. </td> </tr> <tr> <td> <table border="1"> <thead> <tr> <th>If</th> <th>Then</th> </tr> </thead> <tbody> <tr> <td>Clotted</td> <td>Do not add to the plasma pool; discard.</td> </tr> <tr> <td>Hemolyzed</td> <td>Aliquot hemolyzed plasma separately and label as HEMO.</td> </tr> <tr> <td>Not clotted and not hemolyzed</td> <td>Pool plasma into a plastic container (accuvette or sterile urine container).</td> </tr> </tbody> </table> </td> </tr> <tr> <td rowspan="2">Removing serum</td> <td> <table border="1"> <thead> <tr> <th>If</th> <th>Then</th> </tr> </thead> <tbody> <tr> <td>Not hemolyzed</td> <td>Proceed to <i>Step 3</i>.</td> </tr> <tr> <td>Hemolyzed</td> <td>Aliquot hemolyzed serum and label as HEMO and serum.</td> </tr> </tbody> </table> </td> </tr> </tbody> </table>	If	Then	Removing plasma for pooling	<ul style="list-style-type: none"> Keep plasma in pipette. Check sample for a clot prior to adding to the pool. 	<table border="1"> <thead> <tr> <th>If</th> <th>Then</th> </tr> </thead> <tbody> <tr> <td>Clotted</td> <td>Do not add to the plasma pool; discard.</td> </tr> <tr> <td>Hemolyzed</td> <td>Aliquot hemolyzed plasma separately and label as HEMO.</td> </tr> <tr> <td>Not clotted and not hemolyzed</td> <td>Pool plasma into a plastic container (accuvette or sterile urine container).</td> </tr> </tbody> </table>	If	Then	Clotted	Do not add to the plasma pool; discard.	Hemolyzed	Aliquot hemolyzed plasma separately and label as HEMO.	Not clotted and not hemolyzed	Pool plasma into a plastic container (accuvette or sterile urine container).	Removing serum	<table border="1"> <thead> <tr> <th>If</th> <th>Then</th> </tr> </thead> <tbody> <tr> <td>Not hemolyzed</td> <td>Proceed to <i>Step 3</i>.</td> </tr> <tr> <td>Hemolyzed</td> <td>Aliquot hemolyzed serum and label as HEMO and serum.</td> </tr> </tbody> </table>	If	Then	Not hemolyzed	Proceed to <i>Step 3</i> .	Hemolyzed	Aliquot hemolyzed serum and label as HEMO and serum.	
If	Then																						
Removing plasma for pooling	<ul style="list-style-type: none"> Keep plasma in pipette. Check sample for a clot prior to adding to the pool. 																						
	<table border="1"> <thead> <tr> <th>If</th> <th>Then</th> </tr> </thead> <tbody> <tr> <td>Clotted</td> <td>Do not add to the plasma pool; discard.</td> </tr> <tr> <td>Hemolyzed</td> <td>Aliquot hemolyzed plasma separately and label as HEMO.</td> </tr> <tr> <td>Not clotted and not hemolyzed</td> <td>Pool plasma into a plastic container (accuvette or sterile urine container).</td> </tr> </tbody> </table>	If	Then		Clotted	Do not add to the plasma pool; discard.	Hemolyzed	Aliquot hemolyzed plasma separately and label as HEMO.	Not clotted and not hemolyzed	Pool plasma into a plastic container (accuvette or sterile urine container).													
	If	Then																					
	Clotted	Do not add to the plasma pool; discard.																					
Hemolyzed	Aliquot hemolyzed plasma separately and label as HEMO.																						
Not clotted and not hemolyzed	Pool plasma into a plastic container (accuvette or sterile urine container).																						
Removing serum	<table border="1"> <thead> <tr> <th>If</th> <th>Then</th> </tr> </thead> <tbody> <tr> <td>Not hemolyzed</td> <td>Proceed to <i>Step 3</i>.</td> </tr> <tr> <td>Hemolyzed</td> <td>Aliquot hemolyzed serum and label as HEMO and serum.</td> </tr> </tbody> </table>	If	Then	Not hemolyzed	Proceed to <i>Step 3</i> .	Hemolyzed	Aliquot hemolyzed serum and label as HEMO and serum.																
	If	Then																					
Not hemolyzed	Proceed to <i>Step 3</i> .																						
Hemolyzed	Aliquot hemolyzed serum and label as HEMO and serum.																						
3	Transfer the serum or pooled plasma into labeled plastic polypropylene (cloudy plastic) aliquot tubes according to <i>section 3.1</i> . <ul style="list-style-type: none"> Polystyrene (clear plastic) aliquot tubes are not acceptable, and testing will be cancelled. <table border="1"> <thead> <tr> <th>If</th> <th>Then</th> </tr> </thead> <tbody> <tr> <td>Plasma</td> <td>Mix the pool before aliquoting.</td> </tr> <tr> <td>Serum</td> <td>Mark "serum" on label.</td> </tr> </tbody> </table>	If	Then	Plasma	Mix the pool before aliquoting.	Serum	Mark "serum" on label.	**Preferred aliquot tube: 4 mL Polypropylene Simport tube with screw top lid: <ul style="list-style-type: none"> Tube: Simport #T501-4T (Oracle 196337) Screw top lid: Simport #T501-N (Oracle 196338) Or refer to RR01-005 Ordering Supplies from Reagent Room.															
If	Then																						
Plasma	Mix the pool before aliquoting.																						
Serum	Mark "serum" on label.																						
4	Freeze all aliquots at $-70^{\circ}C$ and forward to UAH Special Coagulation. <ul style="list-style-type: none"> Samples from external sites should be shipped on dry ice. Samples must be received frozen and will be cancelled if thawed at any point during transport. 	Note: Sample may be stored at $-20^{\circ}C$ for a short period (e.g. 2 days) in a non-frost-free freezer.																					

3.3. Contact Information

University of Alberta Hospital Routine Coagulation (780) 407-7232.

4. RELATED DOCUMENTS

HE41-300 ACL Specimens

RR01-005 Ordering Supplies from Reagent Room