



Current Status: Active

PolicyStat ID: 4985245



Origination: 05/2013
Effective: 08/2018
Last Approved: 08/2018
Last Revised: 08/2018
Next Review: 08/2020
Owner: Sally Kramer: Manager - Lab
 Science Tech - SJ
Policy Area: Lab / Coagulation
Standards:
Applicability: Saints and Highline

Anticoagulant Adjustment For High Hematocrits, R-W-CG1030-04

PURPOSE

To provide instructions for adjusting the volume of citrate anticoagulant in collection tubes for coagulation testing when the patient Hematocrit is greater than 55%.

BACKGROUND

Patients with hematocrits greater than 55% may have falsely prolonged results for coagulation tests due to excess anticoagulant per volume of plasma. Excess citrate binds more calcium and results in prolonged clotting times. The correct citrate volume can be calculated based on the Hematocrit, and the anticoagulant amount in the 2.7ml collection tube adjusted.

EQUIPMENT / SUPPLIES

Calibrated Pipette
 2.7 mL or 1.8 mL 3.2% Sodium citrate tube (Blue top)

STEPS

NOTE: When a PT and/or APTT is ordered on a patient with a reported Hematocrit value of 55% or greater, a new sample should be drawn in a coagulant-adjusted tube prepared as follows:

- Determine the appropriate amount of Sodium Citrate required using the chart.

HCT %	amount of citrate in uL to remove from 1.8mL tube	amount of citrate in uL to remove from 2.7 mL tube
55	50	75
56	53	80
57	57	85
58	60	90
59	63	95
60	67	100

61	70	105
62	73	110
63	77	115
64	80	120
65	83	125
66	87	130
67	90	135
68	93	140
69	97	145
70	100	150

Note: following formula was used to create the above chart.
 $(0.00185) \times (V) \times (100 - H) = C$

Where:

V = mL whole blood tube volume

H = Hematocrit

C = mL anticoagulant required (Sodium Citrate)

2. Remove calculated amount of Sodium Citrate required, and recap securely.
3. Add the necessary amount of freshly drawn blood to the Citrate tube. Notify the phlebotomist that the vacuum in the tube has been broken and the blood will need to be pushed in.
4. Sample should be capped and mixed by inversion immediately after the blood is added.
5. Repeat the PT and/or PTT on this new anticoagulant-adjusted specimen. Report only the results from this new specimen.
6. Add the following smartphrase .HHCT to the result:

"Anticoagulant adjusted for high Hct."

REFERENCE

Clinical Lab Hematology, Prentice Hall Clinical Lab, Web Figure 39-1, Elizabeth Zeibig, Series Editor,

Attachments:

No Attachments

Approval Signatures

Approver	Date
Arlene Brennan: Administrative Coordinator	08/2018
Adam Saenz: MD, Medical Director	08/2018
Joren Keylock: MD, Medical Director	08/2018

Approver	Date
Shane Anderson: MD, Medical Director	07/2018
Brian Folz: Medical Director	07/2018
Linda Burkhardt: MD, Medical Director	07/2018
Arlene Brennan: Administrative Coordinator	07/2018
Sally Kramer: Manager - Lab Science Tech - SJ	07/2018

Applicability

Highline Medical Center, St. Anthony Hospital, St. Clare Hospital, St. Elizabeth Hospital, St. Francis Hospital, St. Joseph Medical Center

COPY