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Automated Chemistry Contaminated Specimen Alert - Royal Oak

Document Type: Procedure

I. PURPOSE AND OBJECTIVE:

This document details how the laboratory handles samples which may be contaminated whether the specimens are drawn by nursing or phlebotomy.

II. POLICY:

Chemistry technologists and technicians are expected to recognize and investigate abnormal results that suggest a sample has been contaminated with an IV solution (e.g. Dextrose, Total Parenteral Nutrition (TPN), Saline, IV medication etc.) or that has been improperly collected with EDTA. They are expected to take the following appropriate action.

III. SPECIMEN COLLECTION AND HANDLING:

A. The technologist or technician will retrieve the questionable specimen.

B. Repeat testing.

C. Contact the caretaker's nurse to deliver a scripted message with results. The specimen may be contaminated with IV solution (see scripting).

D. Results are released with comment and an alert to interpret with caution.

E. Appropriate specimens drawn at this time will be re-ordered in the Laboratory Information System (LIS) by the laboratory.

F. Critical results are reported with documentation in the LIS.

G. It is the clinical team’s or physician’s decision to accept the results as clinically appropriate or to phone the Lab and request test cancellation.

H. Specimens with obvious EDTA contamination are canceled.

IV. PROCEDURE:

A. When the laboratory technologist/technician suspects that a specimen is contaminated with TPN, Saline, Dextrose or other IV fluid, or that a specimen contains EDTA, he/she should:

1. Review the abnormal Chemistry result(s) and result(s) trend(s) in the LIS Chart Review together with a Manager or second Technologist. Suspected contamination is a judgment call.
2. Retrieve the specimen and repeat suspect result(s), preferably on a second analyzer.
3. “Verify” or “Repeat” any criticals (with exception of Troponin and blood gas pH/pCO2/pO2).
4. Retrieve collection date, time, collector information.
5. Contact the Nursing Unit to speak with the nurse who is taking care of the patient.
6. Initiate the appropriate scripted conversation to verify B#, release non-critical results, release critical results or cancel results with obvious EDTA contamination.
7. Per procedure, request read back for any critical result reported.
8. Request nurse’s employee ID # for documentation purposes.
9. Document results in LIS with appropriately selected, scripted text comment and ID # of nurse alerted.
    a. NOTE: Scripted text result comment for suspected contamination is attached to the first reported chemistry analyte result (e.g. sodium) of the affected panel or group of tests.
10. Reorder appropriate tests in LIS (all Chemistry, Hematology, Coagulation and Special Chemistry tests on original order).
    a. Place Order with STAT priority, unless original order included tests (e.g. Special Chemistry) that are only available as routine. In this case, a “mixed priority” may be necessary.
    b. Attach scripted order entry comment “Lab initiated this Stat redraw request due to possible specimen contamination w/ IV fluid for previously reported results”.
11. For Outreach or Outpatient cases (e.g. Nursing Home, Home Care, Dialysis) with suspected specimen IV contamination, Chemistry Technologist will:
    a. Report results with suspected contamination comment.
    b. Complete documentation in LIS for any critical result associated with suspected contaminated specimen.
    c. Phone Customer Services with patient’s Name and medical record number (MRN) to explain situation. They are to place the call to client to deliver results and scripted message.
    d. Cancel specimens with obvious EDTA contamination.
        i. Notify Customer Services per standard protocol to request that client recollect specimen.
12. Should Nursing or Customer Services instruct the Technologist to “just cancel the results and we will redraw them”, the Technologist will state our procedure is to release results with a statement indicating suspicion of IV contamination.
13. If it is decided that the sample was contaminated with IV fluid, the physician or nurse may call the Lab (x11155) to cancel the result.
    a. Lab can still retrieve original results from the LIS audit trail (Chart Review), if further investigation is warranted.
    b. Attach appropriate selected LIS cancellation comment “Possible specimen contamination with IV fluid. Canceled per request of _____”.
14. EDTA specimen contamination will affect certain chemistries (e.g. K+, Ca, Alkaline Phosphatase, Mg, CK). When EDTA contamination is suspected:

a. Cancel all Automated Chemistry tests on the affected specimen as well as Coagulation and Special Testing tests drawn at the same time.

b. Enter the reason for cancellation as “results suggestive of EDTA contamination.”

c. The K+ will be increased, and the Ca, Alkaline Phosphatase, Mg and CK will be decreased.

d. If a Phlebotomist draw is involved, immediately notify the phlebotomy supervisor.

e. Request that the Nursing Unit place an order in the Hospital Information System (HIS) for specimen recollection.

f. If EDTA contaminated specimen(s) are from Outpatient or Outreach patients, contact Customer Services to arrange for specimen recollection.

15. Chemistry Technologist will document all cancellations in the respective red binder Canceled Specimens Problem Log for Core Lab or Stat Lab.

B. **Scripting - Abnormal Chemistry Results with Possible IV Contamination**

1. **Technologist**:
This is _____ from the chemistry lab. May I please speak to the nurse taking care of _____(patient first and last name) in room _____(number).

2. **Technologist to nurse (non-critical result):**

a. *This is _____ from the chemistry lab. I’m calling about _____(patient’s first and last name). May I have the patient’s MRN _____(Wait for response). Thank you.*
Until the last blood draw on _____(date/time of draw), _____(electrolyte/glucose/etc) results were running in the _____(normal/low/high) range and now the result is significantly different.
I’m concerned that the sample may be collected from the wrong patient, or contaminated with an IV fluid, IV medication or TPN solution.
Will you please verify the B# ? (wait for verification). Thank you.

b. (If Registered Nurse (RN) unwilling to retrieve B#, just proceed. If mismatch, state there is a B# discrepancy and you will need to cancel the labs and follow with a variance report).
Results are being released into _____(patient’s first and last name) chart with a comment indicating possible specimen contamination with IV fluid and an alert to interpret results with caution. Appropriate specimens drawn at this time for (state all Chemistry, Hematology/ Coagulation, Special Testing tests on order) will be re-ordered by the laboratory.
May I please have your employee ID number for documentation purposes. Thank you.

3. **Technologist to nurse (critical result):**

a. *This is _____ from the chemistry lab. I’m calling about _____(patient’s first and last name). May I have the patient’s MRN (wait for response). Thank you.*
Until the last blood draw on _____(date/time of draw), (electrolyte/glucose/etc) results were running in the normal/low/high range and now the _____ result is CRITICAL.
I’m concerned that the sample may be collected from the wrong patient, or contaminated with an IV fluid, IV medication or TPN solution.
Will you please verify the B#? (wait for verification). Thank you.

b. (If RN unwilling to retrieve B#, just proceed. If mismatch, state there is a B# discrepancy and you will need to cancel the labs and follow with a variance report).
Results are being released into _____(patient’s first and last name) chart with a comment indicating possible specimen contamination with IV fluid and an alert to interpret results with

caution. Appropriate specimens drawn at this time for (state all Chemistry, Hematology/ Coagulation, Special Testing tests on order) will be re-ordered by the laboratory.
However, since the result(s) fall(s) into the critical range for our laboratory, I need to document that _____(test) is CRITICAL at _____(result).
Would you please read that back to me.
May I please have your employee ID # for documentation purposes. Thank you.

4. **If the nurse says: "Just cancel the results and I'll redraw them".**
   Our lab policy is to release the results with a statement indicating suspicion of IV contamination. The clinical team or physician can then decide whether the results are appropriate. You may contact the Lab to cancel this test if desired. May I have your employee ID number for documentation purposes? (If not previously given)
5. **IV Contamination Comment for LIS:**
   "Possible specimen contamination with IV fluid, IV medication or TPN solution. Interpret results with caution. Appropriate samples drawn at this time will be re-ordered by the laboratory. Please contact the lab to cancel this test if desired. Nurse # _____alerted".
6. **Scripting - Abnormal Chemistry Results with EDTA Contamination**
   This is _____ from the chemistry lab. I'm calling to cancel the _____(test, panel, etc.) on _____(patient first and last name), MRN _____. The SST specimen collected _____(date/time) appears to be grossly contaminated with EDTA, as the K+ is significantly increased and the Calcium is significantly decreased. May I please have your ID# for documentation purposes? Thank you.

Attachments

No Attachments

Approval Signatures

Step Description	Approver	Date
Medical Director	Ann Marie Blenc: System Med Dir, Hematopath	1/21/2022
Policy and Forms Steering Committee Approval (if needed)	Colette Kessler: Mgr Laboratory [RC]	1/20/2022
Policy and Forms Steering Committee Approval (if needed)	Gail Juleff: Project Mgr Policy	1/20/2022
Lab Chemistry Best Practice Committee	Elizabeth Sykes: System Med Dir, Chemistry	1/20/2022
Lab Chemistry Best Practice Committee	Qian Sun: Tech Dir, Clin Chemistry, Path	1/12/2022
	Colette Kessler: Mgr Laboratory [RC]	1/12/2022

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