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Beaumont

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Key Words:

Applicability: *Royal Oak*

Coagulation Tests: Reportable Limits And Normal/Therapeutic Values-RO

Document Type: Guideline

I. PURPOSE AND OBJECTIVE:

This guideline is for medical technologist during resultting.

II. RANGES:

A. Platelet Aggregation Normal Range

1. Normal Ranges in Hyper Aggregation

Reagent	Concentration	Aggregation %
ADP	10.0 mcM	65 -100 % (Max)
ADP	2.0 mcM	13 - 82 % (Max)
ADP	1.0 mcM	4 - 35 % (Max)
ADP	0.5 mcM	0 -30 % (Max)
Epinephrine	10.0 mcM	70 - 95 % (Max)
Epinephrine	1.0 mcM	7 - 85 % (Max)
Epinephrine	0.5 mcM	5 - 84 % (Max)
Spontaneous	N/A	Absent
Arachidonic Acid	500 mcg/mL	60 - 100 %

2. Normal Ranges in Routine Aggregation

Reagent	Concentration	Aggregation %
ADP	10.0 mcM	≥65% (Max)
ADP	5.0 mcM	≥60% (Max)
Ristocetin	10.0 mcM	≥70% (Max)
Ristocetin	1.0 mcM	≥65% (Max)

Ristocetin	0.5 mcM	≤15 % (Max)
Collagen	N/A	≥65% (Max & Rate)
Collagen Lag Phase	N/A	15-70 seconds
Arachidonic Acid	500 mcg/mL	≥60%

3. Normal Ranges in Lumi Aggregation

Reagent	Concentration	Aggregation %
ADP Max	20 mcM	≥ 65% (Max & Rate)
Collagen Max	2 mcg/mL	≥ 65% (Max & Rate)
Collagen T 1/2	2 mcg/mL	≤ 99 sec
TRAP Max	100 mcM	≥ 40% (Max & Rate)
LUMI ADP	20 mcM	0.30 – 0.93 nM
LUMI Collagen	2 mcg/mL	0.5 – 1.4 nM
LUMI TRAP	10 mcM	0.4 – 1.2 nM
Arachidonic Acid	500 mcg/mL	≥60%

B. Routine and Special Coagulation Tests

Assay	Method	Reportable Limits	Normal/Therapeutic Values
Prothrombin Time (PT)	IL ACL-TOP	9-120 seconds	9.2-13.5 seconds
Activated Partial Thromboplastin Time (aPTT)	IL ACL-TOP	21-200 seconds	25-38 seconds/ 56-81 seconds (ACS: 50-75 seconds)
Fibrinogen	IL ACL-TOP	35-1000 mg/dL	200-400 mg/dL
Thrombin Time	IL ACL-TOP	6-100 seconds	16-25 seconds
Inhibitor Screen (Mixing Studies)	IL ACL-TOP	Negative/ Positive	Negative
Inhibitor Assay (Bethesda)	IL ACL-TOP	<1 - >200 Bethesda Units/mL	<1 Bethesda Units/mL
Platelet Function Analysis (PFA- Coll/ EPI)	PFA-100	0-300 seconds	160 seconds
PFA- Coll/ADP	PFA-100	0-300 seconds	106 seconds
D-dimer; Quantitative	IL ACL-TOP	250 – 10,000 ng/ mL FEU	<600 ng/ml FEU (VTE: <500 ng/mL FEU)
Fibrin Split Products	Manual/	<10 to >40 mcg/	<10 mcg/mL

	Latex	mL	
Fibrin Stabilizing Factor	Manual	Present/Absent	Present
Anti Thrombin III (ATIII)	IL ACL-TOP	0 - >150	85-150%
Factor II Activity	IL ACL-TOP	10-600%	75-135%
Factor V Activity	IL ACL-TOP	10-600%	60-145%
Factor VII Activity	IL ACL-TOP	10-600%	50-150%
Factor VIII Activity	IL ACL-TOP	<1 - 600%	50-175%
Factor IX Activity	IL ACL-TOP	10-600%	70-150%
Factor X Activity	IL ACL-TOP	10-600%	70-150%
Factor XI Activity	IL ACL-TOP	10-600%	65-150%
Factor XII Activity	IL ACL-TOP	10-600%	60-180%
Dilute Russell's Viper Venom Time (dRVVT) Screen	IL ACL-TOP	0-100 seconds	<48 seconds
dRVVT Confirm	IL ACL-TOP	0-100 seconds	< 33 seconds
dRVVT Normalized Ratio	IL ACL-TOP	0-100 seconds	< 1.30
Von Willebrand Factor Antigen (VWF)	IL ACL-TOP	10-300%	50-175%
VWF Activity	IL ACL-TOP	20-300%	50-175%
Heparin Anti-Xa, Low Molecular Weight Heparin	IL ACL-TOP	0-2.0 Units/mL	0 Units/mL Therapeutic:0.3-0.7 Units/mL
Heparin anti-Xa, unfractionated	IL ACL-TOP	0-2.0 Units/mL	0 Units/mL Twice daily dosing 0.6-1.0 mL Once daily dosing 1.0-2.0 Units/
Hexagonal Phase Phospholipid	ST4	0-100 seconds	≤ 7 seconds

Protein C Activity	IL ACL- TOP	10-250%	70-185%
Protein S Activity	IL ACL- TOP	10-250%	Female 50-160% 60-160% Male
Activated Protein C Resistance	IL ACL- TOP	15-200 seconds	≥ 2.3 Normal (ratio)
Plasminogen	IL ACL- TOP	10-150%	70-145%
Plasmin Inhibitor	IL ACL- TOP	10-150%	90-140%
Argatroban (Dilute Thrombin Time)	IL ACL- TOP	0.0-2.0 mcg/mL	0.6-1.8 mcg/mL

Attachments

No Attachments

Approval Signatures

Step Description	Approver	Date
CP Chief Medical Director	Peter Millward: Chief, Pathology Service Line	3/24/2021
Coagulation Medical Director Designee	Marc Smith: System Med Dir, Coagulation	3/24/2021
Policy and Forms Steering Committee Approval (if needed)	Tamara Sabih: Medical Technologist Lead	3/24/2021
Policy and Forms Steering Committee Approval (if needed)	Gail Juleff: Project Mgr Policy	3/19/2021
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Applicability

Royal Oak