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|  | **Special Collection and Handling for Clinical Chemistry**  **IPP#14** | **Dept:** | **Inpatient Phlebotomy 324305** |
| **Effective Date:** | **2/17/2011** |
| **Revised Date:** | **March 2019** |
| **Contact:** | **Laurie Watson** |
| **Name & Title: Greg Pomper, MD Medical Director** | | **Date:** |  |
| **Signature:** | | | |

1. **General Procedure Statement:** To give guidelines to staff concerning the proper Process for Special Collection and Handling for Clinical Chemistry.
   1. **Purpose:** This procedure is to serve as a guide for trained personnel in the Inpatient Phlebotomy Department to perform the services described herein. These guidelines should be used in conjunction with proper training and only by qualified Phlebotomists.
   2. **Responsible Department/Party/Parties:** 
      1. Procedure owner/ Implementer: Inpatient Phlebotomy, Chemistry Lab
      2. Procedure prepared by: Laurie Watson MT(ASCP)
      3. Who Performs procedure: Inpatient Phlebotomy

1. **Procedure: Special Collection and Handling for Clinical Chemistry**
2. **Policy Guidelines** 
   1. Chemistry specimen requirements are communicated to the Inpatient patient Phlebotomy department by way of the Pathology Laboratory Handbook, memos, and the Laboratory Information System.
   2. The LIS database contains the specimen requirements for all orderable laboratory tests.
   3. This information is printed on the barcode labels.
   4. Procedure Notes
      1. The patient name and medical record number (or date of birth) is used to identify patients and their samples.
      2. Specimens are labeled with name, medical record number, and barcode label.
      3. Specimens for routine clinical chemistry assays are delivered to the laboratory within 1.5 hours of collection time.
      4. Special handling requirements apply to many tests. The four most common tests that require special handling are listed below:

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| **TEST** |  | **SPECIAL HANDLING** |
| Ammonia |  | Green top tube, put on ice and deliver within 30 minutes |
| Lactic Acid |  | Gray top tube. Do not leave tourniquet on > 1 mins. Submit sample on ice if requested. |
| Intact PTH |  | Lavender top tube on ice, deliver within 30 minutes |
| Vitamin levels |  | Protect from light by placing in an amber bag, or wrapping in foil or a paper towel |

* 1. Serum Separator Tubes (SST) is considered an additive tube while the plain red top tube (glass) is considered a plain tube. Plain tubes are drawn before additive tubes.
  2. Most chemistry tests performed at DMC laboratory have a dark green lithium heparin tube as preferred tube type. Refer to chart at end of this manual for specific tests and specimen requirements for DMC laboratory.
  3. Quantiferon Test Orders
     1. Quantiferon testing requires special collection and handling of the specimens.
     2. A Quantiferon collection kit must be used, as it contains special tubes specific for this testing.
     3. Collect 1 ML of blood into each of the blood collection tubes.
     4. Hold tube on needle for 2-3 seconds after flow ceases.
     5. Shake tubes firmly about 10 times, until frothy.
     6. Label tubes according to policy.

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| **TEST** | **SPECIAL HANDLING** |
| Ammonia | Green top tube, put on ice and deliver within 30 minutes |
| Cryoglobulins | Plain red top tube, keep warm by saturating a towel with hot water and wrapping it around the tube, place tube in a “ziplock” style bag and deliver within 30 minutes. May also be transported wrapped in a heel warming device. |
| Vitamin D | Protect from light by wrapping in foil or a paper towel. |

1. Serum Separator Tubes (SST) are considered an additive tube while the plain red top tube is considered a plain tube. Plain tubes are drawn before additive tubes.
2. The most common tests drawn in SST’s are listed below. Patient requisitions will indicate if these tests require patients to be fasting or drawn at special times.

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| **Test Abbreviation** | **Test**  **Name** | **Test**  **Components** |
| BMEP | Basic Metabolic Panel | Na, K, Cl, CO2, BUN, Gluc, Crea, Ca |
| CMEP | Complete Metabolic Panel | BMEP + Protein, Albumin, Total Bilirubin, Alk.Phos.,SGOT, SGPT |
| HFP | Hepatic Function Panel | SGPT, SGOT, Protein, Albumin, Alk. Phos,, Total Bilirubin, Direct Bilirubin |

**GLUCOSE TOLERANCE TEST (GTT)**

**PROCEDURE:**

1. If a GTT is scheduled by calling Inpatient Phlebotomy, the following information should be requested: Patient name, Medical Record number, date requested, patient height and weight. No GTT can be scheduled for Saturdays, Sundays or holidays.

2. The patient must be fasting from midnight until the last sample has been drawn. There can be no interfering IV's running. *The patient can drink only water during this procedure.*

3. The phlebotomist will draw the fasting sample, then dose the patient with a 75gm (or prescribed dose if written on the requisition) glucose solution. For patients weighing less than an amount specified by the pediatric endocrinology section, the calculation is based on the patient's height and weight and is determined by the physician.

4. The timing of all draws starts with the time the fasting was drawn. The following Tolerance batteries and timed samples will then be drawn:

**Beaker Code** **TEST** **SAMPLES INCLUDE**

GTT2 GTT 2 hour Fasting / 1-hour / 2 hour

GTT3 GTT 3 hour Fasting / 1-hour / 2-hour 3-hour

GTTOB GTT Obstetrical Fasting / 1-hour / 2-hour / 3-hour

GTT5 GTT 5 hour Fasting / 1-hour / 2-hour / 3-hour / 4-hour

5-hour

Obstetrics patients will have a Sullivan's test or a 1 Hour Tolerance that only requires that the patient drink the specified solution and then draw the sample 1 hour after the solution is consumed.

GLU GLU-; 1 hour pc Fasting / 1-hour

No corresponding urine samples are necessary unless specifically ordered by the physician.

**Procedure Notes**

1. Before submitting the samples to the laboratory, the phlebotomist must be sure to write on each label which sample in the series is in each tube. Clearly label samples as fasting, 30 minute, 1 hour and so on.

2. If for any reason a patient cannot complete the test submit the samples collected and call the doctor.

3. Patients should remain in designated waiting areas during the procedure.

**4) Review/Revision/Implementation:**

All procedures must be reviewed at least every 2 years.

* All new procedures and procedures that have major revisions must be signed by the CLIA Laboratory Medical Director.

* All reviewed procedures and procedures with minor revisions can be signed by the designated section manager.

**5) Related Procedures: IPP#9 Collection**

**6) References: N/A**

1. **Attachments:** **N/A**
2. **Revised/Reviewed Dates and Signatures:**

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| --- | --- | --- | --- |
| Review Date: | Revision Date: | Reason: | Signature: |
|  | 3/6/2017 | Reformatted to Medical Center standard template | Laurie Watson, MT, ASCP |
|  | 3/5/2019 | Revised signature page | Laurie Watson, MT, ASCP |
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