PROCEDURE
Corewell Health East - Chemistry Specimen Handling - Troy

This Procedure is Applicable to the following Corewell Health sites:
Corewell Health Beaumont Troy Hospital

Applicability Limited to: N/A

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Functional Area: Clinical Operations, Laboratory

Lab Department Area: Lab - Chemistry

1. Principle
Specimens received into the Chemistry department need to be properly handled to provide accurate patient results.

2. Responsibility
Personnel who have completed the competency requirements will perform these tasks.

3. Procedure
A. Routine Handling
1. Specimens need to completely clot prior to being centrifuged.
2. Plasma samples (purple, green and gray and pearl tops) can be centrifuged immediately upon receipt in the department.
3. If an aliquot is needed:
   a. Use a clean plastic aliquot tube.
   b. Affix the proper aliquot label to the tube.
   c. Verify the correct patient aliquot label was printed by comparing the name and specimen number from the primary tube to the aliquot label.
   d. Initial the label with your initials.
   e. Store appropriately or load onto automation line for testing.
4. Microtainer samples:
   a. Use a tube extender to extend the length of the microtainer so that it can be centrifuged in the STAT centrifuge.
   b. Once centrifuged, remove the serum or plasma from the microtainer and place into a plastic “false- bottom” tube.
   c. Affix the correct specimen label to the outside of the plastic tube.
   d. Verify the correct patient label was printed by comparing the name and specimen number from the primary tube to the label on the false-bottom tube.
   e. Initial the label on the false-bottom tube.
   f. Load onto the automation line for testing**.**

B. Special Handling

1. Specimens requiring immediate icing or cold storage at collection:
   a. Ammonia
      1) Any ammonia specimen not submitted on ice should be analyzed immediately with the comment "specimen not iced, results may be falsely elevated" added in the specimen comment section.
   b. Blood gases or pH analysis
      1) Blood gases or pH specimens are acceptable without ice for 30 minutes post collection. Analyze immediately upon arrival in the department.
   c. Lactic Acid- green top tubes only need to arrive on ice
2. Specimens requiring 37 °C at collection:
   a. Cryoglobulin
   b. Cryofibrinogen
3. Specimens requiring special pre-treatment:
   a. Urine collections for uric acid, calcium, magnesium, and phosphorus require a pH suitable for analysis. See Urine Aliquots procedure.
4. Viscous Fluid Specimens and patients with High Total Protein Values (multiple myeloma patients)
   a. Some fluids, may be too viscous for proper aspiration by our analyzers and would yield “clot detected” error codes and no results. First make a X2 dilution of the sample using the proper diluent and multiply any result obtained by the dilution factor of 2.
   b. If still unable to analyze, heat an aliquot of the sample in the 37°C heating block for 30 minutes & analyze immediately.
   c. If “clot detected” error codes still persist, return the sample to the 37°C heating block along with an aliquot tube of the diluent. Allow both tubes to warm for 30 minutes.
   d. Make a X2 dilution of the warmed sample using the warmed diluent and analyze and multiply any result obtained X2.
   e. If the warmed X2 diluted sample still does not yield a result, please cancel the test with the comment “unable to perform-sample too viscous to analyze.” Notify the floor if the patient is an inpatient.
5. Gelatinous Samples:
   a. Certain rare patient conditions make their serum samples form a gelatinous clot after centrifugation. Increased centrifugation time of up to 30 minutes may yield serum that can be used for analysis.
   b. Once this is observed in a patient’s sample, notify the supervisor or designate and post large signs in the department’s specimen processing area to notify staff of the patient’s name & medical record number for handling future specimens.
   c. An email should be sent to all department staff members.

C. Specimen Storage

1. All blood samples are stored refrigerated for 7 days.
2. Any dilutions made on a specimen for analysis are not stored but discarded.
3. Aliquot cups resting in a barcoded specimen tube are attached by Parafilm to the tube, if the cup is to be stored. If the cup becomes separated from its partner barcode tube, and there is no identification on the cup, then the cup must be discarded and no longer used.
4. Microtainer aliquots loaded onto the Laboratory Automation will be stored for 7 days refrigerated.
5. Specimens stored in the Beaker container storage will be capped and stored in the Hematology walk-in.

4. Revisions

Corewell Health reserves the right to alter, amend, modify or eliminate this document at any time without prior written notice.

5. Procedure Development and Approval

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6. Keywords
Not Set