Sutter Health
Sutter Roseville Medical Center

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Owner:	*Alex Alba: Spvr, Laboratory*
Policy Area:	*Lab - Hematology*
References:	
Applicability:	*Sutter Roseville Medical Center*

ESR Automated, Streck Auto Plus, HC.ANA02.12-/-RV.XX

ESR, Automated

Purpose	This procedure describes how to perform an ESR test on the auto ESR reader
Policy	ESR Vacuum tubes are specifically used for the ESR Auto reader • A properly labeled EDTA specimen must be collected with every ESR order

Reagents, Supplies, Equipment

Reagents	Supplies	Equipment
ESR QC	ESR Vacuum tubes	• ESR Auto reader • Barcode scanner

Specimen requirements and stability

- Properly labeled specimen per specimen ID SOP
- Specimen is whole blood in a citrate anticoagulant solution
- Specimen must be well mixed at the time of draw and prior to testing
- Specimen must be at room temperature prior to testing
- Specimen is stable for 8 hours at room temperature
- Specimen must not be under or overfilled (+/- 9 mm of fill line)
- Clotted specimens must be recollected if accompanying EDTA tube cannot be used

Procedure

Step	Action
1	Print the appropriate ESR worksheet
2	Ensure the specimen is properly labeled, filled, and at room temperature.

If	Then
Underfilled	From a well mixed and unclotted EDTA tube, use a transfer pipette to add blood specimen to the existing ESR tube until it is properly filled
Overfilled or clotted	From a well mixed and unclotted EDTA tube, use a transfer pipette to properly fill a **NEW** ESR tube with blood specimen

Step	Action
3	Place the specimen on the ESR mixer and allow mixing at 10 to 15 complete inversions or for 3 minutes.
4	Ensure ESR Auto reader is in the Standby mode, indicated by "next sample" . If not, press "X" until the Standby mode is achieved.
5	Enter the specimen ID :

If	Then
Using the Barcode scanner	Scan the LIS barcode
Using manual entry of specimen ID	• Enter the specimen ACC# using the keyboard (the "X" is used to make corrections and the √ is to confirm) • Press √ to confirm

Step	Action
6	Insert the specimen in any free position on the Auto ESR reader as indicated by a green light. Once the specimen is inserted, the position will turn red and testing initiated. **Note**: If EDTA tube is used in the test set up then the EDTA tube is placed in a position on the collection tube rack that corresponds to the ESR vacuum tube position on the ESR device

If	Then
Multiple specimens are to be tested	Follow steps 4-6
If no other specimens to be tested	Continue to step 7

Step	Action
7	The ESR worksheet must have the following information: • Initials of CLS/MLT/SLA setting up the test • Time of test setup • Location of specimen (spot where specimen was inserted
8	After testing is complete, the Auto ESR reader will print the results on the internal printer

Step	Action
9	To validate specimen ID, the CLS/MLT will match: • Specimen ID/position location on the printout • Specimen ID/position location on the Auto ESR reader • Specimen ID/position location on the worksheet • If EDTA specimen is used, specimen ID/position location on the collection tube rack
10	Once specimen ID is validated: • The CLS/MLT will write down the results on the ESR worksheet • Initial the worksheet • Discard the specimen
11	The CLS/MLT will enter the results in the LIS per SOP
12	The CLS/MLT will file the worksheet in the appropriate location

Reference Range	Age	Male	Female
	< 50 yrs	0 – 15 mm/hr	0 – 20 mm/hr
	≥ 50 yrs	0 – 25 mm/hr	0 – 30 mm/hr

Analytical Range	0 – 120 mm/hr
Reporting Results	• Results are reported in the LIS using manual entry • Worksheet is RVHESR • At Test-1 prompt enter "M" to modify • At ESR test code prompt enter RVHM (method code) • At ACC# prompt, enter the ACC # to report results
Related Documents	• Auto ESR QC SOP • Auto ESR specimen preparation • Auto ESR maintenance
References	• Streck laboratories ESR Auto plus operator's manual Oct 2004 • NCCLS H2-A4 Reference and selected procedure for the ESR test, 4th Ed. • Laboratory Test Handbook by Jabob's and Demott, 5th Ed.

All revision dates:

Attachments:

Auto ESR Appendix A Specimen Prep.doc

Sutter Roseville Medical Center
Laboratory
Roseville, California

DEPARTMENT: **LABORATORY**

SECTION: **HEMATOLOGY**

TITLE: **Appendix A: ESR Auto Plus specimen preparation**

Prepared By:	A.Alba 12/30/04
Approved By:	
Date in Service:	
Reviewed By:	
Reviewed By:	
Supersedes:	
Removed From Service:	

Purpose This document describes how to prepare a sample for testing on the ESR Auto plus

Policy

- The ESR specimen collection tube must be mixed per procedure immediately after blood collection and prior to testing
- The ESR specimen collection tube must be labeled per Specimen ID policy
- A properly labeled purple top (EDTA) will be collected with every ESR order

Procedure A Collection of blood specimen

Step	Action
1.	Adhere to established specimen collection and specimen ID SOP.
2.	Draw 1 EDTA blood collection tube and ensure specimen is mixed properly
3.	Insert the 1.2 ml ESR vacuum tube into the plastic holder and push it toward the front wall of the holder, puncturing the vacuum tube stopper.
4.	When the blood flow starts, angle the tube so the blood stream hits the vacuum tube wall before mixing with the citrate anticoagulant. This will minimize the formation of blood foam and improve mixing.
5.	The vacuum will automatically draw the appropriate amount of blood into the tube. Ensure the blood fills to the appropriate fill level as printed on the vacuum tube.
6.	Immediately after collection, mix the blood specimen by inverting the tube 6 to 8 times by holding the tube at a 35° angle and ensuring that the air bubble reaches the opposite end between every inversion.
7.	Place a small aliquot label with the correct patient ID on the properly filled ESR vacuum tube as close to the cap as possible so that the fill line is not covered. Note: Do not place large barcode label on ESR vacuum tube
8.	Place the Barcode Label with the correct patient ID on the well mixed EDTA tube.
9.	Phleb code, date and time of draw must be on both the EDTA and ESR vacuum collection tubes.
10.	Follow established specimen processing procedures.